

NARRATIVE REPORT
OURAY NATIONAL WILDLIFE REFUGE
JANUARY 1 TO APRIL 30, 1962

Permanent Personnel

Don E. Redfearn	Refuge Manager
Marvin P. Duncan.	Assistant Refuge Manager
Lewis A. Littleton.	Maintenanceman
Thelma R. Powers.	Clerk

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NR REPORTS and PHOTOGRAPHS

NARRATIVE REPORT
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I. GENERAL

A. Weather Conditions

The weather data below was taken from the weather station at Ouray.

	<u>Snowfall</u>	<u>Precipitation</u>		<u>Max. Temp.</u>	<u>Min. Temp.</u>
		<u>This Period</u>	<u>Normal</u>		
January	14.0	.42	.41	55	-35
February	17.0	1.10	.36	54	-23
March	.5	.31	.40	67	-18
April	Trace	.06	.60	85	26
Total	31.5	1.89	1.77	Extremes 85	-35

Uintah Basin witnessed one of the hardest winters in the past ten years. Temperatures dipped to -35° on several occasions. Weeks of below -20° were experienced in January. This resulted in heavy ice conditions on the Green River and local ponds.

Early in February, a warm-up occurred in the higher elevations. Rains, combined with this warm-up, resulted in a very early runoff of moisture from the lower elevations. However, thick ice on the Green River forced these runoff waters to build up a tremendous force before moving downstream. Several ice jams were formed along the river, backing up water as high as twelve feet.

Two ice jams occurred in the refuge area, causing the highest flood conditions in the past 50 years. Flood waters caused extensive damage to earthen dikes and dwellings in the refuge vicinity. Approximately three miles of ice jam remained in the oxbow surrounding Leota Bottom for several weeks, diverting the main river flow directly through Leota Bottom.

Gradually temperatures cooled off in the high country. The river flow tapered off and eventually returned to the main channel - a welcome sight indeed.

Above average temperatures with little precipitation during April brought the unpredictable Green River within inches of flooding once again. Intermittent flooding did occur in Leota Bottom which was due to the loss of several hundred feet of dikes and a deep cut on the south end of that area.

Snow measurements and moist conditions in Green River and Yampa River watersheds indicate heavy runoff water for May and June. Needless to say, water availability will not be a problem this year. Our problem is where to put the surplus. (See photo section.)

B. Habitat Conditions.

1. Water

Flood conditions in mid-February forced water into all the bottomlands on the project. Wood Bottom, Brennan Bottom and Johnson Bottom were near the level desired once these areas have been developed for management. Leota Bottom has remained full since the early flood, while most of the other areas are slowly receding through evaporation losses.

Flood waters carried heavy silt deposits into all the pooled areas, but settling conditions revealed a clear water situation at the close of the period.

2. Food and Cover

What little food was available early in the period in Sheppard Bottom was soon covered over with murky flood waters. Heavy waterfowl use was evident during peak flooding conditions, but finding no available food, birds began to seek more desirable areas.

Greasewood flats border the existing flooded bottomlands affording little cover for waterfowl. Some Canada goose nesting has been observed on the bare dikes in the Sheppard Bottom area.

II. WILDLIFE

A. Migratory Birds.

A flock of 125 Canada geese utilized the oat field on Tract 62 in Sheppard Bottom at the beginning of the period, but were forced from the area due to extremely cold temperatures and ice conditions. These birds were carried over from last period and appeared to be winter residents. They were absent about six weeks during the period of most severe temperatures.

Flood waters attracted over 100 Canada geese and approximately 5,000 ducks in late February. By the middle of March, only a few of these birds remained in the area due to heavy ice conditions.

Spring migration peaked the week of April 1, when 5,400 waterfowl were observed on the area. Nearly 50% of these birds were Pintail. During the same period, nearby Pelican Lake equaled the refuge bird numbers with 5,300 waterfowl. However, Pelican Lake retained a higher population for an extended period. Refuge birds dwindled rapidly due to lack of available food.

At the close of the period, a mere 200 waterfowl were present on the refuge area. Some nesting was observed in Sheppard Bottom.

Mourning doves arrived on April 13 along with several shorebirds such as Glossy Ibis, Western Willet and later a few Avocet.

B. Upland Game Birds.

Crow counts indicate approximately 120 pheasant on the refuge. However, nesting success will depend largely on the flood level of the Green River and effects of a high population of magpies.

A small flock of Sage Grouse remain in Wyasket Bottom despite the abundance of water in that area. Booming activities were noted during a pheasant crow count, but the exact area was never located.

Chukar Partridge and Gambel's Quail were not observed during the period, but it is felt these birds are still present on the refuge or nearby lands.

C. Big Game Animals.

White Deer are common along the river area particularly in Leota Bottom. Several herds were sighted earlier in the period in the alfalfa fields at the north end of Leota.

No sightings were made on the Black Bear which was reported last period. Flood waters may have discouraged the beast or perhaps his absence was due to a search for more suitable companionship and habitat.

D. Fur Animals, Predators, Rodents and other Mammals.

Very few skunk were observed during the spring. It is felt that these animals and other small mammals suffered an extensive setback due to flooding conditions.

Beaver activities were common along the river and islands. An unusual situation developed during the early runoff in February. Several Beaver were apparently forced from their den areas only to escape the torrent waters by riding atop the huge ice cakes floating down the river. Somewhat of an unusual southward migration you might say.

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

A peak of four Bald Eagles and seven Golden Eagles occurred in late March. The Great Horned Owl was added to the bird list. The most numerous avian predator on the area is the American Magpie. We will initiate control on the Magpie this coming winter.

F. Other Birds.

Several birds have been added to our growing bird list. We hope to get out a complete refuge bird list in the near future.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development.

The pump and motor for the water supply at Quarters No. 1 underwent repairs before and after the flood. Soon after the flood, a thorough cleanup was necessary in Quarters No. 1, with some spot painting and floor coverings required. The domestic well had to be pumped out before moving back into the quarters.

A temporary man was hired in March to assist with the destruction and salvaging of several structures and corrals at the site of Quarters No. 1. Considerable time was spent on this cleanup work, but the overall results were worth the effort.

A protective dike was constructed around Quarters No. 1 in anticipation of normal high waters yet to come. The work was done by a local contractor. Along with the dike work, a small size pond was dozed out for the propagation flock of Canada geese.

A house trailer was received from Monte Vista Refuge and spotted next to Quarters No. 1. Water and sewage connections were finally made after several water lines were repaired. At the same time, another 30 feet of disposal field was added to the septic system as a result of septic difficulties.

Quarters No. 1 received a complete whitewashing and trim painting. An attempt was made to seed a portion of the yard to grass, but the results have not been too successful.

The granary on Tract 62 was braced and blocked in preparation for relocation, but an unforeseen windstorm demolished the structure before we had completed the move. A new granary was purchased and erected near the goose pen site before receiving 250 bushels of mixed grain from Kirwin Refuge.

Vehicle repairs and overhauls caused quite a drain on the allotment during the period. The Chevrolet pickup underwent an overhaul in January only to return to the shop for two additional crankshaft replacements soon after. We did not pay for anything on the last two trips to the garage because of the errors made by the mechanics. The Ford Station Wagon went in for an overhaul, and we were advised the engine needed replacement. Due to new vehicle replacements, minor corrections only were made. This vehicle is now used only for short runs to the refuge and other local points.

A welcomed addition was a new stake-dump truck received at the close of the period.

IV. RESOURCE MANAGEMENT

A. Grazing.

Special Use Permit No. 36502 in favor of Gale Wilkins to graze 128 AUM's of cattle was terminated on February 28. No other grazing permits have been issued thus far.

B. Haying

Two permits for removal of alfalfa hay have been issued. Special Use Permit No. 36503 was issued to Mr. Ray Barney to use approximately 70 acres in Leota Bottom. Special Use Permit No. 36505 was issued to Mr. Gale Wilkins to use approximately 20 acres in Sheppard Bottom. The permits were made effective April 1 to allow the permittees to come in and irrigate and clean ditches prior to actual harvest operations. There will be no receipts from these permits until an actual harvest is made.

F. Other Uses.

Several items of property were sold as a result of cleanup activity. They are listed below:

Real Property Item No. 1 (4-Room House)	\$150
Wooden Posts and Poles	105
Scrap Lumber	115
	<u>\$370</u>

VI. PUBLIC RELATIONS

B. Refuge Visitors.

<u>Name</u>	<u>Organization</u>	<u>Date</u>	<u>Purpose</u>
Robert Jensen	Utah Fish & Game	Jan. 1	Courtesy Call.
Odell Frandsen	B.L.M.	Jan. 8	Land withdrawal.
Jerry Quinn	B.L.M.	Jan. 8	" "
Whitney Hammond	Attorney, Vernal	Jan. 11	Rod & Gun Club Meeting.
Howard Raybone	R. O. Realty	Jan. 11/12	Courtesy Call.
Lewis Littleton	Randlett, Utah	Jan. 25	Maintenanceman position.
William Nanny	Friden Calculator	Feb. 2	Sales Representative.
Robert Stegman	Monte Vista Refuge	Feb. 16/17	Delivered trailer.
Ray Sprouse	Randlett, Utah	Feb. 19	Refuge acquisition plans.
Bill Stabler	R. O. Engineer	Feb. 26/27	Master Development Plan.
Robert Jensen	Utah Fish & Game	Feb. 26	Stewart Lake Project.
Larry Fields	"	"	"
Jerry Dahlberg	"	"	"
Robert Jensen	Utah Fish & Game	Mar. 3	Refuge Development plans.
Mrs. Hyrum Jensen	Correspondent for Deseret News and Editor, Ute Bulletin	Mar. 6	Discussion of Refuge Project
Jack Hemphill	R. O.	Mar. 7	Wildlife & Recreation Meeting at Ft. Duchesne
Robert L. Azevedo	Springville Fish Hatchery	"	"
Earl Hatch	Contractor, Roosevelt, Utah	Mar. 9	Development Contracts
Mr. Severson	Mtn. States Tel. & Tel.	Mar. 19	Dial System
Walt Stoddard	Randlett, Utah	Mar. 19	Repairing of Dikes in Leota Bottom
Mr. Schaar	Washington Office	Mar. 25/26	Realty matters and trip to Brown's Park
Mr. St. John	Regional Office	"	"
Bill Stabler	R.O. Engineer	Apr. 10/12	Master Plan and trip to Brown's Park
George Hewitt	River Basin Studies, Salt Lake City	Apr. 11/12	Survey of Brown's Park
Don Smith	Utah Fish & Game	"	"
Arthur Kinsky	"	"	"
Ted Roland	"	"	"
Austin Beard	R. O. Realty	Apr. 13/17	Acquisition of Refuge Lands
Allan Neimeyer	GMA, Salt Lake City	Apr. 26	Dove Banding and Courtesy Call.

C. Refuge Participation.

Redfearn is active in the Vernal Lions Club and a member of the Vernal Rod and Gun Club. Redfearn and Duncan were in frequent attendance throughout the period at board meetings of the Vernal Rod and Gun Club.

Redfearn and Duncan attended three Wildlife and Recreation meetings at Ft. Duchesne. These meetings are intended to provide technical information to the Uintah-Urury Tribe so that they can better determine what projects they will invest their money, time and efforts. There will be two sessions on waterfowl in October and November, in which the refuge will be responsible for presentation of the program.

A film was presented to the Vernal Rod and Gun Club on February 15 by Redfearn.

Duncan presented a film to a group at Dinosaur National Monument on February 18.

The County Agent requested that the refuge participate in an area program for control of prairie dogs. In an effort to maintain good relations, we met with the group of farmers and ranchers and made a token effort on the upland portion of refuge lands.

Twenty-two members of the Vernal Chamber of Commerce made a tour of the west side of Uintah County on April 18 to become acquainted with the various activities in this locality. Ouray Refuge was their first stop. Redfearn provided a short talk relative to refuge development plans and operations. Redfearn and Duncan then accompanied the group for the remainder of the tour.

Redfearn and Duncan were members of a party consisting also of Messrs. William Stabler, R.O. Engineering; George Hewitt, River Basin Studies, Salt Lake City; Don Smith, Arthur Kinsky and Ted Roland, Utah Fish and Game Department, which made a trip to Brown's Park on April 11 to observe and discuss Utah's proposed waterfowl project in that area. The State was seeking advice as to development techniques to be employed.

The Manager and Assistant were in attendance at the Division of Wildlife Conference in Albuquerque during January 14 to 18.

Redfearn and Duncan attended the Distinguished Service Award Dinner for Mr. Ernest Greenwalt at Salt Lake City on April 30.

F. Safety.

Refuge personnel are continually instructed in safety practices. Station staff is not yet large enough to have a regular Safety Committee. Ouray Refuge safety record now stands at 292 accident free days.

VII. OTHER ITEMS

A. Items of Interest.

The aforementioned flood created many situations which were new to us. We had never before witnessed ice conditions as existed in the Green River during this flood. It is hard to imagine ice in slabs twelve to eighteen inches thick and twenty feet square being piled six to eight feet deep, and filling the river channel for approximately twelve miles. When there was danger of the river changing its course through the Lota Bottom, we tried desperately to find someone to take the responsibility for blasting out the ice jams to reduce this hazard. The County Commissioners indicated that they would take the responsibility, but they were bothered as to method of approach to this problem, and by the time they were ready to act, the County Attorney had held a conference with the Commissioners and advised them to "keep hands off". When we had finally determined that no one was going to take the responsibility or action and had decided to do something ourselves, the river flow had decreased and the ice had dropped to the bottom. By this time, it was impossible to move this ice and we had approximately four miles of ice, six to eight feet deep, in the oxbow surrounding Lota Bottom. Luckily, the weather once again turned quite cold and the river flow diminished to the point that water did not continue flowing through Lota Bottom. If a strong flow had persisted, we are quite certain irreparable damage would have occurred to Lota Bottom, even if the river channel had not been permanently changed.

Assistant Manager Duncan and family took up temporary living quarters at Dinosaur National Monument during the period they were flooded at the refuge. Superintendent Semingsen graciously offered facilities at the Quarry during this emergency.

We feel quite fortunate in having added Mr. Lewis Littleton to the refuge staff in the position of Maintenance man. Mr. Littleton was a former land owner and a long time resident of the Sheppard Bottom area. His experience in farming and knowledge of the Green River is proving to be an invaluable asset. We are most happy to welcome him as a member of the refuge staff.

We feel that Ouray is experiencing a rather unique situation relative to problems encountered by new areas, inasmuch as the majority of the local community is in full support of the project. Very little opposition is evidenced. The only opposition to our knowledge is with the landowners on the project itself, and in most cases, this opposition is merely a front in an attempt to obtain a better price for their land. Local groups and individuals are more concerned with getting the project underway than with hampering action.

Sections I, II and III of this report was prepared by Duncan.
Section VI-B and typing by Mrs. Powers.

- B. Photographs.
All photographs were taken by Redfearn.
- C. Signature.

Respectfully submitted,



Don E. Redfearn, Refuge Manager

May 15, 1962

Reviewed by:

3 -1750a

Cont. NR -1

(Rev. March 1953)

WATERFOWL (Continuation Sheet)

REFUGEE Over National Wildlife Refuge

MONTHS OF

January

TO

April, 1962

(1) Species	(2) Weeks of reporting period										(3) Estimated waterfowl days use		(4) Production Broods: Estimated seen: total	
	11	12	13	14	15	16	17	18	19	20				
Swans:														
Whistling														
Trumpeter														
Geese:														
Canada	51	36	8	16	14	7	6				966			
Cackling	1										7			
Brant														
White-fronted	1										7			
Snow														
Blue														
Other														
Ducks:														
Mallard	675	1770	777	200	34	47	16				24,633			
Black														
Gadwall		4	90	29							861			
Baldpate			61	80	12	28	17				1,526			
Pintail	1250	2855	2800	757	342	155	45				57,198			
Green-winged teal	115	540	185	115	23	39	2				7,119			
Blue-winged teal						4					62			
Cinnamon teal														
Shoveler	2	15	4	12	4	95	48				1,246			
Wood														
Redhead		16	57	40	31	18	6				1,176			
Ring-necked	5	8				10					371			
Canvasback														
Scaup	6	32	25	24	22	4	6				665			
Goldeneye	6	27		50	4	10					679			
Bufflehead				4							28			
Ruddy		3	1			2	12				126			
Other														
Coot:	10	115	47	60	53	56	23				2,546			

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans				Principal feeding areas
Geese	900	53		Shepard Bottom
Ducks	95,979	5,270		Principal nesting areas
Coots	2,583	115		

Reported by Don S. Redfern

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

(1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.

(2) Weeks of Reporting Period: Estimated average refuge populations.

(3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.

(4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(5) Total Days Use: A summary of data recorded under (3).

(6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.

(7) Total Production: A summary of data recorded under (4).

3-1751

Form NR-1A

(Nov. 1945)

MIGRATORY BIRDS

(other than waterfowl)

Refuge Carmy National WildlifeMonths of January to April1952

(1) Species Common Name	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production		(6) Total Estimated Number
	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young
<u>I. Water and Marsh Birds:</u>									
Great Blue Heron	3	1-1-52							
Double-crested Cormorant	2	1-5-52	3	1-13-52	Still Present				
Western Grebe	14	1-27-52	14	1-27-52	"				
Glossy Ibis	2	1-20-52	2	1-20-52	"				
Sandhill Crane	25	3-21-52	150	3-27-52	"				
<u>II. Shorebirds, Gulls and Terns:</u>									
California Gull	3	1-1-52	15	1-5-52	Still Present				
Killdeer	6	1-5-52	10	1-27-52	"				
Western Willet	4	1-20-52	4	1-20-52	"				
Avocet	8	1-23-52	8	1-23-52	"				

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u> Mourning dove White-winged dove	2 1-13-62	25 1-28-62	present		
IV. <u>Predaceous Birds:</u> Golden eagle Duck hawk Horned owl Magpie Raven Crow	7 1-1-62 2 1-20-62 present all year. 50 1-1-62	7 1-1-62 2 1-20-62 150 1-7-62	2 1-27-62 present 3 1-27-62		Don L. Redfearn

Reported by

INSTRUCTIONS

- Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- First Seen: The first refuge record for the species for the season concerned.
- Peak Numbers: The greatest number of the species present in a limited interval of time.
- Last Seen: The last refuge record for the species during the season concerned.
- Production: Estimated number of young produced based on observations and actual counts.
- Total: Estimated total number of the species using the refuge during the period concerned.

UPLAND GAME BIRDS

Refuge Curay National Wildlife Months of January to April, 19 62

(1) Species Common Name	(2) Density Cover types, total acreage of habitat Acres per Bird		(3) Young Produced Number broods Obs. v. d. Estimated Total		(4) Sex Ratio Percentage	(5) Removals			(6) Total	(7) Remarks
						Hunting	For Re- stocking	For Research		
Cover Types:	River Islands, willow and Cottonwood Bottoms; <u>River; Agriculture Bottomland, various shrubs, grasses, and willows; Cottonwood, salt-tolerant brush and grass above and below the rocky escarpments; rocky escarpments and ridges.</u>									Pertinent information not specifically requested. List introductions here.
King-necked Pheasant	True-Brush Complex (1500 A.), River Islands (100 A.) Agriculture Bottomland (1000 A.) Total Acres-3000		25						120	
Cashel's Quail	Bunchland Brush (1500 A.) True-Brush Complex (1500 A.) Total Acres-3000		103						30	
Chukar Partridge	Bunchland Brush (1500 A.) Rocky escarpments (2000 A.) Total Acres-3500		175						20	Chukar Partridge were introduced by Utah Fish and Game during the past few years.
Sage Grouse	Bunchland Brush (1500 A.) Total Acres-1500		250						6	Sage Grouse are usually found in Wyasket Bottom on the west side of the river.

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES:

Use correct common name.

(2) DENSITY:

Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) YOUNG PRODUCED:

Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.

(4) SEX RATIO:

This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.

(5) REMOVALS:

Indicate total number in each category removed during the report period.

(6) TOTAL:

Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.

(7) REMARKS:

Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge Quincy National Wildlife Year ending April 30, 1942

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs					(5) Total Popula- tion	
	Cover Types & Total Acres of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Permit Number	Trappers Share	Refuge share	Total Refuge Furs Shipped	Furs Donated		Furs Destroyed
Cover Types:	<u>River Islands, Willow and Cottonwood; river; Agriculture Bottomland, various animals, perennials and irrigated food crops; benchland brush, creosote, rabbitbrush and Gortel above and below the rocky escarpment; rocky escarpments and ridges, generally bare with some cacti and shrubs.</u>													
Striped Skunk Badger	Agric. Bottomlands (1000 A.) Agric. Bottomlands and Fenchland (2500 A.)													
White-tailed Jackrabbit	Fenchland Brush (1500 A.) Fenchland Brush and Tree-Brush (3100 A.)													
Desert Cottontail	Tree-Brush and Agric. Bottomland (2600 A.) Fenchland Brush (1500 A.)													
Kit Fox	Tree-Brush (1600 A.) "													
Coyote														
Bobcat														
Mountain Lion														
White-tailed Prairie Dog	Fenchland Brush (1500 A.) River & Islands (1600 A.)													
Beaver														
* List removals by Predator Animal Hunter														
* Unknown														

REMARKS:

* A detailed study and animal list will be made prior to refuge development.

Reported by

Don L. Redfern

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES:

Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

(2) DENSITY:

Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS:

Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.

(4) DISPOSITION OF FUR:

On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION:

Estimated total population of each species reported on as of April 30.

REMARKS:

Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.



The February flood was the big event at Ouray during this period. Water was just starting to enter Sheppard Bottom in the above photo. Note the ice jammed river in the background.



Eight hours later the main flow of water was coursing through Sheppard Bottom. This old abandoned house just west of Quarters No. 1 gives a good idea as to the extent of flooding.



We had just about completed the rehabilitation of the interior of Quarters No. 1 when the high water occurred.



Duncan appears to be a bit dazed as he walks into his living room. Actually, he weathered the situation quite well.



We had just about completed the rehabilitation of the interior of Quarters No. 1 when the high water occurred.



Duncan appears to be a bit dazed as he walks into his living room. Actually, he weathered the situation quite well.



The top scene was photographed approximately 18 hours after water first entered Sheppard Bottom and shows the main river flow still coursing through the unit. The lower photo is an identical shot after the ice jam had broken up and the waters once more returned to the main river channel.





Flooding was caused by ice-jams. This picture was taken about a week after the initial flooding. This jam was about 4 miles long and had been cut off around the large ox-bow which forms Leota Bottom.



The river flow through Leota Bottom caused extensive erosion where the waters returned to the main river channel. It is estimated that about 10 surface acres, 6 feet deep, were eroded away from Leota Bottom.

This scene shows the lower one third of Leota Bottom in the foreground; Wyasket Bottom across the river in the upper center; and Sheppard Bottom at the far right center. View is looking south.



This house can be seen in Leota Bottom in the upper picture. It escaped the flood and was sold by informal bid on April 10th and has been removed.



These two photographs taken from the same position help give an indication of the cleamp problem with which we are confronted. The granary in the lower picture was picked up by a small gale and dropped on our newly completed dike.





This picture was taken on October 1961 before we received title to the property.



This was taken in early April 1962 after we had built a protective dike and completed most of the cleanup of old buildings and corrals. The trailer house was transferred from Monte Vista.