OURAY NATIONAL WILDLIFE REFUGE

Vernal, Utah

ANNUAL NARRATIVE REPORT

Calendar Year 1985

RLW

REVIEW AND APPROVALS

Keith L. Hansen 3/4/86
Refuge Manager Date

Refuge Supervisor Review Date

Regional Office Approval Date

INTRODUCTION

Ouray National Wildlife Refuge was approved by the Migratory Bird Conservation Commission on May 25, 1960 to be purchased with Duck Stamp funds. Land acquisition was intitiated and the refuge became operational in late 1961.

The refuge is located in northeastern Utah in Uintah County. The refuge is reached by taking U. S. Highway 40 fourteen miles west out of Vernal, then south sixteen miles on State Highway 88.

The refuge contains 11,483 acres and is situated astride the Green River just north of the confluence of the White River from the east and the Duchesne River from the west. The refuge is seven and one-half miles in length and varies in width from two to three and one-half miles. The southern boundary is located in the northern portion of the Uintah and Ouray (Ute) Indian Reservation.

The refuge acreage contains 2,347 acres of leased Tribal lands, 3,111 acres of withdrawn public domain, 1,153 acres of leased State lands, and 4,872 acres of fee purchase lands.

Refuge habitats compose about nineteen square miles of primarily bottomlands and river surface in six bottoms along the shallowly entrenched Green River. Benchlands are held up by upper strata of the Uinta Formation, which form rounded and sculptured bluffs bordering the river valley. Pliestocene and earlier terrace gravels cover the benchlands. Bajodas and alluvial fans derived from the benches cover the margins of river terraces in the valley bottoms.

The climate of the area is that of a cold desert biome with low precipitation and extremes in temperatures. Average annual precipitation is just over seven inches, mostly received in the spring and fall. The mean temperature is 45° F. with extremes to 43° F. below zero to 104° F. above, and an average of 113 frost-free days. Evapo-transpiration is about four feet per year.

Soils in the dry upland benches are fine sand or fine sandy loam intermixed with rough, stony broken ground. The uplands are separated from the bottomlands by broken and stony bluffs of sandstone and shale. The bottomland is fine sand, sandy loam, clay loam, or silty clay. Some of the soils exhibit a fairly high degree of alkalinity, including both calcium and sodium salts.

Vegetation consists of cottonwood, willow and tamarix along the banks of the Green River with an understory of skunkbrush, saltgrass and alkali sacaton. Marshes, both naturally occurring and artificial, support cattail and rush species as emergents. Alisma, Echinodorus, and Sagittaria are representative of shallow ponds. Saltgrass is widespread in saline margins of marshes. Greasewood, seepweed and shadscale grow along the drainages into the drier bajodas and fans, where shadscale, sagebrush, spine hop-sage and horsebrush become co-dominates with Indian ricegrass, galleta and numerous other species. This dryland shrub community is also present on the benchlands.

The bluffs and benchlands of the refuge have had no grazing since 1977 and are representative of the nature of the region prior to disturbance by the white man.

The primary objective of the refuge is to produce waterfowl and act as a feeding and staging area for migratory birds. The refuge was created to offset, in part, losses of waterfowl nesting habitat as a result of construction of the Flaming Gorge Reservoir. Secondary objectives are to protect populations of upland game birds, big game and furbearers, and to provide quality wildlife oriented recreational activities which are compatible with the primary objective of the refuge.

Our habitat objectives are aimed at providing the following: (1) maintaining native communities of upland vegetation in good, vigorous condition to maximize habitat for upland nesting birds, primarily waterfowl; (2) maintain marsh environments in good quality condition for overwater nesters and as brood habitat; and (3) maintain fragile benchland desert habitats in good to excellent range condition.

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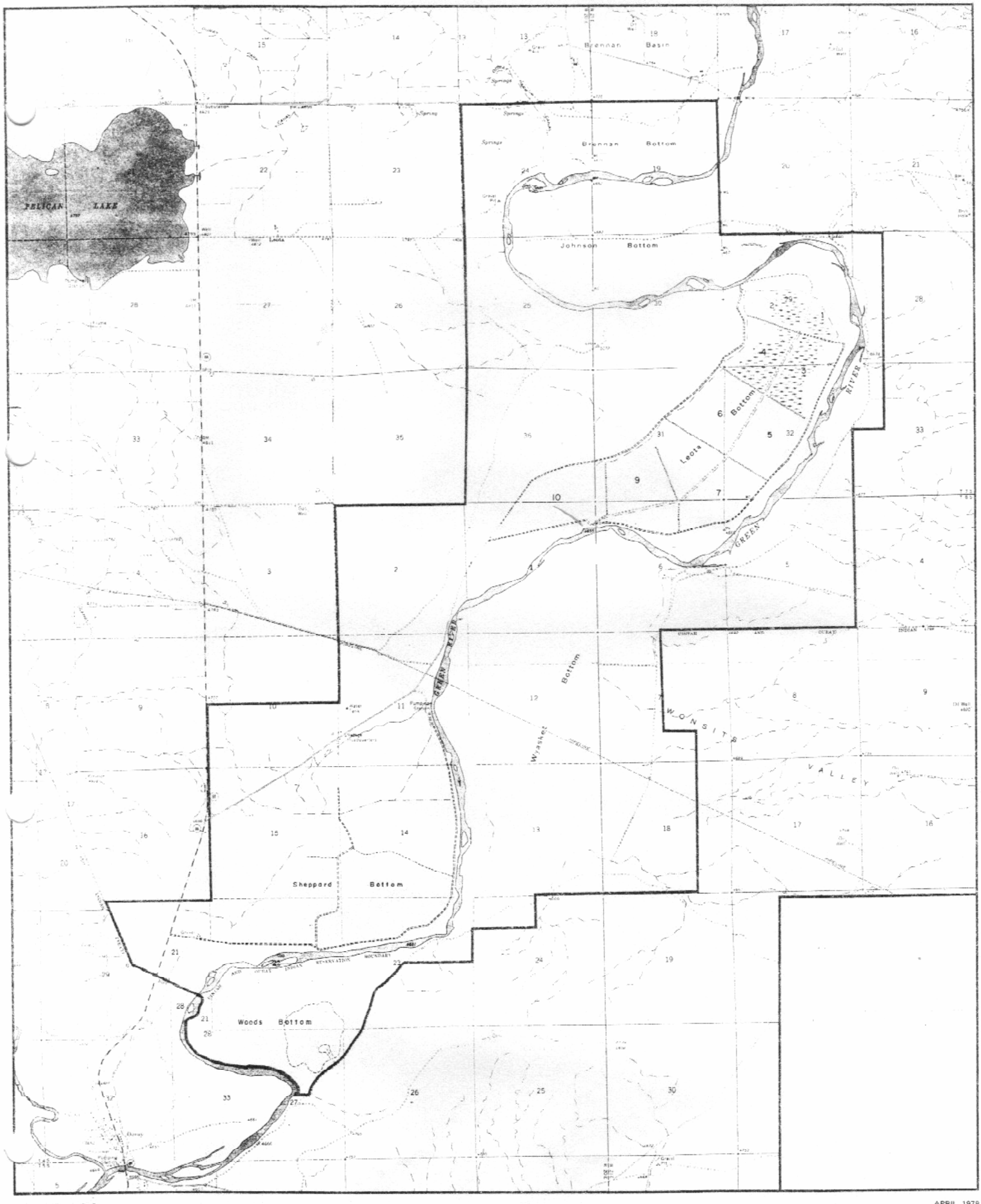
H. PUBLIC USE

I. EQUIPMENT AND FACILITIES



OURAY

NATIONAL WILDLIFE REFUGE
UTAH

U. S. FISH AND WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

APRIL 1978

ANNUAL NARRATIVE REPORT

OURAY NATIONAL WILDLIFE REFUGE

1985

A. HIGHLIGHTS

Refuge crew received Special Achievement Award for flood repair work (Section E.8).

Refuge croplands were put into production for the first time in three years (Section F.4).

Refuge experienced a light botulism outbreak in September (Section G.17).

Flood repair work occupied refuge crew from early January through first week of March (Section I.2).

Refuge hosted two YCC personnel (Section I.3).

New or new to the refuge heavy equipment was received and put to good use (Section I.4).

Refuge office moved to new location on west edge of town (Section I.5).

B. CLIMATIC CONDITIONS

The following weather information was recorded at the U. S. Weather Bureau Station at refuge headquarters for calendar year 1985:

	Temperatures		Precipitation	
	Max.	Min.	Rain*	Snow
January	30°F.	-26°F.	.78"	12"
February	41	-40	.12	3
March	68	- 6	.46	5
April	83	24	.53	
May	86	33	1.06	
June	98	41	.54	
July	100	51	.59	
August	99	44	.21	
September	86	33	1.36	
October	80	26	1.06	
November	64	9	.37	1.5
December	34	- 7	.36	4
Temperature Extremes:	100°F.	-40°F.	Precip. Totals: 7.44"	Ten-Year Precip. Av: 7.54"

* Includes melted snow.

The weather year opened with cold temperatures and lots of snow. We spent a fair amount of time plowing snow, which is unusual for Ouray. The snow depth averaged 18-20 inches through early March. The river broke up March 6. Pond ice was gone by March 20. April was unusually warm and balmy. Spring run-off peaked May 8 at 2.6 feet below the record level recorded in 1984. Precipitation during the summer months was about half of last year's totals. The hot, dry weather rapidly dried up several pond units. September brought twice the normal precipitation, which was a relief from a very dry August. The fall and winter period was relatively dry, with unseasonably moderate temperatures.

C. LAND ACQUISITION

1. Fee Title

There are four tracts of private land totaling 144 acres in Wyasket Bottom which have been designated as necessary for inclusion within the refuge. It had been planned to attempt to exchange the 185 acres the refuge owns in Brennan Bottom for these parcels in Wyasket, but after an inspection of the lands by Realty Office personnel from the Denver Regional Office, a decision was made to not pursue the land exchange and purchase the Wyasket parcels. Negotiations have been started toward that end.

3. Other

The refuge includes both leased State (1,152.44 acres) and Tribal (2,347.64 acres) lands. The Ute Tribal lease must be renegotiated before March 1987. There are 340 acres of Tribal lands in the lower end of Wyasket Bottom which we hope will be included in the new lease. The Tribe has indicated they expect no problem in including this tract in the new lease.

D. PLANNING

2. Management Plans

The Station Safety Plan was rewritten during the year to update it and put it in the correct format. The Water Management Plan was written to indicate that most water diverted from the river would be through gravity flow rather than by pumping. We can normally receive all the water we need from this source for management purposes. With present development we use approximately 5,000 acre feet of water per year. The refuge has water rights from the Green River of just over 23,450 acre feet.

4. Compliance with Environmental and Cultural Resource Mandates

An EA was written for our Water Management Plan requesting a Section 7 consultation because of endangered fish in the Green River. This raised several questions, such as what is historical use, times of water withdrawal, and some questions on evaporative losses. After several months we think we have these resolved and sections of the EA were rewritten and resubmitted to Endangered Species in Salt Lake for their approval before final signing can be completed. At year's end we're not sure where this is--somewhere in the system, we hope.

E. ADMINISTRATION

1. Personnel

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2

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1. Keith S. Hansen, GS-11, PFT . . . . . Refuge Manager
2. Richard R. Sjostrom, GS-9, PFT. . . . . Assistant Refuge Manager
3. Norma A. Wardle, GS-5, PFT. . . . . Refuge Assistant
4. Gary M. Mecham, WG-10, PFT. . . . . Engineering Equipment Operator
5. Rex L. Whitmore, WG-8, PFT. . . . . Maintenance Worker

There were no changes this year to the staff holding permanent appointments for the first time in several years. It's nice to have a stable staff and certainly makes refuge programs function much smoother.

Woodrow Accawanna was hired as a Biological Aid, GS-4, and came on board April 28 and was terminated July 6. This was the fifth year Woodie has worked on the refuge, but he had a lot of personal problems this year and only actually worked 23 days before he was terminated.

	Permanent			Total
	Full Time	Part Time	Temporary	FTE
FY 85	5	0	1	5.1
FY 84	5	0	2	5.4
FY 83	5	0	1	5.6
FY 82	5	0	2	5.4
FY 81	5	0	2	5.7

2. Youth Programs

YCC Personnel

1 2

1. LaReesa Knight . . . . . June 10 - August 2

2. Scott Punches. . . . . June 10 - August 2

The refuge employed two YCC personnel for an eight-week period from June 10 through August 2. We had fifteen applicants and had to go down through several of them before finally hiring LaReesa Knight and Scott Punches, both from Vernal. LaReesa and Scott did a fine job for

us, accomplishing many maintenance projects which we had put off due to lack of personnel. The major problem was tying up a member of our regular staff to supervise them. Rex Whitmore did a fine job in this capacity.

5. Funding

	FY 1986	FY 1985	FY 1984	FY 1983	FY 1982
1260	$247,600(1)	$198,000(2)	$206,500(3)		
1210				$155,000	$150,000
1220				5,000	4,000
1240				15,000	4,000
1520		3,000			
1994		4,000	3,000	3,700	2,720
8610	6,000				
BLHP				62,000	100,000
2821 (Const.)		30,000(4)	80,000(4)		
TOTALS:	$253,600	$235,000	$289,500	$243,700	$273,720

(1) Includes $94,600 ARMM Funds and $10,000 Resource Problems.
(2) Includes $32,000 ARMM Funds.
(3) Includes $28,000 ARMM Funds.
(4) Reprogrammed from Bear River Migratory Bird Refuge.

Fiscal year 1985 provided us with adequate funds to meet our needs. We made several repairs to facilities and were able to purchase a vehicle and some shop equipment. The reprogrammed funds were used in repairing flood damage in Sheppard and Leota Bottoms.

6. Safety

The station had no lost time accidents during the year. The last lost time accident occurred in 1983. Assistant Manager Sjostrom functioned as Station Safety Chairman.

Four safety meetings were held during the year, but safety was discussed prior to each work project and we made it through the year with a few close calls, but nothing that required medical attention. All refuge employees, except Assistant Manager Sjostrom and our YCC employees, completed the Multi-Media First Aid Course put on by the U. S. Forest Service in June.

The following safety modifications or additions were made during the year:

- Rear protective grill was installed on the back of the roll cage of the D-7 to protect operator while operating the winch.

- Railings and shaker screen were installed on several of the water control structures in Sheppard to make it easier and safer to install and remove boards.

- New fire extinguishers were purchased for all buildings, vehicles and heavy equipment.

- A chlorinator tank and injector pump was installed in the refuge domestic pumphouse for chlorination of headquarter's drinking water.

8. Other Items

Zone Supervisor Phil Norton presented Hansen, Sjostrom, Mecham and Whitmore with a Special Achievement Award for the work expended in making flood repairs in Leota and Sheppard Bottom. This surprise presentation was made at the refuge office in Vernal on August 15. Each employee received a check in the amount of $400 less taxes.

Division IV Supervisor, Phil Norton, offering congratulations to Gary, Dick, Rex and Keith upon receipt of Special Achievement Award. JAC

F. HABITAT MANAGEMENT

1. General

The refuge habitat consists of the following broad types:

Type	Acres
Shallow Fresh Marsh (Cattail/bulrush association)	2,136*
River and Streams (Green River, including sandbars)	1,180
Croplands (Legumes, grains, row crops)	265
Native Grasslands (Wheatgrass, Indian Rice Grass, saltgrass and alkali sacaton)	1,291
Forest (Cottonwood)	463
Brush (Saltcedar and greasewood mixed with saltgrass and alkali sacaton)	3,101
Desert (Sagebrush, greasewood, rabbitbrush, prickly pear, Indian Rice Grass)	3,010
Administrative Site (Residences and headquarters shop)	5

*Wyasket Lake (600 acres) added in here, deducted from desert acreage.

2. Wetlands

Flood repair work was completed far enough in Leota and Sheppard Bottoms to make these two units functional in time for the nesting season. No repair work was done to Wyasket or Woods Bottoms, so no water control could be accomplished in these units. Johnson Bottom had no flood damage to speak of and remains functional.

We began the year with most units dry or almost so. The spring melt of snow filled most units half full and we completed filling all units through the gravity flow inlets prior to the commencement of nesting. No pumping was done during the year.

Nesting islands in S-1 which were constructed in December and flooded for the first time this year. RRS

Flows in the river peaked about three weeks earlier than normal due to early warm weather and snow melt from the mountains. The river peaked at 4662.8 feet, near normal levels about mid-May and two feet lower than last year. Following the peak, the river dropped rather rapidly and we were unable to take any water after about the twentieth of June. As a result, by about mid-September all units, except S-3 and S-5 were almost dry. These two units are maintained by excess irrigation water from Ouray Park Irrigation Company.

Sheppard #3 Pond maintained its level into the fall migration period using Pelican Lake overflow water. RRS

Wyasket Pond and Woods filled at high water levels through the breached protective dikes, but drained just as rapidly once the river levels dropped. Wyasket Lake also picked up some water from high river levels and then experienced a slow decline as there is no outlet for this area. Wyasket Lake peaked at around 1,500 surface acres and closed the year at around 600 surface acres.

Water conditions were good through the nesting season, but some of the upland habitat was not up to pre-flood conditions. Units were in poor shape going into the hunting seasons with all of the open area nearly dry.

With the carp removed from the units by dewatering due to flood damage, water quality in most units was excellent and submerged acquatic plants blossomed in many of the impoundments. We had few submerged acquatics in the past so purchased some sego pondweed tubers and planted in S-1, S-2 and S-3, but it appears this is unnecessary if we can keep the water clarity good. With our present system of gravity flow, we think we have water management capabilities which will allow us to accomplish this.

Manager Hansen planting Sago Pondweed tubers in S-1. RRS

Aquatic pondweeds were abundant from natural sources in units such as S-2 when rough fish were controlled. RRS

Wyasket Pond will have repairs made to it prior to the 1986 nesting season and we will have control capabilities over all units, except Woods Bottom.

With the low water in the units this fall, the D-7 was put into L-1, L-2 and L-10 to build nesting islands and open us some dense emergent vegetation located there. Trails were cut through the vegetation from island to island by cutting channels about 18 to 20 inches deeper than the surrounding areas, hopefully keeping them free of vegetation for several years and making these more attractive to waterfowl.

3. Forests

Our habitat fitting this definition is a rather narrow band of large cottonwood trees along the river with a larger area on the bottom end of Leota Botton and a rather large group in the central southeast portion of Sheppard Bottom. The Sheppard Bottom group was about 75 percent killed out by the two years of flooding, so there are many large dead cottonwood trees in this area.

4. Croplands

For the first time in three years the river allowed our farming program to proceed. We divided our farming area into six units of nearly equal size to comply with the planned biological farming rotation. This plan calls for a five year rotation in each field; grain, row crops, clover (2 years) and summer fallow.

Farm field A was planted in mid-April to Steptoe barley. This field contains 24 acres. The drill was slipping when the seeding rate was set, so one-half of the drill didn't plant the required pounds per area and, as a result, we had quite a few weeds in these strips. The field was sprayed with 2,4-D in an attempt to control this weed invasion with only partial success. As a result, our yield was probably only around 20-25 bushel per acre. This variety is a rather short growing spring barley and does fairly well in rather alkaline soils. The weediest parts were mowed with the rotary mower in late October to open up the field. It was heavily utilized by both ducks and geese, as well as a few cranes, through the fall period and only about 2 to 3 percent of the grain is left at year's end.

The 34 acre farm field C was planted to corn and milo in late May. There were two rows of milo to every six rows of corn. This planting pattern allows our sprinkler system to move through the field much easier than with a solid stand of corn. The corn made excellent growth in all but a couple of highly alkaline spots, but the milo didn't do as well as the seed was either older, having been carried over for a few years, or it got planted a little too deep, as we had a poor stand. The corn averaged approximately 50-55 bushel per acre. Portions of this corn were mowed each week beginning in mid-November through late December and attracted large numbers of waterfowl. Approximately 10 acres are still standing at year's end. This field has also received extensive use by our deer herd located in Sheppard Bottom.

Corn/milo was planted in Field C and receives a spraying for weed control. RRS

Mallards using mowed cornfield. RRS

Field E, containing 25 acres, was planted to yellow sweet clover and resulted in an excellent stand. This should provide some nesting habitat in 1986, we well as providing some nitrogen fixation to improve our farming program. Deer used this field in the early stages of development, but later in the year it received little use.

All farm fields were irrigated as needed with our wheeled sprinkler systems with water received from the Ouray Park Irrigation Company via our underground pipeline. We had our usual problems with plugged nozzles and an occasional malfunction of the computers on our two automatic lines, but overall, things went pretty well. One morning our line was not operating and after some checking we found our valve was plugged by a 22-inch channel catfish which had entered our system from Pelican Lake, somehow getting past our screens. We did have some problems getting the line through our corn field the last time we watered, as the stalks would lift the wheels off the ground and we had to have a manpower assist to move the line ahead to the next station.

Water pressure partially filleted this 22-inch catfish which plugged our irrigation line outlet valve. RRS

5. Grasslands

Our only true grasslands are located on the upland areas which consist of Indian Rice Grass. We have planted some wheatgrasses in odd plots and areas around the refuge. Twenty-four acres of Alkar Wheat Grass were planted in Sheppard Bottom in November to square up the farm fields and delete areas of heavy alkali from the farm fields. Alkar Wheat Grass can stand quite alkaline soils and provides good cover when established. The bottoms have patches of saltgrass and alkali sacaton intermixed along the river and dikes. No grazing is allowed on the west side of the river. Since the east boundary is unfenced, except in a few isolated areas, some grazing occurs from adjacent BLM grazing leases, but is extremely light and only for a short period during the winter months.

9. Fire Management

No wildfires occurred on the refuge during the year. We did no prescribed burning. A cooperative fire agreement was written up between the Refuge, The Bureau of Land Management, and Bureau of Indian Affairs. This agreement provides that these agencies will assist with fires on the refuge, if requested to do so, while we will assist on fires adjacent to the refuge on their lands.

10. Pest Control

Mechanical control was completed on the roadsides with the tractor and rotary mower to control weed growth prior to spraying. About 20 acres of saltcedar, much of it dead, was rotary mowed on the north end of S-1 to open this area up to encourage waterfowl nesting through the increase of grasses. This appeared to be quite successful and really changed the looks of the area, as it was heavily infested with brush prior to mowing. Some spraying will be necessary this spring to control regrowth, but we feel we are on top of this area.

Manager Hansen replacing sheer pin while mowing salt-cedar growth on north end of S-1 with newly purchased heavy duty mower. RRS

Same approximate area following completion of mowing. RRS

The S-3/S-5/S-4 dike had become overgrown with brush and trees to the extent that it was almost impossible to walk it, and then there were numerous holes caused by beaver tunnels and some light flood damage. The D-7 was used in early December to clear this dike of brush and make minor repairs to it. The dike is now driveable and will greatly improve access to the S-5 impoundment, as well as the back sides of S-3 and S-4.

The main dikes and roads in Sheppard and Leota Bottoms were sprayed with 2,4-D at a rate of just under two pounds active ingredients per acre using the tractor and boom mounted sprayer. The 24 acre barley field and the 34 acres of corn were sprayed with 2,4-D at a rate of just under half a pound of active ingredients per acre. Results of this spraying were excellent, except for the barley, which did not get a good kill of weeds. The row crops were also cultivated once to control weeds. Two years of flooding has greatly increased our weed problems on the uplands and we are going to have to start a vigorous control effort on Giant Whitetop, the main problem being much of it is in difficult terrain to traverse with equipment.

Heavy weed growth occurred on many of the refuge uplands following two years of flooding. RLW

11. Water Rights

The refuge has water rights for 23,452.12 acre feet of water from the Green River under seven water filings. These waters can be co-mingled and diverted anywhere from near the north end of the refuge to a point near the south end. Two water filings listed at the Regional Office were dropped after finding out that one had been filed in error on water 30 plus miles from the refuge and the other was for a .5 acre foot well which is now under water in the L-6 impoundment.

The refuge also has 700 shares of Ouray Park Irrigation Company stock. Each share will deliver a maximum of three acre feet, if water is available. This water will be used for irrigation purposes. It has been felt by some that we have excess shares and, while we tend to agree with this, we have not yet disposed of any shares. We were assessed $8.50 per share this past year.

G. WILDLIFE

2. Endangered and/or Threatened Species

Approximately 15 bald eagles wintered at Ouray in 1985. On March 30 migrant eagles concentrated on the ice killed carp and sunfish on refuge ponds and Pelican Lake. An estimated 60 bald eagles used this food source until April 5. No balds were observed from April 9 on. Bald eagles showed up again November 6, with 20 balds using this area through December. No peregrine observations were made this year.

Whooping cranes were first spotted on March 14, when a whooper was observed flying up river with a flock of 65 greater sandhills. In early April three whoopers were sighted by Utah Division of Wildlife Resources among 1,500 sandhills in the Jensen area. Jensen is 30 miles northeast of Ouray NWR along the Green River. On April 11, a lone whooper was sighted along with sandhills flying out of Leota Bottom. Whoopers were again sighted the following October. On October 1, 1985 two whoopers were sighted one mile upstream from Jensen and on October 13, 1985 one whooper with sandhills in the same area.

3. Waterfowl

Migration - Few birds overwintered past freezeup in late November, 1984. The river froze over after a week of -15 to -20° F. temperatures. The river broke up late delaying waterfowl use of the river until March 6.

Ice damming, as it broke up, was not a problem. Immediately after ice out, flocks of mallards, green-winged teal and pintails were scattered along the Green's many islands and sandbars. Ice on the ponds was gone by March 20. The waterfowl migration peaked in late March to early April at 14,660 birds.

Mallards on the Green River. RRS

Migrant species that don't commonly nest at Ouray, such as the bufflehead, lesser scaup, ringnecked duck, common goldeneye and canvasback, moved through our area in late March. Many ponds were already near full after ice-out and the 20 inches of snow melted by mid-March. Water entered Leota from the river inlet on March 14. Some very good migration use resulted from reflooding some of the lower units, such as L-4.

Pintail migration peaked around March 18. Some 25 snow geese were observed on this date, also. The first ruddy duck was observed April 18. Spring migration was pretty much completed by May 1.

The resident duck population dropped to a summer average of 4,433 birds. Pintail migration in September and October was minimal this year, with few large groups observed. Mallard use was very good on refuge farm fields with 2,000-3,000 birds using our corn and barley crops in October. The mallard numbers increased in November to a peak of 5,000-6,000 birds using the farm fields. Canada goose use was good, also. Some 400 Canada geese began using the barley fields in early October. This number gradually increased to a peak of 1,800 geese using our crops by early November. By early December, goose and duck numbers dropped significantly as a late freeze-up finally arrived.

Canada geese mowing barley field. RRS

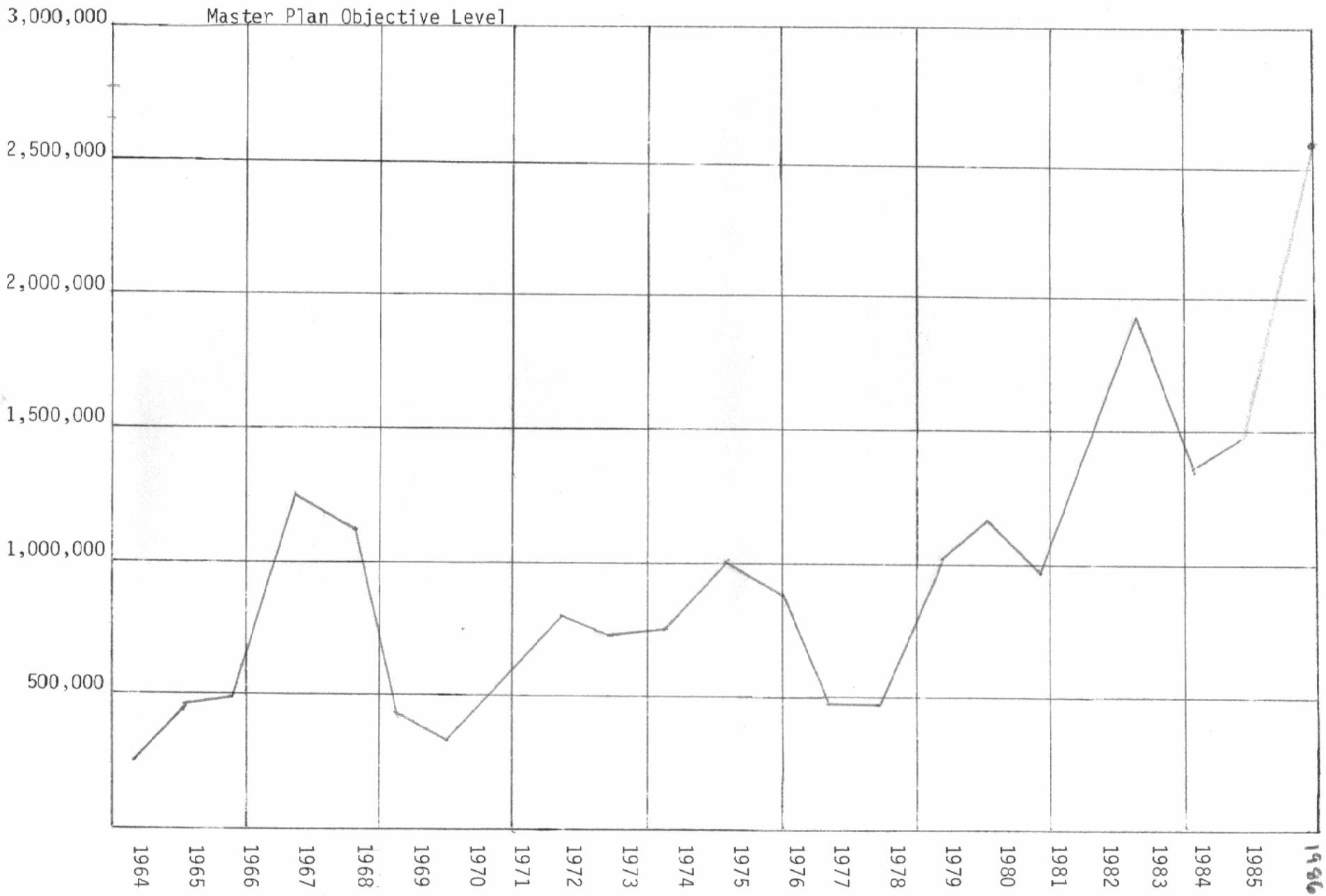
Mallards over corn/milo field. RLW

Tundra swans were observed November 11 (four sighted in S-3) with the high observation of 12 seen on November 25 along the Green River.

A fateful encounter took place in early April when a radio-collared trumpeter swan was observed on a private pond in the Maeser area just northwest of Vernal. Trumpeters in Utah are very rare. This one evidently likes this general area because it was sighted the previous year in the Grand Junction area of Colorado. The strange thing about this observation is that it was made by David Condon, retired Yellowstone National Park naturalist. Mr. Condon did extensive research and survey work on the then endangered trumpeter during the late 1930's. His field work helped provide the basis for establishing Red Rock Lakes National Wildlife Refuge in 1935. Not only did Mr. Condon observe and take pictures of this wayward trumpeter, but the swan picked his small farm pond next to his house to rest up in. The trumpeter left the area after a few days. Information on the observation was relayed on to Red Rock Lakes NWR for their files.

WATERFOWL USE DAYS

	1985	1984
American Coot	280,875	363,300
Tundra Swan	217	242
Canada Geese	135,210	95,660
Snow Geese	588	300
White-fronted Geese		45
Total Geese:	135,798	96,005
Mallard	633,425	469,460
Gadwall	174,820	118,370
Pintail	107,715	290,170
Green-winged Teal	111,290	115,758
Cinnamon/Blue-winged Teal	128,800	73,451
American Wigeon	9,210	12,470
N. Shoveler	25,460	24,800
Total Dabblers:	1,190,720	1,104,569
Redhead	32,520	53,530
Ring-necked Duck	11,605	5,500
Canvasback	1,340	2,260
Lesser Scaup	3,845	2,750
Bufflehead	3,370	4,890
Common Goldeneye	665	1,695
Ruddy Duck	10,375	15,140
Common Merganser	81,930	80,000
Red-breasted Merganser	-	-
Hooded Merganser	150	120
Total Divers:	145,800	165,885
Total Ducks:	1,336,520	1,270,454
Total Waterfowl Use Days: (Excludes American Coot)	1,472,535	1,366,459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Production - A Canada goose pair and nest survey was conducted April 23 and 29. A total of 56 pairs or nesting geese were observed. Sixteen nests were located. Clutches averaged 5.1 eggs. Approximately 50 percent of these nests hatched. Several nests were abandoned or washed away as river levels rose in May. A total of 60 goslings were fledged. Wyasket Lake was a moulting area for 150 geese in late May and June.

Duck pair counts were conducted May 9-13. Pairs totaled 1,168, or 20 percent below the 1982 pre-flood level of 1,461 pairs. This isn't too bad, considering the habitat damage caused by flooding in 1983 and 1984. Redhead pairs suffered the most with a drop from 198 pairs in 1982 to 128 pairs in 1985. Redhead pairs eventually left, for the most part, due to a current lack of emergents in Leota and elsewhere. Most other pair species dropped as well. Gadwalls remained unchanged and green-winged teal pairs increased from 23 in 1982 to 72 in 1985. Dabblers comprised 87 percent of the total, with gadwall, cinnamon teal and mallard the dominant species. Redheads, pintail, green-winged teal and shoveler were the next in dominance with composition percentages ranging from 5 to 11 percent.

Brood surveys were conducted July 8-10 and August 5-7. A total of 109 broods were observed, totaling 675 ducklings for an average of 6.19 per brood. Gadwalls and mallards were the most common broods observed. Redhead nesting was marginal with very few broods observed. Sheppard produced 57 percent of the broods and Leota 39 percent.

Brood of gadwall in Leota. RLW

The east river units were marginal, production-wise, due to river inundation during the May-June nesting period.

In previous years Hammond's Brood/Pair Index formula, using the 45 percent productivity constant, was used to calculate Ouray's production. This constant is outdated and inaccurate, resulting in inflated production figures. A combination of pair counts for species composition and brood surveys expanded for total coverage was used in 1985. An average of six ducklings at age Class III was used to expand brood totals.

Production Breakdown

Gadwall	584
Cinnamon Teal	393
Mallard	353
Pintail	157
Green-winged Teal	138
Shoveler	118
Blue-winged Teal	79
Wigeon	40
Subtotal Dabblers:	1,862
Redhead	60
Ruddy	40
Subtotal Divers:	100
Total All Species	1,962

4. Marsh and Water Birds

Greater sandhill cranes arrived March 14. Some 200 sandhills used the farmfield area in late March. Cranes were seen off and on through April.

Great blue herons arrived in mid-March. Cormorants and ibis arrived in mid-April. A common egret was spotted in S-1 Pond on April 19. Common egrets are rare for Ouray. Another uncommon heron, the green heron, was spotted in lower Johnson on May 13. The Woods Bottom rookery is thriving with some 60 great blue heron and 40 double-crested cormorant nests active this year. The lower Johnson heron rookery did well, also with 35 active nests. Black-crowned night herons appeared to be nesting in Leota's L-7 unit, utilizing flooded dense tamarisk for nest platforms. Snowy egrets get more common each year and some 50 western grebes were produced on L-8 alone.

Some 350 great blue herons were counted on refuge ponds and rookeries in early June. Although waterfowl production has suffered during the flood years, the marsh and water bird population has faired well as ponds have been dried up for rehabilitation.

Marsh and Waterbird Use Days

1982	1983	1984	1985
126,672	182,558	172,410	168,722

5. Shorebirds, Gulls, Terns, and Allied Species

Killdeer arrived March 6, but most shorebirds didn't arrive until after April 10. Overall, refuge units received good shorebird use as water levels dropped during the summer months. Unit L-9 pond in Leota Bottom provided excellent shorebird viewing in May and June with large numbers of avocets, silts, phalaropes, sandpipers and dowitchers feeding along the shallow edges/

Nesting avocet on island in S-1 Pond. KSH

Shorebirds, Gulls, Terns and Allied Species Use Days

1982	1983	1984	1985
136,827	167,225	379,185	170,915

6. Raptors

A Cooper's hawk was spotted January 10 at headquarters. Redtails and kestrels showed up in early March. Prairie falcons were commonly seen around the refuge uplands throughout the year. A single osprey

was seen on May 10. Turkey vultures first arrived in early April. The golden eagle nest near Leota Butte was vacant this year. The mild fall and early winter saw a reluctance by many redtails, harries and kestrels to move south. Roughlegged hawks arrived in mid-November. Few western burrowing owls were spotted this past summer.

Raptor Use Days

1982	1983	1984	1985
36,100	43,485	35,920	32,875

8. Game Mammals

Mule deer surveys were conducted on December 20 and 30. A total of 95 deer were classified in primarily Sheppard Bottom. Comparison data and ratios are listed below.

Year	Bucks/100 Does	Fawns/100 Does
1985	23	84
1984	25	53
1983	34	75
1982	51	100
1981	22	36

Fawn production is up this year. So far, the mild 1985 winter looks to be relatively good in terms of low winter mortality.

10. Other Resident Wildlife

The refuge's pheasant population is still suffering from loss of production due to flooding and heavy winter mortality. Crow responses last spring were few and far between. A few broods were observed last summer.

15. Animal Control

Predator trapping during the 1984-85 winter period resulted in the following animals taken under Special Use Permits or by refuge personnel:

1984-85 (October-April)	1985-1986*
13 coyotes	16 coyotes
7 skunks	4 raccoon
6 raccoon	6 magpies
15 black-billed magpie	

*Covers the period October-December, 1985.

ADC aerial gunning last spring in the vicinity of the refuge removed 48 coyotes for local farmers and ranchers.

Skunk and raccoon sign, although present, is not abundant. Coyote sign is everywhere and they appear to be our primary nest predator at this time.

Night patrols this next spring will target raccoon and skunk as they leave their winter borrows and give us a better idea as to their respective abundance.

Some 15 problem beaver were also removed during 1985. The beaver population along the Green River remains very high.

17. Disease Prevention and Control

The Leota units L-8 and L-6 experienced an avian botulism outbreak in early September. Sick and dead ducks were picked up every few days until September 20, then cooler weather prevailed, stopping the spread of disease. A total of 507 ducks, 2 coots and 12 shorebirds were picked up. Sixty-seven percent of the ducks lost (340) were green-winged teal. Evidently the rough fish die-off, coupled with shallow water and hot temperatures, set off the outbreak. All birds were burned in the refuge land fill.

H. PUBLIC USE

1. General

Overall public visitation was down seven percent to 2,265 visits. The highest use period was during May (650 visits), when the refuge provided tours to several large school groups.

5. Interpretive Tour Routes

The auto tour route moved several steps closer to its completion date in April, 1986. The new tour leaflet was finalized, printed, and has been received. All signs and associated art work was completed and has been received. The pull-outs for vehicle stops have been built and a custom built sign base for the large Leota overlook ordered. Looks like Ouray's auto tour route will finally become a reality.

Tours were provided for 500 local students from Roosevelt and Vernal elementary schools. Road conditions were much improved this spring and buses had little trouble getting around.

8. Hunting

Hunter Use Days

	Visits			Activity Hours		
	1983	1984	1985	1983	1984	1985
Deer - Bow	25	14	32	75	52	124
Deer - Gun	133	244	196	266	732	608
Pheasant	156	101	60	395	105	200
Duck	126	140	25	238	378	50

Deer hunting was better than last season, with 8-10 bucks taken from the Leota and Wyasket units. Hunter pressure was fairly heavy opening weekend, but dropped back to fairly low levels for the remainder of the hunt.

Pheasant numbers are still very low and hunters mostly came out to exercise their dogs. Duck hunting was non-existent due to drying up of the Leota units.

9. Fishing

Fishing pressure along the Green River was up this year, but still remains relatively light. Most fishermen are after the channel catfish, which resides in fairly abundant numbers.

Fishing Use Data

	Visits			Activity Hours		
	1983	1984	1985	1983	1984	1985
Fishing	120	140	260	284	235	720

11. Wildlife Observation

Approximately 80 percent of Ouray's visitations is for wildlife observation activities. Efforts to improve and gravel interior roads in Sheppard and repair dikes in Leota have greatly improved access to the public. The new auto tour route will enhance the wildlife viewer's experience further.

17. Law Enforcement

Both Manager Hansen and Assistant Manager Sjostrom qualified twice with Service revolvers during the year.

Routine law enforcement patrols were conducted during the various season openers. No citations were issued. Two warnings were issued.

Special Agent Galvin from Salt Lake City spent two days on the Green River patrolling it using an airboat. No violations were observed. Bob also assisted the Ute Tribe in a couple of poaching cases that occurred on Tribal lands near the refuge.

I. EQUIPMENT AND FACILITIES

2. Rehabilitation

The refuge had two contract projects for 1985, replacing the shop roof and pouring a new concrete shell over the old domestic water cistern.

The reroofed project was completed in late July at a bid cost of $5,950. The project involved removing the old shingles, laying new felt and laying down new fiberglass shingles. Also, new flashings and metal drip moldings were installed. The work was done by K & K Construction out of Salt Lake City.

K & K Construction reroofing refuge shop. RRS

The cistern projecr was awarded local contractor Max Rasmussen for a bid total of $8,496.00. The contract work started August 26 and was completed by mid-September. This project involved excavation of the cistern walls, forming and pouring six-inch reinforced sides and top. Also, a new lid and overflow pipe were installed.

Regional Engineer Dwayne Deaver inspecting completed cistern contract. RRS

The major rehabilitation work for 1985 involved repairing flood damaged dikes and roads in Sheppard and Leota Bottoms. This was a rather large undertaking for us, since it required more equipment and manpower than we would normally have on hand. Work in preparation for winter repair work started back in the summer/fall of 1984. During this phase some 3,000 cubic yards of material was hauled and several weeks of CAT and excavator work required to actually bridge the breached dikes to a point where dumptrucks could drive through them after freeze-up. In addition, interior roads in Sheppard were raised and improved to handle this truck traffic. Additional dumptrucks were received from Bear River MBR and Seedskadee NWR to assist in the haul operations.

Our objective was to fill in the five breached areas along the Leota protective dike and raise the dike in areas where it was eroded. Clay stockpiled in 1984 in the west Leota pit would be used as the primary core material. Our other objective was to repair four breaks along the Sheppard protective dike and to raise a badly eroded section along the southwest portion of this unit. Clay fill would be hauled to these breaches from a new pit developed at headquarters in 1984. All repair work was aimed at bringing these various protective dikes back up to or above the old elevation.

The haul operation kicked off on January 7. The refuge crew went to nine-hour work days to maximize the fill material hauled. A total of 441 truck loads, or 4,665 cubic yards, of clay was in place by January 23, bringing all flood damaged areas in Sheppard up to the proper level.

During late January, the refuge crew traveled to Alamosa NWR to borrow their loader for use during February. Temperatures in early February dropped to a low of -40° F. Engineering Equipment Operator Mecham and Maintenance Worker Whitmore had a rather lengthy trip with GSA's transport, fighting equipment breakdowns and frozen fuel. They finally made it home and we started repairing Leota in early February. The weather cooperated well, staying cold through most of the month. No problems occurred with soft roads until toward the third week of February. The crew hauled clay every work day in February, except February 1, 4 and 14. A total of 6,304 cubic yards of material (611 truck loads) was moved during the month. Hauling continued into early March to strengthen the first large break in Leota.

The following table and map depict quantities of material moved and repair locations:

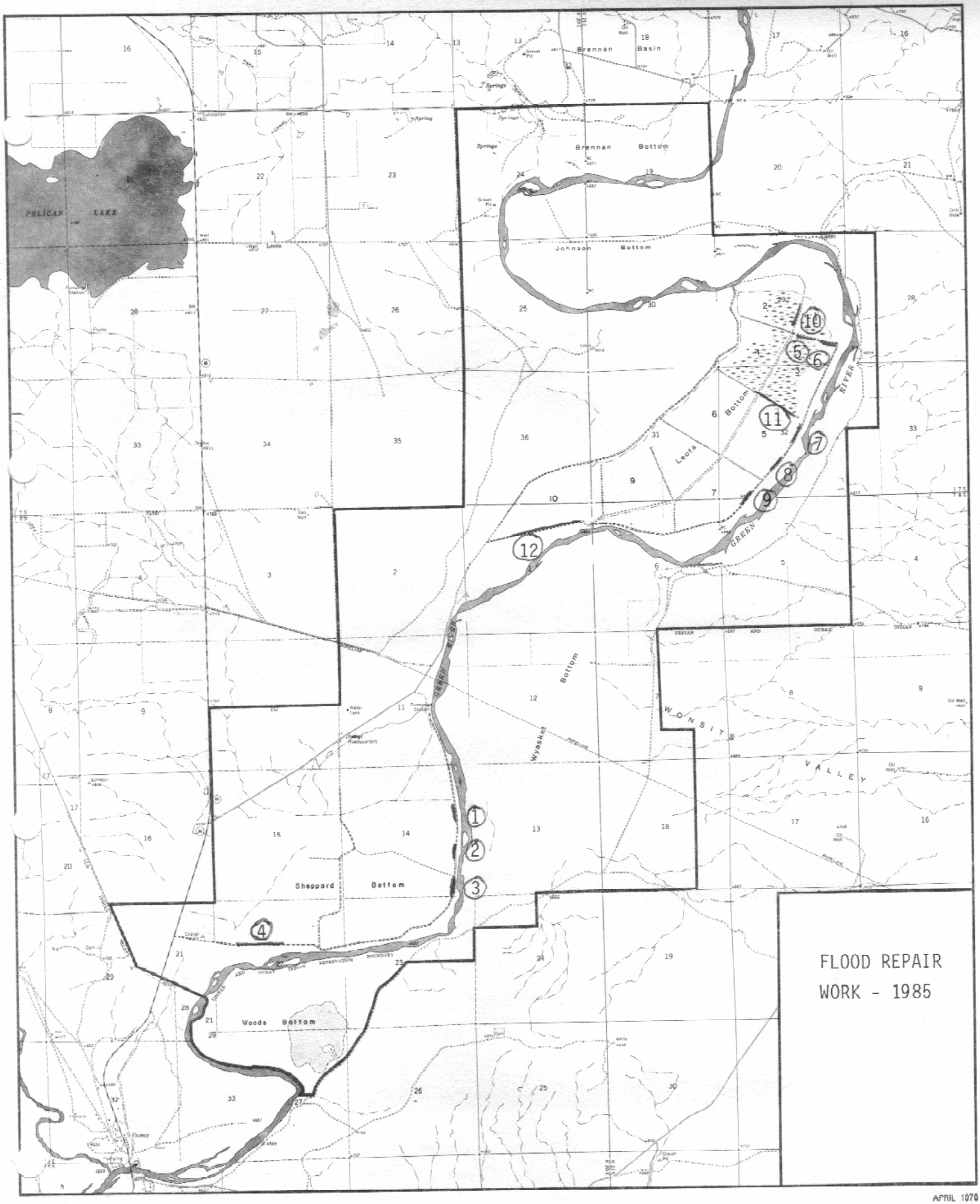
Sheppard Bottom

	Break #	Quantity (cubic yards)
1.	Sheppard #1	1,664
2.	Sheppard #2	1,504
3.	Sheppard #3	453
4.	W. Sheppard	1,379
	Subtotal:	4,998

Leota Bottom

5.	LB #1*	3,072
6.	LB #2*	1,470
7.	LB #3	429
8.	LB #4	583
9.	BL #5	99
10.	L-1/2	333
11.	L-3/5	363
12	L-10	387
	Subtotal:	6,736
	Grand Total:	11,734

* The 1457 Engineering Battalion of the National Guard out of Vernal hauled a total of 402 cubic yards on LB #1 and LB #2 as part of their monthly exercise.



APRIL 1978

OURAY

NATIONAL WILDLIFE REFUGE
UTAH

U. S. FISH AND WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

N

UTAH
REFUGE LOCATION

National Guard equipment hauling on the Leota breaks.
RRS

During the last two weeks of February, Manager Jim Creasy, Browns Park National Wildlife Refuge, loaned us Equipment Operator Lynn Barber and Assistant Manager Don Clapp to help in finishing up Leota before warm weather hit.

Our thanks go out to the refuges and people mentioned in this section for their assistance and/or use of their equipment.

During the summer months, the D-7 and D-6 CAT's were used to dress up the repaired areas. On all the repaired breaks the D-7 was used to push in available material from the sides to fill in washed areas along the base of the protective dikes. After this was done, the dikes were sloped and dressed up.

Additional fill needs to be hauled to LB #1 and #2 and some of the interior dikes in Leota to completely finish flood repairs to this unit. This is planned for February, 1986.

During December 1985, the D-7 CAT was moved to Wyasket Bottom where Maintenance Worker Whitmore spent the month filling in the breaks on the north protective dike and preparing the south dike for a planned January operation.

Contract loader loading refuge trucks out of headquarters pit. RRS

Dumptrucks waiting their turn. RRS

D-6 dozing out a layer of clay fill material in Sheppard. RRS

Alamosa's loader filling trucks out of the Leota clay pit. RRS

Spreading the first layer of fill on a breach in Leota. RRS

Dozing out the final fill material on one of the larger breaks in Leota. RRS

Islands were pushed up and emergents dozed out in several ponds during 1985. The D-6 CAT was used to doze up small irregular uplands on the backside of S-1 and the excavator to build seven islands toward the deeper part of this pond. Leota dried up by early fall and the D-7 was used to push up 24 islands in L-2, and 8 islands in L-1 ponds. The heavy bulrush areas in L-2 were opened up into a myriad of channels. After the D-7 was shut down for repairs in late October, the D-6 was used to build an additional 48 islands in L-10 pond.

Rex on the D-7 pushing channels through the heavy bulrush in Leota Pond #2. RRS

During March, Manager Hansen used the new Rhino brush mower to mow down heavy tamarisk brush in the S-1 unit. This worked well, mulching up the brush and opening the area up to grasses. We're going to have to follow up with spraying as the brush resprouts.

During July, one-half mile of the main Sheppard tour road through the farm fields was raised using the D-7. This road has flooded in the past and sets low to the surrounding ground. The new road is some three feet higher and a couple feet wider.

3. Major Maintenance

During high water in May, a portion of the Bull Durham road eroded away and became a hazard to vehicles along the east bank of the river. The refuge grader spent a day moving the road over 30-40 feet and blading borrow areas.

The YCC program consisted of two enrollees in 1985. Overall, the program went well with the following maintenance projects completed:

- The ugly blue shop trim was scraped and painted with a tan color. This project included all interior trim and doors as well.

- The refuge's east boundary was resurveyed by Regional Surveyors Bruce Mortensen and Pat Carson. After several trips, most of the lines were sorted out and YCC was able to post the east boundary of the refuge.

- New traffic control signs were installed.

- Cleared debri from expanded farmfield.

- Collected garbage along west boundary of refuge.

- Installed vehicle barriers in parking area at old Sheppard No. 2 pumpsite.

- Upgraded signs along west boundary fence.

- Rehabilitation of southwestern and northwestern portions of boundary fence.

During late summer, all refuge roads and dikes were mowed at least once. 2,4-D spray was applied to knock back the late weeds. The mower was also used in Wyasket this fall to mow off two year's worth of Kochia weeds in preparation for winter repair work.

Minor pipe work was completed in September. New pipes were installed under the road near the Sheppard No. 2 bulkhead and at crossings over the Leota pump ditch. The pond adjacent to the farmfield received a larger inlet structure out of the Sheppard gravity inlet ditch and the 48" arched crossing had a prefabricated structure welded to it for better water control.

The old road that traverses the lower west side of the refuge in Sheppard Bottom was reworked with the D-7 where it crossed a slough near the west gravel pit. The CAT built up the road over the slough and improved the approach up the hill to the gravel pit.

The maintenance crew took time off in October for a much needed cleaning out and reorganization of the shop's bolt bins. All unusable junk was set aside for a scrap metal sale.

Equipment Operator Mecham spent a couple of weeks on the refuge grader putting the final touches on finished CAT projects and reworking portions of the main Leota access road. A water ditch was cut through L-9 pond with the grader in preparation for winter pipe work.

The refuge's boneyard was re-shuffled for a scrap metal sale of unwanted items. The resulting old fuel tanks, trailers and mountain of miscellaneous junk was bid on by local scrap dealers. Montgomery Brothers of Vernal, Utah, was the successful bidder. They currently plan on hauling out the junk in early March 1986.

The refuge residences received the following in 1985:

- New insulated storm doors were installed at both front porches.
- Quarters #1 received a new range.
- Both quarters had all closet doors replaced with new models that worked.
- The chimney in Quarters #2 was extended to improve the draw in the wood stove.
- Both attic's insulation around the duct work was inspected and retaped.
- The furnaces were cleaned and serviced.
- Humidifiers were purchased for each quarters.

During December an effort was made to rebuild the trash screen that protects the Leota pumps. Rising river levels and icing complicated our efforts. Finally, an "H" beam was driven into position and sheet piling pushed into place alongside. Come spring, additional bracing and placement of shaker screens will finish this project.

4. Equipment Utilization and Replacement

The refuge received the following major pieces of equipment in 1985:

The refuge's new 4x4 arrived in late May. This vehicle was ordered in November 1983. The long delivery date was offset by the fact that this much needed truck is a Chevy.

In late August the refuge's new Dodge Caravan arrived. This vehicle is a nice blend between pickup and station wagon. We

now have room for passengers. Currently, we're getting 25 MPG fuel-wise.

During December, the new Case 24C 2½-yard loader arrived. This machine was purchased for Ouray by the Region for flood repair work. Bear River construction funds were used to purchase this machine. The refuge's old Hough loader was repaired by Wheeler Machinery and transferred to Browns Park NWR.

In late March, Alamosa's loader was serviced and hauled back to that station using a borrowed (BLM) GSA transport. On the return trip, Equipment Operator Mecham and Maintenance Worker Whitmore swung down to Kingman, Arizona, and picked up an excess D-7 dozer BLM sold to the Region. This piece of equipment was purchased for Ouray to assist in flood repairs. The guys hit a heavy blizzard on the return trip and it took a week to get home. This dozer is a 1967 CAT with heavy winch, hydraulic dozer and power-shift transmission. All in all, a good outfit. Several repairs to various components were required, but the work completed by this machine in 1985 was very impressive. This machine has greatly accelerated the completion of several repair projects.

Other pieces of equipment picked up in 1985 include a John Deere 825 cultivator, a Dayton metal band saw, and a Gator 12" trailer pump was purchased with FY 86 resource funds.

As flood waters rose at Bear River MBR, Ouray hauled some 1,500 gallons of diesel No. 2, which was used in our equipment after temperatures warmed up.

The refuge's excavator spent a lot of down time in 1985 awaiting parts and repairs. During June, the refuge crew tore down one of the tracks and had the idler wheel rebuilt. On July 9, Crescent Lake NWR picked up this machine for use during the summer. Crescent Lake completed their excavation project in early August and returned the excavator in early October. Due to mechanical problems, the excavator spent some six weeks at Wheeler Machinery for repairs to its charging system, track brakes, hydraulic pump and lines, and bucket. Most of the delay was trying to get a few parts from Hein-Werner out of Las Vegas, Nevada. We finally got the machine back in December, 1985. After complaining to the factory, we can now, at least, order parts factory direct. This hard luck piece of equipment still has some bugs that need to be worked out. Crescent Lake helped out on the last repair bill.

After haul operations last spring, the old 10-wheeler dump truck went in for a new clutch, repairs to the air brakes and lights. This truck is still in fairly good shape, considering it has 90,000 hard miles on it. Jackson National Elk Refuge picked up this truck in August for a planned gravel project.

The D-7 CAT also had several mechanical problems during 1985. Nothing major cropped up until November, when we discovered some rather major problems with the valve assembly. Wheeler Machinery and our crew pulled the engine and it was sent to Salt Lake for a rebuild on the valve train and a new camshaft. The engine was dyno-tested and installed by November 21. Evidently, internal bolts had come loose and caused the damage. Shortly upon its return the D-7 developed a hole in its belly pan and additional internal bolts were found to be floating around in the pan. This was fixed and the CAT has worked fine since. Total bill, around $10,000.

During August and September both the D-6 and D-7 CATs were cleaned, sandblasted, primed and painted. Both machines were rather rusty. The paint job took some time and they look great. Maybe they'll run better with this new look.

Both dozers with their new paint jobs. The D-7 is a little dusty in this shot. RRS

5. Communications Systems

The refuge office in Vernal moved in early November to the Ashton Energy Center, some four miles west of the old site. This necessitated moving the refuge's radio antenna and base station.

In addition, the refuge and other Vernal FWS offices switched to a new phone setup called the Merlin system. Each station purchased its own phones and pays a monthly fee for the inter and intra state WATS lines.

J. OTHER ITEMS

1. Cooperative Programs

A. U.S. Weather Service recording station next to headquarters is used jointly to collect weather data for Ouray and the Weather Service.

3. Items of Interest

During early March, Manager Hansen presented the Uintah County Commissioners with a revenue sharing check totaling $13,995. This check represents 74 percent of the entitled payment.

In August, Assistant Manager Sjostrom traveled to Brooks, Alberta, Canada, on banding assignment for three weeks.

Engineering Equipment Operator Mecham attended Heavy Equipment Operator Certification classes at Texas A&M for two weeks.

Assistant Manager Sjostrom completed 40 hours of LE refresher in Denver.

4. Credits

Manager Hansen - Introduction, Sections C, D, E, F and K. Assistant Manager Sjostrom - Sections A, B, G, H, I and J. Refuge Assistant Wardle - report typing, maps, graphs, Table of Contents, Information Packet, pictures and final report organization.

Photo credits are listed by initials under each photo.

Manager Hansen edited the final draft.

K. FEEDBACK

We have some concern over the direction that our budgets are going. Our base budget figure is being decreased each year and the difference is being made up in ARMMs money. This year 38 percent of our 1260 funds are ARMM funds. It is my understanding that ARMM funds are allocated at the whims of Congress and I hate to see us become so dependent upon a source of funds for our basic operation which could be withdrawn at any time by not funding the ARMM program. Should this happen, we would have to close shop. The ARMM funds should be made a part of the base budget; we could still track it through AWP or cost coding, if that is necessary.

Perhaps we have nothing to worry about, as everyone in the Service is, I think, aware of this. But, many times someone outside the Service controls our destiny and base budget figures are harder to make major changes in. With the balanced budget amendment recently signed into law, the more funds we receive money from the easier it is to cut one

or take a percentage from each and we may find ourselves in a position where we will not have funds to carry out even basic functions. Even at best, we are going to be in a tight fiscal climate in the future.

RLW