

SALTON SEA NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

January - April, 1958

Department of the Interior
U.S. Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife
Brawley, California

REFUGE PERSONNEL

Regular Personnel

Edward J. O'Neill Refuge Manager
Dallas A. Carlson Refuge Clerk
Henry Steer Mechanic, Hvy. Duty
Jose' Barros Tractor Operator
Carl W. Ford Tractor Operator
Alfred W. McFarland Tractor Operator
Clyde W. Stewart Tractor Operator
Chesley H. Williams Tractor Operator
Leo E. Cox Oiler
John Barros Irrigator
Reque Barros Irrigator
Leopoldo G. Mata Irrigator
Manuel P. Rodriguez Irrigator

Temporary Personnel

*Ellis F. Coomes Laborer

*January - March, 1958

CONTENTS

	<u>Page</u>
I. General	
A. Weather Conditions	1
B. Habitat Conditions	1
II. Wildlife	
A. Migratory Birds	2
B. Upland Game Birds	2
C. Big Game Animals	2
D. Fur Animals & Other Mammals	2
E. Hawks, Owls, Eagles, Crows, Etc	2
F. Other Birds	3
G. Fish	3
H. Reptiles	3
I. Disease	3
III. Development and Maintenance	
A. Physical Development	3
B. Plantings	3
C. Collections and Receipts	4
D. Control of Vegetation	4
E. Planned Burning	4
F. Fires	4
IV. Resources Management	
A. Grazing	4
B. Mowing	4
C. Fur Harvest	4
D. Timber Removal	5
E. Commercial Fishing	5
F. Other Uses	5
V. Field Investigations and Applied Research	
A. Supplemental Feeding	5
B. Degradations	5
VI. Public Relations	
A. Recreations Uses	6
B. Refuge Visitors	6
C. Refuge Participation	7
D. Hunting	7
E. Violations	7
VII. Other Items	7

NARRATIVE REPORT

I. General

A. Weather Conditions

The exceptional mild weather of the previous period continued. This should perhaps go down in the records as the most windless winter-spring season ever. The weather has been wonderful with mild, clear, warm days in the majority.

Tabulated below is the weather data as compiled at the local U. S. Naval Auxiliary Air Station at Seeley, California.

<u>MONTH</u>	<u>MAX</u>	<u>MIN</u>	<u>PRECIP</u>	<u>DAYS - 25 MPH WINDS</u>
January	77	36	.02	2
February	82	43	1.23	3
March	81	39	.78	7
April	104	45	.53	10
			<hr/>	<hr/>
	Totals		2.56	22

B. Habitat Conditions

1. Water

On March 6, a beautiful twelve inch blanket of snow covered the Laguna Mountains for the first time this year. At the same time winds and rain swept over the valley depositing .19 inch of rain. On March 10, some twelve inches of snow fell in the Laguna Mountains west of Salton Sea blocking all travel for two days.

On April 8, rain in the amount of .24 inches fell over most of Imperial Valley bringing the season's total to 2.56 inches. (One year ago the cumulative rainfall at the same time was .74 of an inch.) This was the most rainfall recorded locally since 1933.

Salton Sea gained .3 of a foot over the elevation of one year ago. April 30 readings showed -234 below sea level.

2. Food and Cover

No change in status from previous periods. See Section III for cultivated crops.

II. Wildlife

A. Migratory Birds

1. Geese

No outstanding change in status occurred during the period. Canada geese appeared to range more freely this season due to lack of hunting pressures. Wary snow geese, plus inexperienced nimrods, resulted in a rather low kill of geese this past hunting season.

2. Ducks

The status of ducks appeared unchanged.

3. Other Birds

No notable change from corresponding periods.

B. Upland Game Birds

The status of pheasants and quail remain unchanged.

C. Big Game Animals

No big game on refuge.

D. Fur Animals, Predators, Rodents and Other Mammals

No known change in status.

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

The burrowing owl appeared in their usual number.

F. Other Birds

Birds common in this area were present in their usual numbers.

G. Fish

No known change in status.

H. Reptiles

No known change in status.

I. Disease

No known disease present.

III. Refuge Development and Maintenance

A. Physical Development

Improvements and development continued to center on Unit B, where operations of clearing and removing brush, dicing, floating, landplanning and building borders were conducted.

Other field work consisted of preparing tracts 1B, 1 & A at Unit I; tracts 3 and 5 at Unit II; building borders and contours on tract 4 at Unit II. Other small tractor jobs were performed.

B. Plantings

1. Aquatic and Marsh Plants

None

2. Trees and shrubs

Several palm trees were planted at Unit II along the road in front of the residence. The trees had been uprooted and discarded by a nearby land-owner who gave them to the Service for the taking.

3. Upland Herbaceous Plants

None

4. Cultivated Crops

All of the seeding of fields to cereal grains were completed during the last report period with the exception of tracts 7 and 14 at Unit II. The seeding and fertilizing of these tracts were completed this period.

The irrigators spent the majority of their time irrigating tract 6 at Unit A; tract C at Unit I; tracts 7 & 14, 9, 15 at Unit II. Ditches were also cleaned and drop boxes placed in fields where leaching is to be undertaken.

G. Collections and Receipts

None this period.

D. Control of Vegetation

None this period.

E. Planned Burning

No planned burning occurred this period.

F. Fires

None this period.

IV. Resources Management

A. Grazing

None.

B. Haying

None.

C. Fur Harvest

None.

D. Timber Removal

None.

E. Commercial Fishing

None.

F. Other Uses

None.

V. Field Investigation or Applied Research

A. Supplemental Feeding

A shipment of 15 tons of oats from the Commodity Credit Corporation and purchase of some 8 tons of green alfalfa from the Fudge Mills at Brawley, afforded supplementary feed for wintering widgeon as per last winter's operations.

Biologist Clint Lostetter furnished one employee to haul and feed grain and alfalfa three days per week. Alfalfa feeding started January 14 and was terminated January 31 when the dehydration plant at Fudge Mills broke down.

Results and overall feeding were very similiar to last year's operation.

B. Depredations

Agent Jim Johnson, stationed at El Centro, took charge of waterfowl depredations. In as much Mr. Johnson was active locally any comments on damages would be a duplication of prior reports.

VI. Public Relations

A. Recreational Uses

Confined this period to drain ditch fishing and bird watching. Numerous individuals, from various parts of the country, stopped at the refuge to observe the birds.

B. Refuge Visitors

- 1/5/58 - Messrs A.W. Elder & Jim Johnson, Game Agents, Los Angeles and El Centro, Calif. - waterfowl inventory.
- 1/22/58 - Messrs. Henry Allanson and Howard Sprague, Consolidated Services, Portland, Oregon - review of position classifications.
- 1/23/58 - GMA Jim Johnson, El Centro, California, waterfowl depredations.
- 2/6/58 - Mr. Raymond Glahn, Pilot-Biologist, Willows, California, waterfowl census.
- 2/7/58 - Messrs. Jim Johnson and Clinton Lostetter, El Centro and Sacramento, California, waterfowl depredations.
- 2/18/58 - Mr. Otto Ray, Predator and Rodent Control Trapper, Brawley, California - courtesy call.
- 2/24 - 27/58 - Mr. Wilfred H. Anderson, Assistant Regional Supervisor, Portland, Oregon - refuge inspection.
- 4/1/58 - Messrs A. W. Elder, Jim Johnson and Clinton Lostetter, Los Angeles, El Centro and Sacramento, California - waterfowl depredations.
- 4/12/58 - Mr. Lloyd Gunther, Assistant Regional Supervisor, Region 2, Albuquerque, New Mexico, refuge visit.
- 4/22 - 29/58 - Mr. George L. Ducret, Civil Engineer, Portland, Oregon - shoreline survey.

C. Refuge Participation

On January 18, refuge personnel conducted a tour of Unit I for the County School Teachers and their families.

A refuge tour and short talk was given to the San Diego County and Phoenix Audubon Society groups on February 1 and 2.

Refuge personnel conducted a tour of refuge units I and II for the San Diego State College.

On March 22, refuge personnel assisted Scout Officials for the Boy Scouts Mock Disaster. The Navy, Red Cross and Civil Defense also attended and helped.

A group of 68 students from Los Angeles State College visited the refuge on March 30. A tour of the refuge was arranged for them.

D. Hunting

Hunting continued into January, however, this subject was completely covered in the September-December, 1957 Narrative Report.

E. Violations

None.

VII. Other Items

The spring issue of Ducks Unlimited Quarterly, under an item headed "Ad Man Bags Bird With Too Much Sex", had the following comments to make on one of Salton Sea's wayward ducks - er, wayward banders (??).

Charles Ramsey of the Phillips-Ramsey Company, San Diego Ducks Unlimited Steering Committee member and an inveterate waterfowl hunter, has heard of circus ladies who grow beards. He has even met doe deer wearing antlers. Now he is wondering whether modern-day ducks have acquired the remarkable ability to change their own sex.

On November 30, 1957, Ramsey dropped a banded Drake Widgeon while hunting in Baja California, 50 miles below the Mexican border on the Colorado River. He forwarded the serial bearing band to the U. S. Fish & Wildlife Service, which reported tagging the duck at the Salton Sea Refuge at Brawley almost two years before.

However, the banding report listed the juvenile as a female widgeon. Ramsey insists that his bird was a male, but bird banders claim they rarely ever make mistakes!

-----o-----

All was rather quiet on the depredations front this winter until writer Dave Galloway of The Brawley News, after interviewing Game Agent Jim Johnson, got loose with a news article which put the Service in a rather poor light. Stewart Kern, Farm Bureau representative had this to say: "You know, the Wildlife people haven't managed this problem very well. You either have to get more habitat for the birds or you have to cut their numbers".

-----o-----

The following tabulations were made by State men fluoroscoping ducks in connection with refuge waterfowl trapping.

DUCKS FLUOROSCOPED IN IMPERIAL VALLEY, FEBRUARY, 1958

Species	Male				Female			
	With No.	Shot %	Without No.	Shot %	With No.	Shot %	Without No.	Shot %
Pintail	56	18.5	246	81.5	50	16.4	254	83.6
Widgeon	39	23.8	125	76.2	6	13.6	38	86.4
G-winged Teal	15	4.8	297	95.2	4	4.1	93	95.9
C - Teal	1	5.5	17	94.5	1	5.0	19	95.0

-----o-----

The Laguna Salada, southwest of Mexicali, which has been dry since creation of Hoover Dam, was refilled by released water from the dam. This was once a real waterfowl wintering area where floodwaters frequently flooded sorghum crops and ducks flocked in.

-----o-----

Controversies over raw sewage being dumped into the Alamo and New Rivers led to investigations and eventually tests by State Chemists. On April 30, the State Chemist advised that Salton Sea is presently safe for bathers. Harmful sewage organisms were found only in the rivers and at the immediate river mouths.

-----0-----

The "Salton City" and riviera including more than 20,000 acres (30 square miles) has gained momentum of no small proportion. The Phillips representatives of Asusa estimate the project will cost over \$20,000,000. Some 6500 homes, a shopping center, resort hotel, play grounds and recreational facilities are planned. A "tent city" of real estate agents was created to get things rolling. Signs advertising Salton Sea land sales are spotted liberally along the highways all the way to Long Beach

-----0-----

The oil well drilling, 2 miles south of refuge sub-headquarters, proved fruitless - for oil that is, however geologists tapped a hotwater gas basin at 4,700 feet and predict numerous similar wells for limitless industrial energies. Claims are made that the 100 pound pressure wells of steam could produce sufficient distilled water to furnish utility water for all Imperial Valley or energy enough to produce electrical power for both Imperial and San Diego Counties.

-----3-----

The Salton Sea fisheries project seems to be paying off somewhat with increased catches of corbina along the northern shores. Publicity on both radio and TV shows has been almost constant since January.

-----0-----

Mr. John Parrish, Manager of the State's local Wister, Hazard and Ramer Lake areas was transferred to Chino during the period.

-----0-----

Local Standard Oil Company distributor, H. C. Stuart and Bill Terry inspected the above-ground fuel storage tanks at refuge headquarters and asked for permission to make sketches for design of similar visible gauge tanks for private interests.

-----O-----

The Westmorland Development Company (Gun Club) was put up for sale in early April. The offer of \$25,000 for the 80 acre tract looked good until the eight members got to figuring what a 25% corporation tax plus a split, 8 ways, for further taxation would mean for them.

-----O-----

The most spectacular carpet of desert wild flowers since 1949 occurred on adjacent desert slopes this spring after liberal rains.

Respectfully submitted:

Edward J. O'Neill
Refuge Manager

Approved:

WATERFOWL

REFUGEE Saltan Sea MONTHS OF January TO April, 19 56

(2)

Species : Weeks of reporting period

Species	1/31 : 2/18	2/18 : 2/26	2/26 : 3/8	3/8 : 3/16	3/16 : 3/24	3/24 : 3/31	April Census	No. Concept Geese	April Census
Swans:									
Whistling									
Trumpeter									
Geese:									
Canada									
Cackling									
Brant									
White-fronted									
Snow									
Blue									
Other									
Ducks:									
Mallard									
Black									
Gadwall									
Baldpate									
Pintail									
Green-winged teal	40,000	35,000	21,000	15,000	15,000	15,000	25,000	10	25,000
Blue-winged teal	2,000	2,000	2,700	3,000	3,000	3,000	2,500	20	2,500
	7,500	7,500	7,000	6,500	6,000	6,000	4,500	10	4,500
Cinnamon teal									
Shoveler	5,000	95	36	18	2,000	2,000	2,000	20	2,000
Wood									
Redhead									
Ring-necked									
Canvasback									
Scaup									
Goldeneye									
Bufflehead									
Ruddy									
Other									
Coot:	5,000	5,000	5,000	5,000	5,000	5,000	4,800	3,200	4,800

3 -1750a

Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE Shiloh MONTHS OF January TO April, 1954

Species	(2)							No On Course	No Course	Estimated waterfowl days use	(3)	(4)
	11	12	13	14	15	16	17					
Swans:												
Whistling												
Trumpeter												
Geese:												
Canada												
Cackling												
Brant												
White-fronted												
Snow												
Blue												
Other												
Ducks:												
Mallard												
Black												
Gadwall												
Baldpate												
Pintail												
Green-winged teal												
Blue-winged teal												
Cinnamon teal												
Shoveler												
Wood												
Redhead												
Ring-necked												
Canvasback												
Scup												
Goldeneye												
Bufflehead												
Ruddy												
Other												
Coot:												

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans			
Geese	93,316	8,450	
Ducks	2,386,073	54,512	
Coots	336,810	5,000	

SUMMARY

Principal feeding areas _____

~~Principal nesting areas~~ _____
Alton, Ontario - Alton, Ontario

Principal nesting areas Salton Sea

Reported by _____

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (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) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: 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.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

3-1751

Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)

Refuge ~~Salton Sea~~ ~~Refuge~~ to ~~April~~ 194 ~~45~~

(1) Species Common Name	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production		(6) Total
	Number	Date	Number	Date	Number	Date	Number Colonies	Total Young	Estimated Number
I. Water and Marsh Birds:									
Bared Grebe	Previous	Period	250	4/12					
Western Grebe	"	"							
White Pelican	"	"	620	3/30					
Double Crested Cormorant	"	"							
Great Blue Heron	"	"							
Common Egret	"	"							
Snowy Egret	"	"							
Glossy Ibis	"	"	300	4/30					
II. Shorebirds, Gulls and Terns:									
Avocet	Previous	Period							
Black - Necked Stilt	"	"							
Least & Western Sandpiper	"	"	2000	4/26					
Dowitcher	"	"							
Gull - Billed Tern	"	"	1000	4/20					
Long Billed Curlew	"	"							
Killdeer	"	"							
Ring - Billed Gull	"	"							
Greater & Lesser Yellowlegs	30	4/24							
Red - Necked Sandpiper	20	4/24							
Snowy Plover	Previous	Period	200	4/12					
Ring-billed Gull									

(over)

III. Doves and Pigeons:
 Mourning dove
 White-winged dove

IV. Predaceous Birds:
 Golden eagle
 Duck hawk
 Horned owl
 Magpie
 Raven
 Crow

(1)	(2)	(3)	(4)	(5)	(6)
	Previous Period				
	Redstart				
Reported by.....					

INSTRUCTIONS

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. 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. Groups: I. Water and Marsh Birds (Gaviliformes to Ciconiiformes and Gruiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: 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.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

UPLAND GAME BIRDS

Refuge Saltan Sea Refuge Months of January to April, 1946

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Number Probs. Ods. v. c. Estimated Total	Percentage	Hunting For Re- stocking or Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
NO CHANGE IN STATUS						

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 Wilton Set Refuge Year ending April 30, 1950

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs				(5) Total Popula tion		
								Share Trapping	Total Refuge Furs Shipped	Furs Donated	Furs Destroyed			
Common Name	Cover Types & Total Acres of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Permit Number	Share Trappers	Refuge Share				
Bobcat	NO NOTABLE CHANGE IN STATUS NO CURRENT WORK BEING DONE													
Raccoon														
Cottontail														
Jackrabbit														
Beaver														
Skunk														
Coyote														

* 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.