

KULM WETLAND MANAGEMENT DISTRICT  
Kulm, North Dakota

ANNUAL NARRATIVE REPORT  
Calendar Year 1980

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

JUN 9 1981

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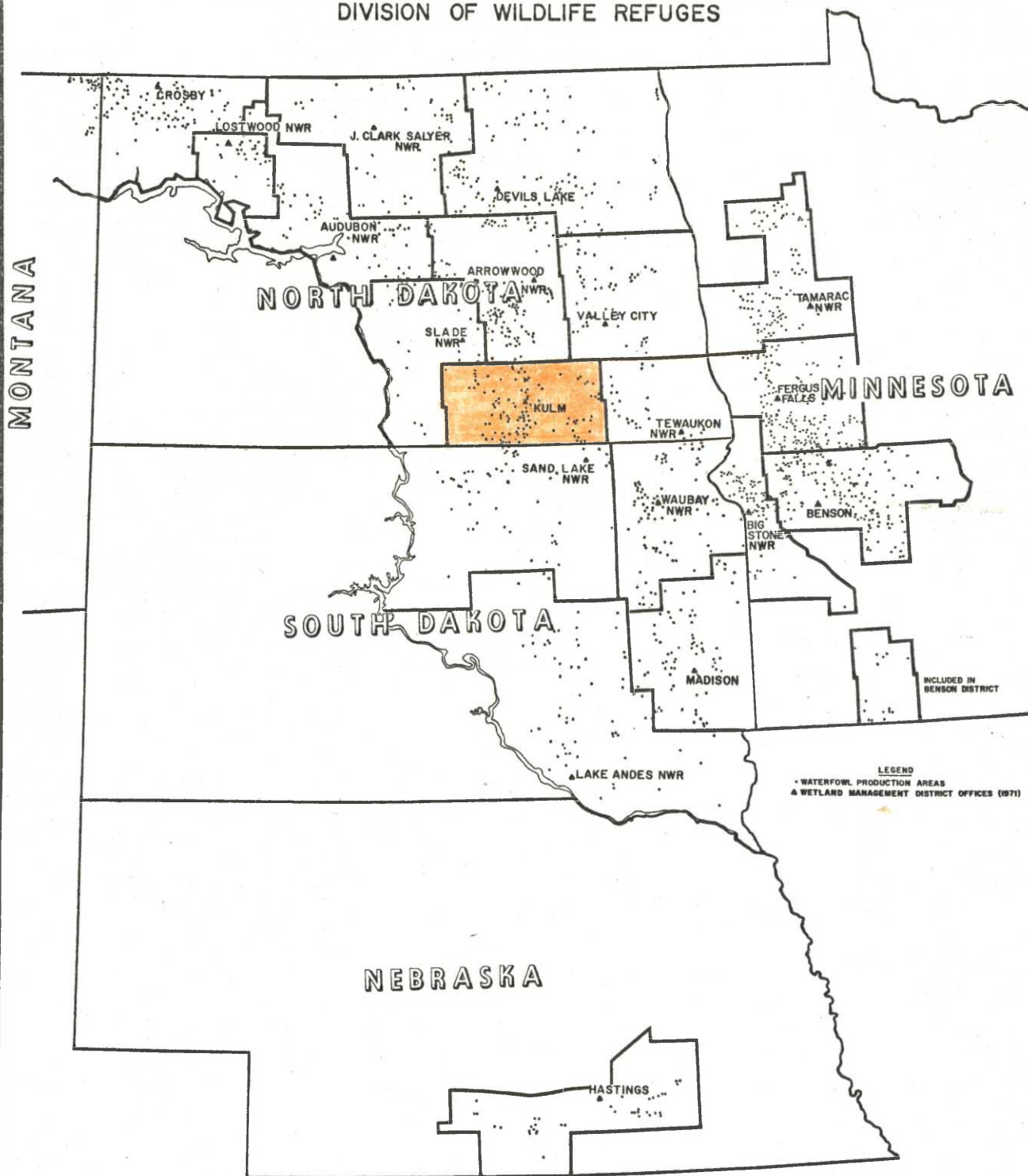
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WATERFOWL PRODUCTION AREAS  
UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF SPORT FISHERIES AND WILDLIFE  
DIVISION OF WILDLIFE REFUGES







Back row, left to right 1-5-8-2-12-13-11-4-3  
Front row, left to right 10-9-7-6

#### Personnel

1. H. "Tuck" Stone, Refuge Manager, GS-11. PFT
2. Francis Maiss, Asst. Refuge Manager, GS-9, PFT
3. John W. Jones, Biological Technician, GS-9, PFT
4. Edna Okerlund, Administrative Clerk, GS-5 PPT
5. James A. Steinmetz, Maintenance Helper, WG-5, EOD 3/11/80 - 12/19/80
6. Sherwood Lundgren, Range Aid, GS-3, EOD 4/20/80 - 11/15/80
7. Harold Hettich, Biological Aid, GS-2, EOD 4/20/80 - 10/31/80
8. Dave Rutschke, Biological Aid, GS-2, EOD 4/20/80 - 10/31/80
9. Randy Klusmann, Biological Aid, GS-3, EOD 5/26/80 - 8/22/80
10. Randy Luck, Biological Aid, GS-2, EOD 5/26/80 - 9/5/80
11. Kelly King, Biological Aid, GS-2, EOD 5/26/80 - 8/22/80
12. Gary Brovold, Biological Aid, GS-2, EOD 5/26/80 - 8/22/80
13. Sally Brovold, Biological Aid, GS-2, EOD 5/26/80 - 8/22/80

#### Review and Approvals

H. T. Stone 2-5-81  
Submitted by Date

Lyle J. Schumann 4/13/81  
Area Office Date

Kulm WMD  
Refuge

James A. Wilson 5/4/81  
Regional Office

## I. GENERAL

- A. The Kulm Wetland Management District is located in southeast North Dakota. The district encompasses 42,332 acres of Waterfowl Production Areas (WPA's) scattered throughout Dickey, LaMoure, Logan and McIntosh counties. Approximately four fifths of this acreage lies within the Missouri Coteau with the remaining acreage in the eastern portion of the district occurring in the glacial drift prairie. The WPA's within the district contains 16,882 acres of wetlands, 15,334 acres of native rangelands, 7,784 acres of tame grassland and 1,982 acres of cropland. An additional 99,236 acres of wetlands under easement are administered by the Kulm WMD.

### B. Climate and Habitat Conditions

The winter of 1980 was very mild compared to the previous two years. During the months of January through March there were only 28 days of below zero temperatures with negligible snowfall. The year's lowest temperature was -25 degrees recorded on January 8 and 9.

Spring thaw occurred around March 29 and the weather switched from winter to summer almost instantaneously. The month of April had 17 days above 60 degrees with a 92 degree reading recorded on April 21. May was also very warm with 14 days above 80 degrees. During these normally wet months only 2.0 inches of rain fell. June delivered 4.0 inches of rain only to be followed by a hot July which yielded no precipitation at all. For the entire year of 1980 a total of 10.55 inches of precipitation fell, or about half of the normal amount expected.

Fortunately most of the larger type III and IV wetlands had a good carry-over of water from the excessive rainfall the previous year and were available to breeding waterfowl. However, nesting cover was in short supply. Private pastures which were heavily grazed down had very little new growth due to the lack of rain. Many alfalfa hay lands were damaged due to individual nights of killing frost, (25° overnight on May 8) after the unseasonably hot April temperatures caused alfalfa to sprout early. All of these factors caused private landowners to utilize every last acre in a desperate attempt to feed their livestock. Basically, the only good nesting cover within the district was on WPA's and Soil Conservation Service waterbank lands. Even the normally idled waterbank lands were opened up for haying due to the drought conditions. Of the 18,077 acres of waterbank lands within the district, 7,430 acres or 41 per cent were hayed off for emergency livestock feed. Since waterbank lands are at least 20 per cent wetlands, the percentage of upland cover hayed was greater than 41 per cent, probably in the 60-75 per cent range. The haying of these lands was not permitted until after July 15, to protect nesting waterfowl. However, the removal of the heavy residual cover decreased the amount of wintering habitat available to upland game and deer.



SCS waterbank land opened up for haying due to drought conditions. #1-80, July 18, 1980, H.T. Stone

Freeze-up occurred October 25-28 with a snowfall that drove all the ducks south. Then the week of November 1-8 saw 50-60 degree weather which opened all the wetlands and melted the snow. The ground was free of snow through the end of the year, as during November and December there were 37 days of above freezing temperatures, a truly mild winter.

### C. Land Acquisition

#### 1. Fee Title

Due to the governor's refusal to approve any land sales the district did not purchase any new WPA's during 1980.

One land exchange did take place, however. Fifty six acres of cropland on the edge of the Mund (134) McI was traded for an 80 acre inholding (53 acre type IV wetland and 27 acres upland) within this 592 acre WPA. This was a good roundout, and makes this WPA a much more managable unit.

#### 2. Easements

No easements were taken in 1980 due to the prohibitive restrictions placed on them by a state law passed in 1977.

Five 20 year easement contracts covering 169 wetland acres expired in 1980.

D. System Status1. Objectives

The primary objective of the Kulm WMD is protection for and enhancement of small wetlands within the district for maximum waterfowl production. At present, all of the activities are in phase with this broad objective. However, specific objectives measurable in duck use days, production estimates, etc. are not very feasible on wetland districts with our present knowledge of various species populations, and an entirely different approach or system is needed to make objectives mesh with program operations and the station budget.

2. Funding

<u>Year</u>	<u>1210</u>	<u>CM</u>	<u>1220</u>	<u>1240</u>	<u>BLHP</u>	<u>PFT</u>	<u>PPT</u>	<u>PT</u>
1976	68,500			1,500		2	1	1
1977	70,000	8,000		1,000	13,000	3	1	1
1978	112,000	6,000	2,200	1,000	36,000	3	1	7
1979	126,800	16,000			186,000	3	1	9
1980	150,000				67,000	3	3	7

The sustained increase in O & M funding enabled the Kulm WMD to hire a permanent part time maintenance worker, WG-5 who will work approximately nine months per year, and a permanent part time range aid, GS-3 who will work approximately eight months per year.

The BLHP money was spent on two projects. Forty one thousand dollars was spent on Dense Nesting Cover (DNC) and native grass to seed back 1,500 acres of cropland and construct 20 miles of fence. Twenty six thousand dollars was spent on a new truck, a 500 gallon slip on spraying unit and herbicides.

II. CONSTRUCTION AND MAINTENANCEA. Construction

The big item this year was the completion of the new shop and equipment storage building, which was constructed with BLHP funding and began in 1979. The building is located on the Patzer (250) WPA, one mile west of



Kulm. The steel building is 40 ft. by 75 ft., of which 40 ft. by 35 ft. is a heated shop area with a vehicle hoist. The remaining 40 ft. by 40 ft. of the building is designed for cold storage. The building was accepted as substantially completed from the contractor, Steel Structures of Aberdeen, SD on August 11, 1980 for the final price tag of \$97,339.57. From this total \$2,800 was deducted for liquidated damages resulting from late charges at the rate of \$50 per day for a total of 56 days.



The new shop and equipment storage building funded under BLHP. #2-80, September 1980, H.T. Stone

A good deal of the time and effort spent on construction this year centered around development of the new shop site. The area around the shop building was leveled and sloped away from the building to facilitate proper drainage and to provide a level spot for the parking area and driveway. The earth work was done through the loan of a bulldozer and heavy equipment operator, Berle Meyers from Sand Lake NWR. After the site was leveled, 480 cu. yds. of gravel was hauled in and tail gate spread by Frisch Gravel Co. of Ashley, ND. The gravel was then leveled and spread over the parking area and driveway by the Kulm staff.

A pre-engineered all metal building, 9 ft. by 12 ft. with 8 ft. high side walls was purchased force account for \$1,456 from Farmers Coop Lumber Co. of Kulm, ND. District personnel formed and poured the concrete slab with footings and then erected the building which is used for storage of flammable materials.



Maintenance worker Jim Steinmetz hanging doors on the new oil storage building. #3-80, Aug. 80', H.T. Stone

A 40 ft. by 60 ft. pole building used for equipment storage on the Gackle WPA a mile north of Kulm was moved by Kamletz Movers of Jamestown, ND to the new shop site. This was done because of the poor access to the Gackle WPA during the winter months and to consolidate all the equipment buildings on one site. Once in place, the movers raised the building two feet to accommodate larger equipment. Then the Kulm staff removed the old galvanized siding and replaced it with yellow siding that matched the shop building.



Asst. Manager Fran Maiss (standing on truck bed) and summer employee Gary Brovold putting new siding on 40 ft. x 60 ft. pole building used for equipment storage.  
#4-80, August 80', H.T. Stone

Two 1,000 gal. fuel tanks and pumps were purchased to provide storage for diesel and unleaded gasoline at the new shop site. Doering Digging, Inc. of Kulm, ND buried the tanks and installed the pumps.

Doering Digging, Inc. also provided and installed a septic tank and drain field to service the rest room facilities of the new shop.

The successful bidders on the domestic well for the shop building was Oahe Drilling Co. at \$5,028.50

The well was drilled to a depth of 300 feet and produces about 10 gallons of water per minute. The contract included drilling the well, installing a 4" plastic casing, a 1 HP submersible pump, and connecting the discharge water line to the shop building. The work on the well was completed on September 18, 1980.





Oahe Drilling Company drilling domestic well for new shop building. #5-80, Sept. 80', H.T. Stone

This fall 20 trees were moved by District personnel using the area tree spade. The trees were used to landscape around the shop buildings. Additional tree moving is planned for next spring, along with a Soil Conservation Service assisted shelter belt planting which will provide a wind-break along the north and west side of the buildings.



Biological Technician John Jones transplanting trees for landscaping around the new shop site. #6-80, Sept. 22, 1980, H.T. Stone



Other activities which centered around developing the shop site include: the actual moving of tools and setting up the shop, the construction of a work bench and the moving of 140 ft. of chain link fence from the Gackle WPA to the new shop site to make an enclosure for storing fencing material.



Summer employee Gary Brovold whose regular job is shop teacher at Kulm High School, constructed the work bench in the new shop. #7-80, Aug. 1980, H. T. Stone

The new shop and equipment storage facilities will greatly enhance the maintenance and storage of the district's equipment. In the past, shop facilities to work on equipment were non-existent and a lot of the equipment had to be stored outside year round.



Aerial photo showing the new shop and equipment storage facilities located on the Patzer WPA one mile west of Kulm.

#8-80, Oct. 30, 1980, F.G. Maiss

Another major effort in 1980 was the construction of 42.25 miles of 3 strand barbed wire fence on 28 WPA's. This fence construction is necessary for management of native grasslands with livestock, to maintain a vigorous plant community conducive to waterfowl nesting. All of this fencing was done force account using summer temporary labor. This is an efficient way to construct fence, as labor costs come to about \$400 per mile. Professional contractors charge about twice that much. Also, hiring temporary personnel from the local community does much towards enhancing community relations as these people are exposed to the small wetlands program and relay information about their jobs and the goal of the Wetland District among their relatives and friends.

The following is a list of units on which fencing was accomplished in 1980:

<u>WPA</u>	<u>Mi. of Fence</u>	<u>WPA</u>	<u>Mi. of Fence</u>
Lazy M (340) D	1.0	Schneider (53) McI	0.75
Gackle (151) LaM	1.0	Schumacker (150) McI	1.75
Patzner (250) LaM	0.75	Maiss (118) McI	0.75
Malm (29) LaM	2.0	Jones (280) McI	1.75
Brunner (101) L	3.0	Fey (11) McI	2.5
Kosanke (53) L	0.5	Pintail (214) McI	1.5
Mundt (75) L	0.5	Geiszler (210) (205) (277a) McI	5.0
Pfeifle (177) McI	1.0	Bauman (308a) McI	1.5
Klipfel (274) McI	1.25	Ehley (203) McI	1.0
Betsch (55) (220) McI	0.25	Mund (134) McI	3.0
Nitschke (182) (208) (223) McI	2.0	Brinkman (315) McI	1.5
Kappes (286) McI	1.25	Werth (438) McI	3.0
Coldwater Lake (377) McI	1.0	Klein (33) McI	0.75
Weisz (20) McI	0.5	Meidinger (436) McI	1.5

Two cattle guards were installed on the Mundt (75) WPA in Logan county. They were placed on a section line trail through the WPA that the public uses for access to a fishing lake. This trail was also reworked and spot graveled. In the past it had been next to impossible to manage the native prairie on this WPA with cattle because the fishing public would not keep the gates closed.

A 1952 TD9 bulldozer was transferred to the Kulm Wetland District from Upper Souris NWR.

#### B. Maintenance

During the summer months district personnel removed 17 miles of sub-standard fence from 15 WPA's.

One building site on the Lazy M(340) D WPA was cleaned up. A house, barn and several building foundations were buried by Berle Meyers from Sand Lake NWR the same week he landscaped the new shop site west of Kulm.

Approximately 280 miles of refuge boundary (out of 520 miles total) was field checked for bent, broken and tattered WPA signs and poles throughout the four county area.

Four large round hay bales were placed on end in type IV marshes on both the Gruneich (359) D WPA and Jenner (289) McI to act as waterfowl nesting islands. Three large round rock nesting islands for Canada geese were constructed on the type IV marsh on the Graham (1b) D WPA.

The spillway for Maple River Dam was found to be in need of major repair this year. The dry conditions had lowered the water level of the impoundment thus exposing where 4 to 5 feet of earthen fill had been washed away over the years from behind the concrete retaining wall. (See photo)



Photo showing the spillway for Maple River Dam before repairs. Note exposed concrete wall from which earthen fill had been washed away. #9-80, Oct. 30, 1980, H.T. Stone

Once again Sand Lake NWR came to the aid of the Kulm District. They provided a bulldozer, front end loader, dump truck and equipment operators, Berle Meyers and Jack Cantwell to help on the spillway repairs. First, clay fill was pushed in and packed to within about a foot of the spillway top. Rip-Rap was placed over the clay to the top of the concrete retaining wall and over that portion of the spillway subject to normal overflows.





Photo of Maple River Dam spillway after repairs had been completed. Clay fill was packed in behind the concrete wall and then rip-rapped. #10-80, Nov. 5, 1980, H.T. Stone

#### C. Wildfire

There were three small fires on WPA's this summer. Lightning touched down on the Mund (133) McI and Buchholz (10) L WPA's and burned 2-3 acres of native prairie on both areas. Duck hunters started a fire in a private hay meadow adjacent to the Young (350)D which got away and burned about 10 acres of private land and crept into the native prairie on the WPA burning 3-4 acres. The local city fire departments nearest these WPA's extinguished the fires before the Kulm WMD personnel knew they had started.

### III. HABITAT MANAGEMENT

#### A. Croplands

Forty four permittees farmed 2,020 acres under cooperative farming agreements. Under the terms of the agreement, the crop on 361 acres was harvested and taken to the elevator where it was sold. The money derived from the sale of this grain, which amounted to \$3,547.23 as of December, 1980, was distributed to J. Clark Salyer NWR which converted the money back to grain to feed waterfowl.



The ultimate goal of this cropland farming is proper seedbed preparation for the establishment of Dense Nesting Cover (DNC). A total of 429 acres on 5 WPA's were seeded to DNC with a nurse crop in early spring, and 634 acres on 13 WPA's were seeded to DNC in late October and early November by cooperative farmers. The DNC mixture contained 5 pounds of intermediate wheatgrass, 2 pounds of tall wheatgrass and 3 pounds of alfalfa per acre. One hundred thirty two acres on 3 WPA's were seeded to native grass by refuge personnel in 1980. The native seed mixture consisted of 2.5 lbs big bluestem, 2 lbs sideoats gramma, 1 lb green needlegrass, 1 lb slender wheatgrass, 1 lb intermediate wheatgrass and 3 lbs switchgrass, pure live seed per acre.

A total of 473 acres of degenerate tame grass fields were broken out in late summer for cropping in 1981 and return to DNC in 1982.

#### 1980 DNC SEEDING

<u>WPA</u>	<u>Acres</u>	<u>Season</u>
Gruneich (359a) D	30	Spring
Gruneich (359a) D	45	Fall
Gruneich (359) (360) D	47	Fall
Enger (32a) D	104	Fall
Malm (29) LaM	43	Spring
Cornell (15) LaM	100	Fall
Domine (235) LaM	28	Fall
Carlson (208) LaM	60	Spring
Mayer (408) L	93	Spring
Wentz (122) L	54	Fall
Roth (435) McI	8	Fall
Kessel (250) McI	31	Fall
Ziegenhagel (281) McI	20	Fall
Schneider (53a) McI	91	Fall
Bollinger (214a) McI	16	Fall
Wolf (176a) McI	9	Fall
Werth (166) (438) McI	204	Spring
Werth (166a)	81	Fall

#### 1980 NATIVE GRASS SEEDING

Cornell (15) LaM	12	Fall
Mayer (408) L	50	Fall
Hoffman (121) McI	53	Spring
Hoffman (121) McI	17	Fall

Within the district there are 7 WPA's containing wildlife food plots totalling 45 acres of corn. These plots support resident populations of wintering whitetail deer, pheasant and Hungarian partridge. They are all farmed and maintained by local sportsmens groups or individuals interested in helping wildlife.

## B. Grassland

### 1. Grazing

Over 35 per cent (15,000 acres) of the Kulm WMD fee title acreage is native rangeland or restored native grasslands. Thus a major emphasis of management in the district consists of attempting to keep these rangelands vigorous, with overall range trends moving upwards toward good to excellent range condition. It is assumed that such range conditions produce the most desirable nesting habitat.

The main problem with native rangelands is invasion by two cool season exotic grasses, Kentucky bluegrass and smooth brome. These grasses are the first to grow in the Spring and produce much low growing foliage. If these native rangelands are left undisturbed for several years these early season plants will produce such an accumulation of litter that the growth of the native forbs and warm season grasses are severely inhibited. Thus the district's main objective of native grassland management is to suppress the growth of exotic cool season grasses and prevent excessive litter deposition which would inhibit growth of native warm season species. One way to accomplish this is by permitting grazing livestock (1 aum/acre) during the early growing season on areas with substantial litter accumulation. There is one ongoing rest rotation grazing system on a WPA that is too large to make spring crowd grazing feasible. The stocking rate on this system is 0.75/acre.

During 1980 the Kulm WMD permitted grazing of 3,734 acres on 30 WPA's. Receipts from grazing totaled \$12,260.24. The table below shows pertinent data relating to the units grazed.

#### UNITS GRAZED IN 1980

<u>WPA</u>	<u>Acres</u>	<u># cows</u> <u>w/calves</u>	<u>Dates</u>	<u>AUM's</u>
Retzlaff (150) D	36	50	5/7-6/15	63
Enger (32) (286) D	102	90	5/1-6/8	110
Rutschke (321) (15b) (352) D	72	35	5/4-6/15	47
Lee (10) D	152	150	5/15-7/1	225
Hamann (203) D	36	30	5/1-7/1	60
Lazy M (340) D	1200	120 yrlds	5/1-10/1 (rest rotation)	500
Cornell (15) LaM	90	55	4/16-6/15	110
Enzinger (13) LaM	60	46	5/1-6/15	68
Brinkman (173) L	129	80	5/3-6/15	117
Mundt (75) L	100	104	5/5-6/15	133
Hummel (11) L	55	63	5/1-6/1	63
Sarkinen (149) L	85	62	5/5-6/1	58
Koskiniemi (29) L	71	60	5/1-6/14	88

<u>WPA</u>	<u>Acres</u>	<u># cows w/calves</u>	<u>Dates</u>	<u>AUM's</u>
Larson (12) L	146	95	5/1-6/15	149
Moldenhauer (384) L	45	55	5/1-6/1	55
Kautz (156) L	35	27	5/1-6/1	27
Knecht (397) L	58	55	5/6-6/15	77
Kautz (156) L	52	30	5/1-6/1	30
Pfeifle (177) McI	54	50	5/2-5/30	45
Marzolf (115) McI	115	40	4/15-6/15	80
George (263a) McI	54	50	5/1-6/1	50
Brinkman (315) McI	177	120	4/26-6/15	180
Kesselberry (203a) McI	170	122	5/3-6/19	176
Wolf (176b) McI	115	100	5/6-6/15	130
Ehley (268) McI	70	60	4/27-5/31	67
Koepplin (437) (142) McI	32	36	5/1-6/1	234
Dalke (65) McI	185	125	5/4-7/20	130
Jenner (289) McI	130	150 calves	5/1-7/20	130
Bauman (308a) McI	83	84	5/1-6/9	109
Sackman (112) McI	25	25	5/1-6/15	38

## 2. Haying

With BLHP allowing the construction of fences on native range units and the rehabilitation of old tame grass fields to DNC, the need for upland haying as a management tool has nearly been eliminated. Out of 10,000 acres of former cropland, over 5,500 acres have been restored to DNC, 2000 are currently being cropped leaving only 2000 acres of tame grasslands remaining. Much of that will be put into crop production within the next three years in preparation for DNC.

This year due to the drought, we received over 100 requests for hay. We referred all requests to the local ASCS who had agreed to let out our hay tracts after a co-ordination meeting with state government officials and the FWS Area Office. But the ASCS requirements for being eligible were too stringent; permittees had to meet emergency feed loan requirements, which meant the permittee had no pasture available and the hay was going to be immediately fed. Of course not many farmers were that desperate for hay, so the ASCS told Kulm WMD personnel that only 1 farmer in the entire district was eligible for hay. So much for attempted co-ordination with ASCS.

The Kulm WMD then held a drawing for 404 acres on 13 WPA's which generated \$3,363 in receipts. The areas hayed were all small parcels of native grass or seeded native grasses in need of mulch removal. Needless to say 13 fields hayed left over 90 applicants unsatisfied and wanting the district's 5,500 acres of DNC. The table below shows pertinent data relating to the units hayed.

UNITS HAYED IN 1980

<u>WPA</u>	<u>Acres Hayed</u>	<u>Type of Hay</u>
Vasvick (178) D	23	Seeded native
White (184) D	12	Seeded native
Wishek (15a) D	37	Native
Hartman (65) D	10	Native
Reinke (354) D	90	Brome
Dittus (180) LaM	17	Brome
Hickey (243) LaM	7	Alfalfa
Moch (160) LaM	16	Native
Brinkman (173a) L	50	Brome
Miller (171) L	50	Native-seeded native
Wolf (56) McI	17	Seeded native
Ham (206) McI	30	Seeded native
Bauman (308a) McI	45	Brome

3. Burning

The district had plans to burn portions of 5 WPA's totalling 150 acres in the Spring that were not burnt the previous spring due to very wet field conditions. This year it was too dry and excessively hot, so the Governor of North Dakota banned all outdoor burning from May through August. Once again we were unable to burn. Three of these areas were fenced this summer and will be grazed next spring and hopefully the remaining two areas can be burned next spring, weather conditions permitting.

4. Weed Control

Kulm WMD is required by state law to control noxious weeds on its fee title areas. The main emphasis in 1980 has been on controlling leafy spurge and Canada and Russian thistle.

Thistle seed is fairly widespread throughout the district and wherever disturbed land is left untended, thistle tends to grow. Thus the main thistle problem occurs in newly seeded fields where DNC establishment takes one or more years. Since a good stand of DNC will generally crowd out any thistles present, the district does not attempt any control unless a complaint is lodged by a neighboring farmer. When a complaint is received the thistle patch is usually mowed prior to seed ripening. This prevents the spread of seed to neighboring private lands and generally satisfies the neighbors. Once DNC is established, thistle control is no longer necessary. This year thistle was mowed on 3 WPA's.

Leafy spurge is a much more tenacious weed and provides the biggest control headache. Left unchecked it can crowd out DNC, massively invade native rangeland and subject the government to verbal abuse by neighbors, county officials and casual passers by.



The best results at controlling this plant have been to spray with Tordon 22K in mid-June, just prior to seed ripening. Since most areas of spurge infestation are small patches, spray is applied via two gallon back pack hand sprayer. This gives excellent control of this potent chemical and restricts the kill to individually selected spurge plants. Even though a complete kill occurs in any given year, areas of known spurge infestations are checked annually, as spurge seeds can be dormant and germinate up to 8 years after dissemination.

In 1980 1.5 man months were spent conducting spot spurge control on 30 WPA's.

Two areas of heavy infestations of absinth wormwood in native rangeland were sprayed with 2-4D, about 60 acres of wormwood were sprayed during the third week in May on the Lazy M (340) D WPA and about 150 acres of wormwood were sprayed on the Jenner (189) McI WPA during the third week of July just after cows were removed from the pasture. It was hoped that spraying the wormwood immediately after the cattle were removed would be least detrimental to native forbs, which were predominately grazed off. The kill on wormwood was not complete, and both areas will be sprayed again next spring during the month of May.

A method of control for wormwood in DNC has to be devised as many of the district's DNC fields are heavily infested with this weed. We are currently reluctant to spray DNC as it would kill out all the alfalfa, which is a major DNC component.

As dictated by state law the district is required to mow the roadside ditches along all of the WPA's. On WPA's where farming, grazing or haying is permitted the stipulation is that the cooperator will mow the roadside for the district. On WPA's where no use has been permitted, payment is made to neighboring farmers to mow the road shoulder. In 1980, \$532.40 was spent for mowing 10.75 miles of WPA roadside ditches.

#### C. Wetlands

There were no wetland management practices conducted such as haying or mowing in 1980 as none were deemed necessary for habitat enhancement.

In September a small wetland basin was excavated on the Kramlich (216) McI by the McIntosh county road crew who needed fill for upgrading the adjacent county road. We provided the fill site free providing they shaped the excavated area into a basin that would hold water.

In October nine old ditches that were draining type III wetlands on the Hoffman (121) McI WPA were filled in using the Kulm District's D-4 cat.

#### D. Forestlands

Nothing to report.

E. Other Habitat

Nothing to report.

F. Wilderness and Special Areas

Nothing to report.

G. Easements for Waterfowl Management

Between October 30 and November 5, aerial easement checks were made over the district. In the four county area 7 easement violations were discovered. All of these cases have been investigated and documented with restoration time frames worked out with the violators. The following is a listing of easement violations found in 1980.

<u>Easement #</u>	<u>Violation</u>	<u>Final Disposition</u>
Dickey (29x)	1 scraper ditch	Restored by 5/10/81
Dickey (287x)	8 plow furrow ditches	Restored by 11/30/80
LaMoure (111x)	1 plow furrow ditch	Restored by 11/28/80
LaMoure (270x)	1 plow furrow ditch	Restored by 11/21/80
LaMoure (270x)	1 tree pile	Restored by 5/21/81
LaMoure (164x)	4 scraper ditches	Restored by 11/20/80
LaMoure (136x)	5 scraper ditches	Restored by 5/24/81

IV. WILDLIFEA. Endangered and/or Threatened Species

While whooping cranes migrate through North Dakota no verified sightings have taken place in the Kulm WMD since this office was established.

During the last week in November four bald eagles were seen moving through the district, three in Logan county one in LaMoure county.

B. Migratory Birds1. Waterfowl

The random quarter section pair count was used to obtain an estimate of the number of breeding duck pairs in the district during the last week of May. Refuge personnel inventoried 1,689 acres on 34 WPA's out of 16,840 acres owned in fee title. Thus the production projections are based on an actual inventory of 10 per cent of the WPA

wetland acres. Due to the unusually hot and dry spring only 60 per cent of the wetlands were wet when this pair count was undertaken.

Waterfowl production on WPA's within the district totalled 33,400, which was 75 per cent of the 1979 WPA production estimates, when the wetlands were 100 per cent full.

No production estimates are attempted on easement acreage due to lack of data.

Estimated Waterfowl Production on WPA's

<u>Species</u>	<u>Pairs counted</u>	<u>Projected Breeding Prs.</u>	<u>Avg. Prod. Rate .45</u>	<u>Std. Brood Size</u>	<u>Total ducks Produced</u>
Mallard	163	1,627	732	6	4,392
Pintail	131	1,314	591	6	3,546
Gadwall	192	1,920	864	6	5,184
Blue wing	365	3,637	1,637	7	11,459
Green wing	9	91	41	7	287
Shoveler	86	859	387	6	2,322
Redhead	86	859	387	6	2,322
Canvasback	24	243	109	5	545
Ruddy	143	1,425	641	4	2,564
Widgeon	8	91	41	6	246
Scaup	20	202	91	6	546
Coot	156				
					<u>33,413</u>

During 1980 there were minor botulism outbreaks on three areas; the Graham (31) D WPA, the Wentz (122) L WPA, and the private lake southwest of Napoleon. All totalled between August 8 and September 26, 160 ducks, 65 shorebirds, 15 pelicans and 48 cormorants were picked up. This was negliable compared to the 6,500 birds retrieved in 1979 and 21,000 birds in 1978 on these three areas.

The fall goose migration was quite spectacular. From October 26-30 we had cold enough weather to freeze up all but the largest marshes which drove most of the local ducks south. At the same time, bad weather in Canada caused most of those ducks to fly right on through the district without stopping. Then the weather warmed up into the 50's and we had open water for another 6 weeks. Inclement weather in Canada and northern North Dakota caused an influx of snow geese in the Kulm area which stayed around due to the open water. Peak population in the immediate vicinity of Kulm was between 50,000-70,000 geese during the week of November 10-16. This was the first fall since 1975 that appreciable numbers of snow geese stopped in the Kulm area.

## 2. Marsh and Water Birds

Even with the dry conditions most of the type IV marshes had high water levels from previous years, so the more common species such as American bittern and black crowned night heron had relatively good nesting conditions.

The cormorant rookery on the Graham (31) D WPA was abandoned in 1980 because the nesting island was connected to the mainland due to lowered water levels.

## 3. Shorebirds, Gulls, Terns and Allied Species

All of these type birds enjoyed reasonably favorable nesting conditions in 1980 due to the good carry over of water on the larger marshes from 1979.

The islands on the Wentz (1) (122,a) L WPA hosted a nesting colony of approximately 1,000 black and common terns and several hundred ring-billed gulls.

Population data for species other than waterfowl is basically non-existent due to the diversity of species and the geographic distribution of over 200 WPA's scattered throughout 4 counties.

## 4. Raptors

The most frequently observed raptors such as marsh hawks, American kestrel and great horned owls appeared to be present in normal numbers. The sightings of bald eagles were discussed under the endangered species section.

Three individual burrowing owls were seen repeatedly using the same badger holes on the Werth (438) McI WPA. This species is not often observed within the district.

A large influx of prairie falcons and golden eagles were observed throughout the entire district during the last two weeks in November.

## 5. Other Migratory Birds

Songbird populations appeared to be in the normal range. Population data on these species are non-existent.

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

### 1. Game Mammals

A special deer archery season was allowed for the fourth straight year on the Maple River NWR, after the deer gun season closed. This hunt is an effective tool to keep deer dispersed off of the refuge after they have been chased into it by the gun season. Peak population on the 400 acre parcel open to bow hunting is less than 100



deer, compared to over 300 in years past.

For the second straight year mule deer have been seen on the Lazy M (340) D WPA. During November a two point buck with four does were observed; last fall a four point buck with two does were seen on this WPA. Mule deer are not usually found east of the Missouri River which is 100 miles to the west.

Sixteen millet bales received from cooperative farming were distributed among four WPA's (Gruneich (359a) D, Klein (33) McI, Wolf (34) McI, and Mund(134) McI) as winter food for deer and upland game birds.

## 2. Other Mammals

During the winter months trapping and hunting of fur bearers is a major activity. With fox selling for \$50 in the round and raccoon, badger worth \$40 the search for these animals is relentless. As long as fur prices stay up, populations of these furbearing mammals will stay depressed.

## 3. Resident Birds

The mild winter of 1979-1980 was beneficial to existing populations of upland game birds as higher than normal numbers survived to breeding season.

The Hungarian partridge population was up substantially while sharp-tail grouse numbers were normal to slightly below normal. It is suspected that the unusually hot spring may have been responsible for high chick mortality, as few large broods were seen in the fall. Pheasant populations in the Ellendale-Oakes area were up due to the mild winter and large amount of sunflower stubble. This is the only portion of the Kulm WMD where sizable pheasant populations occur.

For the second year in a row pheasant hunting was allowed on the Maple River NWR. An abbreviated 11 day season (Oct. 27-Nov. 6) was allowed on the 400 acre parcel of this easement refuge that is owned by the service in fee title. The short season was designed to eliminate conflicts with heavy waterfowl use on the refuge which occurs in October and deer gun season which started November 7. This refuge received heavy hunting pressure with an estimated 100 pheasants harvested.

## V. INTERPRETATION AND RECREATION

### A. Information and Interpretation

#### 1. On Refuge

Nothing to report.

#### 2. Off Refuge

In May the Kulm WMD participated in the Soil Conservation Service's 7th grade environmental education conservation tour. Biological Technician John Jones gave a presentation on waterfowl identification and the importance of North Dakota wetlands in waterfowl production to students from the surrounding six county area.



Students enjoying "hands on" environmental education during conservation tour. #11-80, May 80', J.W. Jones

Three news releases were written during the year, one on archery hunting and pheasant hunting on the Maple River NWR, one on regulations concerning vehicle use on WPA's and one on hiring a new maintenance worker.

Presentations were made to the Edgeley Lions Club and Ludden Sportsmen's Club about land management practices on nearby WPA's.

### B. Recreation

#### 1. Wildlife Oriented

This was only a fair year for hunting all native species. The

drought dried up all the type III marshes and many type IV marshes had a receding shoreline. However, sizable numbers of duck hunters came to the Kulm district to hunt, but a boat was necessary for any degree of success.

High fur prices have caused a lot of people to take up trapping with the result that most WPA's are being trapped.

These two activities make up most of the recreational use of WPA's in the Kulm WMD.

## 2. Non-Wildlife Oriented

Nothing to report.

## C. Enforcement

This year things were relatively quiet. There were no major farming or grazing trespass problems and very few game law violations. The major violation was driving on WPA's which occurred mainly during deer season and was probably due to the very dry conditions and lack of snow cover which caused people not to worry about getting stuck. However, we always saw the evidence (tire tracks) but could rarely catch the violator, only two FOC's were issued.

Enforcement of easement violations was covered under III, Habitat Management, Easements for Waterfowl Management.

One trespass case where a neighboring farmer cleaned out 60 feet of a natural drain on the Kesselberry (100b) McI WPA to facilitate private drainage was settled out of court between the landowner's attorney and the U.S. Attorney. Charges were dropped because of a lack of communication between defendant and the United States. The defendant signed a Motion and Stipulation stating he would not clean out this natural drain on the WPA without permission!

## VI. OTHER ITEMS

### A. Field Investigations

The Northern Prairie Wildlife Research Center is conducting a study within North Dakota entitled, "The effects of rest-rotation grazing and prescribed burning on the mixed grass prairie community and wildlife production in the glaciated prairie region."

The objectives of this study are to evaluate changes in the height, density, species composition and frequency of vegetation on areas of native prairie in the Missouri Coteau and Southern Drift Plain of the Prairie Pothole Region, resulting from various rest-rotation grazing and prescribed burning systems. The study will also evaluate changes in the nesting response of dabbling ducks and population trends of breeding birds due to these systems.

The study encompasses 1,356 acres of native prairie within the Kulm WMD on three WPA's; the Geiszler (205) (210) (277) McI, the Erlenbusch (12) D, and the Lazy M (340) D, along with select tracts on the Arrowwood NWR, Lostwood NWR and the Pipestem project.

The research project leader is Arnold D. Kruse with James Piehl as assistant.



Jim Piehl measuring seed head height during Daubenmire Transects for part of the grazing and prescribed burning study being conducted in the Kulm District. #12-80, Aug. 80', NPWRC.

The Northern Prairie Wildlife Research Center is also conducting a study of the expiring 20 year easement contracts within the Kulm WMD. District personnel monitor the amount of drainage occurring on these expired easements during the annual easement flights, and report the findings to Ken Higgins, the study co-ordinator. An evaluation will occur after several years of flights.



## B. Cooperative Programs

During the summer the Kulm WMD assisted the branch of Animal Control in disseminating scare devices and information for controlling waterfowl and blackbird crop depredation. Scare devices were loaned or given to over 110 local farmers.

ADC personnel were operating out of the Kulm WMD during the small grain harvest in September. They investigated complaints about high density duck numbers in swathed grain, and when favorable conditions existed they purchased fields to act as a lure crop to hold large feeding flocks in the area and reduce depredation on neighboring lands. In the Kulm WMD two lure crop fields were purchased.

## C. Items of Interest

During 1980 the Kulm WMD was able to add two more permanent part time personnel to the staff.

James Steinmetz was hired under the Vietnam Veterans Adjustment Program as a Maintenance Worker, WG-5. He will be in charge of the District's maintenance responsibilities and will work out of the new shop constructed in 1979-1980.

Sherwood Lundgren who had worked for the Kulm WMD as a temporary Bio-Aid over the past three summers was hired as a Range Aid, GS-3. His primary responsibility will be fence construction and repair, weed spraying, grass seeding, equipment operator, etc.

Biological Technician John Jones was promoted from a GS-8 to GS-9.

On May 20, the entire Kulm staff, Manager Tuck Stone, Assistant Manager Francis Maiss, Biological Technician John Jones, and Administrative Clerk Edna Okerlund along with Realty Specialist Stanley Weisz from Jamestown Wetland Office received a \$250 group Special Achievement Award in recognition of the long standing positive community relations between the local Fish and Wildlife Service Office and the people within the Kulm WMD, at a time when FWS is generally held in low esteem throughout the state.

On November 17, Assistant Manager Francis Maiss received a \$200 Special Achievement Award for the good job he did working with and supervising 8 summer employees. Under his direction this crew had constructed 42 miles of new fence and removed 17 miles of old fence along with the normal maintenance duties, signing, weed spraying, etc. thus freeing the rest of the staff to work on the BLHP shop construction project and the force account work related to the shop site.

For the second year in a row FWS was able to field a slow pitch softball team which participated in the local league. Last year's 4-8 won/loss record was improved to 7-5. "Wildlife" came in 1st place in league play with a 6-3 record, but then lost 2 out of 3 in a double elimination tournament. Everyone had a good time and the staff is looking forward to next season.



This report was written by Manager Tuck Stone (Part IIa) and Assistant Manager Francis Maiss (Parts I, IIB, C, III, IV, V, VI). Refuge Administrative Clerk Edna Okerlund typed and assembled the report.

D. Safety

This station was very safety conscious this year, and even with 8 temporary employees the Kulm WMD managed to go through the whole year without a reportable accident.