

NARRATIVE REPORT
SALTON SEA NATIONAL WILDLIFE REFUGE
CY 1979

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

SALTON SEA NATIONAL WILDLIFE REFUGE PERSONNEL

CY-1979


- | | |
|--------------------------------------|---------------------------------|
| 1. Laurence N. Dean | Refuge Manager |
| 2. Joanne Rumbaugh (resigned 10-79) | Assistant Refuge Manager (PFTO) |
| 3. Judy Fischer (resigned 7-79) | Clerk Typist (PPT) |
| 4. Susan Acosta (appt expired 12-79) | Clerk Typist (Temp) |
| 5. Jose Barros | Equipment Operator (PFT) |
| 6. Nestor Gonzales | Equipment Operator (CS) |
| 7. Richard Marquez | Crane Operator(PFT) |
| 8. Marcos Orozco | Maintenance Worker (CS) |
| 9. Lee Laizure | Eng. Equip. Mechanic (PFT) |
| 10. Jim Randall (resigned 3-79) | YACC Work Leader |
| 11. Bruce Hooley (transferred 5-79) | YACC Work Leader |
| 12. Marguerite Ross | Co-Operative Education (T) |

Reviews and Approvals


Submitted _____ Date _____

Area Office _____ Date _____

Refuge _____ Date _____


Regional Office _____ Date 7/18/82

I. GENERALA. IntroductionB. Climatic and Habitat Conditions

1979 was a drier than normal year. Rainfall totaled 2.35 inches compared to a 66 year average of 2.82. The maximum temperature was 114 in June and July and the minimum was 31 in January. Average monthly humidity ranged from 46% in January to 18% in June. Mid-summer humidity was an average of 30% with a range of 18% to 47% (July).

The Salton Sea continued to rise. The apparent stabilization in 1977 and 1978 was illusion. The Sea rose .65 feet in 1979. This resulted in the loss of exposed mud flats and shallow water areas adjacent to refuge fields.

C. Land Acquisition

Nothing to report

D. Systems Status1. Objectives

In view of the long term trends in waterfowl populations and public use (1932 to present) it is apparent refuge objectives are at their maximum at this time. A review of objectives and careful revision is called for. Based on the period of time in which the objectives were drawn up the original objectives were intended to provide for management of 7,000+ manageable acres. We are currently meeting most objectives on less than 2,000 acres of dry ground.

2. FundingSALTON SEA FUNDING FY 1977-1979

	<u>1977</u>	<u>1978</u>	<u>1979</u>
1210 O&M	172.0	183.0	196.0
1210 Rehab	50.4	- (1x O&M)	19.0
1210 CM	-	-	13.8
1240 O&M	16.0	15.7	13.8
1240 Rehab	-	-	-
1240 CM	-	-	-
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Total	238.4	198.7	248.5

MAN POWER FY 1977-1979

	<u>1977</u>	<u>1978</u>	<u>1979</u>
PFT	5	5	5
PPT	1	1	1
CS	2	2	2
TEMP	0	1	1
Total	<u>8</u>	<u>9</u>	<u>9</u>

BLHP

There were no BLHP projects at Salton Sea NWR in CY 1979. BLHP dike construction is scheduled for FY 1981.

II. CONSTRUCTION AND MAINTENANCEA. Construction

Ground work began in preparation for BLHP construction of dikes in FY 1981. A borrow site was identified and a source of rip rap was located. Leases pertaining to Imperial Irrigation District and State lands were renewed for 50 year terms.

B. Maintenance

Maintenance was performed on approximately 230 water control structures in Unit 1, Tracts 1A and 2B. Routine repairs were made to roads and dikes. A motor was taken from a LeTourneau grader and transferred to an Austin-Western. We now have an Austin-Western-LeTourneau with a combined age of approximately 70 years. A 30 year old TD-18 was stripped of parts (including motor) to rebuild a 25 year old TD-20. The mechanic averaged the two and came up with a TD-19. Considerable cyclic maintenance was done on two TD-20's, D-18, TD-15 front loader, Bucyrus-Erie Dragline, and two refuge dump trucks.

C. Wildlife

Nothing to report

III. HABITAT MANAGEMENTA. Croplands

Co-operative farming continues to meet most of the refuge's needs. We have one co-operative farmer working 580 acres. A variety of crops are grown ranging from alfalfa to rotation of ryegrass and Sudan grass. The refuge has retained one 60 acre field (Tract 3) for "experimentation".

The refuge staff attempted "new" farming techniques on Tract 3 this year. The field was disced under in March, allowed to dry and then was leveled.

Composted steer manure was applied at seven tons to the acre. The field was deep shanked, floated, seeded with Sesbania and corrugated. When the Sesbania began to show nitrogen forming nodules, but before stems became woody or seeds set, the plants were chopped, disced into the soil, and heavily irrigated. In the fall a new seed bed was prepared and annual ryegrass was planted. No attempt was made at quantitative measurement of the results but the fields seemed greener and appeared to have a better yield. Next year and subsequent years should provide the best measure of success. It will require some time for the added organic material to be integrated into the soil.

In terms of providing goose pasture the above exercise was a success. It required more equipment time and more water than synthetic fertilizers but the cost was generally less. (It was certainly more satisfying than turning on a urea bubbler.) In terms of strict economics it would be impractical to use this technique if you wanted to make a profit from the crops grown. The time and money spent to grow green manure could be spent to produce a cash crop.

Another "new" practice was initiated this year. Over the years the refuge has slipped into the habit of following the example set by neighboring farmers, field borders and ditch banks have been stripped of all pest plants by burning, herbicides, and mowing. This year two acres were taken out of production on Tract 3 and cover strips of desert thorn, honey, and screw bean mesquite were planted. The bulk of the work was done by a Co-operative Education student, Marguerite Ross. Miss Ross obtained green house space from USDA, conducted an extensive literature search, and communicated with several authorities regarding mesquite management. The effort paid off with 98 percent germination and 80-90 percent transplant survival.

B. Grasslands

Nothing to report

C. Wetlands

Attempts were made to establish native aquatic plants in Unit I and on the catfish ponds. Initially survival was very high and we were very optimistic. Unfortunately summer arrived and shallow water temperatures (moving water) reached 110 F. Most of the plantings were par-boiled. The only survivors were hardstern bulrush, burr-reed, and three square. Hydrilla, however, continues to thrive.

D. Forest Lands

Nothing to report

E. Other Habitat

Nothing to report

F. Wilderness and Special Areas

Nothing to report

G. Easements for Waterfowl Management

Nothing to report

IV. WILDLIFEA. Endangered and Threatened Species

A late-season, unconfirmed sighting of a neck collared Aleutian Canada goose was made by a local hunter; fourteen Yuma Clapper Rails and three California black rails were observed in Unit I, Tract 2B.

B. Migratory Birds

This year marked the first recorded fowl cholera epizootic in the Imperial Valley. In early January a number of dead waterfowl were collected on the Northeast corner of Unit I. In a matter of days dead birds of all species were being collected all along the East side of the Salton Sea. The NWHL in Madison diagnosed the outbreak as cholera. Clean up continued through mid-March. Two hundred specimens were shipped to Madison and 8,837 dead birds were collected and burned. Species involved ranged from ducks and geese to red-winged black birds and American Flamingoes. Madison observed that this outbreak involved the greatest variety of species encountered to date.

In addition to fowl cholera a mild botulism outbreak occurred in the vicinity of Red Hill and the Whitewater river delta. YACC clean up crews collected 795 birds.

The YACC program paid for itself in disease control and clean-up operations alone. It cost approximately \$12,000 to deal with the fowl cholera. The cost would have easily tripled if it had been necessary to call for outside assistance.

Refuge personnel conducted monthly aerial census of the Rio Hardy and Laguna Slada, Baja California. The purpose of the surveys was to determine the importance of these areas to waterfowl and to see if there was any evidence of regular travel between these areas and the Salton Sea. Very few waterfowl were observed, and patience became an endangered species. For every hour we spent in the air an hour was spent on the ground battling red tape.

Dr. Frank Bellrose visited the refuge in early March. He was impressed with the large number of ruddy ducks present, indicating it was the largest concentration he had observed. We can add that to our list of claims to fame. It should fit somewhere between hot weather, hurricanes, earthquakes, and endemic rabies.

1. Marsh and Water Birds

Common, snowy, and cattle egrets continue to be regular visitors to the refuge. Least and American Bitterns were somewhat up in numbers this year. Black-crowned night herons continue to nest at the deltas of the Alamo and New Rivers.

2. Shorebirds, Gulls, and Terns

American avocets and black-necked stilts once again nested in large numbers on the refuge. The black skimmer colony near Lindsey Road showed a decline in nests this year. Our normally resident flamingo left in late spring and did not return.

3. Raptors

The refuge again played foster parent to about 50 orphaned barn owls and five American kestrels. YACC enrollees erected owl nest boxes in an attempt to provide permanent nest sites for barn owls.

4. Other Migratory Birds

Nothing to report

C. Mammals and Non-Migratory Birds and Others1. Game Mammals

Nothing to report

2. Other Mammals

The Imperial Valley has a high endemic rabies problem. This year a number of skunks were observed climbing trees during daylight hours. This abnormal behavior was corrected immediately.

3. Resident Birds

Nothing to report

4. Other Animal Life

Nothing to report

V. INTERPRETATION AND RECREATIONA. Information and Interpretation

All refuge roads have been closed to motor vehicles intermittently throughout the year. This has been due to rainfall or wave erosion.

Access to the public hunting area was shifted from refuge headquarters to four parking lots along McKendry Road (South boundary). This eliminated confrontations between hunters and non-hunters.

B. Recreation1. Wildlife Oriented

The refuge is maintaining 16 blind sites as part of the State hunting program at the Imperial Wildlife Area. These sites are extremely popular but are seldom more productive than the other 160 or so sites on the State Area.

This year refuge special regulations were introduced prohibiting possession of alcoholic beverages in the field on the public hunting area. Goose hunters on the Union Tract are now required to hunt from assigned blinds and must use goose decoys (note plural).

The catfish ponds near refuge headquarters are a constant source of problems. Litter, trespass, and equipment violations continue to be prevalent. It has become almost impossible to clean-up after our "guests".

C. Law Enforcement

This year showed a distinct decline in cases. Only 22 were filed with the U.S. Magistrate and three with the local Municipal Court.

FEDERAL JURISDICTION

<u>Violation</u>	<u>Number</u>	<u>Fine</u>
Equipment (hunting)	1	Suspended Sentence
Licence Violations (hunting)	8	\$330.00
Permit Violations	1	50.00
Shooting Early/Late	2	100.00
Licence Violations (fishing)	2	35.00
Taking Protected Species	3	225.00
Trespass, Hunting	1	50.00
Special Regulations	4	200.00
Subtotal	22	\$990.00

STATE JURISDICTION

Licence Fraud	1	125.00
State Area Regs.	2	u
Subtotal	3	125.00+
Total	25	\$ 1115.00+

VI. OTHER ITEMSA. Field Investigations

The feeding study being conducted by Dr. Leigh Frederickson was concluded. (No data was collected this year). The final study and recommendations are expected in CY 1980.

B. Co-Operative Programs

YACC continues to make significant contributions to refuge operations. This year enrollees constructed a 60 x 20 covered car port and a two story storage building. They also performed almost all routine maintenance on facilities and vehicles, assisted with farming, and wetlands management. A few enrollees that indicated an interest in law enforcement worked at the check station or accompanied patrols around the area.