ANNUAL NARRATIVE REPORT

HAVASU NATIONAL WILDLIFE REFUGE
P. O. BOX A
NEEDLES, CALIFORNIA 92363

FY 1974

PERSONNEL

Robert A. Karges ..... Refuge Manager

Laurence N. Dean ..... Assistant Refuge Manager

Neill S. Hartman ..... Public Use Specialist

Thomas L. Mountain ..... Refuge Manager Trainee

Leonard T. Walters ..... Equipment Operator

Jean G. Aubert ..... Maintenanceman

Albert I. Cardiff ..... Clerk-typist

Veronica H. Ray ..... Clerk-typist (temporary)

Approved, Regional Office

[signature]
Signature

Acting Regional Supervisor
Title

3/4/75
Date

Submitted By:

Neill S. Hartman
Signature

acting Refuge Mgr.
Title

2-28-75
Date

Ajjg to C.O. 3/4/75

HAVASU NATIONAL WILDLIFE REFUGE
FY 1974

I. GENERAL

A. Weather

1. No abnormal weather conditions noted. Temperature ranges were from a high of 120 degrees in July 1973 to a low of 27 degrees in January, 1974. Total precipitation was about 1.40 inches.

B. Habitat Conditions

1. Water. The Topock Marsh Enhancement Project, a cooperative effort with the Bureau of Reclamation, has completed four miles of channels and two miles of dike construction. The "Little Colorado" began dredging channels where the south dike and Beal channels meet. By the end of the fiscal year, the new dike had made contact with the upland ground just south of the Glory Hole. Construction of the dike will allow water level management within 350 to 400 acres of cattail fringe along the western portion of Topock Marsh.

   An extensive system of sand bars are being created in the delta area on North Lake Havasu below Topock Gorge. Navigation through sand bar areas is extremely difficult during low water periods.

   Water diverted from the Colorado River into Topock Marsh during FY 1974 was 33,700 acre feet. The elevation of water on Topock Marsh was held between 455.00 and 456.43 msl.

   The greatest release from Davis Dam for the Colorado River was on April 10, 1974, with 18,900 cfs. The lowest release was on January 1, 1974, with 1,930 cfs.

2. Food and Cover. Desert vegetation is dense salt cedar, mesquite, arrowweed, cottonwoods, etc., providing good cover but limited food value.

   Refuge farming operations provide green browse (Nu Gains winter wheat) and bermuda grass for wintering geese. Pintail Slough was planted in Japanese millet during June, 1973, and provided excellent cover and food supply for the duck hunting season.

   Topock Marsh provides both food and cover for waterfowl species. The unit is managed for aquatics spiny niad (Najas marina) and sago pondweed (Potomogeton pectinatus).

The marsh enhancement program will also enable future habitat development for waterfowl and the rare and endangered Yuma clapper rail.

II. WILDLIFE

A. Migratory Birds

1. Waterfowl. A split season for waterfowl hunters along with the steel shot program was in effect for FY 1974. Hunters were required to use steel shot in the Topock Marsh unit while Topock Bay and the Castle Rock area on North Lake Havasu were open to lead shot. Eight hundred-fourteen waterfowl hunters were on the refuge. Five hundred ninety-seven duck and 13 geese were reported bagged.

   Duck use days totaled 254,790 days for 15 species. Combined goose use days (Canada, snow, white-fronted) totaled 216,690 days. American coots totaled 1,485,000 with 50 breeding pair reported.

2. Dove. A split dove season was observed in both Arizona and California. Rain showers and temperatures below normal during the season forced mourning and white-winged doves further south; few birds were taken on the refuge.

B. Upland Game Birds

Quail numbers were up this year. Hunting pressure on the refuge was confined to Pintail Slough area. A number of coveys were reported in the Pintail Management Unit, however, hunter success was low. Dense vegetation gave the quail a definite advantage in this unit.

C. Big Game Management

Surveys of desert bighorn sheep showed a lower population than in previous years. It was agreed that Arizona Game & Fish Department would not issue a Bighorn Sheep Permit for unit 16B.

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

Fur animals had no significant changes in their population densities. Coyotes are quite frequently seen. During the spring months, more coyote pups were observed than in previous years. No major disease problems noted. (Refer to mammal list for population diversity.)

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

No significant population changes occured within the raptor population.

F. Yuma Clapper Rail

The 1973-1974 Yuma clapper rail census was completed with the cooperation of the Yuma Clapper Rail Recovery Team. Responses showed an increase in bird populations for the Topock Gorge and Bill Williams Delta while Topock Marsh had a population decrease. The total refuge population was placed at 187 birds, down from 221 birds in FY 1973 and 236 in FY 1972. Refuge Manager Robert Karges, was interim team leader for the Yuma Clapper Rail Recovery Team.

No California black rails were reported.

G. Other Birds

Refer to the updated bird list.

H. Fishing

Angling for bass, crappie and catfish was from good to excellent at Topock Marsh. The Topock Marsh Unit of the refuge was stocked with 25,000 channel catfish and 5,000 largemouth bass. (See new fish, reptile, and amphibian phamplet).

Fishing regulations were updated and prepared for distribution.

III. REFUGE DEVELOPMENT & MAINTENANCE

A. Physical Development

1. The refuge boundary in the Castle Rock area was surveyed and posted with the assistance of Regional engineering staff.

2. Y.C.C. trailers were acquired and renovated providing a first aid, environmental education station and field office for the Y.C.C. staff.

3. The refuge installed, with the help of Y.C.C., a complete set of signs received from the Bureau Sign Shop. The sign plan was the first in the region to follow the new handbook and the refuge plan was used as an example nation-wide.

B. Plantings

1. Trees & Shrubs. The Y.C.C. planted willow trees on the dike and islands constructed from dredge operations. Planting included about two miles of dike and three ½-acre islands. Re-growth has been excellent with 80% of the transplants surviving.

2. Cultivated Crops. The crops being grown include Bermuda grass and Nu Gaines winter wheat variety. Both are irrigated and provide browse for our wintering geese.

C. Collections and Propagation

Extensive damage was done by wind blown areas at the refuge farm. The area was leveled by a contractor and the Y.C.C. sprigged blown out areas with Bermuda grass from other portions of the farm field.

D. Control of Vegetation

Weed and brush control was limited to mechanical removal of pest plants in the farm field prior to planting operations.

E. Planned Burning

None to report.

F. Fires

No controlled burns. Several minor cattail and upland brush fires were reported.

IV. RESOURCE MANAGEMENT

Two concessions are presently operating under contract on Havasu Refuge. Catfish Paradise is managed by Philip Villamor and John Closs is the president of the corporation. Five Mile Landing was sold at the end of the fiscal year by Leonard and Eleanor Cooper. The new owners are Guy Hackley and Preston Knight, a father and son-in-law team. The combined trailer-residential parks saw 44,610 use days for both concessions during FY 1974.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

Phillip Smith, under a cooperative agreement with the California Fish and Game Department, completed his research project on the Yuma clapper rail. Responses recorded with the inter-agency, Yuma clapper rail team, showed a general decline in the population on the refuge of the endangered species.

VI. PUBLIC RELATIONS

A. Recreational Uses

1. Approximately 236,500 people did their thing on the refuge in FY 1974. Memorial Day rush brought a peak of 12,000 visitors. Sixty-seven citations were issued over the three day weekend by the refuge staff.

2. A new canoeing leaflet was distributed. Canoeing use on the refuge increased from 2,325 visits in FY 1973 to 6,763 in FY 1974.

3. The expansion of Topock Gorge restriction by three miles in February, 1974, saw the start of a reduction of non-wildlife oriented activities. Camping, skiing, and fires were prohibited for an additional 3 miles distance along the Colorado River, bringing the restricted area to a total of 16 river miles. Information buoys were installed and saw several acts of vandalism. Public acceptance of the new policy took approximately one year.

4. Off-road vehicle use was not as big a problem as in previous years.

B. Youth Conservation Corps

The refuge sponsored a non-residential Y.C.C. camp beginning in June, 1974. The co-ed camp took 10 youths from Needles, California and 10 from Bullhead City, Arizona.

Five camp staff members were chosen from local schools. Everyone was extremely pleased with the results and enthusiasm from the camp.

C. Indians

1. The Chemehuevi Indians were involved in several land disputs in the Lake Havasu portion of the refuge. We were informed for the first time in April, 1974, that the tribe had a special use permit which was issued by the Secretary of the Interior. The Chemehuevi Indians were allowed use of refuge lands south of Catfish Cove on the California side.

2. Land disputs in the Topock Marsh area caused several adjustments to the Topock Marsh enhancement project. The tribe claims ownership of prior Indian lands above the 455' msl contour. Dredge spoil had to be deposited on those lands which were not being contested by the Mohave Indians.

D. Hunting

Waterfowl, dove, quail, and rabbit season were reorganized on the refuge. See Part II "Wildlife" for specific success rates.

E. Violations

During FY 1974, the following violation notices were issued: hunting---5; fishing---40; camping---28; vehicles---19; skiing---57; boating---94; other---8; total, 251. The Arizona Game & Fish Department issued 38 citations on the Refuge in FY 1974.

F. Phamplets

The Havasu general information leaflet was completed on June of 1973; Concession Regulations leaflet in May of 1974; and the Public Use Regulations in June of 1974. The canoeing leaflet was distributed in the Spring; and the distribution of the Topock Gorge Expansion in February; and the hunting and fishing regulations were updated. Iron shot information was distributed with the hunting regulations.

VII. PERSONNEL

A. Staff Changes

1. Anthony Moskos, foreman, retired from the U. S. Fish and Wildlife Service on July 1, 1973 after 16½ years of service.

2. Veronica Ray, temporary clerk, entered on duty July 2, 1973. Mrs. Ray had a temporary separation of service from March 10, 1974 through August 12, 1974.

3. Stephen Burr, public use specialist, resigned from the U. S. Fish & Wildlife Service on July 20, 1973.

4. Edward Zoch, wildlife biologist, resigned from the U.S. Fish & Wildlife Service on July 20, 1973.

5. Neill Hartman, public use specialist, transferred from Branch of Systems Development, Division of Refuges, Washington, D. C. on October 1, 1973.

6. Linda Hartley, clerk-typist, resigned from the Service on November 11, 1973.

7. Thomas Mountain, refuge manager trainee, entered the U. S. Fish & Wildlife Service on January 7, 1974.

8. Albert Cardiff, clerk-typist, transferred from the Regional Office, Albuquerque, New Mexico on February 19, 1974.

B. Special Achievements

1. Leonard Walters completed 10 years with the government on September 7, 1973.

2. Linda Hartley completed 10 years with the Service on July 1, 1973. She also gave birth to a baby boy in the fall of 1973.

3. Larry Dean received a Special Achievement Award for his development of the station sign plan. It was used bureau wide as a sample for the other stations to follow.

C. New Position

The position of Assistant Refuge Manager was approved for the Lake Havasu area. The position would be a GS-7 and have responsibility for management and public use in the upper Lake Havasu and Bill Williams Delta portions of the refuge.

VIII. SAFETY

Safety meeting are scheduled on a monthly basis and include all aspects of refuge operations.

Two accidents were reported during FY 1974. One individual suffered a minor eye injury and another member of the staff was struck in the face by the handle of a jack. Measures were taken to prevent similar accidents in the future and also, precautions were taken to prevent all potentially hazardous situations. These precautions are too numberous to list.

As of June 11, 1974, 897 accident free days have elapsed.

Extensive wind-blow damage occured ~~in July of 1973~~ IN a 10 yr period at the Topock Farm area. Blow-outs measured up to 6 feet in depth. The area was leveled by a contractor and replanted. The Y.C.C. sprigged Bermuda grass in portions of the farm field during June of 1974.

Construction equipment was contacted to assist in leveling the blow-out areas on the Topock Farm area during August, 1973.

Ten acres of winter wheat was planted on the Topock Farm to serve a goose food. The green vegetation attracted the geese when they returned to their wintering home.

Bermuda grass was planted in 90 acres of the Topock Farm area. Early irrigation produced a heavy crop for the over-wintering geese.

A hunter check station was operated at Five Mile Landing concession on weekends during the iron shot program.

Iron shot hunter contact stations were located at the north dike, Pintail Slough, Five Mile Landing and Catfish Paradise concessions.

Bullrush utilization was heavier than normal in Topock Marsh. The Canada and snow geese went through it like a lawnmower.

The expansion of the Topock Gorge area in February, 1974 involved the placement of buoys on the Colorado River. The buoys restricted camping, fires, and waterskiing from the Topock bridge to Catfish Bay on North Lake Havasu.

The Havasu Youth Conservation Corps was put into operation for the first time during the summer of 1974. The youth nick-named the program "Camp Bucky Beaver". Twenty youths participated in the non-residential camp.

One of the contact stations which was built by the Y.C.C. using signs from the Bureau Sign Shop. The refuge sign plan received national recognition.

One of the Youth Conservation Corps member putting the finishing touches on visitor contact station which they constructed. Y.C.C. installed all of the signs purchased from the Bureau Sign Shop.

3-1750b
Form NR-1B
(Rev. Nov. 1957)

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

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Havasu NWR — For 12-month period ending August 31, 1974

Reported by Thomas L. Mountain — Title Refuge Manager Trainee

(1) Area or Unit Designation	(2) Habitat Type	Acreage	(3) Use-days		(4) Breeding Population	(5) Production
Topock Marsh and the Colo. River to Topock Gorge	Crops	150	Ducks	315,000		
	Upland	8000	Geese	198,000		
	Marsh	3000	Swans	480		
	Water	1300	Coots	1,287,000	50	150
	Total	12450	Total		50	150
Topock Gorge and Lake Havasu	Crops	0	Ducks	36,000		
	Upland	24000	Geese	9,000		
	Marsh	40	Swans	0		
	Water	3400	Coots	180,000		
	Total	27800	Total			
Bill Williams	Crops		Ducks	9,000		
	Upland		Geese	4,500		
	Marsh		Swans	0		
	Water		Coots	18,000		
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

(over)

INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

(1) Area or Unit: A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.

(2) Habitat: Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary flooding facilitates use of non-aquatic type foods; marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.

(3) Use-days: Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.

(4) Breeding Population: An estimate of the total breeding population of each category of birds for each area or unit.

(5) Production: Estimated total number of young raised to flight age.