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# MADISON WETLAND MANAGEMENT DISTRICT
Madison, South Dakota

## ANNUAL NARRATIVE REPORT
Calendar Year 1979

NATIONAL WILDLIFE REFUGE SYSTEM
Fish and Wildlife Service
U. S. DEPARTMENT OF THE INTERIOR

TABLE OF CONTENTS


PERSONNEL

| | | |
|---|---|---|
| 1. | David L. Gilbert | Refuge Manager GS-11 (PFT) |
| 2. | Bruce T. Schoonover | Asst. Refuge Manager GS-9 (PFT) |
| 3. | Earl R. Hyink | Biological Technician GS-7 (PFT) |
| 4. | Dorothy E. Tomscha | Refuge Assistant (Steno) GS-5 (PPT) |
| 5. | Harry T. Jones | Tractor Operator WG-6 (PFT/CS) 4/9/79 - 11/30/79 |
| | Steven R. Umland | Biological Aid GS-4 (TEMP) 5/14/79 - 8/31/79 |
| | Christopher R. Sylvia | Biological Aid GS-3 (TEMP) 6/4/79 - 9/7/79 |

REVIEW AND APPROVALS

Harry T. Gilbert 8/21/80
Submitted by Date

Area Office Date

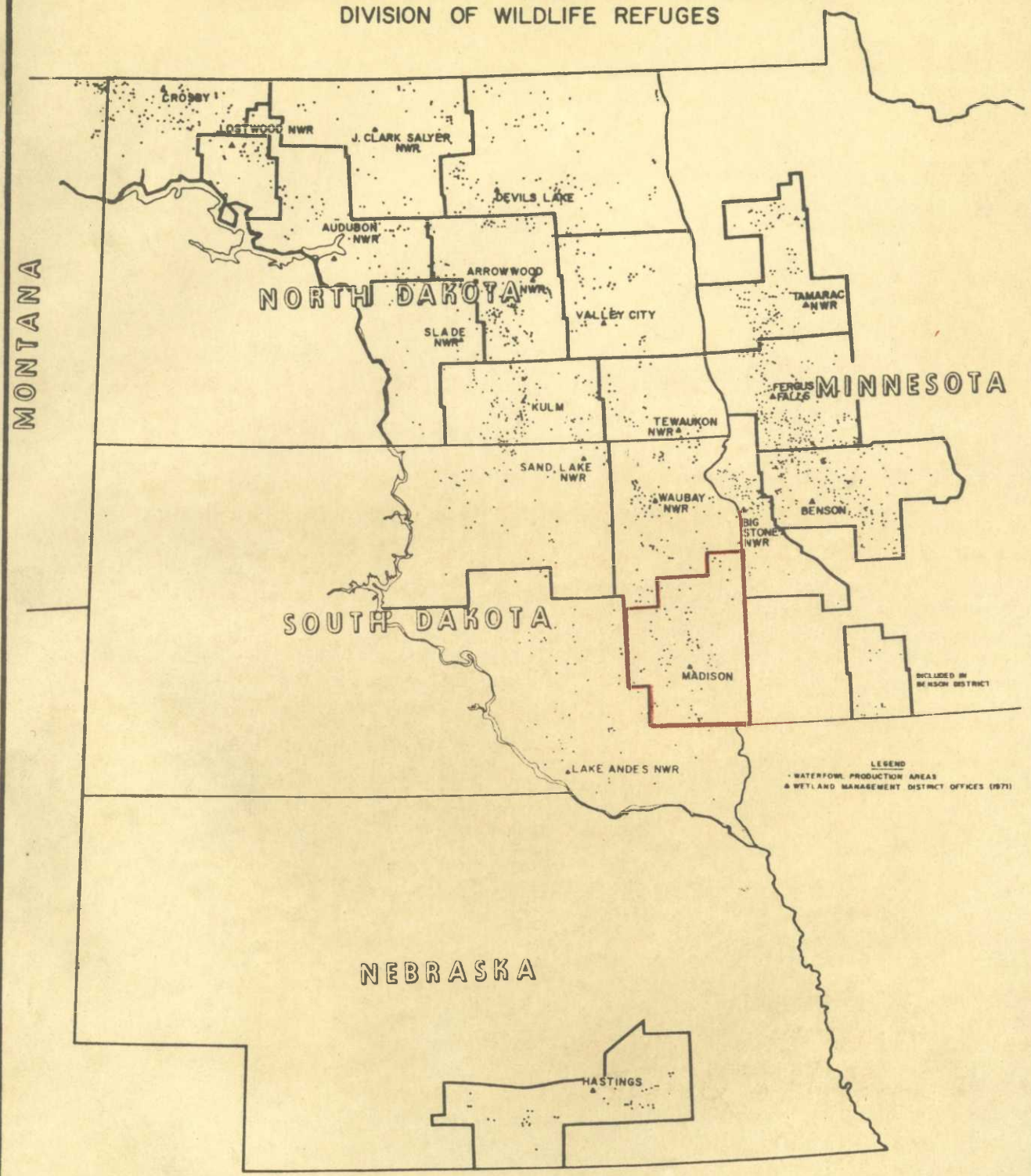
Dennis J. Wilson 5/27/81
Regional Office Date

# WATERFOWL PRODUCTION AREAS

## UNITED STATES DEPARTMENT OF THE INTERIOR

### BUREAU OF SPORT FISHERIES AND WILDLIFE

### DIVISION OF WILDLIFE REFUGES



# NARRATIVE REPORT

## I. GENERAL

### A. Introduction

Madison Wetland Management District administers Waterfowl Production Areas (WPAs) and wetland easements in nine east central South Dakota counties. The two hundred WPA management units range up to one hundred and five road miles from the headquarters.

### B. Climatic and Habitat Conditions

1979 was generally a very good year for wildlife habitat in South Dakota. Snowfall was above normal, but winter winds were lighter than usual with few blizzard days recorded. Late April wetland conditions were good to excellent across the district and remained so during the year. Excellent rainfall amounts and distribution provided very good vegetative growth. Cover on private lands remained somewhat better than normal with cattle numbers continuing to be somewhat depressed as a result of the livestock sell-offs during the 1976 and '77 drought.

1979 offered a record cold January with average temperature of .16 degrees below zero. The old record was established only one year earlier when January of 1978 averaged 1.35 degrees. Temperature remained below freezing for a sixty-two day period ending February 22. Twenty-eight inches of snow were received during January and February. Snow on the ground averaged about one foot during January, two feet in February and one foot in early March. Snow melt was gradual with little significant flooding. Very little snow remained after mid-March.

April and May were cool and wet. Farmers had done very little field work before the first of May. Summer moisture was excellent with three to four and a half inches of rain received each month.

Fall precipitation was moderate. Nine inches of snow was received on November 21. It melted by early December, and the weather remained mild and dry through the end of the year.

### C. Land Acquisition

#### 1. Fee Title

Fee title acquisition for the year totalled 1027.15 acres, down from 1265.5 acres in 1978 (Table 1).

Table 1. Fee Acreage

| County | Total Acres Optioned FY 78 | Total Acres Optioned FY 79 | Total Fee Acres |
|---|---|---|---|
| Brookings | 3466.36 | ---- | 3466.36 |
| Deuel | 2856.46 | ---- | 2856.46 |
| Hamlin | 1692.95 | 563.36 | 2256.31 |
| Kingsbury | 2572.17 | 449.19 | 3021.36 |
| Lake | 4263.00 | 14.60 | 4277.60 |
| McCook | 2910.46 | ---- | 2910.46 |
| Miner | 1578.08 | ---- | 1578.08 |
| Minnehaha | 3541.23 | ---- | 3541.23 |
| Moody | 1466.74 | ---- | 1466.74 |
| Totals: | 24347.45 | 1027.15 | 25374.60 |

2. Easements

The total number of easement wetland acres acquired in 1979 was 2,903. In 1978, the figure was 4,491; 1977 was 2,095. (Table 2).

Table 2. Easement Acreage

| County | Easement Wetland Acres FY 78 | Easement Wetland Acres FY 79 |
|---|---|---|
| Brookings | 1,989 | 2,285 |
| Deuel | 3,719 | 4,006 |
| Hamlin | 3,089 | 4,125 |
| Kingsbury | 13,851 | 14,464 |
| Lake | 2,070 | 2,096 |
| McCook | 3,236 | 3,556 |
| Miner | 6,956 | 7,072 |
| Minnehaha | 165 | 356 |
| Moody | 13 | 31 |
| Totals: | 35,088 | 37,991 |

D. System Status

1. Objectives

The station objectives were revised substantially in CY 77. In 1979, they remain unchanged (Table 3).

Table 3. 1979 Objectives

| Output | Objective Level | | Current Level |
|---|---|---|---|
| Interpretation | 3,600 | A. H. | 600 |
| Education | 350 | | 150 |
| Recreation Wl-Cons. | 143,000 | | 100,000 |
| Recreation, Non-Cons. | 13,000 | | 9,000 |
| Recreation, Non-Wl. | 100 | | 100 |
| F & W Information | 400 | | 300 |
| Studies | 1 | Each | 0 |
| Co-op Programs | 5 | | 5 |
| Nat. Envir. Pres. | 65,000 | Acres | 63,000 |
| Threatened Spp. Maint. | 50 | U.D. | 50 |
| W. F. Maint. | 21,000,000 | | 15,000,000 |
| Other Mig. Bird Maint. | 5,000,000 | | 4,000,000 |
| W. F. Prod. | 85,000 | | 60,000 |
| Species Donated | 10 | Each | 10 |
| Economic Benefits | $6,000 | | 5,000 |

2. Funding and Staffing

FY 79 funding and manpower is tablulated below (Tables 4 and 5).

Table 4. Funding

| FY | 1210 | 1220 | 1500 | Constr. 2821-6M | 8821-64 | Total |
|---|---|---|---|---|---|---|
| 77 | 77,575 | 1,030 | 6,500 | 12,800 (vehicle replacement) | 89,860<br>87,360 (Brood pond Contract)<br>2,500 (O&M, contract inspection) | $188,289 |
| | 1210 | 1220 | 1240 | 2721-G3 | | |
| 78 | 98,200 | 600 | 5,300 | 24,500 | | $128,600 |
| | 1210 | 1220 | 1240 | 2821-TX (BLHP) *** | | |
| 79 | 113,200* | 900 | 7,000** | 221,000 (Headquarters Construction) | | $342,100 |

* Includes $13,000 cyclical maintenance
** Includes $1,000 cyclical maintenance
*** Bicentennial Land Heritage Program

Table 5. Mandays

| FY | PFT | PPT | TEMP. | TOTAL |
|---|---|---|---|---|
| 77 | 522 | 688 | 80 | 1290 |
| 78 | 440 | 638 | 147 | 1225 |
| 79 | 520 | 638 | 150 | 1308 |

## II. CONSTRUCTION AND MAINTENANCE

### A. Construction

#### Headquarters

A contract was let in November for construction of a new office on the Payne WPA. Successful bidder was Four-Square Construction of Sioux Falls at a cost of $233,000 including an active solar heating unit. Actual construction was begun in December with plans to continue work throughout the winter. (Figure 2)

Figure 2. (west) Our new headquarters is being constructed on the Payne WPA (lower right); Madison WPA is in the upper left. 79/25-13 10/4/79 DLG

The new space is badly needed for several reasons. The present leased space is grossly inadequate from the standpoint of maintenance, service, parking area, location, and hazard of access to the highway as located on the curve. (Figures 3 & 4)

Figure 3. On July 30, a drunken driver decided to drive <u>through</u> our office instead of <u>around</u> it. Luckily, the accident occurred at 5:30 p.m., and all staff had gone home for the day. A similar accident during business hours would have put a 13' X 5' piece of window glass on the secretary's head. 79/20-14
7/30/1979 DLG

Figure 4. For the next three months, while our landlord slowly repaired damages, the parking lot looked like this. 79/22-15
9/25/79 DLG

Because of highway rerouting as of this year, our leased space is no longer on a State Highway; our new location (two miles east) will be. We will be able to make better use of an existing storage building at the site and plan to add a shop building in the near future. The new office building with individual offices for staff members and a small display and meeting room will improve the efficiency of our operations and provide better service to the public. Actual dollar savings of occupying owned space (compared to present leased costs of about $8,000. a year) were hoped for, but will not be realized due to the design of the office and the very high bid price resulting. (Figures 5, 6, & 7)

Figure 5. This existing building will be used as a temporary shop and storage building. It is constructed of 2" tongue in groove redwood and is scheduled for remodeling in FY 80 with BLHP funds.
79/50-24
12/18/79 BTS

Figure 6. Gilbert inspects the cement pouring for the new office foundation. The temperature on this day, December 18, was $48^{0}$ F.
79/50-17
12/18/79 BTS

Figure 7. Roof! What roof? We'll definitely need a "change order" for that!!

79/53-19
1/ 2/80 BTS

# II. CONSTRUCTION & MAINTENANCE

## A. Construction

### Fencing

A total of 520 rods of new fence was constructed in FY 79. In addition, 220 rods of existing boundary fence received extensive repairs. (Table 6)

Table 6. Fencing (FY 79)

New Fence Construction

| WPA | County | Type Fence | Rods Fenced |
|---|---|---|---|
| Fischer-Cole | Lake | 3 strand barb | 150 |
| Geardink | Brookings | 5 strand barb | 80 |
| Matson | Brookings | 4 strand barb | 60 |
| Muller | Miner | Woven - 3 strand barb | 230 |
| | | Total rods new fence | 520 |

Fence Repaired

| WPA | County | Type Fence | Rods Repaired |
|---|---|---|---|
| Nordquist | Deuel | 4 strand barb | 80 |
| Wayrynen | Hamlin | 3 strand barb | 80 |
| Gerry | Lake | 4 strand barb | 60 |
| | Total rods fence repaired | | 220 |

## B. Maintenance

### 1. Signs and Posting

Vandalism of WPA boundary signs is perhaps not on the increase, but it is getting no better. Replacement of destroyed signs remains a continual "Rainy Day" project at this station, with no end in sight. In FY 79, 97 WPA signs were replaced before the fall hunting season.

2. Site Clean-ups

Several building site clean-ups were scheduled in FY 79. At the request of the purchasers, the deadline for building removal was extended for a short time, and the site clean-ups were rescheduled for FY 80.

3. Earthwork

Fencing debris and rocks were buried on the Madison WPA with our new 825 Bobcat purchased with BLHP funds. Approaches for access to several WPAs were constructed. (Figure 8)


Figure 8. Hyink buries old fence on Madison WPA. The Bobcat is a handy piece of equipment for the clean-up of rock and junk piles existing on WPAs throughout our district. 79/17-15
6/14/1979 DLG

4. Roads

Roadsides were mowed on all Township roads adjacent to WPAs. County roads were mowed by the Counties. The gravel tour road extending through the Madison WPA was smoothed out and regravelled. Several portions of the road were moved from the original route to eliminate continual potholes and an erosion problem. (Figure 9)


Figure 9. Steve Umland digs up a culvert on the Madison WPA tour road. 79/20-9
7/24/79 ERH

C. Wildfires

Approximately 47 acres was burned in a wildfire on the Kopperud WPA in Kingsbury County on October 5, 1979. The fire was put out by the DeSmet Fire Department. The fire burned approximately 16 acres upland, 24 acres marsh, and 7 acres willows of the 130 acre WPA. Probably the greatest harm resulting from the fire was destruction of winter cover on a WPA used quite heavily by resident species such as deer and pheasants. Some benefits are expected also in opening up choked type III marsh and increasing tall native grasses in upland cover. (Figure 10)

Figure 10. This wildfire on the Kopperud WPA occurred on October 5, 1979. (south east)

79/28-15
10/21/1979 DLG

# III. HABITAT MANAGEMENT

## A. Croplands

### 1. Food Plots

In the past we have not maintained many wildlife food plots because few of our WPAs include enough suitable cropland. Also, because of low upland/water ratios, it was felt the upland nesting cover could not be sacrificed.

In FY 78, rotation food plots were in effect on four WPAs (Bjornlie, Lake Henry, Buffalo Lake, and Murfield). In FY 79, food plots were added on an existing WPA where there is sufficient upland, and on new WPA purchases that have a good upland/water ratios. These include the Madison, Opdahl Slough, and Hyde WPAs. Usually, these plots are set up in a 3-field rotation system totalling 30 - 45 acres, so that 1/3 will be corn, 1/3 small grain, and 1/3 standing sweet clover on any one year. These food plots are put in by cooperative farmers, with our share being 1/2 the corn, which is left standing.

### 2. Plantings

When WPAs are acquired, the upland is usually of marginal farming quality, and is critical to nesting needs for maximum waterfowl production. Our first priority for planting of nesting cover has been a grass/legume mixture because the seed is cheaper, establishment is faster, and it provides excellent cover. Increasingly, however, we have been planting a mixture of native grasses. With an increasing weed control program, we have found that in many cases the grass/legume mixtures are short lived due to spraying of noxious weeds. In native grass, noxious weeds can be controlled without deterioration of the nesting cover. Also, while native grasses cost more to seed initially, with proper management the nesting quality continues to improve, and the seeding is a one-time expense. Nest dragging done in FY 78 and FY 79 has indicated that, at least in this district, there is little difference in total waterfowl production between the grass/legume and native grass mixtures.

Reseeding of depleted land is usually handled by use of a cooperator to farm the last one or two years to reduce existing undesirable cover. (Figure 11 Garrett WPA)

Figure 11. The Garrett WPA was broken up by a cooperator in 1979. It was planted to corn (treated with Atrazine) to reduce a low vigor assortment of Quackgrass, Kentucky bluegrass, Crested wheatgrass, and thistles. A food plot of standing corn is being left standing. The unit will be seeded to native grass with an oats nurse crop.

Mixtures are listed below:

GRASS/LEGUME

| Species | Lbs./Acre PLS |
|---|---|
| Sweet clover | .5 |
| Ranger alfalfa | 1.5 |
| Red clover | 1.0 |
| Tall wheatgrass | 2.5 |
| Switchgrass | 1.0 |
| Green needlegrass | .5 |
| | 7.0 |

NATIVE GRASS

| Species | Lbs./Acre PLS | % of full seeding for each species |
|---|---|---|
| Blue grama | .04 | 2 |
| Side-oats grama | .09 | 15 |
| Big bluestem | 1.35 | 27 |
| Little bluestem | .04 | 10 |
| Indiangrass | 1.35 | 27 |
| Buffalograss | .04 | 2 |
| Western wheatgrass | 1.00 | 14 |
| Slender wheatgrass | .25 | 5 |
| Switchgrass | 1.25 | 36 |
| Green needlegrass | 1.00 | 17 |
| TOTAL: | 7.58 | 155% |

A total of 470 acres on nine WPAs were seeded to nesting cover in FY 79. All native grass seedings were done force account with our John Deere grassland drill. Cooperator-owned grain drills are not equipped to handle fluffy native grass seed and the results have been poor. The grass/legume mixtures were seeded by cooperators. See Table 6 for a summary of these plantings.

Table 6 Nesting Cover Plantings (FY 79)

| WPA | County | Acres | Type | Cooperator |
|---|---|---|---|---|
| Geardink (102) | Brookings | 30 | G/L | Milt Pederson |
| Ramsey (111) | Lake | 50 | G/L | Milt Pederson |
| Severson (132) | Deuel | 25 | NG | Darrell Bowman |
| Milton (134) | Deuel | 15 | NG | Clarence Milton |
| Opdahl Slough (67) | Hamlin | 9 | NG | Dale Everson |
| Peterson (124) | Hamlin | 30 | NG | Martin Peterson |
| Hyde (156) | McCook | 167 | NG | Joe Tschetter |
| Lost Lake (47) | Minnehaha | 100 | NG | John & Ron Petri |
| Munce (35) | Minnehaha | 44 | NG | Dale Bucher |

Total acres nesting cover planted - 470*
*80 acres grass/legume; 390 acres native grass

B. Grasslands


Figure 12. Photopoints and grassland transects were established on several WPA's for habitat condition documentation. This WPA in Deuel County is scheduled for a spring graze in 1981 at the rate of 1 AUM per acre.

79/20-24
8/21/79 DLG

1. Haying

Approximately 15 acres of grass/legumes was hayed after July 10 for reduction and preventing seed production of Canada thistles on the De Neui WPA (#85) in McCook County.

2. Grazing for mulch removal and the reduction of Kentucky bluegrass, quackgrass, and bromegrass in native grass stands has become an expanding program in the district. With increased native grass seedings, we are relying heavily upon grazing as a management tool that returns some benefits to the public sector, accomplishes our objectives regardless of spring weather conditions, and allows us to treat the necessary areas in our 9 County district in the short period of time available.

The grazing period in this district is usually the month of May, but may vary slightly depending on the area and the weather. The intent is to reduce the cool season grass invaders and remove accumulated mulch, so that the vigor and incidence of warm season native grass will increase. In FY 79, the grazing rate was mostly one AUM per acre, and results were generally excellent. The grazing fee was $5.50 per AUM. Collections for grazing this year totalled $2,740.00. See Table 7.

Table 7 Grazing (FY 79)

| WPA & County | Period of Use | Permittee | Acres Grazed | AUM'S |
|---|---|---|---|---|
| Moody | | | | |
| Fannie Anderson (31) | 4/30-5/31 | Jim Van Hecke | 40 | 44 |
| Lake | | | | |
| Madison (44,94,97) | 4/30-5/31 | Tom Wolf | 78 | 81 |
| Alquire (41) | 4/30-5/31 | Milton Pederson | 33 | 33 |
| Brookings | | | | |
| Brookings (33) | 4/30-5/31 | Lody Cihak | 50 | 55 |
| Matson (32,79) | 4/25-5/31 | Loren Olesen | 42 | 42 |
| Wenk (76) | 4/28-5/31 | Melvin Risty | 85 | 85 |
| Geardink (15) | 4/30-5/31 | Ray Nelson | 27 | 25 |
| Errington (50) | 5/ 3-6/5 | Gordon Goodfellow | 35 | 35 |
| Hamlin | | | | |
| Wayrynen (30) | 5/ 2-6/6 | Bob Tillma | 49 | 49 |
| Preston (37) | 5/20-5/31 | Earl Pearson | 7 | 7 |
| McCook | | | | |
| Janssen (10a) | 4/30-5/31 | Ron Stahl | 70 | 70 |
| Sabers (16a) | 5/10-5/31 | LeRoy Streff | 41 | 40 |
| Minnehaha | | | | |
| Fods (41) | 4/30-5/31 | Neal Busser | 75 | 75 |
| Kindt (32,35,39) | 4/28-5/31 | Dale Bucher | 85 | 80 |
| Wise (24) | 5/ 8-5/31 | Mrs. Dean Becker | 29 | 35 |
| Johnson (17) | 5/14-6/ 2 | Neal Even | 36 | 36 |
| | | Total acres grazed: | 782 | 792 |

3. Prescribed Burning

Early spring (April - May) burns in the Madison WMD have proven to be an excellent control method of Kentucky bluegrass and bromegrass invasion in stands of native grass. (Figure 13)

Figure 13. Schoonover and Hyink roast hotdogs on the Nordquist WPA. Note the excessive mulch and Kentucky bluegrass invasion in this native grass upland.79/10-2 5/15/79 DLG

To be effective, the burns must be timed when the cool season invading grass species are beginning their growth, but are still dry enough to burn. One difficulty with using fire as a management tool is the weather. While conditions for burning might be favorable at headquarters, by the time we drive 100 miles to the potential burn site, the wind might be strong and gusty, or it might be raining. In 1979, despite the weather, we were able to effectively burn four separate areas totaling 64 acres. See Table 8.

Table 8 Prescribed Burning (FY 79)

| WPA | County | Date | Acres |
|---|---|---|---|
| Madison (44a) | Lake | 4/24/79 | 1 |
| Nold (105) | Lake | 4/30/79 | 30 |
| Jensen (16) | Moody | 5/ 3/79 | 13 |
| Nordquist (27) | Deuel | 5/15/79 | 20 |

Total acres burned = 64

4. Weed Control

State law requires control of noxious weeds. County Commissioners in our District have used weed control as a major consideration in approval of fee title purchase. Consequently control of noxious weeds has become one of our largest management projects. In FY 79, 2,4-D in the amine and low volatile ester formulations were used exclusively.

This station uses two 4x4 mounted 300 gallon boom sprayers with hand hoses. In addition, in 1979 a 150 gallon unit with hand hose was purchased. It is used primarily for fire control and spot spraying of problem areas. (Figure 14)

Figure 14. Chris Sylvia sprays Canadian thistle on the Madison WPA.

Weed control usually begins in mid-May with the spraying of Leafy spurge and Wormwood sage with low volatile ester. During June, both 300 gallon units are kept busy full time spraying Canada thistle with amine and then low volatile ester after mid-June. During early July, one unit is able to handle complaints and patches missed earlier. By mid-July, Canada thistles are forming seed, and spraying is not very effective. We then clip them with a mower to prevent seed production. During the hot, dry summer, spraying is not very effective. By early September, fall rains and cooler weather usually trigger regrowth of the mowed areas, and

fall spraying of these areas becomes necessary. See Table 9.

Table 9 Weed Control (FY 79)

SPRAYING

| County | Acres Canada thistles | Acres Leafy spurge | Acres Wormwood sage |
|---|---|---|---|
| Brookings | 275 | 139 | 0 |
| Deuel | 4 | 26 | 0 |
| Hamlin | 33 | 0 | 3 |
| Kingsbury | 92 | 5 | 8 |
| Lake | 73 | 62 | 0 |
| McCook | 40 | 0 | 48 |
| Miner | 5 | 0 | 0 |
| Minnehaha | 329 | 21 | 0 |
| Moody | 25 | 25 | 0 |
| | 876 | 278 | 59 |

Total acres weeds sprayed = 1213.

MOWING

| County | Acres Mowed |
|---|---|
| Kingsbury | 26 |
| Lake | 2 |
| McCook | 57 |
| Minnehaha | 112 |
| Total acres mowed = | 197 |

5. Bee Keeping

One bee keeping permit was issued for the Kopperud WPA in Kingsbury County in 1979. Harry Jones is allergic to bee stings, and because of potential health hazards to him and other visitors, bee keepers are encouraged to keep their bees on private land in the area of the WPA. In this way, the bees receive the benefit of the foliage on the WPA while posing the least possible threat to people in the area.

C. Wetlands

Nearly all wetlands in the district are natural basins, and we have no control of water levels. We had intended to do some mowing over the ice in and around the edges of some of our more choked wetlands to open them up for pair use, but the winter of 1979 was unusually mild. It was felt the ice in most cases would not support any equipment capable of doing the job.

D. Forest Lands

No actual forest land exists in the district. Several of our WPA's do have shelterbelts, and trees that surrounded old building sites. Also, volunteer willows and cottonwoods are commonly found around the marsh edges.
In 1979, one tree planting of several acres was planted on the Delbridge WPA in Minnehaha County by the biology class of Sioux Falls Lincoln High School. (Figure 15)

Figure 15. The biology class of Sioux Falls Lincoln High School plants trees on the Delbridge WPA.

E. Other Habitat

N/A

F. Wilderness

N/A

G. Easements for Waterfowl Management

The easement program, both surveillance and enforcement, has been a very large activity at this station. Much time is spent flying and checking files to detect easement violations, ground checking the violations for photos and record data, contacts with the land owners, more ground checks to insure satisfactory compliance, and sending of certified letters to record progress. Most violations are by tenants that were unaware of the easement, or new land owners that were unaware of or "didn't understand" the provisions of the easement. Most violations are plow ditches and restoration compliance is generally fair to good. (Figures 16 & 17)

Figure 16. This ditch completely drains an area that the farmer said "can't be a wetland. It never has water in it. It's only a little damp in the spring." Kingsbury County, Easement 172X.
79/3-19
4/3/79 BTS

Figure 17. When the compliance check was done on June 1, the "damp spot" had become a valuable feeding, resting, and breeding area for waterfowl. 79/16-3
6/ 1/79 BTS

In one case, a landowner placed fill in a wetland, and although he has agreed to remove the fill, the wetland is presently too wet to allow him to do so.

One very "irratating" problem that slows progress in the enforcement of easement violations is the red tape involved. In the past, any cases that were to go to court were sent through the Regional Office in Denver for an opinion, and then sent to the Interior Solicitor in Aberdeen, South Dakota, for a final opinion. To expedite the process, we were given authority two years ago to skip the solicitation in Denver and turn the cases over directly to the solicitor in Aberdeen for an opinion. The idea was good, but we can't seem to impress the Solicitor in Aberdeen with our need to get these cases to court. We now have several cases that have been waiting for an opinion for over a year, in the case of Lake County 21X, we have been waiting just short of two years for an opinion. Meanwhile, the landowner has not filled his illegal scraper ditches, and feels we are all bluff. A more serious problem is that his neighbors will also begin to feel we are all talk and no action, and feel they have no reason not to violate their easements.

One interesting easement violation that occured in 1979 concerned easement 53X in McCook County. In this situation, we were notified by the landowner to the north of the easement that he wished to drain an approximate 5 acre wetland, of which 4 acres was on his land and 1 acre or less was covered by easement. Because a portion of the wetland is under easement and the drainage

ditch would have to be out of the southern portion under easement, he was told he could not drain the wetland. Later, it was discovered he had diverted a natural flowage into the wetland, and there was an apparent man made (shovel) ditch to the south out of the wetland. When contacted, the farmer said he had been told we could not do anything about an "Act of God", and the ditch out of the wetland was dug by the extra water from the flowage, and therefore was God's work. We told him it was a nice try, but then required the easement holder to fill the drainage ditch back to the natural contour of the land. Wonders never cease!! (Figures 18 & 19)

Figures 18 & 19. Schoonover stands beside Special Agent Anderson to show the depth of this ditch draining a wetland in McCook County 53X. The ditch was claimed to have been created by an "Act of God". The ditch was satisfactorly filled (below) without God's help. 79/13-9
7/ 3/1979 BTS
79/22-2
9/14/1979 BTS

Although many possible easement violations were eliminated by file checks and ground inspections, 22 violations were discovered, including plow ditches, scraper violations, burning, and filling. A total of eight violations were corrected in the fall of 1979, but because of winter weather, the rest will need to be corrected in the spring of 1980. Contacts were made with the easement holders during the winter and compliance dates given to them. (Figure 20)

Figure 20. McCook County, Easement 30X. This beautiful type IV wetland was restored after much time and dollars spent by the government. It finally took a court decision in our favor to get action but the precedent set will help us with easement enforcement for many years to come. 79/9-19
4/27/1979 DLG

# IV. WILDLIFE

## A. Endangered and/or Threatened Species

One recorded observation of an eagle, possibly an immature bald, was reported in late fall in a field adjacent to the Ordal WPA in Minnehaha County. No other eagle observations were reported in 1979. The range for the Prairie and Peregrine falcons extends into a portion of our district. None were observed in 1979.

## B. Migratory Birds

### 1. Waterfowl

The first ducks were recorded on March 17 in Minnehaha County and the first geese were sighted on March 20 in Lake County. The major migration of ducks and geese occurred on March 31-April 1. By April 3, flocks of 10,000 to 25,000 geese, mostly snows, were found in several areas, and many species of ducks were found throughout the district. (Figures 21 & 22)

Figures 21 & 22. Many wetlands protected by the U.S. Fish & Wildlife Service easement program serve as essential rest and feeding stops for migrating waterfowl. The extreme importance and rapid destruction of wetlands in eastern South Dakota can not be over emphasized!! 79/3-14,15
4/3/1979 BTS

The fall of 1979 was extremely mild in this area, and the main fall migration was quite late. No geese were observed on their fall flight until the 12th of October, and the last were observed on November 10.

Confirmed sightings of two rare species to the area, a Black duck and an Emperor goose, were reported during 1979.

Very few geese are produced in the District. Almost all production occurs further north, except for an occasional brood of snow or Canadian geese. We have been told, however, that the State intends to stock some wing-clipped Giant Canadian geese in our four northern Counties (Hamlin, Deuel, Brookings, and Kingsbury). These geese were historically raised in this area, but long ago disappeared. Releases in other parts of the state have been extremely successful, and it is hoped the same success will occur here. These releases are scheduled for the spring of 1980.

Duck pair counts were conducted May 30 to June 5. The pair count of 10,406 was down from the 12,965 total pairs on WPA's in 1978. See Table 10. This was attributed to the fact that water conditions in the District were good, and many ducks spread out on private land for their courtship and feeding. The total count figured up to a relatively low .97 pairs per wetland acre. The total 1979 waterfowl production of 50,990 ducks was calculated by using 10,406 pairs x an estimated .70 percent productivity x 7 ducks per brood.

The pair count species composition was as follows: BWT 51%, Mallard 17%, Shoveller 40%, Redhead 15%, Pintail 5%. Woodducks, Widgeon, Canvasback, Lesser Scaup, Ruddy, and GWT each averaged less than 2% of the total production.

Table 10

| | Sample | | | | |
|---|---|---|---|---|---|
| Wetland Type | Total Acres | # of Wetlands | Total District Acres | Pairs Per Wetland Acres | Total WPA Pairs |
| I | 3 | 2 | 456 | 2.30 | 1049 |
| Small III | 39 | 4 | 970 | .83 | 805 |
| Large III | 90 | 3 | 2137 | .93 | 1987 |
| Small IV | 124 | 5 | 2778 | .68 | 1889 |
| Large IV | 233 | 3 | 3836 | .98 | 3759 |
| V | 73 | 1 | 573 | 1.60 | 917 |
| | 562 | 18 | 10,750 | | 10,406 |

2. Marsh and Water Birds

Pelicans were first recorded in McCook County on April 10. On April 24, 10 Black Crowned Night Herons were observed on the Madison WPA in Lake County. 75 Cattle Egrets were recorded north of Lake Preston on September 28. On September 28, 90 D-c Cormorants were seen flying south over the office, and numerous other observations were made. Several Upland Sandpiper

nests were found on the Brookings WPA.

3. Shorebirds, Gulls, Terns, and Allied Species

Black tern nests were recorded on the Larson and Kattke WPAs during spring pair counts. It seemed the population of terns showed a slight increase over the past several years. Yellowlegs, Sandpipers, M-Godwits, Dowitchers, and Willets were observed throughout the district.

4. Raptors

A pair of Red-tailed hawks nested on the Warne WPA. The nest was approximately 35 feet above ground in an old Cottonwood tree. A marsh hawk nest was discovered in the emergent marsh vegetation on the Matson WPA during spring pair counts. Sightings of Short-earred Owls were made throughout the summer, and one eagle, believed to be an immature bald, was reported in Minnehaha County by the Ordal WPA. Snowy Owls are rare in the District, seldom getting this far south. None were recorded in 1979. (Figure 23)

Figure 23. "Hoot" was delivered to us by a local resident who feared his cat couldn't resist the temptation. He was adopted by Schoonover's wife until the garage became too small, and then released.

79/13
7/16/1979 DLG

## C. Mammals and Non-Migratory Birds and Others

### 1. Game Mammals

#### White-tailed Deer

Deer seemed to fare pretty well through the winter months, and several fawn sightings were made in the spring. The overall deer population in the area seems to be on the increase following a very significant die-off during the 1976 drought. Deer use on the WPAs is excellent, and use by hunters on our areas in the fall, both archery and rifle, seems to be increasing yearly.

#### Muskrats

Muskrat populations are showing rapid increases following near elimination during the 1976 drought. Houses are plentiful on WPAs in Lake and McCook Counties, and some muskrat houses were observed in the other counties of our district. Our WPAs are open to trapping under State laws, and muskrat trapping was again allowed in the fall of 1979 after several years of closure. Trapping use on WPAs in Lake, Minnehaha, and McCook counties was observed, as trappers once again went after the $6.00 pelts. Success appeared to be high among those trappers that were questioned. In the fall of 1979, 15 muskrat houses were recorded on the Bork WPA, and 6 houses were observed on the Nordquist WPA in Deuel County.

#### Red Foxes

Again, as in recent years, few foxes were observed, although two active dens were noted on the Ordal WPA, and one on the Graham WPA. Intense hunting and trapping pressure would appear to be the reason for the apparent decrease in population.

#### Raccoons

Raccoons, like so many other predators, are not often seen in the district because they do most of their work at night, but tracks and other evidence of a good population were apparent. Trapping pressure caused by high fur prices seems to hold the population in check, but will never endanger the species.

2. Resident Birds

The population of Ring-neck pheasants was reported to be up significantly over 1978 in most of eastern South Dakota. Hunting success was reported good by everybody but the Assistant Manager. Hungarian partridge also seems to be continuing their increase which was first noted in 1978.

3. Other Animal Life

Fish occur in several of the deeper wetlands in the District. The three that receive the most public use are the Bollinger, Janssen, and Gottlob WPAs, all in McCook County. The Bollinger WPA completely dried up in 1976, and in 1978 the State restocked the lake with several species of game fish, including Walleye and Large-mouth bass. The survival of these fish, as well as populations and species on the other areas, is unknown.

## V. INTERPRETATION AND RECREATION

### A. Information and Interpretation

1. On-Refuge

Interpretive facilities were constructed on the Brookings and Madison WPAs when the District was formed in 1969. Use of these facilities, including interpretive center with pictures and historical data, is disappointingly low. No intensive development is planned on WPAs for interpretation. Parking lots and access routes are being added where it is felt they are needed for wildlife observation or other on-refuge activities.

2. Off-Refuge

While our off-refuge programs have been pretty much on a request basis, we have invited ourselves to several activites, including the local Izaak Walton League, to explain some of our management practices such as grazing and burning. We provide films to several local schools for their environmental classes, and spoke several times to the Outdoor Recreation Class at Dakota State College. Station staff members have been active in several community organizations, including Toastmasters, Rotary, Boy Scouts, Sportman's Clubs, etc.

B. Recreation

1. Wildlife Oriented

Our recreational use consists primarily of hunting. Use of our WPAs for deer hunting seems to be increasing in the past several years, but by far the greatest use is by the pheasant and duck hunter. Duck hunting was excellent in the District in 1979 for the first several weeks. Then the "locals" were shot off, and hunting shifted to the larger areas for goose hunting during fall migration. Pheasant hunting success was much better in 1979 than in recent years, but success on the WPAs did not become good until several weeks into the season, when more of the corn on private land had been picked and the weather began to get colder.
Trapping use has been high on the WPAs in recent years due to extremely high prices being paid for furs, and remained high in 1979.

2. Non-Wildlife Oriented

Asparagus pickers in the spring and wild plum pickers in the fall comprise the majority of our non-wildlife oriented use. Some picnickers use the picnic tables that are provided on the Madison WPA.

C. Enforcement (see also Easement Section)

Most of our enforcement problems other than for easements, concern neighbor trespass and abuse. One situation in 1979 involved a neighbor, and former owner, who had caused us some problems in the past. The Nordquist WPA in Deuel County was originally purchased in 1963. He apparently forgot from time to time that he had sold the land, and used it as his own. Although minor problems began from the time of purchase, they became more severe in recent years. In 1975, Mr. Nordquist was grazing his cattle on the WPA in trespass. He agreed to remove them and make arrangements for other pasture, and no citation was issued. In 1977, we discovered that Mr. Nordquist was running his cattle on our land after dark, and removing them at sunup. By setting up an early morning patrol, we were able to catch his son chasing cattle off the WPA, and a $50.00 citation for trespass was issued. In 1979, we found that he again had cattle on the WPA, and further investigation showed he had been storing machinery and feeding sileage on us. When contacted, Mr. Nordquist was issued a $100.00 citation for the cattle trespass, and a $50.00 citation for the machinery. He paid the $50.00 F.O.C., but requested a court appearance for the cattle trespass. On his scheduled court date of 10/10/1979, he failed to

appear. The next day he was arrested by a Deputy Sheriff and a U.S. Fish & Wildlife Special Agent, and taken to jail in Aberdeen. When he again appeared in Court, his attorney entered a guilty plea for Nordquist in exchange for the U.S.A. not requesting jail time. He was consequently fined $150.00 and placed on two years probation. We don't know if we earned his respect, but we do feel we got his attention.

We continue to have problems with general trespass by hunters and snowmobilers, but additional signing and media publicity has helped to decrease the problem during the past several years. One F.O.C. for vehicle trespass was issued during the fall of 1979, and a $25.00 fine was paid. (Figure 24)

Figure 24. Parking lots were mowed, and "Foot travel only" signs erected, but "a track, is a trail, is a road". 79/44-2
11/14/1979 DLG

The WPAs were patrolled from both air and ground during the hunting season, primarily on the first couple weekends after season openings. High hunting pressure was noted, numerous WPAs were checked, and contacts made, but only the one above-mentioned F.O.C. was issued by station personnel. In this district, we have excellent assistance from Special Agents stationed in Pierre and Watertown, who each

spent many hours working the canvasback and redhead areas in the northern part of our district. Also, each of our nine counties has a full-time State Conservation Officer who issues citations for violations encountered on our areas, and keeps us informed of any problems we might be unaware of.

## VI. OTHER ITEMS

### A. Field Investigations

In the spring of 1978, nest dragging had been done to compare the use and success in grass/legume mixtures with that of native grass seedings. The results indicated the native grasses had a slightly higher success rate. We decided to do similar dragging in 1979 to see if these results would be consistent. Spring rains delayed our attempts to nest drag until late in the nesting season, and only small total acres of each cover type were dragged. The results, as compared to 1978, are summarized below:

1978

Grass/Legume

319 acres dragged ÷ 57 nests found = 5.6 acres/nest

31 nests successful ÷ 44 nests rechecked = 70.5% success

Native Grasses

246 acres dragged ÷ 39 nests found = 3.7 acres/nest

22 nests successful ÷ 28 nests rechecked = 78.6% success

1979

Grass/Legume

158 acres dragged ÷ 43 nests found = 3.7 acres/nest

26 nests successful ÷ 39 nests rechecked = 66.6% success

Native Grass

143 acres dragged ÷ 21 nests found = 6.8 acres/nest

8 nests successful ÷ 19 nests rechecked = 42.1% success

As will be noted, the results are not consistent, and more draggings in future years will be done before any definite conclusions are reached. One observation noted in 1979 was the definite bias our activity causes in the rate of success. A native grass seeding was partially dragged on the Murfield WPA in the afternoon. Three nests were found, all well into their incubation. The next morning, when we returned to complete dragging the area, we found all three nests had been destroyed by unknown predators.

B. Cooperative Programs

1. Drainage Referrals

This station handled 25 drainage referrals in 1979; 22 from Lincoln County, one from McCook County, one from Turner County, and one from Hutchinson County. The biologist in the Huron Acquisition Office has been assigned the responsibility of doing all future drainage referrals, but assistance is still given by this office when requested.

2. Other Cooperative Programs

Three personnel from this station participated in the Audubon Christmas Bird Count done on December 17 in this area.

Realty personnel in the Aberdeen and Huron Acquisition Offices were given assistance on numerous fee and easement purchases.

The Ecological Services staff in Pierre was assisted with field inspections and Environmental Impact Statement preparations for several highway and road improvement projects that occurred in the District. (Figures 25 & 26)

C. Items of Interest

Assistant Manager Schoonover spent August 1st - September 15th in Tugaskee, Saskatchewan on a Canadian Banding Assisgnment.

Bio. Tech. Hyink completed his four weeks law enforcement training in Blynco, Georgia on February 26th - March 23rd.

Dorothy Tomscha received her 10-year Government Service Award on October 12, 1979. (Figure 27)

Figure 25. This wetland destruction occurred during construction of a pork finishing operation in Lake County. The combination of fill and drainage was reported to the Corps of Engineers in hopes a 404 Permit violation had occurred, but the final word was that no permit is required for wetlands under 10 acres, and there is nothing we can do.
79/17-12
6/ 7/1979 DLG

Figure 26. This valuable type III wetland was filled and drained during the construction of a pork finishing complex. It becomes yet another statistic in the saga of vanishing South Dakota wetlands.
79/16-6
6/ 1/1979 BTS

Figure 27. Dorothy Tomscha accepts her 10-year Government Service Award from Manager Gilbert. 79/27-13
10/12/1979 DLG

D. Safety

Monthly safety meetings were held and general discussions were held immediately as potential safety hazards were noticed. As new jobs such as fencing and spraying were began, safety problems associated with them were discussed. (Figure 28)

Figure 28. The crew stands by as Hyink gives a demonstration of the safe and proper use of the winch. 79/16-11
6/ 5/1979 BTS

E. Credits

Dorothy Tomscha summarized weather and acquisition information.

Schoonover wrote the rest of the report.

Gilbert edited the report.

The final report was typed and assembled by Dorothy & Susan Tomscha.