NORTHEASTERN MONTANA WETLANDS DISTRICT

MEDICINE LAKE, MONTANA

ANNUAL NARRATIVE REPORT
Calendar Year 1977

NATIONAL WILDLIFE REFUGE SYSTEM
Fish and Wildlife Service
U.S. DEPARTMENT OF THE INTERIOR
## RESOURCE MANAGEMENT ROUTING SLIP

<table>
<thead>
<tr>
<th>Beaty</th>
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<tr>
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<td>Baldacchino</td>
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<td>Oman</td>
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<td>Sontag</td>
<td>Adams</td>
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<td>Fowler</td>
<td>Carlsen</td>
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<tr>
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<tr>
<td>Bender</td>
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</tr>
<tr>
<td>Stieglitz</td>
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</table>

From:  
Date:  

Comments:
Personnel

Same as those listed in the Medicine Lake National Wildlife Refuge Narrative.

REVIEW AND APPROVAL

Submitted by: Jack Bellingham 2/13/78
Date: 3/13/78
Area Office: Regional Office

Medicine Lake National Wildlife Refuge
Medicine Lake, Montana 59247

Date: 6/1/78
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I. GENERAL

A. Introduction

The northeastern Montana Wetlands District is bounded on the north by Canada and on the east by North Dakota. The area is a part of the glaciated pothole region of the Dakotas and is commonly referred to as the Missouri Coteau. The lake and pond laced hills of the coteau end abruptly as you head south and west. The district is confined to the three northeastern counties of Sheridan, Roosevelt, and Daniels with the majority of the WPA's and easements being in Sheridan County.

Annual precipitation amounts to around 12 inches with the majority of it coming as March snows and spring rain. Surface and ground water conditions are almost solely dependent on winter snowpack and spring melt.

The wetlands district is considered a part of and is administered by the staff of Medicine Lake National Wildlife Refuge.

B. Climatic and Habitat Conditions

The year started out with semi-drought conditions and proceeded into full drought conditions. Holdover water from 1976 in the major lakes was all that was present. Snow melt was totally absent and this is the main source of water for the wetlands. Type I and II wetlands were dry throughout the year. Type III's became I's and then dried up. Main lake and pond areas held water all year but became so low that most shoreline vegetation was of little value to waterfowl.

The official weather station at Medicine Lake registered 11.22 inches of precipitation for that area. Most of the wetland district, although only being 30 miles away is in another weather belt. High winds and drier weather characterize the area. Even though we had an early spring throughout the whole area, those farmers in the wetland district delayed their plantings because of dry conditions.

Winter came early with heavier than normal amounts of snow. If present conditions continue, we should have ample water supplies for the following year.

Native grassland habitat suffered the most from the dry conditions. Being as short as most of our native grass is, it seldom catches much snow and depends on spring rains for its growth. This year there was no rain so the native grass just didn't grow. Normally the prairie is nice and green in the spring but this year it started out brown and went into winter being brown.

Land use changes, although not accelerating, plod on at a steady pace. How the farmers can justify breaking up native sod for wheat production when there is already such a surplus of wheat is beyond me, especially
when you consider most of the land being broken now could only be considered marginal cropland at best.

C. **Land Acquisition**

1. **Fee Title**

No options were accepted during calendar year 1977. Table I gives a breakdown of the current acreages the district administers.

**TABLE I: Fee Acquisition Program**

<table>
<thead>
<tr>
<th>County</th>
<th>No. of Tracts</th>
<th>No. of WPA's</th>
<th>Total Acreage</th>
<th>Goal Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roosevelt</td>
<td>2</td>
<td>1</td>
<td>179.2</td>
<td>2,000</td>
</tr>
<tr>
<td>Daniels</td>
<td>5</td>
<td>3</td>
<td>646.41</td>
<td>1,000</td>
</tr>
<tr>
<td>Sheridan</td>
<td>66</td>
<td>36</td>
<td>7,893.8</td>
<td>11,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73</strong></td>
<td><strong>40</strong></td>
<td><strong>8,719.41</strong></td>
<td><strong>14,000</strong></td>
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</table>

2. **Easements**

One option protecting 28 wetland acres was taken during calendar year 1977. Table II gives the current status of easement acreages for the district.

**TABLE II: Easement Acquisition Program**

<table>
<thead>
<tr>
<th>County</th>
<th>No. of Cases</th>
<th>Wetland Acres</th>
<th>Goal Acres</th>
<th>Total Cost</th>
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<tbody>
<tr>
<td>Sheridan</td>
<td>71</td>
<td>4,771</td>
<td>10,000</td>
<td>$113,555.00</td>
</tr>
<tr>
<td>Daniels</td>
<td></td>
<td></td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Roosevelt</td>
<td></td>
<td></td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>71</strong></td>
<td><strong>4,771</strong></td>
<td><strong>13,000</strong></td>
<td><strong>$113,555.00</strong></td>
</tr>
</tbody>
</table>

As you can see from this years' fee and easement acreages, the program is going quite slowly. This district has been without a full-time realty person since 1975. Since that time, personnel have been assigned from the Minot office on an infrequent schedule. We have tried to re-establish a permanent position in northeastern Montana but for some reason never seem to get anywhere.

This year, we worked out a schedule with the Minot office in which their different realtors would work in this district. Each was assigned a different area and they would try to work one week each month in this area.

We feel that this is a great advancement over having just one person but still feel that a full-time realtor is needed. In order for a realtor to be effective he has to know the people and keep on top of all the land...
sales and most important, keep up his personal contacts - this just can't be done one week out of each month.

3. Other

Nothing to report.

D. System Status

1. Objectives

The wetland district is combined with the Medicine Lake National Wildlife Refuge when it comes to making out the Annual Work Plan and the Refuge Program Schedule. Since this section was already covered in the refuge narrative report it is not necessary to report it here.

2. Funding

No separate funding is received for the wetlands district. It is programmed into the refuge budget during refuge program scheduling time.

II. CONSTRUCTION AND MAINTENANCE

A. Construction

No major construction has been carried out on the wetlands in the past because of funding restrictions. Now that BLHP is present we propose to carry out extension work in dam building and pothole excavation "IF" the funding becomes available.

Fence building is now considered major construction with the cost estimates running at $2,000/mile. Force account fencing was carried out on .7 miles of boundary at Big Slough WPA. One contract was let during the year to fence 1,050 rods of boundary line on the Northeast WPA unit.

B. Maintenance

Fourteen man-days were utilized mending and rebuilding fence on numerous WPA's that border open grazing units. The open winter of 1976-1977 permitted most ranchers to leave their cattle out most of the time and even a new fence won't stop range cattle if the only grass available is on the other side of it.

C. Wildlife

Nothing to report.

III. HABITAT MANAGEMENT

A. Croplands
One cooperative permit was issued for farming 44.5 acres of cropland on Widgeon Slough W.P.A. The cooperator grew spring wheat and left the refuges share standing in the field. This amounted to 8.3 acres and was utilized by pintails and mallards. About half of this cropland, or 19.6 acres was summer fallowed.

Summer fallowing was carried out on 250 acres of cropland on the Erickson W.P.A. This land will be kept in crops and will be administered by the refuge next year as the land use lease of the former landowner ran out this year.

No DNC plantings were carried out this year.

B. Grasslands

No haying or grazing is allowed on any of the WPA Tracts. When Montana was declared a drought disaster area we thought that some haying would have to be done but Medicine Lake Refuge provided enough hay for the program.

There is a total of 2,590 acres of native short-grass prairie located on the WPA's.

C. Wetlands

At the present time we have no management facilities for controlling water except for one dam that impounds water on the Johnson Lake WPA. With the help of BLHP we will hopefully be able to do some water development in the near future.

D. Forestlands

Nothing to report.

E. Other Habitat

Nothing to report.

F. Wilderness and Special Areas.

Nothing to report.

G. Easements for Waterfowl Management

The fall easement surveillance flight again turned up no illegal activities with a dry summer and fall. This year we expected some draining activity but none was found. Three new ditches were observed on land not under easement. One reason why drainage is still not a problem probably is because that most farmers in the wetland areas still have small cattle herds and water is very important to the cattlemen.
IV. WILDLIFE

A. **Endangered and/or Threatened Species**

The whooping crane is the best known endangered species that is found on the district. Although they traverse the area each year, no sightings were made this year.

A peregrine falcon was again sighted on Goose Lake WPA. Prairie falcons are quite common throughout the entire district and are seen almost everytime refuge personnel travel through the wetlands.

Western burrowing owls are common nesters throughout the district. They generally inhabit old badger dens and feed mostly upon insects and small rodents. We feel that the WPA program is contributing a lot to the saving of their grassland prairie habitat.

B. **Migratory Birds**

1. **Waterfowl**

Although water conditions were some of the worst ever in the district, waterfowl production was the highest we've ever recorded. Most of the WPA tracts have large water bodies on them, as spring dried up into summer, these water areas were just about all that was available and we had a large ingress of duck broods from surrounding wetland areas.
that were drying up. This unusual movement of ducklings put our production estimates at a very inflated level. As was the case with Medicine Lake Refuge, the pairs that had been counted earlier would have had to have been producing more than one clutch. We had to use an average productivity rate of 45% and average brood sizes from Hammond to figure this years' production.

Duck production in the district totaled 13,846 birds. This represents an increase of 128% over 1976. Seven pairs of Canada geese produced 28 goslings and we estimated a production of 432 coots. Table III illustrates production in the district.

### Table III. Production According to Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Number</th>
<th>Species</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>B. W. Teal</td>
<td>3,892</td>
<td>Ruddy</td>
<td>780</td>
</tr>
<tr>
<td>Gadwall</td>
<td>1,866</td>
<td>Canvasback</td>
<td>450</td>
</tr>
<tr>
<td>Shoveler</td>
<td>1,458</td>
<td>Redhead</td>
<td>366</td>
</tr>
<tr>
<td>Wigeon</td>
<td>1,332</td>
<td>G. W. Teal</td>
<td>153</td>
</tr>
<tr>
<td>Mallard</td>
<td>1,314</td>
<td>Ringneck</td>
<td>12</td>
</tr>
<tr>
<td>Lesser Scaup</td>
<td>1,170</td>
<td>Goldeneye</td>
<td>12</td>
</tr>
<tr>
<td>Pintail</td>
<td>1,032</td>
<td>C. Merganser</td>
<td>8</td>
</tr>
</tbody>
</table>

Canada geese are slowly expanding into the wetlands district from Medicine Lake Refuge. In calendar year 1976 there were 16 goslings produced and this year we had 28 produced. Nesting pairs were located on Long Lake, Goose Lake, and Pintail Marsh WPA's.

Spring migration counts peaked at 50,700 ducks the last week in April. Of this total, lesser scaup (18,100) and gadwall (8,200) made up over half of the population. This peak was almost four times as great as that in 1976. The main reason for the increase was the lack of water. This caused the birds to concentrate on the larger lakes, many of which are on WPA's.

Fall migration was characterized by a large influx of local ducks during the first week of September. A census at that time showed 96,900 ducks present. Mallards (25,600), gadwall (14,900), and shoveler (16,700) made up over half of the total. Cool weather moved most of the ducks out of the area and by the 1st of October the population was only 19,300. The large flights from Canada never materialized as those ducks had excellent water and feeding conditions. Most northern ducks didn't migrate until mid-November when a large cold front pushed them out of Canada and right on through the wetland district.

Although water conditions were low, aquatic plant growth was abundant. Sago pondweed grew extensively in almost all wetland tracts and curley-leaved pondweed was abundant in the deeper-fresh water ponds. Small snails were especially abundant this year and provided additional food for the diving ducks.
It was interesting to note vegetation changes on some of the WPA tracts. In 1976, Berger Pond held extensive beds of sago pondweed and provided food for a large number of wigeon and coot. This year Berger Pond was almost devoid of aquatics but Long Lake (just a half-mile away) which had very little aquatics in 1976 was literally choked with sago. Long Lake held high populations of wigeon, gadwall, and coot all fall.

It was also observed that many of the larger wetlands which froze solidly to the bottom this past winter had better than normal aquatic growth during the summer.

No botulism problems were encountered this year.

2. Marsh and Water Birds

No census data is regularly compiled on these birds which is unfortunate as the district is a virtual paradise for these species. The main nesters of this group are the eared grebes. They nest in large colonies on both Big Slough and Wigeon Slough WPA.

Other common nesters include western grebes, horned grebes, pied-billed grebes, American bittern, black-crowned night herons and Sora rails. Pelicans and double-crested cormorants feed on minnows on those lakes which are deep enough to sustain fish.

3. Shorebirds, Gulls, Terns and Allied Species

As is the case with marsh and water birds, these species are not censused or evaluated. Large movements of birds are generally noted during migration. Wilson's phalaropes normally show up in large numbers during the 1st week in October. Long-billed dowitchers also build to high populations early in September.

Common nesters include the American avocet and the killdeer. Field investigations at Goose Lake WPA showed that Franklin's gulls and black terns also nest in the district.

4. Raptors

The most common nesters include the short-eared owl and the marsh hawk. The western burrowing owl, as mentioned before, is also a known nester. The prairie falcon, red-tailed hawk, and American kestrel are common during the summer with rough-legged hawks and golden eagles becoming more common in late fall and early winter.

The refuge co-operates with the State of Montana on surveying raptors. This was the 1st year that this program was carried out and we hope to get some valuable information on the numbers of these birds that inhabit the district.

5. Other Migratory Birds

Nothing to report.
C. **Mammals and Non-Migratory Birds and Others**

1. **Game Mammals**

   White-tail deer are becoming increasingly common on some of the WPA tracts in the district. Those areas that are close to Medicine Lake Refuge benefit from the deer on the refuge as they move back and forth from the refuge to the WPA tracts. Salter WPA, located adjacent to the refuge had 68 deer on it in December. Big Slough, Goose Lake, and Outlet Marsh WPA's all have small deer herds on them.

   The establishment of large tracts of DMC is favoring the growth of deer populations throughout the northern part of the district. The lack of winter cover in this area is the limiting factor for the deer. An estimated peak population of 110 animals was recorded for the district.

   The WPA tracts are not large enough to provide adequate cover for deer to hide from the hunters. Deer are usually run out of an area in short order when hunting season starts. Once the season ends, the deer find their way back to the protective cover of the WPA tracts.

   A small band of 12 antelope used the Erickson WPA throughout the year. They wander back and forth across the North Dakota-Montana border in their feeding forays. Antelope were also seen on Mallard Pond and Outlet Marsh WPA's.

   Trapping of fur-bearing animals has become more than just common sport with the high prices of fur. The public land status of the WPA's make them targets for professional long-line trappers which come in from all over the U.S. Out-of-season trapping of muskrats was also noted on a number of the WPA's.

   The severe cold winter of 1976-1977 coupled with low water levels froze out approximately 60% of all the muskrats in the district. This year with water levels lower than ever and a winter that is colder than the last we probably won't have many muskrats next spring. However, with good water conditions, muskrats have a great ability to bounce back. The population this fall was estimated at 950 muskrats as compared to 2,900 last fall.

   Beaver are not common but are found on Johnson Lake, Salter, and Goose Lake WPA's. Other fur-bearing animals that are found throughout the area include red fox, coyote, badger, mink and raccoon. The raccoon is a pioneer in the area but is apparently finding enough denning sites in old building foundations that it is gaining a foothold and increasing.

2. **Other Mammals**

   Nothing to report.
3. Resident Game

Ring-necked pheasants, grey partridge, and sharp-tailed grouse are all on the increase. DNC on WPA tracts and additional cover from Water Bank Lands are undoubtedly adding to the increase. Areas that held no birds two years ago now have populations of pheasants but these areas are all characterized by heavy cover. Good populations of pheasants are found on Johnson Lake, Carlson, Big Slough, Goose Lake, and Salter WPA's. With adequate winter cover, upland game bird populations could increase greatly as there is plenty of food available in the stubble fields.

4. Other Animal Life

At present, none of the WPA tracts contain any game fish. Some of the deeper lakes were assessed this year of their value for supporting panfish and trout. We found that none of them would be suitable for sustaining a population because of their relatively shallow depth. Long Lake, Johnson Lake, Espen, Pintail Marsh and Mallard Pond WPA's are all known to contain fathead and stickleback minnows.

V. INTERPRETATION AND RECREATION

A. Information and Interpretation

1. On-Refuge

Initial contacts with two school systems in 1976 have led to the establishment of outdoor classrooms on two WPA tracts. The Froid school system is using Johnson Lake and the Westby school system is using State Line. Different projects dealing with wildlife populations were discussed with the teachers for use in the field.

2. Off-Refuge

It is difficult to separate interpretation between the refuge and the wetland district. Many of the programs given deal with both. Wildlife Week programs were given in the Plentywood and Westby school systems.

The district cooperates with the Daniels County and Sheridan County SCS office in the implementation of their Water Bank Programs.

B. Recreation

1. Wildlife Oriented

Public use visits to the wetland district from local people are just about non-existent. Deer season and waterfowl season attracts a limited number. Non-resident hunters pursuing waterfowl probably accumulated more visits to the district than local hunters this year.

Retired people and vacationing people that stop at Medicine Lake Refuge generally visit some of the closer WPA tracts for observing waterfowl.
Trapping has become an increasingly important activity to both local residents and non-resident long-line trappers in the past couple of years. Most muskrat trapping is done by local high school students trying to earn some extra money. Three years ago there probably wasn't a muskrat trapped in the district but now the competition is quite keen.

2. Non-Wildlife Oriented

Nothing to report.

C. Enforcement

The refuge generally patrols the district on the opening day of waterfowl and deer season. Although some violations probably occur, the district is so large and the users so few that you are lucky to even see anyone during a day's patrol.

Cattle trespass is still a problem on the district but is steadily going down hill with our increased fence patrols during the fall. If the tracts aren't checked weekly cattle will find their way in.

VI. OTHER ITEMS

A. Field Investigations

Nothing to report.

B. Cooperative Programs

Two Special Use Permits were issued for oil exploration on the Long Lake and Erickson tracts. Since the land was bought in fee title without the mineral rights, we cannot keep the tracts from being seismically explored, but we can spell out special conditions that protect the area as much as possible. These two permits were issued for a total return of $1,600.

C. Items of Interest

Nothing to report.

D. SAFETY

Nothing to report.