

SALTON SEA NATIONAL WILDLIFE REFUGE

&

WATERFOWL DEVELOPMENT AREAS

NARRATIVE REPORT

1951



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UNITED STATES DEPARTMENT OF THE INTERIOR
FISH & WILDLIFE SERVICE
BRAWLEY, CALIFORNIA

Salton Sea National Wildlife Refuge
@
Waterfowl Development Areas

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NARRATIVE REPORT

January, February, March and April 1951

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United States Department of the Interior
Fish and Wildlife Service
Brawley, California

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REFUGE PERSONNEL

Regular Personnel

Edward J. O'Neill.....Refuge Manager
Clyde W. Stewart.....Foreman-Farm Operations
Jerryl W. Sexton.....Clerk-Typist
Will T. Wesley.....Maintenance Man
Alfred W. McFarland.....Tractor Operator
W. Carl Ford.....Tractor Operator
Melvin Ford.....Tractor Operator

Temporary Personnel

John Barros.....Irrigator
Jose Barros.....Irrigator
Sylvester Barros.....Irrigator
William Lewis Lynch.....Irrigator
Estrel E. Weldon.....Irrigator
William E. Hoff.....Laborer
Leon Lesicka.....Laborer
Raymond L. Gash.....Carpenter
Chesley H. Williams.....Tractor Operator
J. W. Hamilton.....Tractor Operator

NARRATIVE REPORT

I GENERAL CONDITIONS

A. Weather ^f Conditions

No hard killing frosts were felt in the general area of Salton Sea during the report period and as a result winter vegetable business has been outstanding this year.

On January 28th for the second time during the month, rainfall drenched the Valley leaving secondary roads in a very mucky, slick condition. Tomatoes were damaged and winter lettuce crops nearing maturity were ruined. Accompanying high winds whipped the Valley at 40 miles per hour.

Winds and bad dust storms throughout the period were common. As usual several days of operations were lost due to such weather.

Fabulated below is the period weather data as compiled by the El Centro Naval Air Station at El Centro, California.

<u>MONTH</u>	<u>MAXIMUM</u>	<u>MINIMUM</u>	<u>PRECIPITATION</u>
January	85°	36°	.21
February	89°	34°	.11
March	88°	35°	Tr.
April	98°	50°	<u>.19</u>
TOTAL.....			.51

B. Water ^f Conditions

In April the main current of New River, depositing heavy silt, turned abruptly south in the Section 22 area of Unit I for about one mile, thence west along the north line of Section 27. In so doing the river created a large sandy island which became a favorite for geese, pelicans and gulls. "Feather Grass" (Leptochlaa spp.) thrived on the small island and appeared to add something to the diet of wintering Snow Geese.

Many times during the period the main channel of the meandering stream became choked with silt endangering canals and drains above the -230 contour. In January the Imperial Irrigation District completed work on a new diversion channel which will carry New River directly north.

During February contoured areas formerly planted to Wild Millet were drained for cultivation, leveling and cropping.

C. Fires

No fires occurred on the refuge area during the period.

II WILDLIFE

A. Migratory Birds

1. Populations and Behavior

Greatest Canada Goose population on the refuge reached an estimated 630 here in mid-January. At the same time an estimated 700 Canadas were using the State's Hazard Unit which was by then declared closed to hunting.

White-fronted Geese reached a peak of 3,000 in mid-February.

An estimated 4,000 was the top population figure for Lesser Snow Geese the week of January 13th.

Early February found 200 Canadas, 3,000 White-fronts and an estimated 1,000 Lesser Snow Geese here. Migrating Canadas gradually decreased in numbers to a count of only 4 on March 25th.

White-fronts dropped to 800 February 24th; 60 one week later. There was 4 here on April 28th.

At the start of the period some 62,130 ducks and coots were estimated to be using the refuge development units and food plots. The same month in 1950 saw 18,950; January 1949, 23,000; In January 1948 26,000 were recorded.

Green-winged Teal attained a peak population of 5400 February 18th. On March 17 they were still 3,000 strong! The last record for the spring was 3 seen April 3rd.

Blue-winged Teal showed up again----this year 14 were here February 24th; 5 still here March 3rd. Last seen was 10 birds on March 10th.

Cinnamon Teal ran as follows: February 18, 3600 present; March 10th, 4000; March 17th, 1500; April 1st 230.

From a peak of 3000 Shovellers dropped to 1360 March 24th; 600 April 7th; 390 April 14th; 260 the last week of April.

Redheads, Canvasbacks, Lesser Scaup and Ruddy Ducks as usual moved in and out of the development units. On April 1st we recorded 31 Redheads and 400 Lesser Scaup; 277 Ruddy Ducks were present at that time.

On April 28th 14 Fulvous Tree Ducks showed up, the first record of the season for Salton Sea.

Mourning Doves steadily increased through late February and March. By mid-March the refuge population was about 1500, a 75% increase. One week later some 3000 were recorded.

On April 27th we noted the first White-winged Dove migrants of the season.

Waterfowl census work was greatly aided again this year by Mr. Ross Hanson and the Service plane, covering in a short time areas which are inaccessible for all practical waterfowl census purposes.

2. Shorebirds, Gulls and Terns

On January 20th we observed a flock of about 800 Black-bellied Plover.

3. Marsh and Water Birds

During March 90 Sandhill Cranes were using the general area on and around Unit II. Open grain fields and the hay south of Mullet Island were believed the favorite haunts of this small group of cranes. Four were seen here April 1st.

Great Blue Herons, Black-crowned Night Heron, egrets and cormorants all nested together again this season in the large Athel Trees in Section 22, Unit I.

Other birds which used the area are recorded on NR Form 1A attached.

4. Food and Cover

The comments of the previous period under this heading hold true for the late winter months also.

B. Upland Game Birds

No comments.

C. Other Birds

1. Population and Behavior

This winter several groups of robins were observed in the Valley adjacent to the refuge units. Inquiries disclosed that natives here couldn't recollect this species here in such numbers before. Outstanding flock seen was a group of about 300 which spent the winter in a date grove two miles east of Unit I on the Raymond Gash place.

Swallows literally "swarmed" into Imperial Valley the 2nd week of March.

2. Food and Cover

During the period bulrush (S. paludosis) tubers were dug and transplanted in the Tract 27 and 29, Unit I areas. Five men covered 300 acres, spacing tubers 50 feet, in 3 days.

D. Fur Animals, Predators, Etc.

No comments.

E. Fish

Attempts were made to eliminate the abundant carp in Unit I waters. The project was given up when the State refused permittees a commercial seiners license during March and April due to the fact that the commercial season closed in February.

III REFUGE DEVELOPMENTS AND MAINTANENCE

A. Physical Developments

Early in the period the new residence house situated at sub-headquarters in Unit II was completed for occupancy. A Bermuda Grass lawn, trees and shrubs were set out with the hope that despite the alkali and close water table conditions, a fair survival would be realized.

In early January a 1/2 yard P&H dragline was shipped from the Wheeler Refuge. The tracks, rollers, frictions and brakes were overhauled on this unit preparatory to operation.

Regional engineers grade-staked 480 acres of land in Unit II during January, and leveling work by carryall scraper was started promptly. During breakdown of the only carryall on hand the State Fish & Game made loan of a new 14 yard scraper which assisted greatly during repairs.

All buildings at headquarters recieved painting and trim finish during the period.

B. Plantings

1. Cultivated Crops

(a) Unit I

A total of 160 acres of barley was seeded and irrigated through the period.

White Clover, to the extent of 160 acres, was planted in February to provide a cover crop. So poor was the germination that the resultant crop did not warrent further irrigation after the second wetting.

In Tract 25 all contours used for leaching purposes were removed and leveling work started.

All 18-inch drops and pipe were installed in the 300 acre Tract 27-29 area and the contours closed for flooding.

(b) Unit II

Tracts 1 & 2 were plowed, leveled bordered and toward the end of the period the irrigation ditch with boxes were being constructed.

Tract 5 (80 acres) was retilled and planted to barley for fall use.

Tract 6 consisting of 80 acres was seeded to White Clover with the same results as mentioned above for Unit I.

Tracts 8 and 13 were cleared of interfering trees and stumps, re-leveled, surveyed and contoured for leaching.

IV ECONOMIC USE OF REFUGE

A. Grazing

During the period, through intermitent grazing, some 7,866 head of sheep were pastured on refuge alfalfa tracts to graze down frosted or overgrown alfalfa crops.

V PUBLIC RELATIONS

A. Recreational Uses

No facilities on area.

B. Refuge Visitors

<u>NAME</u>	<u>DATE</u>	<u>IDENTIFICATION</u>	<u>PURPOSE</u>
Mr. Jim Reynolds	1/2	Calif. F&G Warden	Law Enforcement
Mr. Leo Couch	1/2-3	F&WS R.O. Biologist	Tour Refuge
Mr. Wooten	1/3	F&WS Game Agent	Law Enforcement
Mr. Shaler Auldous)	1/23	Calif. F&G	Tour Refuge
Mr. Dan Tillotson } Party			
Mr. Jim Ashley }			
Mr. Ben Hundley)	1/26	F&WS R.O. F&WS Game Agent F&WS Game Agent	Tour Refuge " " " "
Mr. H. W. Elder } Party			
Mr. Wooten }			
Mr. Nielson)	1/27	Nevada F&G	" "
Mr. Wright } Party			
Mr. Ross Hanson	2/8-9	F&WS Pilot-Biologist	Aerial Census
Mr. Arnold Small)	2/8	UCLA Ornithologists representing Audubon Society	Tour Refuge Inspection
Mr. Pyle } Party			
Mr. K. F. MacDonald	2/13-17	F&WS Refuge Superv.	Inspection
Mr. Leo Laythe)	2/14-16	F&WS Regional Director F&WS Asst. Reg. Director	" "
Mr. Paul Quick } Party			
Mr. Jacoby)	2/14-21	F&WS Engineers	Land Survey
Mr. West }			
Mr. Vail }			
Mr. C. H. Lostetter	3/21-22	F&WS Depredations	Tour Refuge

C. Refuge Participation

During January the Service film "Conservation in Action" was shown and a talk given to the Westmorland, California Lions Club.

On February 16th a meeting of the California Fish and Game Commission was attended with Messrs. Laythe and MacDonald and a tour conducted over the refuge area. A group in flight over the Valley and refuge units was accompanied also.

Messrs. Lesicka and Sexton of the refuge attended a local sportsmen meeting at Calexico, California March 19th. Other local meetings were attended by the writer from time to time.

VI OTHER ITEMS

A. Items of Interest

One Los Angeles newspaper writer commented thus about the Salton Sea Refuge, "Hunting was terrible in Imperial Valley. The Federal Government is boycotting the sportsman by farming and feeding his ducks on closed areas-----."

On January 24th an earthquake shook headquarters sharply, leaving several cracks in the service building floor abutment. The grain storage shed, containing more than a carload of seed and grains, literally "walked" off it's supports. Four by four uprights were split like matchsticks and the south portion of the shed moved east and south a couple of inches.

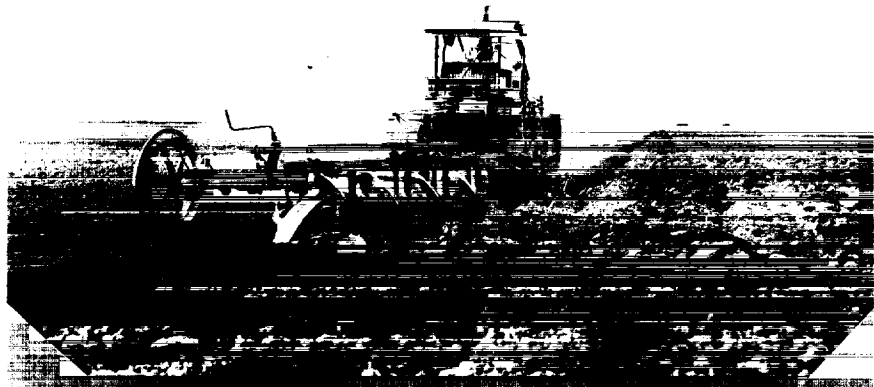
One member of the local Game Depredations Committee inquired at a meeting as to just why the Fish and Wildlife Service was opposed to a hunting season which would extend throughout February thus keeping concentrations dispersed. Among the several reasons given by the writer was the explanation that by February a great percentage of the birds were mated and already in migration.

At a later date it was explained by the same inquirer to the local Farm Bureau, that the Government was opposed to shooting migrant, pregnant ducks.

Date Submitted October 22, 1951

Edward J. O'Neill
Refuge Manager

Approved: _____



Tractor tracts 1-2, Unit II after field had been
leached. (Operator McFarland w/TD-18)

Setting new boundary sign
Unit II. (J. Barros - R. Gash)

WATERFOWL

Refuge Salt Lake Refuge Months of January to April 1951

(1) Species Common Name	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total Estimated for Period
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	
I. <u>Swans:</u> Whistling swan					4	3/25/51			650
II. <u>Geese:</u> Canada goose Cackling goose Brant <u>White-fronted goose</u> Snow goose Blue goose					50 8	2/24/51 3/17/51			3,000 4,000
III. <u>Ducks:</u> Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck <u>Fulvous Tree Duck</u>									
					20,000 30,000	2/18/51 1/6/51			25,000 40,000
					14 4,000	2/24/51 3/10/51			15 4,000
					30	1/27/51			50
IV. <u>Coots:</u>									
					10 600 14	1/6/51 3/17/51 4/28/51			10 1,000 15
					5,000	1/6/51			6,000

SUMMARIES

Total Production: _____

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

- (1) **Species:** In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) **First Seen:** The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) **Peak Concentration:** The greatest number of the species present in a limited interval of time.
- (4) **Last Seen:** The last refuge record for the species during the season concerned in the reporting period.
- (5) **Young Produced:** Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) **Total:** Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since the data are necessarily based on a analysis of the rest of the form.

UPLAND GAME BIRDS

Refuge Salton Sea Refuge Months of January to April, 1951

(1) Species	(2) Density		(3) Young Produced	(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
					Hunting	For Re- stocking	For Research		
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number Bands Produced Total Estimated	Percentage				Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Partridge	Barren, Atriplex etc.							150	
Quail	" "							300	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

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

SMALL MAMMALS

Refuge Salt Lake Basin Year ending April 30, 1951

(1) Species Common Name	(2) Density		(3) Removals					(4) Disposition of Furs				(5) Total Popula tion		
	Cover Types & Total Acres of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For He- stocking	For He- search	Share Permit Number	Share Trappers	Refuge Share	Total Refuge Furs Shipped		Furs Donated	Furs Destroyed
There is no small mammals of importance economically on the refuge.														

* List removals by Predator Animal Hunter

REMARKS:

Reported by _____

INSTRUCTIONS

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

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
 - (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
 - (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
 - (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
 - (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.