

RG 22 Narrative Report Crosby Wetland Management District
July 1973 - June 30, 1974

NARRATIVE REPORT
FOR
JULY 1, 1973 - JUNE 30, 1974

PERSONNEL

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U.S. FISH AND WILDLIFE SERVICE
CROSBY WETLAND MANAGEMENT DISTRICT
and
LAKE ZAHL NATIONAL WILDLIFE REFUGE

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NARRATIVE REPORT
FOR FY-74

I.

GENERAL

A. Weather

Weather conditions throughout the reporting period were near normal. Hot and dry weather prevailed early in the reporting period. We received a record amount of moisture with 62 inches of snowfall being recorded. A cool wet spring hampered nesting success of upland game birds and delayed the planting of small grain crops. There were no severe hailstorms or damaging winds.

B. Habitat Conditions

1. Water - Early in the reporting period many of the Type III's and some IV's were dried up. The dry conditions were alleviated somewhat with a 4 inch rain on Labor Day. A good spring run-off was needed because of the dry fall. We received more than enough run-off in the spring of 1974. Run-off received on April 9 was significant and caused many roads to be under water. Many of the wetlands were so full that the desirable emergent cover did not grow. The excess water in the spring of 74 has possibly caused some sloughs to contribute to saline seep conditions. Many of the WPA's still were ice covered in mid-April.
2. Food and Cover - Food and cover conditions were fair to good throughout the reporting period. Waterfowl, deer and upland birds utilized the small grains left on WPA's as the government's share. Aquatic vegetation was available on most WPA's. The snow accumulation made winter food somewhat scarce and packed down much of the vegetation. High water on several WPA's restricted the growth of emergents; thus, some quality brood cover was eliminated. The sunflower food patches on Stady WPA (Divide Co.) and Lake Zahl (Williams Co.) made excellent growth and were utilized by deer and upland game birds.

II.

WILDLIFE

A. Migratory Birds

1. Waterfowl - Goose production (an estimated 10) remained the same. Duck production increased 11 percent to 45,800. Pair block data gave a total of 6,700 pairs on fee lands. This figure was multiplied by the assumed productivity rate of 45 percent to determine broods produced. Total broods produced was multiplied by 5.9 ducks per brood to flight stage. The result was 17,800 ducks produced on fee lands. Another .5 ducks per easement wetland acre (28,000) was added resulting in a total of 45,800 ducks produced in

the Crosby WMD on fee and easement lands. Dabbling ducks comprised 75 percent and divers 25 percent of the total.

Duck production is supplemented by the use of artificial nesting structures. For the 1974 nesting season 31 structures were available, 22 were used and of the 25 nesting attempts, 23 were successful. A total of 215 eggs were laid and 173 ducklings hatched.

In this district a method used for evaluating nesting cover is cable-chain dragging. During the week of June 24-28 a total of 353 upland acres on four WPA's was dragged to locate nesting ducks and upland game. One hundred three nests were found for a ratio of 1 nest for each 3.42 acres searched. Soo Grade (Divide Co.) had the best ratio with 1 nest per 2.66 acre on all native prairie. Fenster (Divide Co.) followed with 1 nest per 2.77 acre on all DNC, Cy Wigness (Divide Co.) with 1 nest per 3.08 acre on half DNC and half native and Lincoln (Divide Co.) with 1 nest per 23.3 acres on DNC and native. It is notable that Lincoln WPA had been grazed during May at 1 AUM per acre.

Average waterfowl populations were up 25 percent the first half of FY 74 as compared to FY 73. The high population in the district may have accounted for the lack of a noticeable fall migration. The dry condition to the north and west in Canada may have forced many ducks to migrate early contributing to the increased population in the Crosby WMD.

Spring waterfowl populations were stable at 25,000 to 45,000 after a spectacular migration through the district. The first waterfowl of any numbers were seen April 9 but by the following day a large influx had occurred. Over 3,000 geese and 30,000 ducks were seen in one small area northeast of Crosby. The peak occurred about April 13.

Less than 100 whistling swans were observed during the fall of 1973. Normally 250 or more are seen. Spring migration was quite different with 250 or more observed at one location in early April. Nearly 600 swans were observed district wide at the peak of their migration.

On July 31, 1973 an attempt to establish a nesting flock of giant Canada geese was initiated by releasing 250 at Lake Zahl NWR. Flightless when released, all were flying within two weeks. Near the end of August a group of 70-80 were observed making flights of 20 miles from the release site. Until this time all were accounted for but then in September 70-80 became unaccounted for. They apparently moved to the west and mixed with the Medicine Lake flock.

Prior to hunting season a program was enacted to make the geese more wary. The geese were periodically harrassed with rifles, shotguns, teleshots and fire-crackers. Neighboring landowners agreed to post an area 1.5 to 2 miles deep around the south unit of the refuge. Much publicity was put out encouraging people not to shoot the geese.

These protection efforts were fairly effective as only 3 band recoveries due to shooting came from within a 10 mile radius of the release site. Even before all geese had migrated on November 5, it was apparent by band returns that parts or all of the flock was moving about over a large part of the territory. Fourteen geese were shot at widely scattered points in North Dakota and nearby Montana. After November 5, 4 (all in November) were shot in North Dakota, 6 (5 in November, 1 in December) in South Dakota, 1 (December) in Kansas and 1 (December) in Wyoming. Two were captured and released (January 5, 1974) near Pierre, South Dakota and 5 were sighted December 22, 1973 at Cheyenne Bottoms in Kansas.

The first spring observations were of five geese March 10 and 30 on April 19. By the end of the FY no more than 31 were verified as being of the released flock.

2. Other Water Birds - White pelicans were observed on Lake Zahl in a flock of 350 and in smaller flocks on 3 or 4 Waterfowl Production Areas. Only sub-adults and non-breeders are usually seen. Double-crested cormorants loafed around Lake Zahl and several WPA's but only 25 or more were seen at one time.

Approximately 200 sandhill cranes were observed near Missouri Bottoms WPA (Williams Co.) but thousands more were observed migrating through the district.

A nesting colony of 250 pairs of black-crowned night herons was discovered at Beaver Lake WPA (Burke Co.). They nested on many other WPA's but not in such large numbers. Twelve great blue herons were noted in the district but no nesting was observed.

American bitterns were seen on only 10 or more WPA's but it is probable that they inhabit most units.

Four species of grebes were observed nesting on fee land. Western grebes nested on Lake Zahl NWR and Beaver Lake WPA. Eared and horned grebes nested on almost all WPA's but the biggest colonies were found on Beaver Lake (500 pairs), Fenster (500 pairs), Big Meadows (Williams Co.) (1000 pairs)

and Rattler Lake (Divide Co.) (1000 pairs). Pied-billed grebes nested widely also, but not in such dense numbers.

Common mergansers were seen during spring and fall migration but one observation was in June when a lone female was seen at State Slough WPA (Divide Co.)

3. Shorebirds - Use by shorebirds during the fall of 1973 was quite high possibly because of exposed shore lines. Due to a heavy spring run-off in 1974, water levels were so high that shore lines and emergent vegetation were inundated. This caused a decrease in use by shorebirds although the normal compliment of species was present.

Avocets showed a dramatic increase. More than 100 were observed at Lake Zahl NWR. Several WPA's were also host to 25-50 avocets. Most units were used by just a few but numbers were still higher than the year before.

Virginia rails were again heard and a dead specimen was found, but nesting was not verified.

4. Doves - The first spring observation of a mourning dove was on April 12, 1974. Three days later 3 more were seen. The breeding population was about the same as 1973. Data from two mourning dove call count transects reflect this. A total of 37 were seen or heard in 1973 and again in 1974.

B. Upland Game Birds

Pheasants - The fiscal year started out with a good population of pheasants in the district. More pheasants were seen on or near WPA's than in previous years. Although the winter was mild a record snow accumulation apparently caused a high mortality. Data from crow counts in May indicated a much lower population than the previous year. Some 68 pheasants were heard in 1973 and only 15 in 1974. The outlook for a good hatch was bright but cold, wet weather through the nesting season negated that. Subsequently populations were very low as the fiscal year ended.

Hungarian Partridge - This species increased in numbers slightly over previous years. Coveys of 12 or more were seen near WPA's. Extremely dense cover on WPA's seems to be preferred for nesting.

Sharp-tailed Grouse - Early morning trips to known dancing grounds in the spring of 1974 indicate that this species is at or near the bottom of the population cycle. Only one grouse was seen at the ground on Soo Grade WPA. Eighteen males were on this ground in 1973. Other grounds indicated the same downward trend. Two more grounds were found on WPA's to bring the total known dancing grounds to 11.

C. Big Game Animals

The white-tailed deer population was extraordinary this year. More than 100 were observed on Soo Grade and State Slough WPA's. There was a herd of 100-150 on the south unit of Lake Zahl NWR for most of the winter season. This is 4 times the normal population. As in past years, does used the heavy cover on WPA's for fawning. There were no observations of mule deer this year.

The pronghorn population was relatively normal, no more than 200-300 over the whole district. Little use occurs on WPA's.

D. Fur Animals, Predators, Rodents and Other Mammals

Mink, weasel, skunk and raccoon were observed occasionally. Populations of each were about normal according to available signs.

Red fox populations were high. Good trappers were taking up to 100. Because they were hit hard, numbers were quite low by the end of the year.

Coyotes appeared to increase district wide. We not only heard more about them; but station personnel observed them more often. A half-dozen were observed; whereas, 5 years ago none were seen.

White-tailed jackrabbits were low in number at the beginning of the year; but increased significantly near the end. Observations were common throughout this district.

Porcupine numbers remain about the same. They are observed only occasionally.

Muskrat populations were quite high as the year began. Trappers hit them pretty hard. Then water levels became very high from spring run-off and the population was hurt again. At years end numbers were down from a year ago.

Small mammal populations were high to begin with and down again toward the end. Mice and voles were commonly seen when one walked through cover. Raptors utilized them heavily.

E. Hawks, Eagles, Owls, Crows, Ravens & Magpies

Marsh hawks are the most common hawks in this district nesting on several WPA's. Seven red-tailed hawks were seen April 10 during spring migration and Swainson's hawks were seen migrating September 18, 1973. Thirty or more Swainson's were seen on one quarter section in western Divide County.

Fourteen eagles were observed through the year. This is better than twice the previous year. Six were bald eagles, 6 were golden eagles and 2 were unidentified.

Three species of owls were noted as nesting in the district: great horned owls, short-eared owls and burrowing owls. Only three burrowing owls were observed on two occasions. Snowy owls were observed one time during the year.

Crows and magpies occurred in near normal numbers throughout the district.

F. Other Birds

Two adult whooping cranes were observed for approximately one week on Nelson WPA (Burke County). A pair of cinnamon teal was observed on Wildrose Marsh WPA (Divide Co.) in late April.

The following species were observed at least once during the year:

Vesper Sparrow	Common Nighthawk
Ruby-throated Hummingbird	Belted Kingfisher
Hairy Woodpecker	Downy Kingbird
Eastern Kingbird	Western Kingbird
Least Flycatcher .	Yellow-shafted Flicker
Horned Lark	Tree Swallow
Bank Swallow	Barn Swallow
Purple Martin	Black-billed Magpie
Common Crow	Brown Creeper
Black-capped Chickadee	House Wren
Long-billed Marsh Wren	Short-billed Marsh Wren
Catbird	Brown Thrasher
Robin	Mountain Bluebird
Eastern Bluebird	Golden-crowned Kinglet
Ruby-crowned Kinglet	Bohemian Waxwing
Cedar Waxwing	Swainson's Thrush
Gray-cheeked Thrush	Starling
Loggerhead Shrike	Yellow Warbler
Myrtle Warbler	American Redstart
Tennessee Warbler	Blackpoll Warbler
Yellow-throated Warbler	Bobolink
Western Meadowlark	Yellow-headed Blackbird
Red-winged Blackbird	Orchard Oriole
Common Grackle	Brewer's Blackbird
Common Redpoll	American Goldfinch
Lark Bunting	Grasshopper Sparrow
Bairds Sparrow	Le Counte's Sparrow
Sharp-tailed Sparrow	Clay-colored Sparrow
Harris' Sparrow	Savannah Sparrow
Baltimore Oriole	Rusty Blackbird
Brown-headed Cowbird	White-throated Sparrow
White-crowned Sparrow	Lincoln's Sparrow

Song Sparrow
Snow Bunting
Chipping Sparrow

Lapland Longspur
Chestnut-collared Longspur
Field Sparrow

G. Fish

Several species of fish are present on few WPA's. Game fishing occurs on Powers Lake WPA (Burke Co.) where northern pike and yellow perch are caught. Many species of minnows can be found on a few WPA's.

H. Reptiles and Amphibians

Painted turtles, common garter snakes and plains garter snakes were the only reptiles observed in the district. Tiger salamander, great plains toad, chorus frog and leopard frog were the only amphibians recorded.

I. Disease

Nothing to report.

III.

REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Developments

A total of 520 rods of three-strand barbwire fence was constructed on three WPA's and Lake Zahl NWR. The fence on Lake Zahl was done for account and the fence on the WPA's was done by the adjacent landowner with the government providing the materials. All fencing was done to prevent cattle trespass. Some fence and gates were repaired on three WPA's in the district.

Posting and re-posting was completed on 20 management units within the district.

Electricity was installed at our storage building on Carlson WPA (Divide Co.). It makes the storage shed more usable as a shop area.

B. Plantings

Dense nesting cover (4 lbs. pubescent, 2 lbs. tall wheatgrass and 2 lbs. alfalfa) was seeded on a total of 178 acres on five WPA's. The grass was seeded on cropland of recent acquisitions. All the grass was seeded by cooperators, who harvested 90 percent of the nurse crop as compensation for the extra work of seeding the grass.

Fourteen acres were plowed up on Carlson WPA for the purpose of eliminating a sow thistle problem. Because of high water levels, the area has not been seeded to DNC.

Thirteen cooperative farming permits were issued for the purpose of seeding DNC and preparing the area for re-seeding. We are

gradually working into a program of re-seeding old cropland that has become a sparse monotypic stand of brome.

Approximately 124 acres of wheat and 18 acres of barley were planted on WPA's. Cooperators harvested 90 percent of these crops with the remainder standing in the field for wildlife food. Approximately 12 acres of sunflowers were planted on two units for a food patch. Deer and upland game utilized the food patches for winter food supply.

Approximately 300 replacement trees were planted on Carlson WPA. No clump plantings were done although some are planned for the district.

C. Collection of Seeds and Specimens and Receipts

Plants were collected for the station herbarium. Some of the plants are used for demonstration purposes.

Eggs of different birds were collected for office display and demonstrations.

Our office was called in the spring of 1974 to assist in transplanting some beaver from Long Creek (north of Crosby) to a suitable area. We live-trapped and transplanted eleven beaver to State Slough WPA.

D. Control of Vegetation

Tree plantings on Miller (Divide Co.), Carlson, Wigness and Bratlien (Divide Co.) WPA's were cultivated for weed control. The above cultivating was done by station personnel. The trees at Lake Zahl NWR were cultivated by a cooperator.

Leafy spurge was sprayed on four management units within the WMD. Canada thistle was sprayed on two management units. Weed control could consume much of our operating money if we complied with the North Dakota Noxious Weed Law.

Cooperators did some spraying of crops where no grass and legume mixture was seeded.

E. Planned Burning

None

F. Fires

None

IV.

RESOURCE MANAGEMENT

A. Grazing

Grazing can be used as a management tool to check invading brome and reduce litter and mulch. Intensive grazing in the

spring can stimulate growth and increase variety of vegetation. We issued one grazing permit for the month of May in 1974. The grazing rate was 70 AUM's on 70 acres. Within two weeks after the cattle were off, new and more diverse plant cover was 18 inches tall. In the future more grazing on a controlled basis will be conducted in the WMD.

B. Haying

Three cooperators cut 149 acres of hay for a total yield of 195 tons. The haying was done to facilitate the plowing of monotypic brome stands which are being rehabilitated to attain more diverse cover.

C. Fur Harvest

There were no permits issued for commercial trapping. Several inquiries were received for trapping Lake Zahl NWR. Sport trapping is discussed under public relations.

D. Economic Benefits

The grazing permit generated \$322.50 in Bureau revenue and two applications for power line access permits generated \$20.00 in revenue. No other economic benefits for FY 74.

V. FIELD INVESTIGATIONS OR APPLIED RESEARCH

A. Formal Studies

No formal biological studies were being conducted during FY 74.

B. Informal Studies

Two areas in Divide County (Lincoln and Cy Wigness WPA's) were seeded to DNC in 1967. These areas had been very productive for duck nesting, upland game nesting and use by big game. From observations by station personnel and reports from surrounding landowners the use of the area by wildlife seemed to be declining. It was decided to graze one of the areas in 1974 to stimulate growth and reduce litter and mulch. Both of the areas were dragged for nests in June. The area that was grazed (Lincoln) had three nests on 70 acres and the ungrazed area had 37 nests on 144 acres. In 1975 Cy Wigness WPA will be grazed and Lincoln will be left idle. Both areas will be dragged for nests in June of 1975. Our objective is to find at what point in time the wildlife use on the area begins to decline and if we can halt this decline by grazing on a periodic basis.

We have been monitoring the giant Canada geese that were released at Lake Zahl NWR in 1973. They should be nesting this spring. Round hay bales and nesting tubs (fiberglass) have been placed on Lake Zahl NWR.

VI.

PUBLIC RELATIONS

A. Recreational Uses

Wildlands appreciation was the largest public-use activity in FY 74. All of the WPA's were used for hunting and trapping. The ecology class from Divide County High School uses a few of the management units for environmental studies.

B. Refuge Visitors and Participation

The office received approximately 100 visitors in FY 74. Our exhibit booth at the Divide County Fair attracted approximately 4,000 visitors. Personnel at Crosby WMD gave 21 programs to a total of 919 people. Five mini-courses on Wildlife Conservation were taught to 120 students at the high school during career week. An article on our nesting structure program was prepared for publication in the Flickertail magazine. Hesselbart and Steffen are certified hunter safety instructors.

C. Hunting

The fall of 1973 was probably one of the best hunting seasons ever recorded since the start of this district. Waterfowl hunting was exceptional in marshes as in the fields. Most hunters that made a reasonable attempt were bagging their limit. Upland game hunting was excellent. Hunting pressure on sharp-tailed grouse and partridge is quite limited. There was heavy pressure on pheasants and the pheasant hunting was excellent. Most of the WPA's are used for some type of hunting.

The trapping season was excellent and because of extremely high fur prices, everybody was getting in the act. All the local hardware stores etc. ran out of traps to sell.

D. Violations

Hesselbart and Steffen worked on the ports of entry in northwest North Dakota for one weekend. One apprehension was made. Two apprehensions were made in southwest Divide County on opening day of waterfowl season. No easement violations were recorded.

E. Safety

This station has never had a lost time accident. Monthly safety meetings were held. A few of the safety meetings were done jointly with Northwestern Bell Company. New seat belts were installed in one of the station pick-up trucks. All personnel attended a Defensive Driving Course in January.

VII.

OTHER ITEMS

A. Items of Interest

In fiscal year 74 approximately 100 easements were taken in

Crosby WMD. This is the highest number of easements ever taken at Crosby WMD in one FY.

Saline seeps are wet-alkaline sites which are caused by excess salt being brought to the surface by ground water. They are caused primarily by summer fallowing, which leaves no root system to absorb excess ground water. The water moves through the soil to an impermeable layer and then laterally picking up salts. When this lateral movement approaches the surface, the salts are deposited and the area stays wet and salty. The research in Divide County indicates that purchased wetlands may contribute to the seep problem by adding more water to the soil. Our office has received a few requests to drain wetlands that are contributing to seeps; however, the wetlands are under easement with the Fish and Wildlife Service. A policy on how to handle these requests is under consideration.

This office received good publicity locally for the assistance we provided farmers on depredation. We loaned out scare cannons and crackers with caw-caw rope. The county commissioners were pleased with our efforts and the commissioners are the ones that approve or disapprove all purchases.

SIGNATURE PAGE

Date: 4-21-75

Submitted by:

Willard B. Henshaw
Signature

Wetland Manager
Title

Approved: Area Manager

Date: 4/23/75

Leslie J. Schommer
Signature

acty Area Manager
Title

Concurrence

Date: 4/23/75

Leslie J. Schommer
Signature

Chief, LM, Area Office
Title

Approved: Regional Office

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Signature

Title