NORTHEASTERN MONTANA WETLANDS DISTRICT
MEDICINE LAKE, MONTANA

ANNUAL NARRATIVE REPORT
Calendar Year 1982

U.S. Department of the Interior
Fish and Wildlife Service
NATIONAL WILDLIFE REFUGE SYSTEM
PERSONNEL

1. Eugene D. Stroops, Refuge Manager
   Transferred in from Red Rock Lake NWR, 11/28/83
   GS-12  PET

2. Jay R. Bellinger, Refuge Manager
   Transferred out to Yukon Delta NWR, 06/12/82
   GS-9  PPT

3. Steven R. Brock, Assistant Manager
   Transferred in from Devils Lake WMD, 05/16/82
   GS-9  PPT

4. Steven W. Breeser, Assistant Manager
   Transferred out to Tetlin NWR, 03/06/82
   GS-5  PPT

5. Frances K. Larson, Refuge Assistant (Typing)
   Transferred out to Tetlin NWR, 03/06/82
   WS-5  PPT

6. Kermit E. Bolstad, Automotive Mechanic
   Transferred out to Tetlin NWR, 03/06/82
   WS-8  PPT

7. John E. Snellman, Maintenance Worker
   Transferred out to Tetlin NWR, 03/06/82
   WS-7  PPT

8. Carl S. Kampen, Maintenance Worker
   Transferred out to Tetlin NWR, 03/06/82
   WS-6  PPT

9. Dennis C. Nelson, Motor Vehicle Operator
   Transferred out to Tetlin NWR, 03/06/82
   WS-6  PPT

Reviews and Approvals

Submitted by: 2/17/83
Regional Office Review: 2/23/83
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2. Rehabilitation ................................................................ Nothing to report
3. Major Maintenance ........................................................ Nothing to report
4. Equipment Utilization and Replacement .......................... Nothing to report
5. Communications System ................................................. Nothing to report
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K. FEEDBACK

L. OTHER
HIGHLIGHTS

Natural wetland basins are finally full again after two years of severe drought. (Section B)

Five easement tracts, protecting 234 acres of wetland, were finalized in 1982. (Section C.2)

Oil and gas exploration declines this year in the Williston Oil Basin. (Section E.8)
B. CLIMATIC CONDITIONS

Relief finally came to the dry pothole area of northeastern Montana. After two years of blowing dirt and dry wetland basins, we finally received the needed winter snowpack necessary to refill the natural wetland basins.

A heavy snowpack of approximately 55 inches of snow with about 4 1/2 inches of precipitation was more than adequate to refill the wetland basins in early spring. Evenly spaced spring and early summer rain showers provided ideal growing conditions for grassland habitat.

C. LAND ACQUISITION

1. Fee Title

No fee title purchases were made in the district this year. With the lack of available funding, it is not expected to get any better in the near future. Very limited funding is available for the purchase of specific round-out properties if they are considered to be very high priority and necessary for management of the existing property.

The size of the individual waterfowl production areas vary from 1,657 acres at Goose Lake to 4.5 acres for the Muddy Creek Tract. Fifteen of the total 40 WPA's are larger than 160 acres. Many of these WPA's surround meandered waters. The meandered acres total 1,440 and are not included in the total acreage figures.

TABLE I. Fee Acquisition Program

<table>
<thead>
<tr>
<th>County</th>
<th>Number of Tracts</th>
<th>Number of WPA's</th>
<th>Total Acreage</th>
<th>Goal Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheridan</td>
<td>67</td>
<td>36</td>
<td>8,179.96</td>
<td>11,000</td>
</tr>
<tr>
<td>Daniels</td>
<td>5</td>
<td>3</td>
<td>646.41</td>
<td>2,000</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>2</td>
<td>1</td>
<td>179.20</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>74</strong></td>
<td><strong>40</strong></td>
<td><strong>9,005.57</strong></td>
<td><strong>14,000</strong></td>
</tr>
</tbody>
</table>

2. Easements

Final payments were made on five easement tracts in 1982. These five easements will protect an additional 234 acres. The average price paid for these five tracts was $184.00 per wetland acre.

TABLE II. Easement Acquisition Program

<table>
<thead>
<tr>
<th>County</th>
<th>Number of Easements</th>
<th>Wetland Acres</th>
<th>Total Acres</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheridan</td>
<td>106</td>
<td>6,223</td>
<td>53,273</td>
<td>$308,365</td>
</tr>
<tr>
<td>Daniels</td>
<td>6</td>
<td>262</td>
<td>2,106</td>
<td>34,700</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>10</td>
<td>1,007</td>
<td>7,178</td>
<td>66,700</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>122</strong></td>
<td><strong>7,492</strong></td>
<td><strong>62,557</strong></td>
<td><strong>$409,765</strong></td>
</tr>
</tbody>
</table>
E. ADMINISTRATION

5. Funding

Operational funds and personnel are incorporated with the Medicine Lake National Wildlife Refuge. No separate program is work planned for the district. See the refuge narrative for funding and staffing.

8. Other Items

The wetland district lies right in the middle of the Williston Oil Basin. A great deal of time and effort is expended in the administration of permits and inspections related to oil exploration and production activity.

All of the WPA tracts were purchased without the mineral rights. The title deed for these tracts states the mineral right owner will have the right of access for the exploration and development of minerals. As the surface owners of the property, we are able to place some stipulations on how exploration and development occurs. A special use permit is issued with conditions which must be met. Oil companies have been quite agreeable to any stipulations we have required. We have excellent relationships with both exploration and development companies and they have been cooperative and complied fully with all special conditions on the permits which are issued.

During 1982 seismic exploration was permitted on five WPA's. Total fees collected for surface damage was $4,938.00. This total compares to eleven WPA's and $13,793 in 1981.

Seismic exploration surface damage payments are set by the local Northeastern Montana Land and Mineral Owners Association. Rates vary depending on type of exploration used. Sub-surface exploration involving explosives set in shallow drilled holes require payment of $1,000 per mile regardless of the number of holes drilled or $150.00 per mile for track damage and another $150.00 per drilled hole. The new less damaging technique of surface vibrators pay $450.00 per mile for driven routes and $300.00 per mile for line walked across wet areas.

F. HABITAT MANAGEMENT

1. General

The Northeastern Montana Wetlands District is bound on the north by Canada, on the east by North Dakota, on the west by the Fort Peck Indian Reservation, and on the south by the Missouri River. This area is a continuation of the glacial pothole region of the Dakotas' and is commonly referred to as the Missouri Coteau.

Annual precipitation is from 10 to 14 inches with the majority of this coming as early spring snows and late spring rains. Surface and groundwater levels are almost entirely dependent on winter snowpack and spring run-off. Vegetation is of the mixed grass prairie type as this district lies in the transition zone between the tall and shortgrass prairies. Cool season grass species predominate with scattered shrub communities. Trees exist only in planted shelterbelts.
2. **Wetlands**

Waterfowl returning in the spring were met with ideal water conditions in 1982. Unlike the previous two disastrous drought years, all wetland basins in the district were in excellent condition in early spring. This was the result of heavy runoff from the 55 inch snowpack.

All wetland basins in the district are naturally occurring, glaciated potholes. Some of the larger deeper wetlands are permanent water bodies, except during the most severe droughts. The majority of the basins are temporary wetlands which provide spring breeding pair habitat and then become dry in mid-summer.

There is presently only one water management facility on the district. This structure impounds water on Johnson Lake WPA and creates a permanent body of water.

4. **Croplands**

Cooperative farming is used on three WPA's in an attempt to lessen waterfowl crop depredation on neighboring private lands.

Widgeon Slough WPA contains 44.5 acres of cropland. Of this acreage 25 acres was summer fallowed and 19.5 acres was planted to small grain. Our share was 6.5 acres left standing.

Goose Lake WPA has 104 acres of cropland. Fifty-two acres were summer fallowed and 62 acres seeded to small grain. Our share was 21 acres left standing.

Frickson WPA has 172.6 acres of cropland. The sandy-loam topsoil with gravel layers below will not retain soil moisture when summer fallowed, thus this entire acreage is seeded each year. Our share left standing was 57.5 acres.

Waterfowl depredation complaints have been common in the past. However, in the last two years no complaints were received. Though the small acreages of grain provided could be quickly consumed by waterfowl, resulting in them moving to private grain fields, the fact that we do provide some feed helps with our public relations program.

In preparation for DNC establishment, 295 acres was summer fallowed for the second year using force account. The areas involved were 257 acres on Goose Lake WPA and 38 acres on Redhead Retreat WPA. These fields are scheduled to be seeded to DNC in the spring of 1983.

5. **Grasslands**

The WPA district contains approximately 2,600 acres of native grassland, 1,750 acres of DNC, and 1,150 acres of introduced grasslands. This introduced grasslands is mainly crested wheatgrass and will eventually be converted to DNC.

No haying or grazing was permitted on any of the WPA's in 1982. Trespass cattle grazing continues to be a problem. In an area considered open range, where cattle are released in the fall to graze freely, it is our responsibility to fence cattle out.
Fence maintenance is a constant chore. Our most common problems are gates being carelessly (or intentionally) left open, wires snapping from contraction during intense cold or heavy snow drifts, and cattle walking on ice around the end of fences at lake shores.

At present, no active management program is being conducted on the districts native grasslands. Plans include fire as a management tool on some areas, however timing of burns on cool season grasses are difficult to schedule due to the short time period prior to their green-up. Intensive grazing and haying will probably be used to a greater extent in the future.

10. Pest Control

We are required by State law to control noxious weeds on government lands. Canada thistle is the target species for our control effort. In 1982, twenty acres were sprayed on Flaxville WPA and two acres on Base Camp WPA. We have been treating this acreage with 2 pounds acid equivalent per acre of 2,4-D Amine.

Our efforts have been aimed at treating the problem areas. If surrounding landowners do not attempt control on their properties there is little sense or need in our attempted control of this weed problem.

Fortunately, leafy spurge has not been located on any WPA. This noxious weed is just now getting started in this area and we are watching closely for any new infestations of this weed.

13. WPA Easement Monitoring

A drainage violation on Sheridan County 20X is still pending. This violation occurred in the fall of 1981. Difficulties in determining current ownership, following the recent death of the original landowner, has resulted in this delay.

The fall surveillance flight in 1982 detected no new violations. This was a pleasant treat following the active year of 1981 when the first four violations in the district were detected.

G. WILDLIFE

1. Wildlife Diversity

The various types of habitats available within this wetlands district provide habitat for a diverse array of wildlife. The wide variety of semi-permanent wetlands, larger permanent bodies of water, native grasslands, introduced grasslands, shrub communities, and surrounding agricultural land all provide habitat for many wildlife species.

2. Endangered and/or Threatened Species

Whooping cranes traverse the district each year during their spring and fall migration. We rely primarily on neighbors in the area to report sightings of these birds. No sightings were recorded in the district in 1982.
Peregrine falcons and bald eagles both are known to migrate through the area. Again no sightings were recorded in 1982.

3. Waterfowl

Waterfowl returning this spring were met with excellent water conditions throughout the district. This broad expanse of available water provided the breeding pairs the opportunity to disperse into much more habitat than was available during the last two drought years. Our breeding pair census demonstrated this well, with a drop from 2,013 pairs in the dry spring of 1981 to 919 pairs in the wet spring of 1982. Our waterfowl production estimate based on the number of breeding pairs displayed a similar decline. This shows how important available permanent water is on WPA's during the dry years.

### TABLE III. Duck Production by Species

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue-winged teal</td>
<td>1688</td>
<td>4242</td>
<td>3886</td>
<td>59</td>
<td>2757</td>
</tr>
<tr>
<td>Gadwall</td>
<td>1046</td>
<td>3496</td>
<td>2678</td>
<td>1950</td>
<td>1148</td>
</tr>
<tr>
<td>Mallard</td>
<td>637</td>
<td>2127</td>
<td>1900</td>
<td>1691</td>
<td>119</td>
</tr>
<tr>
<td>Lesser Scaup</td>
<td>1394</td>
<td>2207</td>
<td>1696</td>
<td>1531</td>
<td>1164</td>
</tr>
<tr>
<td>Redhead</td>
<td>112</td>
<td>522</td>
<td>828</td>
<td>363</td>
<td>139</td>
</tr>
<tr>
<td>Ruddy</td>
<td>524</td>
<td>879</td>
<td>811</td>
<td>560</td>
<td>396</td>
</tr>
<tr>
<td>Wigeon</td>
<td>228</td>
<td>737</td>
<td>702</td>
<td>690</td>
<td>453</td>
</tr>
<tr>
<td>Shoveler</td>
<td>1139</td>
<td>1537</td>
<td>686</td>
<td>1389</td>
<td>1309</td>
</tr>
<tr>
<td>Pintail</td>
<td>504</td>
<td>408</td>
<td>622</td>
<td>1102</td>
<td>646</td>
</tr>
<tr>
<td>Green-winged teal</td>
<td>81</td>
<td>416</td>
<td>404</td>
<td>357</td>
<td>153</td>
</tr>
<tr>
<td>Canvasback</td>
<td>313</td>
<td>379</td>
<td>106</td>
<td>177</td>
<td>131</td>
</tr>
<tr>
<td>Bufflehead</td>
<td>0</td>
<td>29</td>
<td>99</td>
<td>80</td>
<td>17</td>
</tr>
<tr>
<td>Ring-necked duck</td>
<td>0</td>
<td>0</td>
<td>37</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Cinnamon Teal</td>
<td>0</td>
<td>0</td>
<td>28</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Total 7666   17069   14455   14194   9249

The fall migration reached its peak in mid-October at 39,850 birds. This peak is a reduction of 54% over the previous year of 87,540 birds. This reduction can again be attributed to the excellent water conditions throughout this general area that were available this fall, resulting in the dispersal of migrating birds.

All census counts are limited to Fee Title WPA's. No estimate is made for easement wetlands.

No botulism outbreaks were observed in the district this year.

4. Marsh and Water Birds

Census data is not regularly recorded for these birds. Common nesters include: eared grebes, western grebes, horned grebes, pied-billed grebes, American bittern, black-crowned night herons, and Sora rails.
Pelicans and cormorants from Medicine Lake will use those wetlands which are deep enough to hold minnow populations.

5. **Shorebirds, Gulls, Terns and Allied Species**

As is the case with marsh and water birds, these species are not censused on a regular basis. Large movements of these birds are common during migration. Common nesters include: black terns, Wilson's phalarope, American Avocet, common snipe, willet, upland plover, and killdeer.

6. **Raptors**

Nesting species include the marsh hawk, Swainson's hawk, short-eared owl, and western burrowing owl.

Fall migrants include the rough-legged hawk, American Kestrel, and snowy owl.

Other occasional visitors include golden eagles, great horned owls, and prairie falcons.

Refuge personnel, in cooperation with the State of Montana, conduct an early summer raptor survey. This 50 mile route was developed to cover several of the WPA's in the district.

7. **Other Migratory Birds**

Mourning doves are a common nester in old shelterbelts found on several of the WPA's.

8. **Game Mammals**

Many of the larger WPA tracts have a high white-tailed deer population associated with them. The 1,096 acre Erickson WPA has been wintering 150 to 200 deer each year. The large amount of winter cover provided by new DNC fields has been the attractant on this area.

The 320 acre Salter WPA also winters in excess of 100 deer. The deer are attracted to this area in the winter by the extensive bullrush stands in the bottom of the large coulee.

Other WPA's such as Goose Lake, Big Slough, Base Camp, Redhead, Long Lake, and Outlet Marsh all have deer herds ranging from 10 to 50 animals.

With the planned increase of DNC establishment in the next few years on the WPA District, the deer herd will surely mushroom as it has on the Medicine Lake Refuge. The habitat that a new DNC stand provides appears to be what the prairie white-tailed deer herd requires to survive this harsh winter environment.

Hunting pressure over most of the district is very light. Erickson and Salter WPA's in close proximity to the Medicine Lake Refuge, have become favorite hunting areas for many hunters.

Fur-bearing animals that are found throughout the district include beaver, coyote, fox, badger, raccoon, muskrat, striped skunk, and long-tailed weasel.
Trapping remains attractive for some species. The fox population appears to be on the increase after several years of reduced populations. Interest in muskrat trapping remains low due to suppressed populations and low fur prices.

10. Other Resident Wildlife

Cropland and DNC plantings are directly responsible for sustaining pheasant populations throughout the district. Erickson WPA has the highest population of pheasants, while Goose Lake, Salter, Big Slough, Johnson Lake, Carlson and Base Camp WPA's all have smaller populations.

Sharptail grouse are common on most tracts. However, similar to the Medicine Lake Refuge, this population showed a drastic decline in 1982.

Hungarian partridge are found on those tracts which have old shelterbelts or areas of brush in close proximity to grain fields.

11. Fisheries Resources

Long Lake WPA and Mallard Pond WPA both have a known population of northern pike. These lakes are both connected to the main drainage that flows into Medicine Lake. During years of high water runoff, the northern pike have run upstream into these lakes. Very little fishing pressure has been recorded on these areas.

H. PUBLIC USE

1. General

This WPA District is not located near any large population centers and is fairly distant to any major travel routes. This isolation has kept public use on these areas to a minimum. The majority of the public use on these areas has involved consumptive use of wildlife. Total visits to WPA's in 1982 were 1,045 and represent a 14% reduction from last year. General public use of these areas has been declining since 1980. This is directly attributed to reduction in duck hunting pressure, the economic recession and possibly to the endrin pesticide scare.

8. Hunting

Of the 1,045 total visits to the WPA's an estimated 527 were involved with hunting. Deer hunting accounted for 335 visits, while 107 visits were in pursuit of waterfowl, and 85 visits for upland bird hunting.

10. Trapping

Trappers made an estimated 150 visits to the WPA's. Most of this effort was in pursuit of fox.
J. OTHER ITEMS

3. Credits

Assistant Manager Brock wrote the report, Manager Stroops edited the report and Refuge Assistant Larson typed and assembled the report.