1970

NARRATIVE REPORT

BENSON WETLAND MANAGEMENT DISTRICT

BENSON, MINNESOTA

CALENDAR YEAR, 1970

PERMANENT PERSONNEL

James J. Hubert, Project Leader, GS-12	1-1-70/12-31-70
Jack C. Womble, Assistant Wetland Manager, GS-9	1-1-70/12-31-70
John T. Hutchinson, Biological Technician, GS-5	1-1-70/12-31-70
Roger H. Nelson, Maintenanceman, WG-6	1-1-70/12-31-70
Evonne T. Mikkelson, Clerk-Steno, GS-4	1-1-70/12-31-70

TEMPORARY PERSONNEL

Dennis L. Heidebrink, Laborer, WG-2	6-15-70/9-5-70
Daniel J. Orr, Laborer, WG-2	6-1-70/8-29-70
John E. Schliep, Laborer, WG-3	6-1-70/9-16-70
Thomas H. Tucker, Laborer, WG-2	6-1-70/8-22-70

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ANNUAL NARRATIVE REPORT

BENSON WETLAND MANAGEMENT DISTRICT

JANUARY - DECEMBER, 1970

I. GENERAL

A. Description of the Area

The Benson Wetland Management District with an office located in Benson, Minnesota was established in October 1964 to serve an area of eleven counties of West-central and South-central Minnesota. Included in the District are the counties of Big Stone, Cottonwood, Jackson, Kandiyohi, Lac qui Parle, Pope, Stearns, Stevens, Swift, Traverse and Yellow Medicine. The map which follows shows the extent and location of the Wetland District in relation to the state. Individual management units are pin-pointed on the current Federal Guide to Waterfowl Production Areas attached to the back cover of this report. These management units range in size from 6 to 878 acres.

The District lies on the eastern margin of both the Great Plains and the duck factory region of the upper midwest. The topography varies from rolling grassland to flat agricultural type land. The transition zone between plains and forest is locally evident. Signs of past glaciation are found throughout this region.

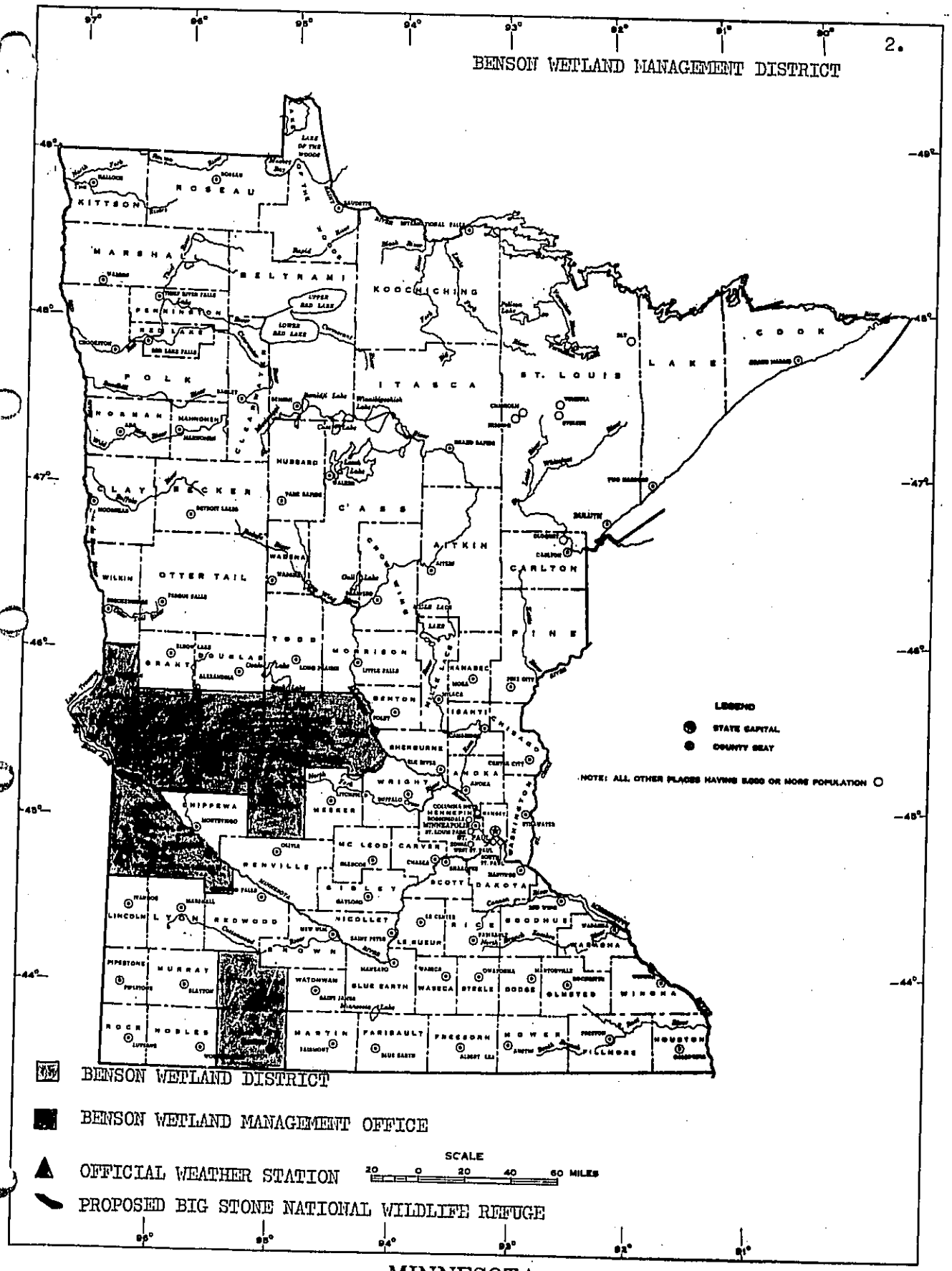
B. Status of the Acquisition Program

1. Fee Title Program

Acquisition is still progressing under the Wetlands Program Extension Bill of December, 1967. This bill extended the period for acquiring wetlands to June 30, 1976. With the Minnesota Land Exchange Commissions' approval, the goal acreage was reestablished at 59,000 acres following the shift of 7,000 acres to the Fergus Falls Wetland District in 1968. The goal of 364 management units in the eleven county Benson District still appears to be a realistic figure.

Proposals to phase out the acquisition program are becoming realities as the acreage goal and the end of the extended period are approached. However, the when and how this will occur are not yet clear. In the Wetland Office one appraiser position was vacated in November of 1970 and is not to be refilled. It is believed that other positions will be phased out in the same manner as the program approaches the end.

BENSON WETLAND MANAGEMENT DISTRICT



MINNESOTA

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The only significant policy change made in the acquisition program during this reporting period involved the institution of a new procedure for determining survey needs. For the first time, this procedure gives engineering and management a greater voice in survey determination. Also, the management office has initiated a system of vendor contacts soon after tracts are purchased in order to explain major management policies and activities. Hopefully, this procedure will lessen future misunderstandings and management problems such as have been experienced in the past.

Table I, "Fee Title Acquisition Status", reflects trends of the fee title program from 1968 through 1970. A correlation of acquisition can easily be made between these three years. The option date of the purchase agreement was used as the breaking point for preparing Table I.

TABLE I FEE TITLE ACQUISITION STATUS

County	1968 No. Mgt. Units	1968 Optioned Acres	1969 No. Mgt. Units	1969 Optioned Acres	1970 No. Mgt. Units	1970 Optioned Acres
Big Stone	53	6,677.15	54	7,344.42	56	7,525.92
Cottonwood	6	798.45	6	838.45	7	932.00
Jackson	10	1,352.17	10	1,352.17	10	1,420.17
Kandiyohi	38	5,823.37	42	6,505.39	46	7,307.91
Lac qui Parle	12	1,371.23	13	2,009.77	14	2,301.95
Pope	42	6,091.87	50	7,194.26	57*	8,318.33
Stearns	13	2,044.69	20	2,581.41	29*	4,545.05
Stevens	37	4,091.03	46	5,016.87	50*	5,477.87
Swift	21	4,338.06	24	4,742.46	25	4,972.06
Traverse	7	1,669.62	7	1,669.62	9*	2,036.37
Yellow Medicine	2	70.00	2	70.00	2	70.00
TOTALS	241	34,327.64	274	39,324.82	305*	44,907.63

* A portion of this increase reflects the creation of 4 additional units because of dividing several tracts into separate manageable units.

A significant increase in the number of tracts acquired, from 54 in 1969 to 77 in 1970 was noted. A good share of this increase involves tracts purchased in Stearns County where the quality of habitat for waterfowl production is low. Also, Table I indicates a substantial increase in the number of acres acquired in 1970 as compared to 1969. The Wetland Office acquired an average of 273 acres per month in 1968, 416 acres in 1969 and 465 acres in 1970.

Table I shows a slight decrease in the number of new management units created in 1970 as compared to 1969. It is evident that the creation of new units will decrease as more time is required for roundouts and the potential for new units becomes more limited.

2. Easement Program

Trends of the easement program are reflected in Table II, "Easement Acquisition Status". The table correlates progress of the program from 1968 through 1970.

TABLE II

EASEMENT ACQUISITION STATUS

County	1968 No.	1968 Total Acres	1969 No.	1969 Total Acres	1970 No.	1970 Wetland Acres	1970 Total Acres
Big Stone	108	15,572.63	109	15,641.83	110	4,437.00	15,741.83
Cottonwood	No easements being taken						
Jackson	No easements being taken						
Kandiyohi	85	10,205.27	85	10,205.27	85	3,033.00	10,205.27
L.Q.P.	2	240.00	2	240.00	2	141.00	240.00
Pope	118	20,118.13	120	20,338.13	123	5,495.00	20,886.30
Stearns	5	876.32	6	995.26	6	292.00	995.26
Stevens	15	1,392.64	14	1,426.64	14	435.00	1,426.64
Swift	13	1,311.52	14	1,341.52	14	399.00	1,341.52
Traverse	21	3,101.04	21	3,101.04	21	995.00	3,101.04
Yellow Med.	1	80.00	1	80.00	1	17.00	80.00
TOTALS	368	52,837.55	372	53,369.69	376	15,244.00	54,017.86

Emphasis is on fee title acquisition while the easement program continues to remain at a low ebb. The Benson Wetland Office is currently taking easements only on a request basis. The conspicuous decrease to 4 easements acquired for each of the last two years supports present thinking that the easement program will not gain much status in Minnesota. The lack of public acceptance and emphasis on draining in Minnesota appears to be responsible for the decline.

C. Weather Conditions

The winter of 1969-1970 started with normal temperatures and average precipitation. However, during the period of January through March the temperature fluctuated greatly and very little precipitation was received. The temperature dropped to -33°

TABLE III — 1970 WEATHER DATA

Precipitation

Month	Willmar	Morris	Benson	Canby	Windom	Average
January	.29"	.24"	.36"	.38"	.81"	.42"
February	.22	.35	.25	.06	.10	.20
March	.80	1.52	1.13	.91	2.09	1.29
April	3.58	4.83	4.09	4.16	2.34	3.80
May	2.93	2.48	3.11	3.74	2.96	3.04
June	5.07	3.10	3.18	4.82	2.24	3.68
July	4.78	4.14	4.35	3.99	8.30	5.11
August	2.71	.25	4.32	2.69	2.07	2.41
September	2.48	2.55	1.99	2.87	3.71	2.72
October	3.84	4.11	3.86	3.73	4.08	3.92
November	2.76	3.66	4.10	3.09	2.57	3.24
December	.11	.10	.13	.30	.98	.32
ANNUAL TOTAL	29.57"	27.33"	30.87"	30.74"	32.25"	30.15"
ANNUAL NORM*	24.47"	22.58"	27.61"	26.99"	30.04"	27.66"

*Annual norms for Willmar and Morris are based on period of 1931-1960. Annual norms for Benson, Canby & Windom are based on period of 1966-1970.

Temperature

Month	Willmar		Morris		Benson		Canby		Windom	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
January	34	-33	31	-33	35	-33	40	-31	40	-30
February	42	-23	43	-24	44	-24	47	-21	41	-21
March	45	3	43	0	44	2	46	3	42	6
April	83	11	79	3	84	4	88	11	89	16
May	92	26	86	27	89	25	92	25	93	28
June	96	46	94	44	95	43	99	41	99	44
July	93	51	94	49	95	48	98	47	94	48
August	93	50	92	47	93	46	97	47	92	48
September	92	37	90	34	90	34	97	36	97	36
October	87	23	85	22	87	19	89	21	83	19
November	52	- 1	52	- 3	53	- 4	53	- 3	56	- 1
December	38	-10	45	-15	43	-12	50	-12	57	-11
EXTREMES	96	-33	94	-33	95	-33	99	-31	99	-30

Last Killing Frost of Spring - 5/2/70
First Killing Frost of Fall - 10/9/70

in some areas of the district during January. This was the lowest temperature recorded in Benson for the past ten years. Although the weather was dry in February and March, the temperature was very mild.

The spring was unseasonably cool well into June. The cool damp weather in April caused some anxiety among the farmers who were behind schedule because of excessive spring moisture. May brought normal precipitation while again in June heavy amounts were received.

Typical summer temperatures occurred during July and parts of August. The latter half of August brought cooler weather. Several thunderstorms evolved during the last half of July and the second week of August. Above normal precipitation was received for the period. The storm during August packed 70 mph winds, hail and three inches of rain in some areas.

An Indian summer was experienced during a portion of September and October. The temperature ranged as high as 97 degrees during September. Again precipitation was high, especially for a Minnesota Fall. Over half of the fall season was under cloudy-rainy skies. The first snowstorm of the 1970-1971 winter at Benson occurred October 9th when six inches of snow fell.

Excessive rainfall continued through November 13th. The remainder of 1970 was very dry with seasonable temperatures. Ice cover of all lakes was complete by November 15th. The year ended with no snow cover in the Benson area but 2-6 inches in the Cottonwood-Jackson County area.

D. <u>History of Past Use</u>

This region of Minnesota was inviolate until 1862. With the passage of the Homestead Act and construction of the railroad immigrants rapidly settled the area and began farming.

Since then the region has been primarily agricultural with corn and beans as prevailing crops. Nearly all land regardless of capability has been tilled at one time. All types of erosion are evident as a result. Early landowners believed only in reaping the resources with little thought of conserving for the future.

The terrific demand for farmland in the 1940's and 1950's caused many thousands of wetlands to be destroyed in the name of conservation. Greater emphasis on true conservation in recent years has resulted in at least a beginning to better land use.

The wetland management units are beginning to contribute to the area economy. Although the degree of economic relation may be

small with grazing units and small farmland tracts it is an accepted fact that wildlife related recreation is drawing many dollars into the local communities.

E. Habitat Conditions

1. Water

Water conditions for 1970 were of no great significance. Little flooding occurred in early spring because of the limited buildup in moisture through the winter. There was more snow accumulation in the eastern and southern portions of the district than in the west. Abundant precipitation in April somewhat improved the dwindling water levels existing at the time of spring thaw. Summer showers maintained wetland water at adequate levels for waterfowl brooding. By September most type III marshes were dry but again recharged by late fall rains. The year ended with most marshes brimful and the soil well saturated.

Total precipitation for the year was above average. The resultant high water levels made it possible for the first time to evaluate the effects of past ditch plugging. Simple ditch and tile plugs have increased wetland acres and greatly improved their quality. Ditch plug construction was handicapped in 1970 because of excessive moisture. Farmers were also restricted from planting and harvesting on schedule because of spring and fall rainfall. A bountiful water supply during the hunting season scattered waterfowl thus providing more hunting sites for the hunters.

2. Food and Cover

Wildlife have benefited by the relatively open winters of 1969-1970 and 1970-1971. More food and cover were present for resident wildlife because high amounts of precipitation put a damper on extensive fall plowing and burning in 1970. Also, limited snow cover has kept food and cover within reach for wildlife.

Grasses and weeds flourished with the abundance of moisture received during the year. However, excessive surface water did cause some species changes in areas. By the nesting season, the quality of the cover was near optimum levels. During 1970, 517 cropland acres were seeded by cooperators to alfalfa and mixed grasses. In 1971, 1250 acres are expected to be seeded. A native grass mixture was seeded by use of our Nesbit drill on 69 acres in 1970 and 256 acres are scheduled for seeding in 1971. All seedings are doing well and will add to the overall cover available for the future in a region where adequate cover is rapidly diminishing due to present day farming practices. Many block

and strip type tree plantings now in existence are yet too young but should provide much needed cover in the future.

Weeds also flourished during 1970. During the summer 2317 acres of noxious weeds required control. However, due to a switch to the use of MCP for aerial spraying very little damage occurred to legumes. It is unfortunate that we must divert funds from more beneficial uses to weed control when most weeds are useful to wildlife. Weed control laws in Minnesota are very severe and demanding however.

The only cropland maintained for wildlife is through food plots. These plots are six to ten acres in size and contain corn planted by cooperators and harvested on shares. The number of these plots has been increased from 30 in 1969 to 58 in 1970. They are expected to be increased to 70 in 1971. Those plots are scattered throughout the district to provide a winter food supply for resident wildlife. A spot check of corn plots during 1970 revealed good quality corn. An inspection during February showed heavy wildlife usage on the majority of the plots.

The year of 1970, proved to be a good year for natural waterfowl food production. Also vegetative growth was optimum for waterfowl brood cover. An abundance of new submergent vegetative growth on the larger marshes should provide good diving duck nesting cover for 1971. For the second year wild rice was scarce on some areas, possibly due to high water. Average to high water levels through the growing season reduced the amount of smartweed production this year.

II. WILDLIFE

A. Migratory Birds

1. Waterfowl - (Anseriformes)

Three mallards took the honor of being the first waterfowl to be seen by station personnel in the eleven county district this year. They were observed on March 21 near Benson.

After a relatively dry winter, abundant spring moisture brought up water levels in wetlands to nearly average condition. Breeding conditions, although not up to 1969, were good throughout the district. Our pair counts showed only a slight decrease from 1969 and were above the average for the preceding years of the census.

TABLE IV — BREEDING PAIR SUMMARY, BLOCK COUNTS

Unit	Total Study Acres	Water Basin Acres	Pairs (ducks-coot) 1967	1968	1969	1970	Average*
Evenson	140	49	14-2	30-0	29-12	14-3	21.7-4.2
Christenson	465	124	22-0	19-0	22-3	28-0	22.7- .7
Dismal	640	256	60-7	88-25	171-42	161-36	120-27.5
Total	1245	430	96-9	137-25	222-57	203-39	164.5-32.5

*1967 thru 1970

TABLE V — BREEDING PAIR SUMMARY, SPECIES COMPOSITION

Species	Evenson	Christenson	Dismal	Total Pairs	Species Percentage 1967	1968	1969	1970
Mallard	1	5	22	28	22.9	8.0	10.3	13.8
Gadwall	-	-	7	7	1.0	.7	4.5	3.4
Widgeon	-	-	2	2	4.1	0	.4	1.0
Wood Duck	-	7	-	7	3.1	3.6	.8	3.4
Blue-wing	10	16	78	104	62.5	57.6	59.4	51.6
Green-wing	-	-	7	7	0	1.4	0	3.4
Shoveler	-	-	3	3	0	2.1	4.0	1.5
Pintail	-	-	9	9	1.0	.7	4.5	4.4
Redhead	2	-	12	14	3.1	8.7	7.2	6.8
Canvasback	-	-	-	0	1.0	0	.4	0
Lesser Scaup	-	-	8	8	0	0	0	3.8
Ruddy Duck	1	-	12	13	0	15.3	7.6	6.4
Ring Neck	-	-	1	1	1.0	1.4	.4	.5
TOTAL	14	28	161	203				

The first duck brood was seen on June 3rd. The brood transects were censused for the fourth year. Each transect was run twice as in past years. The transects are 42 miles and 53.5 miles in length. Production of dabblers, divers and coots seemed to be below the average of past surveys. Excessive vegetation at the time of the surveys made brood sightings difficult and may have biased the results.

TABLE VI BROOD SURVEY SUMMARY

	Broods (Transect #1 - #2 - total)*			
	1968	1969	1970	Average**
Dabblers	20-31-51	27-23-50	14-19-33	28-21-49
Corrected Dabblers	31-62-93	78-53-131	25-46-71	-
Divers	0-2-2	3-9-12	6-1-7	3-3-5
Corrected Divers	0-2-2	5-12-16	8-2-10	-
Tot. Dab. & Divers	20-33-53	30-32-62	20-20-40	30-28-55
Corrected Total	31-64-95	83-65-147	33-48-81	-
Coots	0-3-3	98-48-146	21-37-58	43-26-69
Corrected Coots	0-6-6	243-79-322	58-126-184	-
Basin Acres	1456	1456	1456	1423

*Two counts each transect **Average for 1967 thru 1970

Fall migration was late for the district. Not until mid-November were high flying flocks seen moving to the south. As most area marshes were frozen at least temporarily by October 15, few if any migrating birds stopped in the area. It is thought that many passed through at night. Many flocks of canada, snow and blue geese were observed as they passed through. Flocks of whistling swans were noted in both spring and fall migrations.

2. Water and Marsh Birds - (Gaviformes, Ciconiiformes, Colymbiformes, Gruiformes and Pelicaniformes)

Great blue herons and american egrets are common in the district and utilize many of our waterfowl production areas. (Forty american egrets were observed on the Stenson Unit, Pope Co. in September.) A nesting colony exists on the Lovell Lake Unit of Stearns Co. Regularly seen throughout the district are the green heron, black crowned night heron, least bittern and american bittern. Sora and virginia rails are fairly common. King and yellow rails have been reported in the district but these reports are unconfirmed.

Coots were fewer in number this year but were still amply represented in the district. Pied-billed grebes are common residents.

Double crested cormorants visit many of the open water marshes and white pelicans are common during migration.

3. Shore birds, gulls and terns - (Charadriiformes)

Sandpipers, yellow-legs, plovers, godwit and phalarope are found throughout the area. During the warm months, wilson's snipe are common. A low population of woodcock is known to exist in the eastern part of the district.

The herring, franklin's and ring billed gulls are all common residents between spring and fall migrations. Frequently seen are forster's, common and black terns.

4. Doves - (Columbiformes)

Mourning doves are abundant in the district. Nesting occurs frequently on W.P.A.s. Banding proved to be successful again this year and band returns are starting to accumulate. See Section V for more complete coverage of banding and returns.

B. Upland Game Birds - (Galliformes)

The pheasant population of the district, with the exception of our two southern counties, remains at a low ebb. Cover conditions on private land continues to deteriorate. After the drastic reduction of pheasants caused by the winter of 1968 - 1969, a long, if not impossible uphill battle is in store for *Phasianus colchicus* in the once prime range of west central Minnesota. The picture is not all one of gloom, a limited season was opened in the southern counties of Minnesota, including Cottonwood and Jackson which are part of the Benson District. The population is fair to good in this area.

Our random sex-ratio count during the 1969-70 winter season involved 211 pheasants. A ratio of 1.57 males to 1.00 female was found. The 1966-67 ratio was 1:1.83, in 1967-68 it was 1:1.19 and in 1968-69 it was 1.05:1.0.

Ruffed grouse are known residents to only a few units in the eastern fringe of the district. Hungarian partridge are occasionally seen in the district.

C. Other Birds (Falconiformes, Strigiformes, Passeriformes)

Osprey and eagles are observed occasionally throughout the district. Marsh, red-tailed, red-shouldered, goshawk, rough-legged and sparrow hawks are all at least visitors to the area and to our units. Great-horned owls are common residents while barred, screech, snow and barn owls make a few visits.

Belted kingfishers and crows are common warm season residents with some of the latter remaining year round. Many species of perching birds are found in the district and apparently thrive on the protective and undisturbed cover around old farmsteads and brushy areas of our units. Although common through the eastern half of the district, scarlet tanagers were observed for the first time this year.

D. Big Game Animals

The only big game animal represented in the district is the white-tailed deer. The white-tail seems to thrive on our units. Dense marsh emergents provide good protective cover. Our food plots receive considerable deer use and natural feed is abundant. We estimate the population remained about the same as 1969 or around 1200 frequenting our units.

E. Fur Animals, Predators, Rodents and other Mammals

Marsh conditions again this year seemed beneficial to the muskrat population. Some estimates are that there has been a 200-300% increase over the 1969-1970 season. Houses and feeding piles are abundant but have not increased enough to warrant such a high estimate in population. Mink population remains good throughout the district.

Beaver are common throughout the area but only two units are believed to have family groups.

The red fox population remains about the same as 1969-1970. Pelt prices continue high, about $10.00, and trapping and hunting remain heavy. Cottontail rabbit, fox squirrel and gray squirrel are common. Thirteen-lined ground squirrel, franklin's ground squirrel, pocket gopher and chipmunk are all abundant residents.

F. Rare, Endangered and Status Undetermined Species

There are no threatened species known to exist in the district.

G. Fish

With the exception of a few units in the district, year around fish populations do not exist. Most marshes are too shallow to overwinter fish. Because of this factor most rough fish are eliminated once a year.

III. DEVELOPMENT AND MAINTENANCE

A. Physical Development

Ditch plugging continued to be one of our most effective developmental activities. An exceptionally damp fall season caused postponement of many of these projects however. We have now constructed a total of 257 ditch plugs and 14 tile plugs on district wetlands. These facilities restore or influence at least six hundred water basin acres. About 100 ditches on new ownerships remain to be plugged and several formal water control structures are needed when funds are available.

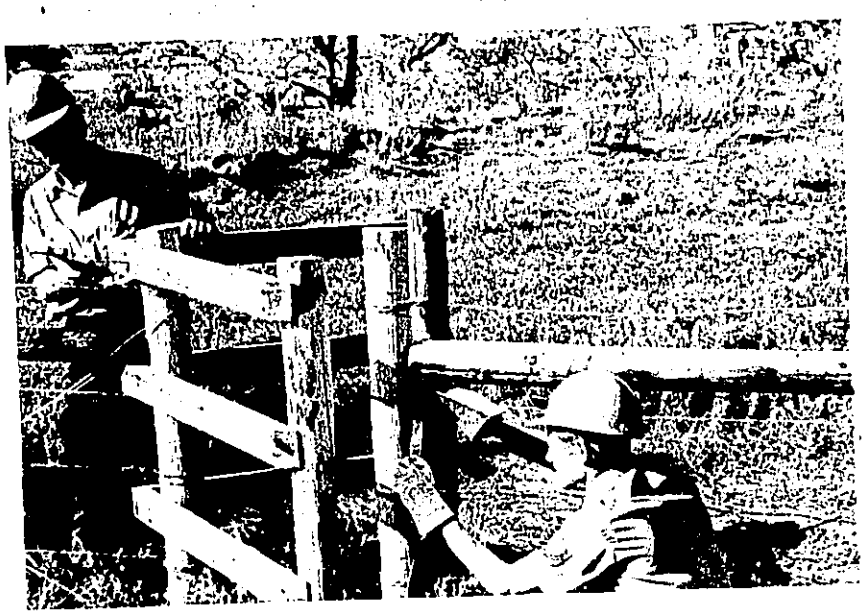
TABLE VII MAJOR PHYSICAL PROJECTS

County	Unit	Project and Amount	Remarks
Big Stone	S. Olson	Bldg. Site Cleanup	F, 1.2 md
Cottonwood	Thomas	Fence Removal, 614 rods	C, $614
Jackson	Sangl	Fence Removal, 160 rods	C, $160
	Sevetson	New Fence, 308 rods	C, $308
	Sevetson	Fence Removal, 374 rods	C, $374
Kandiyohi	Rambow	New Fence, 60 rods	
		Fence Removal, 260 rods	F, 13.7 md
	Fischer	Ditch Plugs 11	
		Tile Plugs 2	C
	Kelly	Ditch Plug, 1	C
Lac qui Parle	Hastad	New Fence, 360 rods &	
		Fence Removal, 314 rods	F, 33 md
Pope	Wall	New Fence, 260 rods &	
		Fence Removal, 240 rods	F, 20.5 md
	Heidebrink	Creek Safety Barricade	F, .5 md
	M. Nelson	Fence Removal, 80 rods	F, 1.7 md
	Evjen	Fence Removal, 320 rods &	
		Parking Lot	F, 12 md
	McIver	Parking Lot	F, 6 md
Stearns	Spanier	New Fence, 340 rods &	
		Fence Removal, 224 rods	F, 34 md
Stevens	Kopitzke	Fence Removal, 1400 rods	F, 35.5 md
	Solvie	Fence Removal, 80 rods	F, 2 md
	Miller	Fence Removal, 160 rods &	
		Parking Lot	F, 8.5 md
Swift	Lynch Lake	Ditch Plug, 1	C
	Svor	Ditch Plug, 1	C

C = Contract F = Force Account md = 8 hour man days

Emphasis was placed on the removal of old fencing as 13.1 miles were accounted for. Some of the old material can be re-used but most of it is useless. Safety and esthetic values are both improved by getting rid of such junk. New fencing was constructed on 4.1 miles of boundary of which 308 rods were completed by contract. Several hundred miles of boundaries remain to be fenced so only the very critical areas are fenced each year.

Parking lots are being established regularly along with fence jobs. These lots indicate a welcome to the public and yet strongly imply that vehicle travel is unnecessary. Four inch treated wooden posts placed five feet apart in a lot 100' X 75' makes an attractive parking lot that blends well with the surroundings. Parking lots adjacent to grazing units include a cowbender which allows humans to pass through but not cattle.

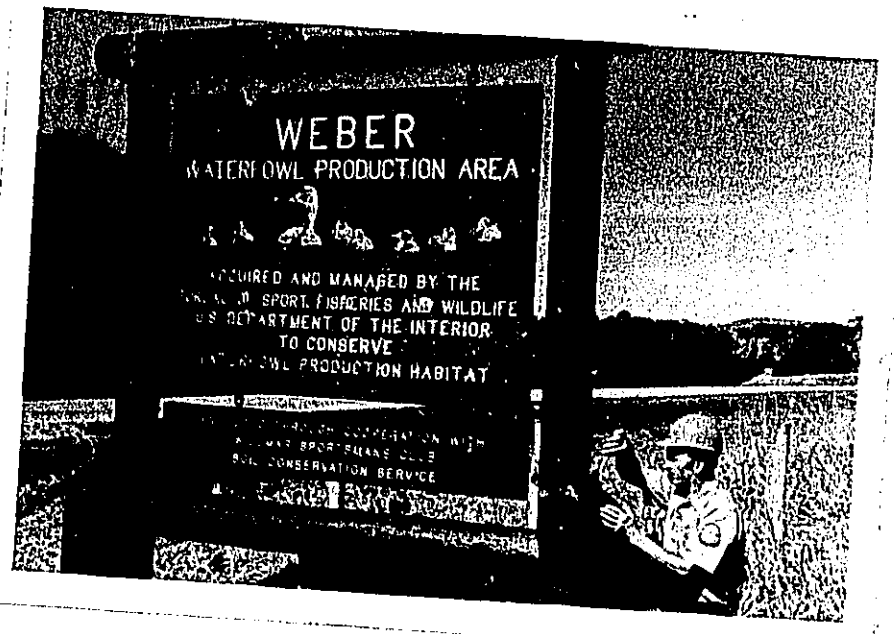


Cowbender construction on parking lot on Compton Unit, Swift County-Nelson and Hutchinson.
70, slide, 10-5, JJH

Additional food plots were plotted and marked. Boundaries were also measured and marked on tracts not having formal cadastral surveys. Many hours were spent throughout the year replacing damaged signs and posts, repairing fences and facilities, vehicle maintenance and headquarters upkeep.

Water control drop box construction on Grote Unit, Stevens County-John Schliep
70, slide, 8-31, JJH

const. - as per Engr recommendations + agreement w/ R.R. executed Feb. 70. [illegible]



Recognition sign erection on Weber Unit, Kandiyohi County - Roger Nelson.

70, slide, 9-28, JJH

A problem concerning a neighboring landowner cleaning out a drainage ditch on his portion of a marsh was at least partially solved. A drop box structure was placed on our side of a railroad grade culvert which will restore our portion of the marsh above the railroad. The acquisition office is presently negotiating for the purchase of the roundout needed for the unit. — Grotelueschen Tract Stevens Co.

Boundary posting was completed on 34 new ownerships which involved 28 management units. The Benson District now contains 240 units totaling 33,136 acres that are posted open to hunting. This compares to 222 - 31,271 in 1969 and 193 - 26,922 in 1968.

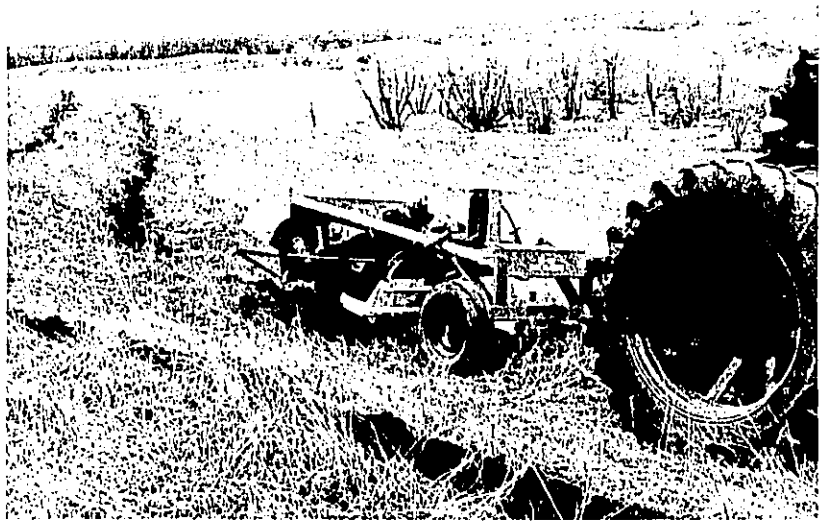
Additional recognition signs were ordered and erected. Included were the Weber Unit and the Headquarters Site and a large sign is ready for the Froland Unit. Signs for the Froland Unit nature trail were ordered and plans for developing the system will be implemented in 1971.

B. <u>Plantings Including Soil and Moisture</u>

1. Trees and Shrubs

Shrub plantings were completed on the Wagner Unit in Big Stone County, Kilen, Sangl, Schwarzenbach and Wiebener

Units in Jackson County, Kelly Unit in Kandiyohi County and Froland Unit in Pope County. These block plantings consist of low growing shrubs and evergreens mostly. The Minnesota Department of Natural Resources and the Soil Conservation Service assisted with these plantings. Plans and ground preparations have been made for six new block plantings in 1971.



Tree planting by "scalping" on Weber Unit, Kandiyohi County. 70, 16, 5-15, JCW

2. Grasslands

A total of 586 acres of cropland were retired to permanent cover. Cooperative farming agreements covered 517 acres while 69 acres were seeded using our own Nisbet drill. The usual arrangements for sharecropping was for the operator to supply all small grain seed and five pounds of alfalfa seed per acre. We supplied a seed mixture as indicated in Table VIII that would go through a grain drill seed attachment. Our seed contribution also amounted to 5 pounds per acre. The cooperator did all the farming and received full share of the small grain crop in return.

Seeding with our Nisbet was done by force account. A much better variety of native grasses could be seeded due to the higher capability of a Nisbet drill in planting the fluffy and chaffy native grass seeds. Between 200-300 acres are

planned for Nisbet seeding in 1971. The seed mixture given to cooperators had to be capable of being seeded by a common grain drill, thus the limited number of small seeded native grasses in the mixture.

TABLE VIII

GRASSLAND SEEDING SUMMARY

County	Tract	Acres Seeded	Mixture & Rate/Acre	Method	Date Seeded
Big Stone	Arndt	7	A - 10 lbs.	Sharecrop	Spring
Big Stone	Dimberg	14	A - 10 lbs.	Sharecrop	Spring
Big Stone	Lundell	14	A - 10 lbs.	Sharecrop	Spring
Big Stone	Trainor	68	A - 10 lbs.	Sharecrop	Spring
Big Stone	Wagner	18	A - 10 lbs.	Sharecrop	Spring
Big Stone	Wulff	2	A - 10 lbs.	Sharecrop	Spring
Cottonwood	Thomas	49	A - 10 lbs.	Sharecrop	Spring
Jackson	Kilen	48	A - 10 lbs.	Sharecrop	Spring
Kandiyohi	Dengerud	22	A - 10 lbs.	Sharecrop	Spring
Kandiyohi	Dengerud	42	A - 10 lbs.	Sharecrop	Spring
Kandiyohi	Dykema	27	A - 10 lbs.	Sharecrop	Spring
Kandiyohi	Erickson	12	A - 10 lbs.	Sharecrop	Spring
Kandiyohi	Nelson	14	A - 10 lbs.	Sharecrop	Spring
Kandiyohi	Willmar J.C.	4	B - 10 lbs.	Nisbet	5/13/70
L.Q.P.	Nelson	45	B - 10 lbs.	Nisbet	5/12/70
Pope	Berglund	19	B - 10 lbs.	Nisbet	5/15/70
Pope	Gullickson	42	A - 10 lbs.	Sharecrop	Spring
Pope	Moen	25	A - 10 lbs.	Sharecrop	Spring
Pope	Stammer	45	A - 10 lbs.	Sharecrop	Spring
Stevens	DeWall	6	A - 10 lbs.	Sharecrop	Spring
Stevens	Hegg	2	B - 10 lbs.	Nisbet	5/11/70
Stevens	Pieske	20	A - 10 lbs.	Sharecrop	Spring
Stevens	Summer	4	A - 10 lbs.	Sharecrop	Spring
Swift	Brustuen	7	A - 10 lbs.	Sharecrop	Spring
Swift	Loen	4	A - 10 lbs.	Sharecrop	Spring
Swift	Swenson Unit	6	A - 10 lbs.	Sharecrop	Spring
Swift	Wetherell	20	A - 10 lbs.	Sharecrop	Spring
TOTAL ACRES		577			

Key: Mixture A = Switch 1 lb., Sand Drop 1 lb., Green Needle 1 lb., Alfalfa 7 lb.

Mixture B = 1 lb. each Big Bluestem, Little Bluestem, Switchgrass, Indian Grass, Blue Grama, Buffalograss, Sand Drop, Green Needlegrass, Canada Wildrye, Alfalfa.

We assisted the Willmar Junior College by establishing for them a four acre plot of native grasses. They supplied the seed and land and we did the seeding with our Nisbet drill on a cooperative venture.

C. Cultivated Crops

Wildlife foodplots of corn have been established where suitable cropland, wildlife needs and tenants are all available. A total of 57 units contained food plots in 1970. Additions will increase the total to about 70 units in 1971. The plots vary from 6-10 acres in size and involve cropping rotations where possible to maintain fertility levels. Resident wildlife make very high use of these plots in winter months and waterfowl returning in the spring often harvest what is left.

The alternate row harvest system is used to avoid the problem of the operator leaving the poorest corn for our share. In this system, the operator harvests eight rows and leaves four rows alternately across the field. A fair sharing is assured and drifting snow seems to spread itself throughout the entire plot rather than inundating portions of the field. Corn ears are consequently left exposed for wildlife use.

Care is being exercised to place food plots only where suitable cropland exists and where other cover is well represented.

D. Collections and Receipts

1. Building Disposal

Surplus real property was disposed of in March. Five building sites were involved including 19 structures. Bidding was active as 32 bids were received and receipts totaled $3150.53. Unfortunately this money is not available for needed development in the district but must be deposited in the general treasury of the United States.

A total of 147 structures have been sold by this office during the past six years for total receipts of $17,256.72.

E. Control of Vegetation

Weed control was necessary on 117 units. Total acreage mowed, sprayed or swathed was 2490. Canada thistle, sow thistle and leafy spurge were the most serious weed pests. Control activities were delayed as far as possible into July to avoid nesting bird disturbance and still get good control results.

Weed control is certainly of no direct benefit to wildlife. However, in this intensive farming area it is absolutely essential for public relations and to conform with stringent Minnesota State Weed Laws. The rather extreme weed infestations and problems are a result of acquiring large acreages in a relatively short span of time. The retirement of these acreages to grasslands has created a very favorable situation for weed growth as plant succession plays its part. The chemical application portion of 1970 weed control is summarized on NR-12.

IV. RESOURCE MANAGEMENT

A. Grazing

Table IX shows the extent of our 1970 grazing program as well as totals for 1966-1969. Grazing was granted on eight management units this year, while ten units were grazed the previous year. The Rice and Lindahl Units were not grazed this year. Lack of interest on the part of past permittee has provided us with the opportunity to permanently discontinue grazing on these two units.

TABLE IX — 1970 GRAZING PROGRAM

Management Unit & County	Acres Grass	Total AUM's	Date of Use	Revenue Collected*
Bakalyar (2), Cottonwood	105	55	5/1-9/30/70	$110.00
Elder (19), Pope	162	100	5/1-9/30/70	200.00
Ewen (3), Jackson	136	90	5/1-9/30/70	180.00
Freese (4), Kandiyohi	120	70	5/1-9/30/70	140.00
Gjerdingen (5), Pope	45	25	5/1-9/30/70	50.00
Randall (5), Kandiyohi	224	95	5/1-9/30/70	190.00
Sonstegard (20), Kandiyohi	73	45	5/1-9/30/70	90.00
Welsh (4), Swift	260	110	5/1-9/30/70	220.00
1970 TOTALS (8**)	1125	590.0		$1,180.00
1969 Totals (10**)	1236	650.0		$1,300.00
1968 Totals (8**)	878	518.25		$1,036.50
1967 Totals (12**)	1199	703.0		$1,406.00
1966 Totals (7**)	804	428.0		$ 856.00

*@ $2/AUM **Total Permittees

On an economic and biological management basis the Wetlands Program has moved toward de-emphasizing grazing. All potential 1971 permittees were notified that rates would be increased from $2.00 to $2.50 per AUM and the beginning date would be delayed to May 15, 1971. These changes were necessary to keep fees in line with the area and to increase wildlife cover. It is also intended to discourage future grazing interest. The number of AUs will be decreased in 1971 on Welsh and Ewen Units which showed somewhat less than desirable wildlife cover during the past grazing period. Grazing will be discontinued permanently as present permittees drop out. Once grazing is cancelled on a unit the roadside fence is removed to further decrease grazing desires.

B. Haying

This district has never permitted haying on WPAs, except as a tool for weed control. The destruction of habitat and setting of precedence are the main factors against haying. Native and tame hay lands are retired to allow maximum nesting and escape cover as well as native grass invasion. The only haying permitted this year was on the Persen Unit in Big Stone County where about 15 acres were hayed for the purpose of controling thistles.

C. Fur Harvest

Trapping on Waterfowl Production Areas ranges from mediocre attempts by youngsters and local farmers to intensified pressure by professional trappers. The Benson District, as related to fur harvest, is very diversified in methods, pressure, weather, species, size of units and topography. These factors make it difficult to acquire realistic data for analyzing the status of the fur resource on management units.

Based on the success of local trappers, muskrat populations have increased over last year, while mink have remained about the same. The price for muskrat pelts is about $1.00. Mink are currently bringing $15.00 for a male and $4.00 for a female. Red fox prices are remaining good or about $10.00 and raccoon going for about $4.00. Little change was noted in harvest of fox but the scarcity of young would seem to indicate low breeding success. Raccoons are relatively common in the Benson locality and populations seem stable throughout the district.

D. Other Resources

Interest continues to be shown by area bee keepers to maintain apiaries on waterfowl production areas. Our WPAs offer good yard sites, an abundant pollen supply and exclusion from disturbances. However, permits covering bee keeping have been kept at a minimum. In 1970, two permits were renewed covering three apiaries. Apiaries under permit were located on the Paulson Unit in Pope County, Wetherell Unit in Swift County and Hodak Unit in Kandiyohi County. The apiary located on our Froland Unit in past years was removed by our request due to possible conflict with an interpretive nature trail being established in the area. One new request for a permit to keep bees on the Lovell Lake Unit was denied because of involvement with future management plans.

V. FIELD INVESTIGATIONS OR APPLIED RESEARCH

A. Wildlife Management Studies

Two studies are now in progress in the Benson District. The Nest Cover Width Study and The Evaluation of Waterfowl Production Areas.

Studies on waterfowl cover preference and the effect of reduced agricultural operations on waterfowl production are under consideration.

1. Cooperative Nest Cover Width Study

The Benson District, in cooperation with several refuges and other wetland districts is participating in this study. The Area Biologist heads the project with responsibility for research and supervision. The Northern Prairie Wildlife Research Center is supplying research assistance. The objectives of this study are as follows:

Primary

1) To compare dummy nest survival rates in different cover block widths.
2) To compare natural nest densities in different cover block widths.
3) To compare natural nest survival rates in different cover block widths.

Secondary

4) In some samples, to compare the relative attractiveness of different cover types and densities.
5) To compare dummy nest and natural nest survival rates.
6) To determine the efficiency of the flushing device used and of the search after haying.

We are sorry to report that our study was postponed this year. We were unable to hire help in the vicinity to accomplish necessary preliminary preparation of the study blocks. Since our station was fortunate enough to acquire a new tractor this summer we will be able to eliminate this problem in the future.

2. Evaluation of Waterfowl Production Areas

Preliminary work has begun on this study. As yet guidelines have not been finalized. It is hoped that continued periodic inspections of sample WPAs will show the effectiveness of various management tools. Nine diversified units have been chosen for evaluation. These units vary in size and composition. Some have or will have extensive development while others will remain as purchased except for the discontinuation of agricultural practices. Each unit will be evaluated three times a year; breeding time, production time and winter. The evaluation involves an extensive inventory of all wildlife use and indications thereof as well as vegetative and marsh conditions. It is hoped that over a period of time criteria will be established that will give valid dos and don'ts for WPAs and other Bureau and public wildlife lands.

B. Informal Biological Activities

1. Banding

Dove banding was again carried out in 1970 to contribute to the Bureau's nationwide banding program and the 3,500 bird quota set for Minnesota. Pre-baiting was started on July 6th. On July 13th twenty Kniffen type traps were set at three locations. As results proved rather poor at two of the sites, the traps were consolidated at one location, the cornfields of the Jasper Ladd farm located one mile south of Benson. Mr. Ladd applied "Atrazine" to all of his corn ground to eliminate forbs and as a result established an ideal trapping area.

Nine hundred and fifteen doves were banded on Ladd's farm. A total of 1033 doves were banded in the Benson area between July 13th and August 5th, before the operation was discontinued because of retraps and predation. Three hundred and twenty four doves were retrapped. About 35 birds were lost to dogs, skunks, cats and red-tailed hawks. Two skunks and one cat were destroyed. Six doves were retrapped carrying 1969 bands and one old timer with a 1968 band.

Banding one of the 1033 doves, John Hutchinson.
70, 10-12, JJH.

Band returns are starting to accumulate. We have received reports as follows: Texas-6, Georgia-1, Louisiana-1, Florida-1, Kansas-1, Minnesota-1, Mexico-4 and Guatemala-1.

2. Pothole Blasting

A total of 28 blasted potholes have been placed on units in the Benson district. This technique for increasing and improving habitat is being tested for effectiveness on Waterfowl Production Areas. The secondary objective is to establish demonstration sites for future reference and public relations purposes.

Ten potholes were created in 1966 and an additional 18 were blasted in 1967. Due to limited funds no additional blasting has been attempted since 1967. Many excellent sites exist and it is our hope they can be utilized by this practice in the future.

Although no pothole blasting was done this year on our Waterfowl Production Areas, the Benson Lions Club, with encouragement and aid from our office and member Jack Womble, blasted eight waterfowl dugouts, four on private land and four on easement land.

VI. EASEMENT ADMINISTRATION

With the aid of Mr. Glen Orton, Bureau Pilot from Mankato, we were able to aerially make easement compliance inspections this year. On December 2nd, 4th and 7th Mr. Orton accompanied by Mr. Hutchinson and Mr. Nelson of this station, aerial checked 371 easements. Total flying time was 15.4 hrs., at a station cost of $200.20.

Eleven possible violations were noted from the air and of these, nine have been ground checked and cleared while two are still pending. Very wet conditions in early fall and a late agricultural harvest resulted in very little potential for easement violations, in 1970.

Landowner acceptance of the easement program remains low and with the passage of the Water Bank Act, the future of the Waterfowl Easement Program is also in doubt.

VII. PUBLIC RELATIONS

A. Recreational Uses

It is inevitable that with an expanding program and improved public relations recreational use of our WPAs will grow. Recreational use increased in excess of 12,000 visits over the past year. The peak load day of about 2,500 visits occurred during October. Table X summarizes recreational use for the year.

With expanding public interest in the Wetlands Program it is important to evaluate the needs for interpretation and accommodation. Funding and manpower has limited development along this line. However, several visitor parking lots were constructed during the year. Also, work was accomplished toward establishing an interpretive nature trail on our Froland Unit in Pope County, while the Christenson Unit in Kandiyohi County is under consideration for some sort of interpretive facilities in the future.

TABLE X

Bureau of Sport Fisheries and Wildlife
Division of Wildlife Refuges

ANNUAL ~~XXXXXXXXXX~~ RECREATIONAL USE REPORT

Refuge name ~~Benson Wetland Management District~~
State **Minnesota**

State Code 2 3 (1-2) | Congressional District Code 0 7 (3-4) | Refuge Code 3 1 5 (5-7) | Report Period Yr. | Mo. (8-11) **Calendar Year 1970**

(Card Columns). . . . . (12-13) (14-18) (19-25)

ACTIVITY	Code	VISITS FOR THE MONTH Total Number	Total Hours
Hunting: Big Game	01	3800	7600
Upland Game	02	1750	3500
Waterfowl	03	12200	24400
Other Migratory	04	500	1000
Other	05	2150	2150
Bow	06	2800	5550
Fishing: Salt Water	07		
Warm Water	08	750	1400
Cold Water	09		
Environmental Education	10	925	1650
Wildlife Photography	11	2050	2050
Wildlife Observation	12	23000	23000
Conducted Programs	13		
Field Trials	14		
Wildlife Trails	15		
Wildlife Tours/Routes	16		
Visitor Contact Stations	17		
Camping (wildlife related)	18	510	12240
Picnicking (wildlife related)	19	475	950
Wildlife Interpretive Center	20		
Off-Site Programs	21	1446	56

(Card Columns). . . . . (12-13) (14-18) (19-25)

ACTIVITY	Code	VISITS FOR THE MONTH Total Number	Total Hours
On-Site Programs	22	195	31
*Miscellaneous Wildlife	23	2700	3200
Swimming	24		
Boating	25		
Water Skiing	26		
Camping	27		
Group Camping	28		
Picnicking	29		
Horseback Riding	30		
Bicycling	31		
Winter Sports	32	1250	1850
Fruit, Nut and Vegetable Collecting	33	400	400
*Miscellaneous Non-Wildlife	34	315	340
Peak Load Day	35	2500	
Actual Visits	36	42700	
Commercial Days Use		2225	
Fee Area Use	37		
Number of Fee Areas	38	(14-18)	
Fee Collections	39	$	
Collection Costs	40	$	

Form 3-123
(Revised July 1969)

*Use reverse side to indicate types of activities summarized under miscellaneous codes 23 and 34. MAKE NO OTHER ENTRIES ON FACE OF THIS FORM.

B. Wetland Management Office Visitors

Visitation to the Wetland Management Office increased four-fold this year. During the year 453 persons visited the office as compared to 100 in 1969 and 121 in 1968. As an average, there were 1.7 visits per day to the office in 1970. The move to our new headquarters site has accounted for a sizable portion of this increase.

Routine visitors included the Wetland Office staff, state weed and seed inspectors, GSA officials, the Lang Bros. as landlords of the headquarters site and several other state officials of the MCD. The station was inspected on March 18th by Tom Kerze and on May 8th by John Carlsen. Les Dundas made a trip to the Benson Wetland District on May 21st on a photo mission. Claude Denton, Forrest Carpenter and John Carlsen stopped by the new headquarters site for a "look see" on June 5th. Also, Biological Technicians, Karen Smith and Elaine Rode visited the station on June 22nd and 23rd for wildlife interpretive planning. A copy of all office visitors is on file at the Wetland Management Office.

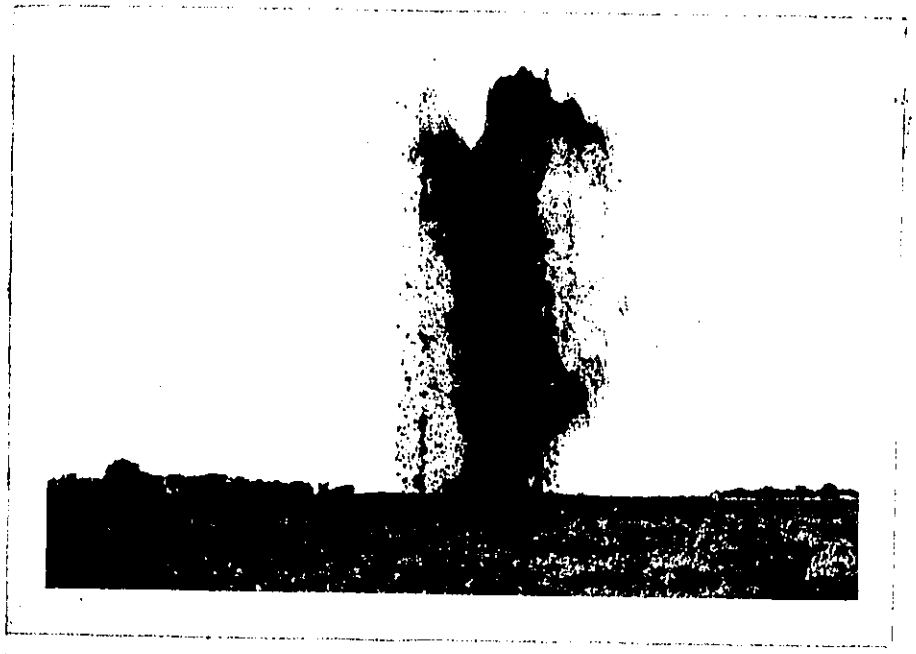
C. Participation

TABLE XI WETLAND MANAGEMENT PARTICIPATION

Date	Activity, Group and Location	Personnel
1-28	Presented Wetland Program at High School, Benson	Hubert
1-29	Attended Blomkest Cons. Ed. Mtg., Blomkest	Womble & Hutchinson
2-5	Presented Bertrand Program to High School, Benson	Womble
2-6	Participated in meeting with MCD & Bureau, Mpls.	Hubert
2-10	Presented Wetland Program to Girl Scouts, Benson	Womble
3-13	Presented 3 Wetland Programs to High Sch., Albert Lea, Mn.	Womble
3-14	Conducted tour & slide talk, Girl Scouts, Benson	Womble
4-1	Presented Wetland Program, Lutheran Church, Starbuck	Hubert
4-3/4	Worked Bureau Booth at Sport Show, Willmar	Staff
4-14	Instructed Gun Safety Class, High School, Benson	Hutchinson
4-14	Presented Bertrand Program, High School, Benson	Womble
4-21	Instructed Gun Safety Class, High School, Benson	Hutchinson
4-26/30	Attended Law Enforcement School, Jamestown, N.D.	Staff
5-1	Lions Club Tree Planting Project, Benson	Womble
5-5	Instructed Gun Safety Class, High School, Benson	Hutchinson
5-7	Instructed Gun Safety Class, High School, Benson	Hutchinson
5-9	Instructed Gun Safety Class, High School, Benson	Hutchinson
5-12	Meeting with Willmar Sportsmans Club, Weber WPA	Womble
5-23	Conducted tour of Christenson WPA, Girl Scouts	Womble
6-10	Conducted tour of Staack WPA, Grade School, Benson	Hutchinson
7-1	Conducted tour of Staack WPA, Grade School, Benson	Hutchinson
7-11	Lions Club Pothole Blasting Project, Benson	Womble
7-24	Kiwanis Club Duck Pond Project, Compton WPA	Hubert
7-29	Program to Underprivileged Children, Sibley Park	Hutchinson
7-30	Bertrand Prog. to Comm. Group, Hawthorne, Florida	Womble

Date	Activity, Group and Location	Personnel
8-4	Presented Wetland Program, Kiwanis Club, Benson	Hubert
8-26	Participated in County Ditch Hearing, Kandiyohi Co.	Womble
9-19	Presented Wetland Program, MCF at Hill City	Hubert
9-29	Presented Wetland Program, St. Cloud Sportsmans Club	Hubert
10-15/17	Attended Environmental Workshop, Sherburne NWR	Hubert
12-7	Presented Bertrand Program, Lions Club, Starbuck	Womble

Jim Hubert regularly attended monthly board meetings and weekly luncheons of Kiwanis and participated in his Church Council activities as president. Jack Womble regularly attended bi-weekly Lions meetings and participated in their community activities. John Hutchinson assisted the local conservation officer in conducting a gun safety class involving five sessions.



Holes with surface areas in excess of 1,200 square feet and in the shape of half moon and Y designs were created through the Lions project.
70, 48, 7-11, JCW

Jack Womble was instrumental in stimulating the interest and participation of the Benson Lions Club in a two-fold conservation project. One phase of the scheme involved the block planting of 3,200 trees on four separate private holdings of one acre each. Eight potholes were blasted with ammonium nitrate on private land, a portion being under Federal easement, as the second phase of their project. Through Jim Hubert's work and influence with the

Benson Kiwanis Club the group responded by alloting $400 for the construction of five dugouts, 30' X 50' each on our Compton WPA. Both conservation endeavors received publicity through 21 news outlets and club magazines.

Dugouts financed by the Kiwanis have enhanced the attractiveness of this marsh to wildlife.
2, 70, 10-5, JJH

D. Hunting

Hunting pressure on Waterfowl Production Areas continues to increase over the Benson District. "Your Guide to Federal Waterfowl Production Areas" has helped to promote public interest. About 6,000 of these brochures were distributed to area post offices and sporting goods stores. A copy may be found on the inside back page of this report. More and more private lands are bound by leases or posted against trespass, hence hunters are utilizing Federal Wetlands to a greater extent each year.

The fall migration was looked forward to by all area waterfowlers. Talk of good nesting success locally and in the northern pothole country had one and all anticipating good hunting, full bags, and delicious aromas from the cook house. Alas, the weather and the waterfowl did not cooperate. After a disappointing opener on local birds, due to bluebird weather, the northern flights were late. When the ducks and geese finally decided to leave the northern lakes, nothing but ice greeted them here.

TABLE XII

BAG CHECK SUMMARY

Benson Wetland Management District

	1967	1968	1969	1970
Hunters Checked	74	130	161	96
Coot Checked	1	1	11	0
Ducks Checked	121	76	159	166
Avg. Ducks/Htr.	1.63	.58	.98	1.7
Ducks Lost/Htr.	37/48	30/26	40/144	13/66

Species	1967 No.	1967 %	1968 No.	1968 %	1969 No.	1969 %	1970 No.	1970 %
Mallard	24	20	17	22	34	21	38	23
Black	-	-	3	4	-	-	-	-
Gadwall	1	Tr.	1	Tr.	1	Tr.	-	-
Baldpate	6	5	11	14	17	11	16	10
Pintail	1	Tr.	2	3	2	1	7	4
G.W. Teal	23	19	19	25	7	4	12	8
B.W. Teal	48	40	12	16	30	18	40	24
Shoveller	4	3	-	-	6	4	6	3
Wood Duck	11	9	6	8	18	11	15	9
Red Head	2	Tr.	1	Tr.	14	9	16	10
Ring Neck	-	-	2	3	10	6	9	5
Scaup	1	Tr.	1	Tr.	18	11	5	3
Canvasback	-	-	-	-	1	Tr.	2	1
Mergansers	-	-	1	Tr.	-	-	-	-
Bufflehead	-	-	-	-	1	Tr.	-	-

Mallards and blue wing teal were again the most abundant ducks in hunters bags. Deer, rabbit, squirrel and fox received hunting pressure from archers and gunners. Pheasants were fair game in only two counties in the district, Jackson and Cottonwood. The reports of area hunters and observations by station personnel indicate that pheasant hunting success was fair to good.

In addition to the 1970 bag check summary above, 22 redheads were taken in an overbag violation.

E. Violations

Waterfowl hunting was limited this year and consequently violations were not as prevalent. This can be partially attributed to inclement weather and waterfowl migrations occurring late. All hunters included in the bag check summary were inspected for legal compliance. Table XIII notes three cases processed, while warnings were issued for an additional ten violations.

Although few violation cases were made in 1970, this station can be credited with what is probably the case of the year for Minnesota. By decoying, Hubert and Nelson were successful in apprehending John Karels, a reportedly habitual violator on an overbag charge. Mr. Karels was responsible for shooting at least 31 ducks, 24 being redheads.

TABLE XIII VIOLATION SUMMARY

Defendant	Charge	Officer	Action
Lowell Rueben Hollen	Unplugged Shotgun	Womble	$20/5
Donald J. Callen	Unplugged Shotgun	Womble	$15/0
Roland John Karels	Overbag	Hubert	$95/5

Snowmobiles continue to be a menace. An effort was made to secure a Commissioner's Order from the MCD closing Federal Waterfowl Production Areas to snow vehicle use. However, we know of no action yet. Presently, only warnings have been issued for snowmobile trespass. The size of units under the Wetlands Program makes the establishment of snowmobile trails rather impractical.

F. Safety

Regular safety meetings were held once each month with all staff members on duty attending. Each permanent staff member was assigned the responsibility of conducting one or more of these meetings during the year. Topics discussed during these sessions included; first aid, drugs, equipment handling, hazardous weather conditions and defensive driving. Mrs. Evonne Nikkelson took the defensive driving course given at Morris, Minnesota and the remainder of the permanent staff completed the refresher requirements.

Our new John Deere 25-20 tractor came equipped with roll bars and seat belts as ordered. A rotary mower guard was added by station personnel. Roll bars and seat belts were added to our 4-wheel drive jeep. Steel toed shoe covers were purchased during the year for use with push mowers and chain saws.

At the close of the year our record stood at 459 days without a lost time injury.

G. Revenue Sharing

Refuge revenue sharing payments and a comparison with previous years appears on Table XIV. Payments were again publicized by a news release to all county newspapers. The checks were delivered to the county seats by the Wetland Managers.

When the payment procedure is understood, public reaction has been favorable. Uninformed or irate citizens still persists in claiming that loss of tax revenue on federal lands is hurting their counties, townships, schools, etc. At times it becomes a major project to convince them otherwise.

TABLE XIV

PAYMENTS TO COUNTIES

County	1967	1968	1969	1970
Big Stone	$3,477.93	$4,480.66	$4,494.69	$5,154.42
Cottonwood	249.77	616.11	886.11	953.61
Jackson	1,023.73	1,547.17	1,547.17	1,547.17
Kandiyohi	3,147.17	3,430.94	3,928.62	4,870.65
Lac qui Parle	673.11	1,028.84	1,162.45	1,177.57
Pope	2,489.97	2,991.38	3,588.92	4,253.75
Stearns	963.03	1,240.02	1,240.02	1,883.71
Stevens	2,720.86	2,857.41	3,526.43	4,446.06
Swift	1,490.26	1,536.91	2,744.57	3,075.70
Traverse	1,193.48	1,264.73	1,264.73	1,264.73
Yellow Medicine	20.27	80.27	80.27	80.27
TOTAL	$17,449.58	$21,074.44	$24,463.98	$28,707.64

Total since the start of the program (1966-1970) - $103,947.27

VIII. OTHER ITEMS

A. Items of Interest

The promotion of Evonne Mikkelson to GS-4 was effected in March. Hutchinson, Nelson and Hubert completed Law Enforcement training in May. A total of 1776 pieces of mail was received during the year while 1496 items were sent out. Included in the outgoing mail were 1212 correspondence and miscellaneous items, 212 fiscal documents, 62 reports and 10 special use permits. Farming agreements written during the year totaled 80 and are discussed further in Section III.

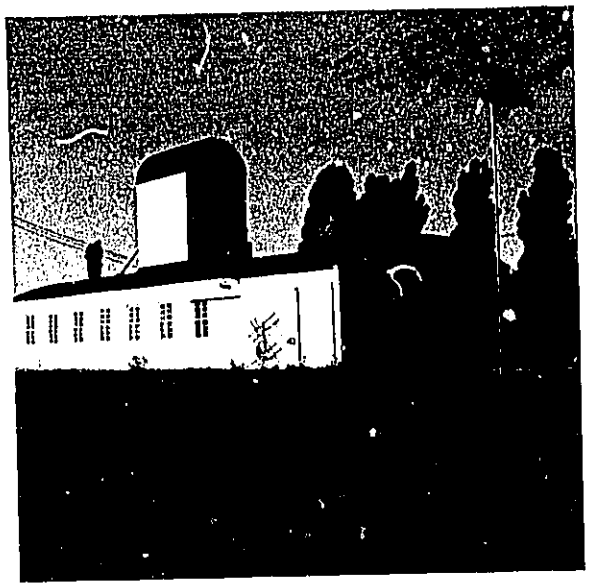
In May the Benson Wetland Management District office was moved to the former Lang Bluegrass Plant. The new headquarters is located about two miles northwest of Benson on Highway #9. Regional Office personnel have termed the headquarters as the most ideal physical setup in the Wetland Management Program. It is unfortunate that an attempt by our Bureau to purchase the site completely faltered. GSA assisted, however, by renting the site for us. We are grateful to have these facilities whether owned or rented. The economically sad part is that the Bureau will have more than paid the asking purchase price in rental fees during the initial 5 year term of the lease but still not own the site.

The efficiency of our Management operation has been greatly improved by establishing the new headquarters. All of our equipment, vehicles, personnel, office and storage has been brought together for simplified coordination, supervision and communications.

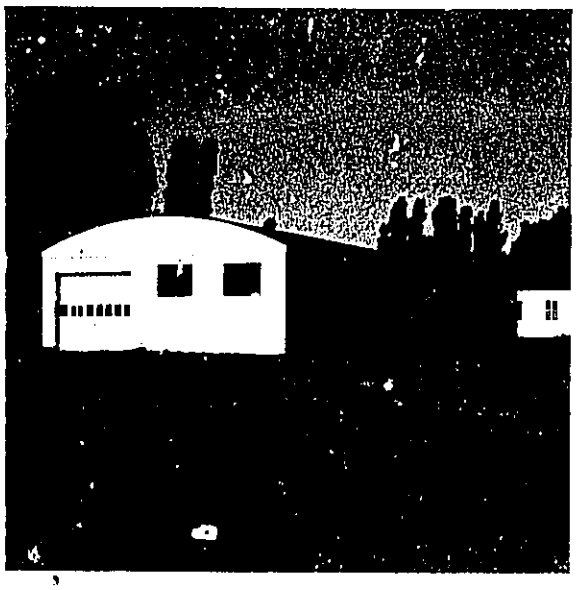
Reception room includes plenty of additional space for records storage and office machines.
70, 32, 8-31, JJH

Typical corner of the large center room.
70, 33, 8-25, JJH

Manager's office in separate room allows for private conferences and added efficiency.
70, 34, 8-31, JJH



Warehouse #1 contains seed, signs and some equipment.
70, 35, 8-31, JJH



Warehouse #2 contains wood posts, steel posts, wire, vehicles and a heated shop.

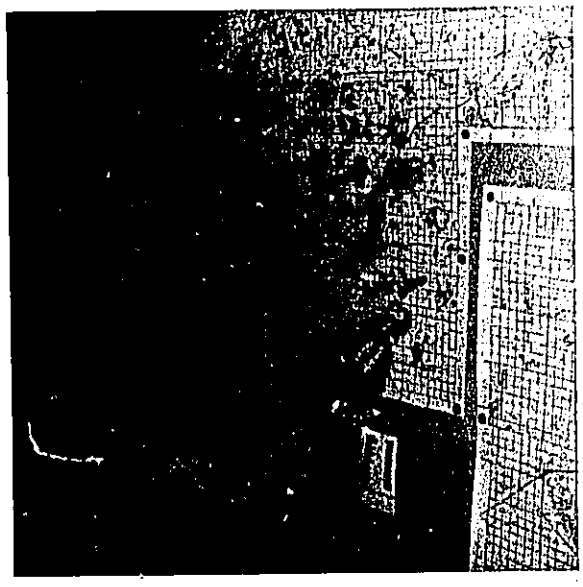
70, 37, 8-31, JJH

Duck stamp sales dropped for the fourth straight year at the Benson Post Office. The stamp was priced at $3.00 throughout the years in Table XV.

TABLE XV DUCK STAMP SALES - Benson, Minn.

Year	Amount		Year	Amount
1963	283	:	1967	431
1964	293	:	1968	414
1965	330	:	1969	396
1966	420	:	1970	390

News releases were issued to the 23 press, radio and TV outlets in the district covering a wide range of subjects. Included were releases on a Building Sale, Seen Any Wildlife Lately?, Headquarters Move, Kiwanis Duck Ponds, Headquarters Sign, Environmental Education Workshop, Dove Banding, Revenue Sharing Payments, Lions Habitat Development Project and "Wing tips".



Evonne Nikkelson maintains the wall map of district wetlands in addition to her other varied duties.
71, 1, 1-5, JJH

Summer temporaries, Dan Orr, John Schliep, Tom Tucker & Dennis Heldebrink. (L - R).
70, 39, 8-21, JJH

Jack Womble, Jim Hubert and John Hutchinson (L-R) participated in the Benson Centennial.
70, 28, 8-13, JJH

Sections I, IV and VII of this report were prepared by Jack Womble. Preparation of Sections II, V, VI, NR-8, NR-8a was completed by John Hutchinson. Jim Hubert prepared Sections III, VIII and NR-12 and edited the report. Credit for the arrangement and typing of the narrative report goes to Evonne Mikkelson.

1-22-71
Date

James J. Hubert
James J. Hubert
Project Leader

JAN 29 1971
Date

/s/ John C. Carlson
Signature (R.O. Approval)

ASST. Regional Refuge Supervisor
Title

3-1758
Form [illegible]-8
(Rev. Jan. 1956)

Fish and Wildli[illegible] Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge **Benson Wetland Management District** County **Big Stone** State **Minnesota**

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return Harvested		Government's Share or Return Unharvested		Total Acreage Planted	Green Manure, Cover and Water-fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
Cropland Retirement									
Small Grain/Legume	123		0		0		123	**123-Alfalfa Cover**	123
Food Plot Rotation									
Corn	54		0		27		81		~~81~~
Small Grain/Alfalfa	72		0		0		72	**72-Alfalfa Cover**	72
Alfalfa	0		0		0		0	**81-Alfalfa Cover**	81
Sweet Clover	0		0		0		9	**9-Sweet Clover-Cover**	9
Food plot									
Corn	4		0		2		6		~~6~~
								Fallow Ag. Land.	10

No. of Permittees: Agricultural Operations **10** Haying Operations **1** Grazing Operations **0**

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
***Farmer permitted to cut & bale wild hay in turn for weed control thereon.**				1. Total Refuge Acreage Under Cultivation				382
Hay - Wild	15	15*		2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

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Permittee's Share - Only thenumber of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvesed column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Cottonwood State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
			Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
Cropland Retirement Small Grain/Legume	49		0		0		49	49-Alfalfa Cover	49
Food Plot Corn	8		0		4		12		12
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 2 Haying Operations 0 Grazing Operations 1

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	33*	55	$110.00	105
				2. Other *This includes all age classes	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				61
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

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CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge **Benson Wetland Management District** County **Jackson** State **Minnesota**

Cultivated Crops Grown	Permittee's Share Acres	Permittee's Harvested Bu./Tons	Government's Share or Return Harvested Acres	Harvested Bu./ Tons	Unharvested Acres	Unharvested Bu. /Tons	Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
Cropland Retirement									
Small Grain/Legume	48		0		0		48	**48-Alfalfa Cover**	48
Feed Plot Rotation									
Corn	24		0		12		36		36
Small Grain/Alfalfa	36		0		0		36	**36-Alfalfa Cover**	36
Alfalfa	0		0		0		0	**36-Alfalfa Cover**	36
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 4 Haying Operations 0 Grazing Operations 1

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	24*	90	$180.00	136
				2. Other *This includes all age classes	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				156
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Total Acreage Planted - Report all acreage planted, including crop failures.

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Kandiyohi State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water-fowl Browsing Crops Type and Kind	Total Acreage
			Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
Cropland Retirement									
Small Grain/Legume	105		0		0		105	105-Alfalfa Cover	105
Native Grass							14	14-Native Grass-Cover	14
Food Plot Rotation									
Corn	24		0		12		36		36
Small Grain/Alfalfa	18		0		0		18	18-Alfalfa Cover	18
Alfalfa	0		0		0		0	27-Alfalfa Cover	27
Sweet Clover	0		0		0		18	18-Sweet Clover-Cover	18
Food Plot									
Corn	30		0		15		48		48
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 11 Haying Operations 0 Grazing Operations 3

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	46*	210	$420.00	417
				2. Other *This includes all age classes	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				266
Hay - Wild	0			2. Acreage Cultivated as Service Operation				14

DIRECTIONS FOR PREPARING FORM NR--8:
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758
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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge **Benson Wetland Management District** County **Lac qui Parle** State **Minnesota**

Cultivated Crops Grown	Permittee's Share Harvested Acres	Permittee's Share Harvested Bu./Tons	Government's Share or Return Harvested Acres	Government's Share or Return Harvested Bu./ Tons	Government's Share or Return Unharvested Acres	Government's Share or Return Unharvested Bu. /Tons	Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
Cropland Retirement									
Native Grass							45	**45-Native Grass-Cover**	45
Food Plot Rotation									
Corn	6		0		3		9		9
Small Grain/Alfalfa	9		0		0		9	**9-Alfalfa Cover**	9
Alfalfa	0		0		0		0	**9-Alfalfa Cover**	9
Food Plot									
Corn	4		0		2		6		6
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 2 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				78
Hay - Wild	0			2. Acreage Cultivated as Service Operation				45

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge **Benson Wetland Management District** County **Pope** State **Minnesota**

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
			Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
Cropland Retirement									
Small Grain/Legume	131		0		0		131	**131-Alfalfa Cover**	131
Food Plot Rotation									
Corn	18		0		9		27		~~27~~
Small Grain/Alfalfa	27		0		0		27	**27-Alfalfa Cover**	27
Alfalfa	0		0		0		0	**27-Alfalfa Cover**	27
Food Plot									
Corn	16		0		8		24		~~24~~
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations **7** Haying Operations **0** Grazing Operations **2**

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	**26***	**125**	**$250.00**	207
				2. Other ***This includes all age classes**	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				236
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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3-1758
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Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge **Benson Wetland Management District** County **Stearns** State **Minnesota**

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water-fowl Browsing Crops	Total Acreage
			Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons		Type and Kind	
Food Plot Rotation									
Corn	6		0		3		9		9
Small Grain/Alfalfa	9		0		0		9	9-Alfalfa Cover	9
Alfalfa	0		0		0		0	9-Alfalfa Cover	9
Food Plot									
Corn	8		0		4		12		12
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 3 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				39
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only thenumber of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvesed column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758
Form [illegible]-6
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Stevens State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return Harvested		Government's Share or Return Unharvested		Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
Cropland Retirement									
Small Grain/Legume	26		0		0		26	26-Alfalfa Cover	26
Native Grass							6	6-Native Grass-Cover	6
Food Plot Rotation									
Corn	26		0		13		39		~~39~~
Small Grain/Alfalfa	27		0		0		27	27-Alfalfa Cover	27
Alfalfa	0		0		0		0	27-Alfalfa Cover	27
Sweet Clover	0		0		0		0	6-Sweet Clover-Cover	6
Food Plot									
Corn	14		0		7		21		~~21~~
								Fallow Ag. Land.	6

No. of Permittees: Agricultural Operations 8 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				158
Hay - Wild	0			2. Acreage Cultivated as Service Operation				6

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only thenumber of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvesed column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758
Form [illegible]6
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Swift State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested Acres	Permittee's Share Harvested Bu./Tons	Government's Share or Return Harvested Acres	Government's Share or Return Harvested Bu./ Tons	Government's Share or Return Unharvested Acres	Government's Share or Return Unharvested Bu. /Tons	Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
Cropland Retirement									
Small Grain/Legume	37		0		0		37	37-Alfalfa Cover	37
Food Plot Rotation									
Corn	6		0		3		9		~~9~~
Sweet Clover	0		0		0		9	9-Sweet Clover-Cover	9
Food Plot									
Corn	16		0		8		24		~~24~~
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 5 Haying Operations 0 Grazing Operations 1

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	28	110	$220.00	260
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				79
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

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Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758
Form [illegible]-8
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Traverse State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water-fowl Browsing Crops Type and Kind	Total Acreage
			Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
Food Plot Rotation									27
Corn	18		0		9		27		
Small Grain/Alfalfa	18		0		0		18	18-Alfalfa Cover	18
Alfalfa	0		0		0		0	18-Alfalfa Cover	18
Sweet Clover	0		0		0		9	9-Sweet Clover-Cover	9
Food Plot									6
Corn	4		0		2		6		
								Fallow Ag. Land.	18

No. of Permittees: Agricultural Operations 5 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				96
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1758
Form [illegible]5
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Benson Wetland Management District County Yellow Medicine State Minnesota

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Waterfowl Browsing Crops Type and Kind	Total Acreage
			Harvested		Unharvested				
	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /Tons			
								Fallow Ag. Land.	0

No. of Permittees: Agricultural Operations 0 Haying Operations 0 Grazing Operations 0

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	Grazing	Number Animals	AUM'S	Cash Revenue	ACREAGE
0				1. Cattle	0	0	0	0
				2. Other	0	0	0	0
				1. Total Refuge Acreage Under Cultivation				0
Hay - Wild	0			2. Acreage Cultivated as Service Operation				0

DIRECTIONS FOR PREPARING FORM NR--8'
CULTIVATED CROPS - HAYING - GRAZING

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Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

ANNUAL REPORT OF PESTICIDE APPLICATION

Refuge	Proposal Number	Reporting Year
Benson Wetland Management District	1,2 & 3	1970

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated		Total Acres Treated	Chemical(s) Used AI/Acre	Total Amount Chemical Applied Payees Cost	Remarks Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3) Unit	County	(4)	(5)	(6)	(7)	(8)	(9)
6/18	Leafy Spurge	Thompson	- B.S.	½	Tordon - 2#/acre	F.A. - 3.47	3.47/hr.	Beads	Hand
7/24	Canada	Daly	- B.S.	1	MCP - 3/4#/acre	F.A. - 5.00	3.47/hr.	Water	Hand
7/24	Canada	Artichoke	- B.S.	1	MCP - 3/4#/acre	F.A. - 5.00	3.47/hr.	Water	Hand
7/1	Canada & Sow	Artichoke	- B.S.	24	MCP - 3/4#/acre	Bauer- 52.80	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Daly	- B.S.	16	MCP - 3/4#/acre	Bauer- 35.20	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Jorgenson	- B.S.	80	MCP - 3/4#/acre	Bauer- 176.00	2.20/ac.	Water	Aerial
6/29	Canada & Sow	Dismal	- B.S.	425	MCP - 3/4#/acre	Bauer- 935.00	2.20/ac.	Water	Aerial
6/27	Canada & Sow	Karsky	- B.S.	50	MCP - 3/4#/acre	Bauer- 110.00	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Olson	- B.S.	27	MCP - 3/4#/acre	Bauer- 59.40	2.20/ac.	Water	Aerial
6/27	Canada & Sow	Boehnke	- B.S.	89	MCP - 3/4#/acre	Bauer- 195.80	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Krogarud	- B.S.	4	MCP - 3/4#/acre	Bauer- 8.80	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Lind. Lake	- B.S.	6	MCP - 3/4#/acre	Bauer- 13.20	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Swenson	- B.S.	18	MCP - 3/4#/acre	Bauer- 39.60	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Bent. Lake	- B.S.	17	MCP - 3/4#/acre	Bauer- 37.40	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Nelson	- B.S.	19	MCP - 3/4#/acre	Bauer- 41.80	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Wagner	- B.S.	65	MCP - 3/4#/acre	Bauer- 143.00	2.20/ac.	Water	Aerial
7/1	Canada & Sow	Blinkman	- B.S.	20	MCP - 3/4#/acre	Bauer- 44.00	2.20/ac.	Water	Aerial
7/28	Canada	Knutson	- C.	2	MCP - 3/4#/acre	Nelson- 12.50	5.00/hr.	Water	Ground
7/1	Canada	Pankonin	- C.	27	MCP - 3/4#/acre	Deel - 66.96	2.48/ac.	Water	Aerial
7/1	Canada	Eckhardt	- C.	8	MCP - 3/4#/acre	Deel - 19.84	2.48/ac.	Water	Aerial
7/1	Canada	Thomas	- C.	7	MCP - 3/4#/acre	Deel - 17.36	2.48/ac.	Water	Aerial

10. Summary of results (continue on reverse side, if necessary)

7/1	Canada	Bakalyar	- C.	4	MCP - 3/4#/acre	Deel - 9.92	2.48/ac.	Water	Aerial
7/1	Canada & Sow	Nirnsman	- J.	4	MCP - 3/4#/acre	Deel - 9.92	2.48/ac.	Water	Aerial
7/1	Canada & Sow	Stern	- J.	39	MCP - 3/4#/acre	Deel - 96.72	2.48/ac.	Water	Aerial
7/1	Canada & Sow	Kilen	- J.	33	MCP - 3/4#/acre	Deel - 81.84	2.48/ac.	Water	Aerial
6/29	Canada & Sow	Sevetson	- J.	28	MCP - 3/4#/acre	Deel - 69.44	2.48/ac.	Water	Aerial
6/29	Canada	Wiebener	- J.	50	MCP - 3/4#/acre	Deel - 124.00	2.48/ac.	Water	Aerial
6/29	Canada	Schwarzenbach	-J.	18	MCP - 3/4#/acre	Deel - 44.64	2.48/ac.	Water	Aerial
6/29	Canada	Sangl	- J.	10	MCP - 3/4#/acre	Deel - 24.80	2.48/ac.	Water	Aerial
6/29	Canada	Rasmussen	- J.	6	MCP - 3/4#/acre	Deel - 14.88	2.48/ac.	Water	Aerial
7/1	Canada	Brooks	- J.	8	MCP - 3/4#/acre	Deel - 19.84	2.48/ac.	Water	Aerial

35500

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisher[illegible] and Wildlife

ANNUAL REPORT OF PESTICIDE APPLICATION

Refuge	Proposal Number	Reporting Year
Benson Wetland Managem[illegible] District	1,2 & 3	1970

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated: Unit	Location of Area Treated: County	Total Acres Treated	Chemical(s) Used AI/Acre	~~Total Amount Chemical Applied~~ Payee of Cost	Remarks ~~Application Rate~~	Carrier and Rate	Method of Application
(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9)
7/2	Canada & Sow	Carley	- K.	22	MCP - 3/4#/acre	Carley- 55.00	5.00/hr.	Water	Ground
7/1	Canada & Sow	Schueler	- K.	3	MCP - 3/4#/acre	Schueler-10.00	5.00/hr.	Water	Ground
7/2	Canada & Sow	Quinn	- K.	8	MCP - 3/4#/acre	Nielson- 21.60	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Rambow	- K.	39	MCP - 3/4#/acre	Nielson-105.30	2.70/ac.	Water	Aerial
7/2	Canada & Sow	DeGroot	- K.	35	MCP - 3/4#/acre	Nielson- 94.50	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Reynolds	- K.	3	MCP - 3/4#/acre	Nielson- 8.10	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Olson Lake	- K.	52	MCP - 3/4#/acre	Nielson-140.40	2.70/ac.	Water	Aerial
7/1	Canada	Flamm	- K.	52	MCP - 3/4#/acre	Nielson-140.40	2.70/ac.	Water	Aerial
7/2	Canada	Bishop	- K.	3	MCP - 3/4#/acre	Nielson- 8.10	2.70/ac.	Water	Aerial
7/2	Canada	Hodak	- K.	20	MCP - 3/4#/acre	Nielson- 54.00	2.70/ac.	Water	Aerial
7/2	Canada	Bjur	- K.	5	MCP - 3/4#/acre	Nielson- 13.50	2.70/ac.	Water	Aerial
7/1	Canada & Sow	Fischer	- K.	83	MCP - 3/4#/acre	Nielson-224.10	2.70/ac.	Water	Aerial
7/1	Canada	Erickson	- K.	3	MCP - 3/4#/acre	Nielson- 8.10	2.70/ac.	Water	Aerial
7/1	Canada	Zwemke	- K.	1	MCP - 3/4#/acre	Nielson- 2.70	2.70/ac.	Water	Aerial
6/17	Leafy Spurge	Bouchier	- K.	10	Tordon- 2#/acre	F.A. - 13.88	3.47/hr.	Beads	Hand
7/1	Canada	Quinn	- K.	2	MCP - 3/4#/acre	F.A. - 10.00	3.47/hr.	Water	Hand
7/1	Canada	Flamm	- K.	1	MCP - 3/4#/acre	F.A. - 5.00	3.47/hr.	Water	Hand
7/1	Canada	Hodak	- K.	1	MCP - 3/4#/acre	F.A. - 5.00	3.47/hr.	Water	Hand
7/1	Canada	Fischer	- K.	3	MCP - 3/4#/acre	F.A. - 15.00	3.47/hr.	Water	Hand
7/1	Canada	Ansen	- K.	8	MCP - 3/4#/acre	Rudnigen-25.00	5.00/hr.	Water	Ground
7/11	Canada	Bredberg	- P.	15	MCP - 3/4#/acre	Nielson- 40.50	2.70/ac.	Water	Aerial
10. Summary of results (continue on reverse side, if necessary)									
7/2	Canada & Sow	Murphy	- P.	14	MCP - 3/4#/acre	Nielson- 37.80	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Thone	- P.	14	MCP - 3/4#/acre	Nielson- 37.80	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Froland	- P.	11	MCP - 3/4#/acre	Nielson- 29.70	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Brosh	- P.	22	MCP - 3/4#/acre	Nielson- 59.40	2.70/ac.	Water	Aerial
7/2	Sow	Jackson	- P.	11	MCP - 3/4#/acre	Nielson- 29.70	2.70/ac.	Water	Aerial
7/2	Canada	Berglund	- P.	10	MCP - 3/4#/acre	Nielson- 27.00	2.70/ac.	Water	Aerial
7/2	Canada	Mattson	- P.	4	MCP - 3/4#/acre	Nielson- 10.80	2.70/ac.	Water	Aerial
7/2	Canada	Jordan	- P.	13	MCP - 3/4#/acre	Nielson- 35.10	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Moen	- P.	17	MCP - 3/4#/acre	Nielson- 45.90	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Solvie	- P.	17	MCP - 3/4#/acre	Nielson- 45.90	2.70/ac.	Water	Aerial

35500

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

ANNUAL REPORT OF PESTICIDE APPLICATION

Refuge	Proposal Number	Reporting Year
Benson Wetland Management District	1,2 & 3	1970

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application (1)	List of Target Pest(s) (2)	Location of Area Treated: Unit (3)	County	Total Acres Treated (4)	Chemical(s) Used AI/Acre (5)	Total Amount Payee of Chemical Applied (6)	Cost	Remarks Application Rate (7)	Carrier and Rate (8)	Method of Application (9)
7/2	Canada	Greiner	- P.	1	MCP - 3/4#/acre	Nielson-	2.70	2.70/ac.	Water	Aerial
6/9	Leafy Spurge	Elder	- P.	2	Tordon - 2#/acre	F.A. -	6.94	3.47/hr.	Beads	Hand
7/24	Canada & Sow	Jordan	- P.	1	MCP - 3/4#/acre	F.A. -	5.00	3.47/hr.	Water	Hand
7/24	Canada	Thone	- P.	1	MCP - 3/4#/acre	F.A. -	5.00	3.47/hr.	Water	Hand
7/24	Canada	Stens. Lake	- P.	1	MCP - 3/4#/acre	F.A. -	5.00	3.47/hr.	Water	Hand
7/2	H. Alys.	Costello	- SR.	7	MCP - 3/4#/acre	Nielson-	18.90	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Kenna	- SR.	36	MCP - 3/4#/acre	Nielson-	97.20	2.70/ac.	Water	Aerial
7/2	Canada	Demer	- SR.	4	MCP - 3/4#/acre	Nielson-	10.80	2.70/ac.	Water	Aerial
7/2	Sow	Schaefer	- SR.	15	MCP - 3/4#/acre	Nielson-	40.50	2.70/ac.	Water	Aerial
7/2	Canada	Spanier	- SR.	2	MCP - 3/4#/acre	Nielson-	5.40	2.70/ac.	Water	Aerial
7/2	Canada	Koepp	- SR.	9	MCP - 3/4#/acre	Nielson-	24.30	2.70/ac.	Water	Aerial
7/24	Sow	Kenna	- SR.	1	MCP - 3/4#/acre	F.A. -	5.00	3.47/hr.	Water	Hand
7/24	Canada	Wehseler	- SR.	1	MCP - 3/4#/acre	F.A. -	5.00	3.47/hr.	Water	Hand
7/8	Canada & Sow	Joos	- SV.	22	MCP - 3/4#/acre	Bauer -	47.96	2.20/ac.	Water	Aerial
7/2	Canada & Sow	Golden	- SV.	61	MCP - 3/4#/acre	Bauer -	134.20	2.20/ac.	Water	Aerial
7/10	Canada & Sow	Kill	- SV.	7	MCP - 3/4#/acre	Bauer -	18.92	2.20/ac.	Water	Aerial
7/10	Canada & Sow	Struck	- SV.	19	MCP - 3/4#/acre	Bauer -	40.92	2.20/ac.	Water	Aerial
7/8	Canada & Sow	Edwards	- SV.	11	MCP - 3/4#/acre	Bauer -	24.64	2.20/ac.	Water	Aerial
7/8	Canada & Sow	Lamprecht	- SV.	130	MCP - 3/4#/acre	Bauer -	286.00	2.20/ac.	Water	Aerial
7/10	Canada	Schultz	- SV.	9	MCP - 3/4#/acre	Bauer -	19.36	2.20/ac.	Water	Aerial
7/7	Canada & Sow	Freeman	- SV.	20	MCP - 3/4#/acre	Bauer -	44.00	2.20/ac.	Water	Aerial

10. Summary of results (continue on reverse side, if necessary)

7/10	Canada & Sow	Smith	- SV.	6	MCP - 3/4#/acre	Bauer -	12.32	2.20/ac.	Water	Aerial
7/7	Canada & Sow	Bahr	- SV.	26	MCP - 3/4#/acre	Bauer -	56.32	2.20/ac.	Water	Aerial
7/7	Canada	Miller	- SV.	55	MCP - 3/4#/acre	Bauer -	121.00	2.20/ac.	Water	Aerial
7/2	Canada	Harrison	- SV.	70	MCP - 3/4#/acre	Bauer -	154.00	2.20/ac.	Water	Aerial
7/2	Canada	Anderson	- SV.	13	MCP - 3/4#/acre	Bauer -	29.92	2.20/ac.	Water	Aerial
7/8	Canada	Grossman	- SV.	30	MCP - 3/4#/acre	Bauer -	67.76	2.20/ac.	Water	Aerial
7/10	Canada	Johnson	- SV.	22	MCP - 3/4#/acre	Bauer -	48.40	2.20/ac.	Water	Aerial
6/8	Leafy Spurge	Sherstad Sl.	- SV.	2	Tordon - 2#/acre	F.A. -	13.88	3.47/hr.	Beads	Hand
7/17	Leafy Spurge	Greiner	- SV.	10	Tordon - 2#/acre	F.A. -	24.29	3.47/hr.	Beads	Hand
7/24	Canada	Lamprecht	- SV.	1	MCP - 3/4#/acre	F.A. -	5.00	3.47/hr.	Water	Hand

35500

3-1979 (NR-12)
(9/63)

Bureau of Sport Fisheries and Wildlife

ANNUAL REPORT OF PESTICIDE APPLICATION

Refuge: Benson Wetland Management District

Proposal Number: 1,2 & 3

Reporting Year: 1970

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated		Total Acres Treated	Chemical(s) Used AI/Acre	~~Total Amount Chemical Applied~~ Payee & Cost	~~Remarks Application Rate~~	Carrier and Rate	Method of Application
(1)	(2)	Unit	(3) County	(4)	(5)	(6)	(7)	(8)	(9)
7/24	Canada	Schultz	- SV.	1	MCP - 3/4#/acre	F.A. - 5.00	3.47/hr.	Water	Hand
7/2	Canada & Sow	Swenson	- SW.	26	MCP - 3/4#/acre	Nielson- 70.20	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Lynch Lake	- SW.	26	MCP - 3/4#/acre	Nielson- 70.20	2.70/ac.	Water	Aerial
7/2	Canada	Lindahl	- SW.	33	MCP - 3/4#/acre	Nielson- 90.10	2.70/ac.	Water	Aerial
7/2	Canada & Sow	Westhausen	- SW.	22	MCP - 3/4#/acre	Nielson- 59.40	2.70/ac.	Water	Aerial
7/17	Leafy Spurge	Lynch Lake	- SW.	11	Tordon - 2#/acre	F.A. - 17.35	3.47/hr.	Beads	Hand
6/8	Leafy Spurge	Svor	- SW.	½	Tordon - 2#/acre	F.A. - 3.47	3.47/hr.	Beads	Hand
7/17	Leafy Spurge	Hdqtrs.	- SW.	½	Tordon - 2#/acre	F.A. - 1.73	3.47/hr.	Beads	Hand
7/24	Canada & Sow	Swenson	- SW.	1	MCP - 3/4#/acre	F.A. - 5.00	3.47/hr.	Water	Hand
6/26	Canada & Sow	Geyer	- T.	44	MCP - 3/4#/acre	Bauer - 97.68	2.20/ac.	Water	Aerial
6/26	Canada	O'Neill	- T.	30	MCP - 3/4#/acre	Bauer - 66.00	2.20/ac.	Water	Aerial

10. Summary of results (continue on reverse side, if necessary)

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