

Pathfinder NWR Narrative
1972

* Administered by Arapaho NWR

N A R R A T I V E R E P O R T

Pathfinder National Wildlife Refuge

January through December
1972

Administered from Arapaho National Wildlife Refuge
Walden, Colorado

NO ASSIGNED PERSONNEL AT PATHFINDER REFUGE

REFUGE PERSONNEL - ARAPAHO

Refuge Manager	V. Carrol Donner
Clerk Typist	Barbara J. Smith
Engineering Equipment Operator	William O. McDermith
Biological Technician (Wildlife)	Rodney F. Krey

UNITED STATES DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife
Walden, Colorado

NARRATIVE REPORT
1972

Pathfinder National Wildlife Refuge

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NARRATIVE REPORT
January through December
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Pathfinder National Wildlife Refuge

I. GENERAL

A. Weather Conditions

Weather data was compiled from Bureau of Reclamation records at Pathfinder Dam. The dam is from five to twenty miles away from individual units of the refuge. Table 1 below is a summary of the weather data.

Table 1: 1972 Weather Data, Pathfinder Dam

<u>Month</u>	<u>Precipitation</u>		<u>Temperatures</u>	
	<u>This Month</u>	<u>Normal</u>	<u>Max.</u>	<u>Min.</u>
January	.35	.29	45	-20
February	.36	.38	55	-17
March	.87	.63	66	13
April	1.67	1.11	70	9
May	1.67	1.59	82	26
June	1.83	1.19	89	38
July	.36	1.03	95	35
August	.63	.88	94	40
September	.12	.83	81	26
October	1.85	.86	74	1
November	.84	.49	49	3
December	.31	.30	46	-23
Totals	10.86	9.58		
Extremes			95	-23

The new year started with very cold temperatures for Pathfinder Refuge. The temperature dipped to -20°F. in January and -17°F. in February. The low for the year, -23°F., occurred in December. Summer temperatures reached a maximum of 95°F. in July.

Total precipitation for the year was 10.86", 1.28" above normal established for the area. A total of eight months received above average precipitation. October had the largest departure from normal of any month. A total of .99" of moisture above normal was received. Only four months showed a shortage of precipitation. February and August were slightly below normal, July and September far below. Lack of moisture during July, August and September badly inhibited the growth of vegetation.

In July a very local storm dumped several inches of rain on the Platte River-Sage Creek unit of the refuge. According to local ranchers as much as three to four inches of rain fell in about one hour. This was not reflected in the weather table since this unit is about twenty miles from Pathfinder Dam. Results of the heavy rain were a flash flood and severe washing of the trail to DeWeese Creek. Gullies were washed eight feet deep in some places.

B. Habitat Conditions

1. Water

The water level of Pathfinder Reservoir during the first six months of 1972 was excellent for waterfowl. During the first three months of the year the reservoir was filled to within 4.42 feet of maximum. It was held very near this level during March and April. In May an additional foot of water was retained to increase the surface elevation to the highest point in nearly 40 years. This level was 1.52 feet above the high point of last year.

The North Platte River Basin received below normal snowfall for the year, therefore resultant runoff was less than average. In June irrigation needs downstream required a drawdown of the reservoir, lowering the level 4.36 feet. During July the reservoir dropped 6.26' and in August it was lowered another 3.38'. By September most of the irrigation was over and the reservoir level decreased only a foot. During October, November and December the reservoir level increased.

Table 2: Comparison of Pathfinder Reservoir Surface Elevations, 1971 - 1972

	1972	Change from previous month	Change from 1971
January 1	5,842.52	+1.54	+11.36
February 1	5,844.30	+1.78	+ 7.42
March 1	5,845.58	+1.28	+ 3.86
April 1	5,845.34	- .24	+ .42
May 1	5,845.86	+ .52	+ 1.68
June 1	5,846.88	+1.02	+ 1.52
July 1	5,842.52	-4.36	- .90
August 1	5,836.26	-6.26	- 6.66
September 1	5,832.88	-3.38	- 6.48
October 1	5,831.94	- .94	- 6.94
November 1	5,834.50	+2.56	- 6.12
December 1	5,836.38	+1.88	- 4.60
December 31	5,841.02	+4.64	- 1.50

Maximum capacity of Pathfinder Reservoir is 1,000,000 A.F. Highest level for this year, 946,660 A.F., was recorded on June 1. This was 31,550 A.F. greater than the 1971 maximum of 915,110 A.F. (Table 3 below).

Table 3: Active Storage, Pathfinder Reservoir, May 1-Nov. 1
1970 - 1972

Date	1972 Active Storage (1,000 A.F.)	1971 Active Storage (1,000 A.F.)	1970 Active Storage (1,000 A.F.)
May 1	925.40	891.08	321.18
June 1	946.66	915.11	432.31
July 1	858.04	875.85	492.29
August 1	741.45	865.90	498.71
September 1	683.92	797.56	520.85
October 1	668.59	788.64	516.47
November 1	711.04	821.29	559.36

As a result of the early high reservoir levels, the series of small dams making impoundments along Horse Creek were severely damaged. Three of the four dams were washed out. The fourth dam had slight damage. DeWeese Creek also has four dams. Two of these dams were under water but were not damaged.

2. Food and Cover

Spring migrants found abundant aquatic and upland vegetation in most units. Large patches of sago pondweed were observed on Goose Bay and the Sweetwater Arm. Widgeongrass was fairly abundant on DeWeese Creek, but Horse Creek lacked its normal growth since the impoundments had been washed out and only a small stream remained. Cattail thrived and somewhat extended its range. DeWeese Creek ponds were not washed out by the receding reservoir, and supported a dense stand of bulrush along the edges. Small patches of bulrush occurred along the Sweetwater River, Goose Bay and Horse Creek.

The high reservoir levels limited waterfowl browse species in the spring. As summer progressed and the reservoir receded, more and more browse was available along extensive mud flats. Medium sized flocks of ducks and geese were observed feeding on these areas. However, the flocks were not as large as last year.

Very little yellow sweetclover was present this year. Hopefully receding water will allow recovery of the large patches that once covered the Sweetwater River bottom during 1966-69. During these years sweetclover provided food and cover for waterfowl and food for hundreds of antelope and deer.

As summer progressed dry weather inhibited upland plant growth. Dry conditions were compounded on the Soda Lakes unit by severe overgrazing. The permittee had removed segments of the fence and allowed his cattle to graze the fenced refuge area as well as his surrounding BLM land. The result was a congregation of cattle around wet bottom areas and severe trampling of some areas. This problem is discussed further in other sections of this report.

II. WILDLIFE

A. Migratory Birds

1. Ducks

Pathfinder provided less waterfowl maintenance in 1972 than in 1971. A total of 553,487 use-days were recorded in 1972 compared to 572,450 last year. A large percentage of the use occurred during fall migration when a peak of 4,340 birds were present late in August. Spring migration was average with 2,070 birds counted early in May. Although use during 1972 was less than in 1971 it was still far above average. In 1972, 50% of the total use occurred on the Soda Lakes unit. Sweetwater River unit of the reservoir was next highest with 40%. The remaining 10% was divided among four other units - Goose Bay, DeWeese Creek, Horse Creek and Sage Creek-Platte River.

Table 4: Waterfowl Use-Days and Production 1965 - 72
Pathfinder Refuge

Year	Use-days				Production		
	Swans	Geese	Ducks	Coots	Geese	Ducks	Coots
1965		30,030	163,688	35	10	350	
1966	35	33,859	218,029	28	30	476	
1967		30,520	233,464	5,404	30	480	
1968		12,411	375,875	5,530	45	640	10
1969		21,941	150,333	391	25	410	20
1970		35,450	351,085	13,440	50	370	
1971		52,165	572,450	34,300	100	540	
1972		30,492	553,487	6,642	170	545	
Avg.	4	30,858	327,301	8,221	57	476	4

Duck use by individual species fluctuated both up and down from last year. By groups, dabbling use was up, diver use down. Accompanying charts reflect comparisons for 1971 and 1972. Since our population surveys are quite infrequent, we do not consider our data valid for useful population comparisons.

Table 5: Duck Use-Days and Production, 1971-1972

Species	1971		1972		% of 1971 Use-days
	Use-days	Prod.	Use-days	Prod.	
Mallard	140,090	150	126,330	130	90%
Gadwall	31,675		61,004	85	193%
American widgeon	32,235		45,729	30	142%
Pintail	166,375	90	130,089	105	78%
Green-winged teal	35,350	30	39,141	25	111%
BW/Cinnamon teal	26,390	50	24,719	20	94%
Shoveler	16,240	20	26,213	35	161%
Redhead	51,030		35,400	15	69%
Ring-necked duck	0		2,055		
Canvasback	4,195		2,807	15	67%
Scaup	15,260		19,329		127%
Goldeneye	4,530		6,681		147%
Bufflehead	1,435		9,000		627%
Ruddy	2,590		1,463		56%
Common merganser	45,048	160	23,527	85	52%
Hooded merganser	7		0		
Totals	572,450	540	553,487	545	
Average					97%

2. Geese

A total of 30,492 goose use-days were recorded in 1972 compared to 52,165 in 1971 (See Table 4). The 1972 total is slightly below average for the years 1965 - 1972.

Canada goose was the only goose species observed on the refuge during 1972. A total of 225 birds, largest count of the year, were observed in July. This compared with 275 geese observed in July, 1971. Majority of goose use was on the Sweetwater Arm. Limited use was made of DeWeese Creek and Soda Lakes unit. Occasionally birds were observed on Goose Bay, Horse Creek and North Platte River units.

There was no apparent reason for the decrease of more than 20,000 use-days. Receding water levels exposed large areas of mud flats and a favorable amount of green browse occurred, producing conditions very similar to those of 1971.

There were no geese observed molting on Goose Bay. Last year a total of 25 geese were observed. Goose Bay is the historic molting area of large numbers of geese. The group in 1971 was the first group known to use the area in the last few years. Increased public use and low water levels were probable reasons for the change in molting use areas.

Goose production was up 70% over last year. One hundred and seventy young geese were counted. This was the highest production figure since 1965 (Table 4). Most of the young were observed on the Sweetwater Arm. Some of the young probably were hatched on the Soda Lakes unit and traveled overland to the Sweetwater River. Five broods were observed on DeWeese Creek unit and at least one brood was raised on Goose Bay unit.

3. Swans

No swans were observed using the refuge during 1972.

4. Coots

Coots were observed in small groups this year. The 1972 use-day figure of 6,642 days was a tremendous drop from 34,300 use-days recorded in 1971. The 1972 figure is also 1,500 use-days less than the 1965-1972 average (See Table 4). In May a peak of 120 coots were counted. There was not a large fall migration. In September of 1971, 900 coots were observed compared to just 40 in the same period this year. There were no coots produced on the refuge.

5. Other Waterbirds

Western grebes were present in greater numbers than any other bird in this category. A total of 37,575 use-days were recorded. This was more than four times the 1971 figure. The highest count was reported in July when 325 birds were observed. The Sweetwater Arm was the primary use area. Smaller numbers were observed on DeWeese Creek, Goose Bay and North Platte River units.

Eared grebes were present on all refuge units. Eared grebe use-days totaled 6,745 with all units receiving some use. Pied-billed grebes were also present for a total of 1,645 use-days, mostly on Sweetwater Arm and Soda Lakes units.

A total of 6,795 use-days were recorded for white pelicans this year. This is considerably less than the 8,780 use-days recorded in 1971. A peak number of 100 pelicans were observed in August. This is the same peak as in 1971. The decrease in use-days was due to birds arriving later and departing earlier than last year.

The double-crested cormorant seems to have benefited from the high water levels. A total of 2,790 use-days were recorded this year. This was an increase of 390 use-days over 1971. A peak number of 35 birds was recorded compared to 30 in 1971.

Other waterbirds observed included common loons, great blue herons and snowy egrets. A total of 1,245 use-days were recorded for common loons with a peak number of 15 birds observed in March. Great blue heron use was recorded as 2,655 use-days. A peak of 50 herons were observed in July. A maximum of five snowy egrets were present during July, accounting for 123 use-days.

6. Shorebirds

There were five families of shorebirds observed this year. The most numerous of the family Phalaropodidae was Wilson's phalarope. A total of 187,750 use-days were recorded with a peak number of 2,200 birds in August. This was a large increase over 1971.

A total of nine species of the Scolopacidae family were observed. Included were willetts, common snipe, long-billed curlews, long-billed dowitchers, spotted sandpipers, least sandpipers, western sandpipers, greater yellowlegs and lesser yellowlegs. Of the above species, willetts were credited with the most use-days, 4,190. Peak numbers for all species were low, ranging from 4 for greater yellowlegs to 75 for least sandpiper.

The family Laridae was represented by three species. The most numerous of these were California gulls. They reached a peak number of 1,240 birds in July and had 93,350 use-days. Franklin's gulls and black terns were observed during June in small numbers.

The remaining two families were represented by one specie each. American avocets represented the Recurvirostridae family. A total of 26,800 use-days were recorded with a peak number of 250 birds. Representative of the Charadriidae family was the kalldeer. Their numbers were relatively unchanged from last year.

7. Doves

A peak number of 80 mourning doves were recorded this year. An estimated twenty young were raised.

B. Upland Game Birds

Sage grouse is the only upland game bird in the refuge area. The refuge grouse population was estimated at 125 birds, same as 1971. Production in 1972 was estimated at 70 young compared to 65 in 1971. Production is below past years due to the high reservoir water level flooding the river bottomland.

The refuge is closed to sage grouse hunting. Sage grouse season for the area surrounding the refuge was September 16 and 17 with a bag limit of three grouse per day.

C. Big Game Animals

Pronghorn antelope reached an early summer peak of 1,000 animals. Pronghorn production increased in 1972 to an estimated 150 young. A visit to the refuge was made during the 1972 antelope hunting season and several hunters were contacted. Mainly we discussed dumping of trash, but hunting success was also discussed. Hunters were of the opinion that an antelope was easy to kill if you weren't particular as to sex. It is estimated that 150 antelope were harvested on the refuge.

Mule deer were observed several times this year. It is estimated that 100 deer use the refuge, some on a part time basis. Main use area is the Sweetwater Arm but several were observed on Goose Bay and Platte River units.

D. Fur Animals, Predators, Rodents and Other Mammals

Fur animals occurring on the refuge include muskrat and beaver. Neither are abundant. Among the predators observed on the refuge are coyote, bobcat, red fox, striped skunk and raccoon. Coyotes and raccoon seem to be increasing in numbers. The other species are holding steady.

Several species of rodents occur on the refuge. Desert cotton-tail, white-tailed jackrabbits and white-tailed prairie dogs are the larger and more commonly observed rodents.

E. Hawks, Eagles, Owls, Crows and Magpies

Bald eagles were a common sight around Pathfinder Refuge in the spring. A total of 15 bald eagles were counted in March of this

year. Golden eagles were present at the same time. A total of 10 golden eagles were observed compared to 20 in 1971. Golden eagles were seen frequently all year.

Move to
Section F

Several species of hawks use the refuge. Most numerous during the summer months were common nighthawks. A peak number of 250 nighthawks were observed in July. / Other hawks common to the area include sparrow hawks, marsh hawks and Swainson's hawks. Rough-legged, red-tailed and ferruginous hawks were only occasionally observed.

Prairie falcons and peregrine falcons are seen occasionally. They seem to be holding their own in this area.

Other species in this category which are present on the refuge include great horned owls, turkey vultures, crows and the black-billed magpies.

F. Other Birds

A wide variety of small birds occur on the refuge. Among these were rock wrens, loggerhead shrikes, lark sparrows, McCrowns longspurs and mountain plovers.

G. Fish

The "Miracle Mile" of the North Platte River is one of the best fishing areas in Wyoming. A portion of this area is in the Platte River unit of the refuge. Brown and rainbow trout are present in great numbers and several trout weighing 5-8 pounds were caught by fishermen. According to local Wyoming WCO's this area was fished heavier and with more success this year than in any previous year. Fishing pressure also increased in Goose Bay and Sweetwater River units.

Large numbers of carp and suckers are present in the reservoir and tributary rivers. No fish exist in the Soda Lakes unit due to high alkalinity.

H. Reptiles

Prairie rattlesnakes and bull snakes both occur on the refuge. A few rattlesnakes were observed by refuge personnel. Several fishermen reported seeing and/or killing the reptiles. No report of snake bite was received by this office.

I. Disease

None noted.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development and Maintenance

The major maintenance job this year was repairing fence on the Soda Lakes unit. A total of 16 man hours was spent and the job was only three-fourths completed.

Other maintenance included emptying trash and collection litter on the North Platte-Sage Creek and Sweetwater River units. Heavy fishing and hunting pressure caused problems with the trash. Due to the long distance Arapaho Refuge personnel made a trip to Pathfinder only once a month. Trash cans provided were usually full in a week and we received many complaints from fishermen and State Game and Fish personnel. In September when Arapaho personnel were making the monthly visit, a total of four trash cans were found which had been uncovered by the receding reservoir. Hopefully these cans will help ease the trash overflow in this area. As a solution to a serious trash problem along the Buzzard Road, a trash can was removed and two "No Dumping" signs were put up. This area has been a problem for some time. A pickup load of trash was removed from around the single 55 gallon barrel on most trips. It is believed the local ranchers were using the spot as a public dump.

B. Plantings

None

C. Collections and Receipts

None

D. Control of Vegetation

None

E. Planned Burning

None

F. Fires

None

IV. RESOURCE MANAGEMENT

A. Grazing

Grazing on Pathfinder Refuge is administered by the Bureau of Land Management from Casper, Wyoming. BLM issues the grazing permits and collects grazing fees. Bureau of Reclamation and our own Bureau make recommendations to BLM as to the number of AUM's and period of use.

A serious problem arose this summer with grazing. When refuge personnel visited in July, it was noted that a few cattle were grazing on the Soda Lakes unit. In August a total exceeding 100 head of cows were observed on this same unit. Vegetation by this time was seriously overgrazed. According to our recommendations, this area was to be grazed during January and February. Casper BLM office was immediately notified and the cattle were removed. Apparently the cattle were supposed to be grazing on surrounding BLM land. The rancher who leases the refuge and surrounding BLM land had lowered the refuge fence so his cattle had access to all areas. Refuge wetlands were much preferred by the cattle and the result was severe overgrazing and trampling. The refuge grazing lease will be revoked for the next few years to allow vegetation to recover.

B. Haying

None

C. Fur Harvest

None

D. Timber Removal

None

E. Commercial Fishing

None

F. Other Uses

None

V. FIELD INVESTIGATIONS AND APPLIED RESEARCH

No activity in this area.

VI. PUBLIC RELATIONS

A. Recreational Uses

The main recreational use on Pathfinder Refuge is fishing. A total of 4,995 fishermen fished 27,685 hours. This is an increase of more than a thousand fishermen and 5,000 hours of fishing from 1971. Other recreational uses include wildlife and wildland observation, camping, picnicking and boating.

Deer and antelope hunting are allowed on the entire refuge and waterfowl hunting on designated units.

Visitor use of the refuge increased by more than 1,300 in 1972. This was mostly due to a large increase in fishermen.

B. Refuge Visitors

Please refer to Arapaho Refuge, Colorado report.

C. Refuge Participation

Public relations in this area is restricted to contact with fishermen and hunters in the field.

D. Hunting

1. Big Game

The entire refuge was open for pronghorn and deer hunting in accordance with state regulations.

Pronghorn hunters found plenty of antelope and very few went home empty handed. An estimated 150 animals were removed from the refuge during the September season. Areas surrounding the Sweetwater Arm were most heavily hunted. Areas receiving moderate use included DeWeese Creek and along the North Platte River. Very few hunters were seen around Goose Bay. The hunting area in which the refuge is located had 800 permits available. A large percentage of the hunters contacted were from out of state.

An estimated 10 deer were removed from the refuge during the October season. This was the second year that antelope and deer seasons were separated. Relatively few deer hunters used the refuge.

2. Waterfowl

Pathfinder Refuge was again under the Central Flyway Point system for duck hunting. A split season was in effect for the Central Flyway portion of Wyoming which included Pathfinder Refuge. The early season opened October 1 and ran through November 5, 1972. A late season was in effect from November 23, 1972 through January 15, 1973. An estimated total of 100 ducks were killed on open areas of the refuge. Mallard, gadwall, green-winged teal, blue-winged teal and scaup were included in the kill.

An estimated 25 Canada geese were killed. This was down five from last year. The goose season was also split. The early season ran from October 7 through October 20, 1972. The late season opened on November 18, 1972 and closed January 9, 1973.

E. Violations

No game law violations were noted.

F. Safety

No assigned personnel. Refer to Arapaho Refuge Narrative Report.

VII. OTHER ITEMS

A. Items of Interest

Refuge Revenue Sharing checks were delivered to the County Treasurers of Carbon and Natrona Counties on November 29. The check to Natrona amounted to \$89.56. The Carbon County check was \$19.47.

This report was written by Biological Technician Krey, edited by Manager Donner and typed by Mrs. Smith.

B. Photographs

The photographs were taken by Biological Technician Krey with his personally-owned 35 mm Mamiya-Sekor 1000 DTL camera. Prints were made from slides by a commercial firm at government expense.

Submitted by:

V. Carrol Donner
V. Carrol Donner

April 3, 1973

Reviewed by:

W. G. Fildon
Area Supervisor
Land Management



Krey

8/30/72

Rattlesnake coiled for strike.



Krey

7/21/72

Mule deer doe on Goose Bay Unit.



Krey

5/3/72

Large brown trout caught by local fishermen.



Krey

5/4/72

Delayed exposure catches Krey cleaning up trash along Buzzard Road. This can was later removed and "No Dumping" signs put up.

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Pathfinder For 12-month period ending August 31, 1972

Reported by V. Carroll Donner

Title Refuge Manager

Observed by Rodney F. Krey

(1)		(2)		(3)	(4)	(5)
Area or Unit		Habitat			Breeding	
Designation	Type	Acreage		Use-days	Population	Production
Sweetwater Arm	Crops		Ducks	264,397	150	350
	Upland	9,947	Geese	31,268	40	105
	Marsh	540	Swans			
	Water	1,260	Coots	28,589		
	Total	11,747	Total	324,254	190	455
Soda Lakes Unit	Crops		Ducks	276,695	60	90
	Upland	380	Geese	3,420	8	30
	Marsh	420	Swans			
	Water	420	Coots			
	Total	1,220	Total	280,115	68	120
Goose Bay Unit	Crops		Ducks	30,744	10	25
	Upland	940	Geese	489	2	5
	Marsh	40	Swans			
	Water	160	Coots	2,891		
	Total	1,140	Total	34,124	12	30
DeWeese Creek Unit	Crops		Ducks	30,744	30	50
	Upland	1,000	Geese	13,191	6	10
	Marsh	40	Swans			
	Water	100	Coots	642		
	Total	1,140	Total	44,577	36	60
Sage Creek-Platte River Unit	Crops		Ducks	12,298	20	30
	Upland	1,380	Geese	489	10	20
	Marsh	20	Swans			
	Water	160	Coots			
	Total	1,560	Total	12,787	30	50
Refuge Totals	Crops		Ducks	614,878	270	515
	Upland	13,647	Geese	48,857	66	170
	Marsh	1,060	Swans			
	Water	2,100	Coots	32,122		
	Total	16,807	Total	695,857	336	715
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

(over)

WATERFOWL HUNTER KILL SURVEY

Refuge Pathfinder

Year 19672

(1) Weeks of Hunting	(2) No. Hunters Checked	(3) Hunter Hours	(4) Waterfowl Species and Nos. of Each Bagged	(5) Total Bagged	(6) Crippling Loss	(7) Total Kill	(8) Est. No. of Hunters	(9) Est. Total Kill
8	-0-	270	Canada goose				65	25
10	-0-	245	Duck species: Mallard Gadwall Green-winged teal Blue-winged/cinnamon teal Lesser scaup This is an estimate of the number killed. Season consisted of "Central Flyway Early and Late Point System Seasons" for ducks, coots and mergansers, and late goose seasons.				65	45 15 10 20 10

(over)

DISEASE

Refuge PathfinderYear 19 72

Botulism

Period of outbreak None

Period of heaviest losses _____

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Areas affected (location and approximate acreage) _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.) _____

Condition of vegetation and invertebrate life _____

Remarks _____

Lead Poisoning or other Disease

Kind of disease None

Species affected _____

Number Affected

Species

Actual Count

Estimated

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks _____

(1)
NONAGRICULTURAL COLLECTIONS, RECEIPTS, AND PLANTINGS

Refuge Pathfinder Year 19 72

Collections and Receipts (Seeds, rootstocks, trees, shrubs)							Plantings (Marsh - Aquatic - Upland)						
Species	Amount (Lbs., bus., etc.)	(2) C or R	Date	Method or Source	Cost	(3) Total Amount on Hand	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount and Nature of Propagules	Date	Survival	Caus of Lo
Nothing to report.													

- (1) Report agronomic farm crops on Form NR-8
(2) C = Collections and R = Receipts
(3) Use "S" to denote surplus

Total acreage planted:

Marsh and aquatic _____
Hedgerows, cover patches _____
Food strips, food patches _____
Forest plantings _____

Remarks: _____

3-1758
Form NR-8
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Pathfinder County Carbon - Natrona State Wyoming

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
			<u>Harvested</u>		<u>Unharvested</u>				
	Acres	Bu./Tons	Acres	Bu./Tons	Acres	Bu./Tons			
Nothing to report.									
								Fallow Ag. Land	None

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
None				1. Cattle	Grazing administered by BLM*			
				2. Other				
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild	None			2. Acreage Cultivated as Service Operation				None

* Based on recommendations made by BSF&W.

REFUGE GRAIN REPORT

Refuge PathfinderMonths of January through December, 19672

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Refer to Hutton Lake Refuge Narrative Report.											

(8) Indicate shipping or collection points _____

(9) Grain is stored at Hutton Lake Refuge Granary.

(10) Remarks _____

*See instructions on back.

16-61482-1

April 10, 1973

The output printouts for the period July 1 - December 31, 1972 have not been received. These will be forwarded upon receipt.

NATIONAL WILDLIFE REFUGE SYSTEM
PUBLIC USE REPORT - ACT HRS BY MONTH
FISCAL YEAR 1972

PATHFINDER 02-3527-01-PTF

ACTIVITY NAME	JUL-DEC 1971	JAN-72	FEB-72	MAR-72	APR-72	MAY-72	JUN-72	12 MONTH TOTAL
RECREATION-WILDLIFE WILDLANDS								
Hunting Migratory Birds								
Ducks		10						10
Geese		8						8
Fishing								
Coldwater		90	100	425	550	5,100	5,000	11,265
On Ref Wldlfe Observatn		8	8	40	60	70	140	326
On Ref Othr W/W N-C Rec								
Canoeing/rowboating					20	10	10	40
Walking/hiking							10	10
Photography				5	15	10	20	50
Sightseeing		3		5		4	40	52
Other and General				2				2
RECREATION-NON-WILDLIFE								
Camping						150	350	500
Picnicking					20	10	60	90
Boating and Waterskiing								
Boating						45	5	50
Other Non W/W Rec								
Other		2						2
Total Hunting		18						18
Total Fishing		90	100	425	550	5,100	5,000	11,265
Total Other W/W Recreation		11	8	52	95	94	220	480
Total Wildlife Oriented		119	108	477	645	5,194	5,220	11,763
Total Non-Wildlife Oriented		2			20	205	415	642
Total Public Use		121	108	477	665	5,399	5,635	12,405
No. Visits to Refuge		35	20	90	280	1,062	1,050	2,537

(This sheet typed from printout - furnished but not reduced to proper size.)

NATIONAL WILDLIFE REFUGE SYSTEM
REPORT OF MISCELLANEOUS OUTPUTS
FY-72

PATHFINDER
02-3527-01-PTF

TYPE OF OUTPUTS	UNITS	FY TOTAL
ENVIRONMENTAL PRESERVATION		
NATURAL ENVRNMNTS PRESR	ACRE	16807
MISCELLANEOUS WILDLIFE OUTPUTS		
WILDLIFE DIVERSITY	USE DAYS	158

NATIONAL WILDLIFE REFUGE SYSTEM

WATERFOWL USE DAYS

PATHFINDER

02-3527-C1-PTF

SPECIES NAME	JAN 1972- FEB 1972	MAR 1972- APR 1972	MAY 1972- JUN 1972	JUL 1972- DEC 1972	12 MONTH TOTAL
SPECIAL RECOG SPECIES					
AMERICAN COOT	0	450	3,390	0	3,840
WATERFOWL MAINTENANCE					
GEESE					
CANADA GOOSE	3,450	7,020	4,350	0	14,820
DUCKS					
MALLARD	10,050	33,420	15,840	0	59,310
GADWALL	0	11,280	17,670	0	28,950
 COMMON MERGANSER	3,300	9,480	7,800	0	20,580
AMERICAN WIDGEON	0	1,260	5,700	0	6,960
GREEN WINGED TEAL	0	15,180	7,050	0	22,230
BLUE-WINGED TEAL	0	900	3,600	0	4,500
SHOVELER	0	900	8,520	0	9,420
PINTAIL	300	60,360	21,000	0	81,660
RED HEAD	0	27,570	6,120	0	33,690
CANVASBACK	0	1,110	1,500	0	2,610
LESSER SCAUP	0	10,280	1,560	0	11,840
RING-NECKED DUCK	0	1,770	270	0	2,040
COMMON GOLDENEYE	1,290	360	150	0	1,800
BUFFLEHEAD	0	490	90	0	580
RUDGY DUCK	0	450	900	0	1,350
TOTAL SWANS	0	0	0	0	0
TOTAL GEESE	3,450	7,020	4,350	0	14,820
TOTAL DUCKS	14,940	174,990	97,860	0	287,790
TOTAL WATERFOWL	18,390	182,010	102,210	0	302,610

NATIONAL WILDLIFE REFUGE SYSTEM
REPORT OF ECONOMIC OUTPUTS - FY 72
(IN DOLLARS)

PATHFINDER

02-3527-01-PTF

TYPE OF BENEFIT	JUL-SEP 71	OCT-DEC 71	JAN-MAR 72	APR-JUN 72	FY TOTAL
REFUGE RECEIPTS					
GAS AND OIL	0.00	0.00	0.00	358.24	358.24
TOTAL	0.00	0.00	0.00	358.24	358.24

NATIONAL WILDLIFE REFUGE SYSTEM
WILDLIFE USE REPORT
ALL REPORTED SPECIES FOR FY 72
(EXCLUDING WATERFOWL)
FY-72

ATHFINDER

2-3527-CL-PTF

2-3527-C1-PTF		*****-----USE DAYS-----*****					FY-NO.	FY-NO.	FY-PEAK	DATE	
SPECIES NAME		LINE CODE	JUL-SEP 71	OCT-DEC 71	JAN-MAR 72	APR-JUN 72	FY TOTAL	PRODUCED	HARVESTED	POPULATION	
THREATENED SPECIES											
ENDANGERED											
AMERICAN PEREGRINE FALCON	700 3561	0	0	0	40	40	0	0	2	05/00	
REGISTERED											
FERRUGINOUS HAWK	701 3480	0	0	30	0	30	0	0	2	03/30	
PRAIRIE FALCON	701 3550	0	0	35	0	35	0	0	2	03/30	
SPECIAL RECDG SPECIES											
WESTERN GREBE	720 0010	0	0	0	16000	16000	0	0	220	05/00	
PAKED GREBE	720 0040	0	0	0	6000	6000	0	0	125	05/00	
PIED BILLED GREBE	720 0060	0	0	0	1000	1000	0	0	25	05/00	
COMMON LOON	720 0070	0	0	725	300	1025	0	0	15	03/22	
CALIFORNIA GULL	720 0530	0	0	2000	25500	27500	0	0	900	06/00	
FRANKLINS GULL	720 0590	0	0	0	600	600	0	0	20	06/00	
BLACK TERN	720 0770	0	0	0	200	200	0	0	10	06/00	
DOUBLE CRESTED CURMORANT	720 1200	0	0	0	1000	1000	0	0	25	06/00	
WHITE PELICAN	720 1250	0	0	0	500	500	0	0	20	05/00	
WHITE FACED IBIS	720 1870	0	0	0	30	30	0	0	4	05/24	
GREAT BLUE HERON	720 1940	0	0	0	900	900	0	0	30	06/00	
WILSONS PHALAROPE	720 2240	0	0	200	63000	63200	0	0	1500	05/00	
AMERICAN AVOCET	720 2250	0	0	0	12000	12000	0	0	250	05/00	
COMMON SNIPES	720 2290	0	0	0	1000	1000	0	0	30	05/00	
LONG BILLED DOWITCHER	720 2320	0	0	0	1000	1000	0	0	60	05/00	
MILLET	720 2580	0	0	0	2100	2100	0	0	30	06/00	
SPOTTED SANDPIPER	720 2630	0	0	0	600	600	0	0	40	06/00	
LONG BILLED CURLEW	720 2640	0	0	0	100	100	0	0	20	05/00	
KILLDEER	720 2730	0	0	30	4500	4530	0	0	15	05/00	
TURKEY VULTURE	720 3250	0	0	200	600	800	0	0	10	06/00	
MARKS HAWK	720 3310	0	0	75	250	325	0	0	6	06/00	
RED-TAILED HAWK	720 3370	0	0	0	40	40	0	0	2	05/00	
SWAINSON'S HAWK	720 3420	0	0	0	100	100	0	0	4	05/00	
ROUGH-LEGGED HAWK	720 3470	0	0	0	65	65	0	0	3	05/00	
GOLDEN EAGLE	720 3490	0	0	250	200	450	0	0	10	03/15	
BALD EAGLE	720 3520	0	0	400	100	500	0	0	15	03/20	
SPARROW HAWK	720 3600	0	0	190	1500	1690	0	0	15	06/00	
GREAT HORNED OWL	720 3750	0	0	75	70	145	0	0	5	04/00	
TOTAL		0	0	4210	139295	143505	0	0			

NATIONAL WILDLIFE REFUGE SYSTEM
PUBLIC USE REPORT

VISITS BY MONTH

PATHFINDER
02-3527-01-PTF

ACTIVITY NAME	JUL-71	AUG-71	SEP-71	OCT-71	NOV-71	DEC-71	JAN-72	FEB-72	MAR-72	APR-72	MAY-72	JUN-72	12 MONTH TOTAL
RECREATION-WILDLIFE WILDLANDS													
HUNTING MIGRATORY BIRDS													
DUCKS						5							5
GESE						4							4
FISHING													
COLDWATER						30	25	150	225	975	850		2255
ON REF WOLFE OBSERVATN						4	8	20	30	35	70		167
ON REF OTHER W/W N-C REC													
CANOEING/KAYBOATING								10	5		5		20
WALKING/HIKING											5		5
PHOTOGRAPHY								2	5	5	10		22
SIGHTSEEING						3		2		2	40		47
OTHER AND GENERAL								1					1
RECREATION NON-WILDLIFE													
CAMPING											15	35	50
PICNICKING								10	5		30		45
BOATING AND WATERSKIING													
BOATING										20	5		25
OTHER NON W/W REC													
OTHER						2							2
TOTAL HUNTING						9							9
TOTAL FISHING						30	25	150	225	975	850		2255
TOTAL OTHER W/W RECREATION						7	8	25	45	47	130		262
TOTAL WILDLIFE ORIENTED						46	33	175	270	1022	980		2526
TOTAL NON-WILDLIFE ORIENTED						2			10	40	70		122
TOTAL PUBLIC USE						48	33	175	280	1062	1050		2648
NO. VISITS TO REFUGE						35	20	90	280	1062	1050		2537

NATIONAL WILDLIFE REFUGE SYSTEM
AVERAGE MONTHLY WATERFOWL POPULATIONS

PATHEINDER

02-3527-C1-2TF

SPECIES NAME	JUL 71	AUG 71	SEP 71	OCT 71	NOV 71	DEC 71	JAN 72	FEB 72	MAR 72	APR 72	MAY 72	JUN 72
SPECIAL RECOG SPECIES												
AMERICAN COOT	0	0	0	0	0	0	0	0	0	15	83	30
WATERFOWL MAINTENANCE												
GESE												
CANADA GOOSE	0	0	0	0	0	0	65	50	96	138	59	86
DUCKS												
MAILARD	0	0	0	0	0	0	145	190	327	797	233	295
GADWALL	0	0	0	0	0	0	0	0	38	339	379	210
COMMON MERGANSER Common Merganser	0	0	0	0	0	0	60	50	116	200	180	80
AMERICAN WIDGEON	0	0	0	0	0	0	0	0	12	30	95	95
GREEN WINGED TEAL	0	0	0	0	0	0	0	10	200	306	180	55
BLUE WINGED TEAL	0	0	0	0	0	0	0	0	12	18	48	75
GOVALLER	0	0	0	0	0	0	0	0	0	33	194	90
PINTAIL	0	0	0	0	0	0	0	0	462	1550	480	220
RED HEAD	0	0	0	0	0	0	0	0	156	763	104	20
CANVASBACK	0	0	0	0	0	0	0	0	12	25	30	20
LESSER SCUR	0	0	0	0	0	0	0	0	140	206	53	0
WING-CHECKED DUCK	0	0	0	0	0	0	0	0	6	53	9	0
COMMON GOLDENEYE	0	0	0	0	0	0	0	35	6	6	5	0
BUFFLEHEAD	0	0	0	0	0	0	0	0	0	16	3	0
RUDDY DUCK	0	0	0	0	0	0	0	0	0	15	20	10
TOTAL SWANS	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL GESE	0	0	0	0	0	0	65	50	96	138	59	86
TOTAL DUCKS	0	0	0	0	0	0	213	285	1487	4346	2092	1170
TOTAL WATERFOWL	0	0	0	0	0	0	278	335	1583	4484	2151	1256