NARRATIVE REPORT

SALTON SEA NATIONAL WILDLIFE REFUGE

CY 1978

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

SALTON SEA NATIONAL WILDLIFE REFUGE PERSONNEL

CY-1978

1.	Laurence N. Dean (GS-11) (EOD l-4-78)	Refuge Manager
2.	Joanne Rumbaugh (GS-5/7) (EOD 4-24-78)	Assistant Refuge.Manager
3.	Judy Fischer (GS-5)	Clerk Typist (PPR)
4.	Jose Barros (WG-8)	Equipment Operator
5.	Nestor Gonzales (WG-8)	Equipment Operator (CS)
6.	Richard Marquez (WG-8)	Crane Operator
7.	Marcos Orozco (WG-8)	Maintenance Worker (CS)
8.	Lee Laizure (WG-10)	Eng. Equipment Mechanic
9.	Jim Randall (GS-5)(EOD 6-78)	YACC Work Leader
10.	Andrew Gordus (GS-5)	Co-operative Education (T)

Reviews and Approvals

Laurence N. Dean

Submitted Date

Area Office Date

Refuge

Regional Office Date

I. GENERAL

A. Introduction

Salton Sea National Wildlife Refuge is comprised of about 32,000 acres. Approximately 2,000 acres are manageable. The remaining 30,000 has been inundated by the Salton Sea. The Imperial, Coachella, and Mexicali Valleys provide wintering habitat for migratory waterfowl. The majority of the ducks and most of the geese (snow, Ross', and Canada) winter on state and federal management areas in Imperial County. The refuge was initially established in 1932 to provide relief from waterfowl depredations. Peak wintering populations are small, approximately 15,000 white geese, 5,000 Canada geese, and 125,000 ducks. These birds are attracted to the Valley by extensive agriculture and associated flood irrigation as well as the presence of a large inland body of water.

Salton Sea NWR also provides summer habitat for a large varity of shorebirds as well as occasional visitors such as frigate birds, flamingoes, wood storks, and others.

B. Climatic and Habitat Conditions

Precipitation was above normal this year. Heavy rainfall in October added to damage sustained during hurricanes in 1976 and 1977. Average rainfall is about three inches. This year we received 4.37 inches of rain. Temperatures ranged from 44 F to 117 F. There was no snowfall recorded.

Increased rainfall in surrounding mountains resulted in a 0.9 foot rise in the level of the Salton Sea. Evaporation claimed about 1.0 foot resulting in an overall decrease of 0.10 foot. This is the first time a decrease in the elevation has been noted in several years. There is probably no cause for optimism regarding stabilization of the Sea unless similar conditions occur for several years. No habitat losses occurred as a result of the Sea's "tidal" activity.

C. Land Acquisition

1. Fee Title

There are still rumors that the refuge may receive 360 acres of land and about $360,000 for improvements as partial compensation for the lining of the Coachella Canal.

2. Easements

None

D. Systems Status

All objectives at Salton Sea NWR are in need of revision. Migratory Bird PMD's and general habitat conditions have changed to the point, where the old targets are unrealistic. Since our recreational objectives are based on migratory bird objectives, these too will require revision.

II. FUNDING

SALTON SEA FUNDING - FY-1976 - 1978

	1976	1977	1978
1210 O&M	172.0	172.0	183
1210 Rehab	56.0	50.4	--
1210 C&M	--	16.0	15.7
1240 Rehab	--	--	--
1240 C&M	--	--	--
Total	228.0	238.4	198.7

MAN POWER - FY-1976 - 1978

	1976	1977	1978
PFT	5	5	5
PPT	1	1	1
cs	2	2	2
Temp	0	0	1
Total	8	8	9

BICENTENNIAL LAND HERITAGE PROJECTS

Year	Projects	$ (K)
FY-1978	Tile Installation & Cleaning	19,818.00
	Concrete Ditch Construction	28,776.00
FY-1979	NONE	
FY-1980	Rehab Seawall	1,050.00

BLHP projects for FY-1978 were accomplished by the close of CY-1978. One half mile of concrete ditch lining was installed on the supply ditch from Trifolium 13, Gate 255. The head ditch on the south one-half of the Johnson tract was repaired. Subsurface drain tiles were cleaned and repaired on the Johnson tract, Union tract, F-2, Tract 3, and the C tract. In addition, the drain tile system on the Johnson tract was split and 23,800 feet of lateral lines were added. The results of this work will not be seen in their entirety until spring/summer of CY-1979. Field leveling was originally included in this project but was deferred in favor of going to sprinkler irrigation at a later date. Several pieces of equipment (rotary mower, bedder disc, triplane, disc harrow, and subsoil chisel) were replaced with part of the funds.

III. CONSTRUCTION AND MAINTENANCE

New construction was discussed under BLHP.

IV. HABITAT MANAGEMENT

A. Crop Lands

This year marked a major shift in emphasis in Salton Sea's farming operation. Historically the refuge staff had performed all farming operations on the refuge. Cooperative farming was initiated on a limited basis in about 1974. The refuge retained several fields and continued to do part of the farming. There were several problems with one of the co-operative agreements in 1977. In 1978 an agreement was reached with the remaining co-operator to take over all refuge fields with the exception of tract 3 near refuge headquarters. This tract was to be retained to allow experimentation with "organic" farming.

There was also a shift in the type of farming done. Since supplemental spring waterfowl feeding will be discontinued in 1979, the refuge will no longer have a demand for grain. Grain crops will be replaced with alfalfa where drainage and alkalinity permit. In poor soil areas the co-operator will be requested to plant Sudan or other suitable crop in the summer, reseeding to annual ryegrass in the winter. After the departure of waterfowl in the spring the co-operator will have the option of grazing or mowing the remaining ryegrass. On alflafa fields the co-operator is responsible for all soil amendment applications and irrigation. The co-operator will harvest the fields mid-March through September, The refuge will reserve the fields for goose pasture October through March. The co-operator will not be permitted to use pesticides of any type. If there is an insect problem it will be reviewed by the manager with the co-operator. If necessary, the fields will be grazed or mowed (and the clippings removed) to control the pests.

Millet and bulrush were planted on the hazard tract in early July. In spite of hot weather and irrigation problems production was quite good and supported a large number of ducks and snow geese, providing some of the best hunting in Imperial Valley.

Maintenance of refuge dikes continues with the assistance of YACC enrollees. At this point we are keeping abreast of the rising level of the Sea. Hopefully we will be able to hold out until the BLHP dike rehab package in FY-1980.

B. Grasslands

Nothing to report.

C. Migratory Birds

1. Waterfowl

Since it's establishment in the 1930's one of the objectives of the refuge has been to alleviate waterfowl depredations on surrounding croplands. This has been attempted by growing crops on the refuge and by providing grain for waterfowl post-season. The peak of waterfowl depredations was in the 1950's. Changes in agriculture, particularly the disappearence of rice farming, has reduced depredations to within tolerance. Few complaints are received regarding damage by waterfowl. The majority of these are related to winter wheat. We do receive numerous complaints of puddling by gulls feeding in newly irri ated fields and damage to ripe wheat by "blackbirds" (starlings 4.

Through the Spring of 1978 the refuge continued to provide post-season grain feedings for waterfowl. In past years as much as 400 tons of grain had been fed from mid-January to mid-March. In addition, chopped alfalfa and lettuce culls were fed, with no effect. Widgeon and Pintail readily fed on refuge crops and grain then moved off the refuge to feed at night. The greatest factor in the reduction in depredations was the change in agriculture practices and the decline in waterfowl, particularly widgeon, accompanying the reduction in rice acreage.

The refuge feeding proqram served to concentrate the majority of waterfowl in the Imperial Valley on a maximum of three acres of land for a two month period. In time the birds hardly attempted to avoid the feeding truck and returned immediately to the grain. As many as 128,000 pintail were observed on the feed pad at one time. The potential for serious disease problems was tremendous. The spring of 1978 marked the end of the post-season feeding practice.

Another throwback to the era of serious waterfowl depredations are the waterfowl "feeding" clubs in the Coachella and Imperial Valleys (or "baiting" clubs, depending on your point of view). In 1953 the State of California elected to license landowners to feed waterfowl in accordance with certain requisites of State law. The law provided foe hunting on the areas being used to feed waterfowl. Several restrictive conditions accompanied the license but the Service has contended that these licensed clubs are in violation of 50 CFR. The subject has been a sore point between State and Service for a number of years. Numerous studies have been made and rejected in an attempt to justify or denounce the practice. Until now it has been a frustrating situation. In the Spring of 1978 Dr. Leigh

Frederickson of the University of Missouri-Columbia concluded an evaluation of feeding clubs in Southern California. This study-was an attempt to provide a detached evaluation of the problem acceptable to all parties (State of California, Californis Game Commissioners,Waterfowl Hunters and Owners Alliance and FWS). At this time no conclusions have been reached or recommendations presented. The final report is expected to be available by December, 1979.

2. Marsh and Waterbirds

Eared grebe populations appear to be as high as ever. Although no actual comparison has been made, the Salton Sea may hold the largest number of these birds in the State during the Winter and Spring months.

A large number of whitefaced ibis were observed but there were no indications of nesting activity.

Common and snowy egrets were abundant but cattle egrets remained dominant. Large colonies of the smaller egrets occur throughout the Imperial Valley. Black-crowned night herons nested along the Alamo and New Rivers. Several young were banded by banders from San Diego. Pied-billed grebes nested successfully near the refuge headquarters. At least six pairs were noted with young.

Coot and common gullinules nested in large numbers wherever water and sui table cover could be found.

Wood storks and flamingoes again spent the summer on the refuge. About five flamingoes were observed and 125 wood storks.

3. Shorebirds, gulls, terns

Black skimmers nested successfully at the end of Lindsey Road. One of the problems associated with checking the skimmer colony was avoiding stepping on black-necked stilt and American Avocet eggs. Both species bred quite successfully this year.

Gull-billed terns were reported to be nesting near Red Hill Marina. This report was not confirmed.
Long Billed curlews were very abundant throughout the Imperial Valley. No indications of nesting were observed.

4. Raptors

American Kestral, Western burrowing owl and red-tailed hawk populations appear unchanged. High nest mortality continues for barn owls. This species has the unfortunate habit of nesting in hay stacks. Numerous nests and young ones are destroyed each year when the hay is hauled away. The refuge manager's wife raised at least 25 young to maturity in 1978.

Several Prairie falcons were observed in Unit I.

5. Other Migratory Birds

Mourning dove and Mexican ground dove were quite abundant. Inca dove were observed on several occasions. One hunter checked had nine Mexican ground dove and one Inca dove in possession. When asked why he had killed these protected species he indicated he thought they were young mourning doves and he was shooting only the "babies" because they were more tender.

D. Mammals and Non migratory Birds and Other

1. Game Mammals

Nothing to report.

2. Other Mammals

Spotted and striped skunks remain abundant. A high incidence of endemic rabies remains a major disease problem.
Refuge personnel assisted with the annual Western Predator Survey.

3. Resident Birds

Nothing to report.

4. Other Animal Life

Nothing to report.

V. INTERPRETATION AND RECREATION

A. Information and Interpretation

Auto tour route along refuge dikes to Rock Hill remained open throughout the year. Deteriorating dike conditions will eventually necessitate closing the dike to motor vehicles.

Numerous requests for slide talks were received for off-site slide talks, movies, etc. Due to manpower shortages these requests were turned down.

Several birding groups visited the refuge from November through February. There were a number of confrontations between hunters and non- or anti-hunters. At this time both groups intermingle at parking lots. Steps will be taken to correct the problem.

Three requests for on-site orientations were accomodated.

B. Recreation

1. Wildlife Oriented

During the 1977-78 season the Hazard tract remained laid out as a "feeding" club as part of Dr. Frederickson's study. The blind sites were much sought after but hunting success was not noticeably different from the State Area at Wister. The Union fields near the office are probably the hottest snow goose area in Southern California. Several private organizations have taken advantage of the

situation by setting up blinds right on the refuge boundary. The presence of these groups creates some problems.

An attempt was made to straighten out some of the problems generated by stocked fishing ponds on the refuge. Motor vehicles were prohibited as were fires and overnight fishing. In order to encourage a turnover in fishermen, catfish and bass limits more restrictive than State limits were imposed. All of the above generated a number of complaints and one Congressional inquiry. Once the problem was clearly understood opposition declined rapidly. Litter, night fishing, and fires still remained problems.

C. Law Enforcement

Enforcement concentrated on hunting and fishing. Fifty-five violations were referred to the special agent in Long Beach for prosecution. One case was rejected on a technicality, the court's tape recorder broke down and a retrial would have resulted in double jeopardy. In addition, thirteen complaints were referred to California wardens for processing. All were successfully prosecuted,

FEDERAL JURISDICTION

TYPE-VIOLATION	NUMBER	FINE
Equipment (unplugged, etc.)	4	$ 365.00
Licence Violation	6	300.00
Permit Violation	10	525.00
Shooting Early/Late	4	181.00
Overlimit - Mig. Birds	1	50.00
Taking Protected Species	8	585.00
Hunting Trespass	7	365.00
Fishing Trespass	11	500.00
Vehicle Trespass	4	90.00
Subtotal	55	$2961.00
REFERRAL TO STATE		
Buck Shot in Possession	2	U
Violation Permit Regs. - State Area	1	U
Licence Fraud	1	U
No State Duck Stamp (off refuge)	1	U
No Inland Waters Stamp (off refuge)	1	U
Other	7	U
Subtotal	13	0
TOTAL	68	$2961.00

VI. OTHER ITEMS

A. Field Investigations

1. As mentioned earlier Dr. Leigh Frederickson is continuing his study of the role of feeding clubs in Southern California. The study was initiated during the 1976-77 season. Collection of data was conducted 1977-78. His primary objectives were to collect data to meet the guidelines of the Settlement Agreement of 14 October 1975 between the Fish and Wildlife Service (defendant) and the Waterfowl Habitat Owners Alliance, California Department of Fish and Game, and the California Fish and Game Commission. The data required included:

    1. Number and distribution of waterfowl

    2. Wetland availability

    3. Waterfowl depredations, behavior, and harvest on public lands and on duck clubs with or without feeding permits.

B Cooperative Programs

Salton Sea National Wildlife Refuge provided a YACC work site beginning in the Spring of 1978. Initially five enrollees were requested and we received fifteen and a work leader. The enrollees were generally accepted by the refuge staff and made many valuable contributions to refuge management programs.

Perhaps the most significant project YACC worked on was maintenance of the refuge dike system. Without these dikes the refuge would be inundated by the Salton Sea. Funds will not be available until FY-1980 to initiate a major rehabilitation of the dikes. Until then we must maintain the dikes with our own personnel and equipment. During 1978 enrollees, closely supervised by refuge staff, operated three dump trucks, a TD-15 front loader, a D-8, and two TD-20's and maintained two miles of earthen dike. By the end of the year YACC work crews had raised the dike two feet.

During the year YACC crews completed several other projects, including: painting the office, residence, mechanic shop, wood shop, and service island. They also put a new roof on the residence, office, and oil storage building.

The YACC enrollees have been a welcome addition to the staff.