

PIXLEY NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT 1967

PIXLEY REFUGE PERSONNEL

Refuge Manager Leon A. Littlefield
Assistant Refuge Manager James R. Good
Clerk-Typist Virginia K. Anderson
Mechanic William G. Carpenter
Maintenanceman II Carl L. Ayres
Maintenanceman II Willard H. Lewis
Y. O. C. Michael Olvera

All personnel stationed at Kern Refuge.

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PIXLEY NATIONAL WILDLIFE REFUGE

I. GENERAL

A. Weather Conditions.

Same as Kern report.

B. Habitat Conditions.

1. Water.

During the latter part of February excess water again came into the refuge putting additional pressure on the already overtaxed and worn dikes. This resulted in the washout of the old breaks in the west dike.

The first week of March emergency repairs were made to the west dike with the refuge dragline. During the latter part of March, Deer Creek began flowing again and additional flood waters entered the refuge through the middle of April.

The Pixley Irrigation District cut the plug in Deer Creek the second week in April which let the main flow of water continue on down Deer Creek with only a small amount going into the water units of Pixley which the dikes were able to hold.

Fortunately during the month of May, Pixley received no water and further emergency repairs were made to the interior dikes, however funds will have to be made available to further beef up existing dikes and build at least 2 or possibly 3 additional interior dikes so that additional water can be held and spread over the area.

Free class two water was received intermittently on Pixley refuge for the balance of year except for a period from June 22 thru July 5, during this period the one pump at Pixley was run and produced 1.37 cubic feet per second for a total of 38 acre feet. Estimated total of water received into Pixley from the Pixley Irrigation District was approximately 900 acre feet. See photographs at the end of narrative showing damage to Pixley dikes.

2. Food and Cover.

Due to the large amount of water at Pixley in the early spring we had an abundance of annual plant growth. This continued through the spring and into the early summer. Bromes and foxtail grasses along with mustard and many Composites were the dominant plants. These were found in the drier areas of the refuge. Along the borrow ditches and around the edges of the west pond emergents such as bulrush, spike rush, Juncus spp., cattails, Sagattaria and Ranunculus spp. were found. Millet Echinochloa crusgalli and Sprangle top were prevalent grasses along borrowing ditches.

Salt grass was found abundantly in shallow, muddy alkaline areas. Millet started appearing in June and was seen throughout the fall and was a good food source for ducks. Sprangle top appeared later and became quite noticeable later on. Emergents provided bulk of food along with millet. Spike rush was heavily utilized along ditches in Units 20 and 21. In January and February geese utilized new green growth in Sections 19 and 20 and did likewise in December. They also fed on surrounding agricultural lands during these periods.

Good cover was available in sections 19, 20 and 21 throughout the nesting and brood period which was used in this our best waterfowl production year.

II. WILDLIFE

A. Migratory Birds.

1. Geese.

Canada geese were the only species seen using Pixley from January through the second week in March. A lone Canada goose was seen for two days the second week in May. Geese were seen again the last week in October when two snows were sighted. The first large build-up of geese in the winter was the second week of December when large numbers of Western, lesser and cacklers appeared. White-fronts made their first appearance the following week. Geese utilized green vegetation in Units 2 and 3.

2. Ducks.

Duck population peaked the first week in January with 33,680 recorded. There was a slow weekly decline in the population until March 10 when there was a large build-up for the annual northern migration. Low point in the duck population was the first week in May. Main species using the refuge were pintail, green-wing teal, mallards, shovelers and cinnamon teal. Widgeon used the refuge in large numbers January through March, then again in late December. Ducks were seen utilizing Units 1 and 2 and 3 all year.

Due to the abundance of water in the San Joaquin Valley we had an increased number of ducks produced at Pixley. Twenty-six broods were seen. Number of broods per species seen were: mallards 13, shoveler 6, cinnamon teal 5, and pintail 2.

Pixley was closed to waterfowl hunting this year and as in the past waterfowl numbers increased on weekends due to hunting pressure in the southern part of the San Joaquin Valley.

3. Water and Marsh Birds.

Snowy egrets were seen throughout the entire period. Eared grebes, great blue herons, common egrets and black-crowned night herons were seen during most of the period. Forty-five sandhill cranes were seen from February to the first week in March then left. November 3, ten were again

seen and their numbers built up to an estimated 150 at the end of the year. One double crested cormorant was seen October 13, in Unit 1.

4. Shorebirds, Gulls and Terns.

Killdeer, least and Western sandpipers and American avocets were seen at Pixley all year. Black-necked stilts were observed from January through the second week in October. Killdeer, American avocets and black-necked stilts all nested and brought off broods at Pixley. An estimated 25 black terns were seen on May 1. From June 11 to September 3 one common tern was occasionally observed over Unit 1. Ten California gulls were seen the last week of November, and 10 ring-billed gulls were observed from December 12-22.

5. Doves.

Mourning doves were seen occasionally from April through December. The largest numbers were seen the last week in July and first week of August.

B. Upland Game Birds.

An estimated 25 ring-necked pheasants were using the Pixley refuge during the last part of the year. They have decreased since the first of the year due to dispersal onto surrounding land.

C. Big Game Animals.

Not applicable.

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

Muskrats were seen occasionally throughout the year. Badger and raccoon signs were seen throughout the period. Coyotes were seen on a few occasions. Kit foxes were not observed during the year. Striped skunks were seen sparingly. Ground squirrel populations remained static during 1967. The black-tailed jackrabbit is seen at all times at Pixley.

E. Hawks, Eagles, Owls and Crows.

The marsh hawk was commonly seen throughout the year. Other hawks occasionally seen were red-tails, Swainson's and rough-legged. Golden eagles were present at different times on the refuge. Great horned and burrowing owls were occasionally

sighted in the willows and along Pixley's dikes. No crows were seen.

F. Other Birds.

Turkey vultures were present at Pixley from the latter part of May through December. One roadrunner was seen September 26, along the west dike of Unit 3.

G. Fish.

Carp and goldfish were seen in ponds and the central ditch throughout the year.

H. Reptiles.

Gopher snakes were seen on different occasions at Pixley. Lizards seen were leopard and side-blotched.

I. Diseases.

None observed.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development.

Temporary repairs were made on the west exterior dike in January. After the west dike washed out again in the latter part of February, emergency repairs were made the first week of March with the refuge dragline. On March 27 emergency fills in the west dike were built up and leveled off with the bulldozer. In the latter part of May repairs were made to the cross dikes at Pixley which were washed out early in the year. In August a weak spot in number 2 cross dike, which was continually washing out, was completely beefed up and repaired with the dragline.

Fence maintenance, minor dike and road upkeep was done throughout the year.

B. Plantings.

1. Aquatics and Marsh Plants.

None.

2. Trees and Shrubs.

None planted.

3. Upland Herbaceous Plants.

None

4. Cultivated Crops.

No cultivated crops were planted at Pixley this year. Volunteer millet again produced an excellent crop on the east end of the developed area.

C. Collections and Receipts.

1. Seed or other Propagules.

No seeds or receipts were collected during this year.

2. Specimens.

No birds or mammals were collected or preserved for Calendar year 1967.

D. Control of Vegetation.

No mechanical or chemical control of vegetation during 1967.

E. Planned Burning.

None at Pixley.

F. Fires.

During late summer and early fall fire hazard in upland units is fairly high, because of the heavy ground cover of dead annual forbs and grasses. There were no fires during this period.

IV. RESOURCE MANAGEMENT

A. Grazing.

Range conditions at Pixley were very good due to the early abundance of rain.

Four permittees running 850 cattle on 3,060 acres utilized the refuge rangeland. Total AUM's were 2,202 with revenue of \$4,405.32 being collected for range use privileges. No conflict was observed between cattle and wildlife.

B. Haying.

None.

C. Fur Harvest.

None.

D. Timber Removal.

Not applicable.

E. Commercial Fishing.

Not applicable.

F. Other Uses.

There were no other uses of Pixley N.W.R.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Progress Report.

No field investigation or applied research was conducted on Pixley N.W.R.

VI. PUBLIC RELATIONS

A. Recreational Uses.

Very little recreational use was made at Pixley. People were noted viewing ducks and shorebirds from the shoulder of the Central Valley highway in March after heavy rains ponded some of section 19 close to the road.

B. Refuge Visitors.

Included with Kern report.

C. Refuge Participation.

Personal contact was made occasionally by refuge personnel with permittees Sam White, Kenneth Beck, James Rodari and Marion Howard. Personnel also conferred with Pixley Irrigation supervisor and ditch tender usually bi-weekly.

D. Hunting.

Pixley is closed to hunting at this time. There is considerable hunting along the boundary all season.

E. Violations.

There were no violations recorded at Pixley during 1967.

F. SAFETY.

Included in Kern report.

VII. OTHER ITEMS

A. Items of Interest.

Vandalism at Pixley included constant shooting of refuge boundary signs and the cutting of barbed wire gate twice on Road 88 by storage building.



FEB • 68

One of the interior cross dikes after the spring flood at Pixley. This portion of the dike was almost non-existent.



FEB • 68

This picture shows additional damage to the north perimeter dike.



FEB • 68

Pipe and riser washed out of center drain by spring flood at Pixley.



FEB • 68

Temporary repairs were started immediately however the muddy conditions hindered the repair operation.



As the soil dried out additional temporary repairs were made with dozer.



Soil was pushed up on the original dike site and then flattened with the tractor blade. At best this was the poorest of temporary repairs but was all that time and funds would allow. Additional money will be needed to make proper dikes for this unit.

SIGNATURE PAGE

Submitted by:

Leon A. Stockfield
(Signature)

Refuge Manager
(Title)

Date: February 9, 1968.

Approved, Regional Office:

Date: _____

(Signature)

(Title)

complete set

WATERFOWL

REFUGE FRUIT

MONTHS OF January TO April, 19 67

(1) Species	(2) Weeks of reporting period									
	1/1-7	1/8-14	1/15-21	1/22-28	1/29-2/4	2/5-11	2/12-18	2/19-25	2/26-3/4	3/5-11
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	1500	1500	1500	1500	1000	500	200	200	300	100
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other TOTAL	1500	1500	1500	1500	1000	500	200	200	300	100
Ducks:										
Mallard	8,000	8,000	2,000	2,000	2,000	2,000	2,000	2,000	8,000	5,000
Black										
Gadwall	100	100	50	50	50	50	50			
Baldpate	5,000	5,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Pintail	10,000	15,000	10,000	10,000	10,000	10,000	10,000	8,000	15,000	15,000
Green-winged teal	3,000	3,000	2,000	2,000	2,000	2,000	2,000	1,000	2,000	2,000
Blue-winged teal										
Cinnamon teal	300	200	200	200	200	200	200	1,000	200	2,000
Shoveler	1,000	1,000	2,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Wood										
Redhead	25	25	0	0	0	0	0	0	0	0
Ring-necked	25	25	0	0	0	0	0	0	0	0
Canvasback	10	10	0	0	0	0	0	0	0	0
Scaup	10	10	0	0	0	0	0	0	0	0
Goldeneye										
Bufflehead	10	10	0	0	0	0	0	0	0	0
Ruddy	200	200	200	200	10,000	10,000	10,000	10,000	20,000	20,000
Other TOTAL	33,000	32,500	16,150	16,150	16,300	16,300	16,300	16,300	29,000	29,000
Coot:	3,000	3,000	3,000	2,000	2,000	2,000	2,000	3,000	8,000	10,000

WATERFOWL
(Continuation Sheet)

REFUGE PISTY

MONTHS OF January TO April, 1967

(1) Species	(2) Weeks of reporting period								(3) Estimated	(4) Production	
	11	12	13	14	15	16	17	18	waterfowl days use	Broods: seen	Estimated total
<u>Swans:</u>											
Whistling Trumpeter											
<u>Geese:</u>											
Canada	0	0	0	0	1	0	0		58,107		
Cackling Brant											
White-fronted Snow											
Blue Other	0	0	0	0	1	0	0		58,107		
TOTAL											
<u>Ducks:</u>											
Mallard	900	300	300	300	200	30	20		167,800		
Black Gadwall	0	0	0	0	0	0	0		1,150		
Baldpate	4,000	4,000	4,000	4,000	1,100	0	10		357,700		
Pintail	2,000	500	100	100	15	20	15		859,300		
Green-winged teal	500	200	200	200	10	30	20		155,400		
Blue-winged teal											
Cinnamon teal	300	100	100	100	100	50	60		51,300		
Shoveler	500	100	100	100	75	35	20		76,500		
Wood Redhead	0	0	0	0	0	0	0		300		
Ring-necked Canvasback	0	0	0	0	0	0	0		300		
Scaup Goldeneye	0	0	0	0	0	0	0		100		
Bufflehead	0	0	0	0	2	0	0		15		
Ruddy Other	0	0	0	0	1	0	0		15		
TOTAL	6,200	5,200	4,000	4,000	1,000	150	100		2,100,500		
<u>Coot:</u>	4,000	2,000	2,000	2,000	900	900	500		350,100		

(over)

	(5)	(6)	(7)
	<u>Total Days Use</u>	<u>Peak Number</u>	<u>Total Production</u>
Swans	:	:	:
Geese	<u>95,107</u>	<u>1,500</u>	:
Ducks	<u>1,795,110</u>	<u>11,800</u>	:
Coots	<u>357,100</u>	<u>20,000</u>	:

SUMMARY

Principal feeding areas Flooded grasslands in T2N.

R2E Section 20 & 21.

Principal nesting areas None

Reported by _____

James E. Hood, Asst. Manager

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).

3-1756

Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE Pixley N.S.R.

MONTHS OF May TO Sept., 1967

(1) Species	(2) Weeks of reporting period								(3) Estimated	(4) Production	
	7/9-7/15	7/16-7/22	7/23-7/29	7/30-8/5	8/12-8/18	8/19-8/25	8/26-9/1	9/2-9/8	waterfowl days use	Broods: seen	Estimated total
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada											
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
Ducks:											
Mallard	30	65	70	100	50	100	30	100	18,100	13	150
Black											
Gadwall	0	0	0	10	10	20	20	20	500	0	0
Baldpate	10	10	10	0	0	0	0	0	700	0	0
Pintail	20	20	10	50	60	60	30	100	7,000	2	15
Green-winged teal	15	15	15	15	15	15	25	25	2,700	0	0
Blue-winged teal	0	0	0	0	0	0	0	0	35	0	0
Cinnamon teal	35	30	35	120	160	160	60	100	13,600	1	50
Shoveler	20	10	10	10	10	10	50	50	1,000	0	0
Wood											
Redhead											
Ring-necked	0	5	0	0	0	0	0	0	35	0	0
Canvasback											
Scaup											
Goldeneye											
Bufflehead											
Ruddy											
Other	5	5	10	10	10	10	10	15	700	0	0
TOTALS	125	135	160	435	515	430	200	2030	45,015	26	275
Coot:	100	150	150	75	75	75	75	75	24,500	10	30

(over)

	(5)	(6)	(7)	SUMMARY
	Total Days Use	Peak Number	Total Production	
Swans				Principal feeding areas <u>In the two units just west of</u>
Geese				<u>road 88.</u>
Ducks	<u>15,835</u>	<u>1,215</u>	<u>275</u>	Principal nesting areas <u>In unit just east of the large</u>
Coots	<u>21,535</u>	<u>300</u>	<u>30</u>	<u>pond.</u>
				Reported by <u>James R. Good, Asst. Refuge Manager</u>

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- (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).

WATERFOWL

REFUGE PILLEY N.W.R., Delano, California

MONTHS OF September TO December, 19 67

(1) Species	(2) Weeks of reporting period									
	9/3-9	9/10-16	9/17-23	9/24-30	10/1-7	10/8-14	10/15-21	10/22-28	10/29-11/4	11/5-11
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling	0	0	0	0	0	0	0	0	0	0
Trumpeter	0	0	0	0	0	0	0	0	0	0
Geese:										
Canada	0	0	0	0	0	0	0	0	0	0
Cackling	0	0	0	0	0	0	0	0	0	0
Brant	0	0	0	0	0	0	0	0	0	0
White-fronted	0	0	0	0	0	0	0	0	0	0
Snow	0	0	0	0	0	0	0	0	0	0
Blue	0	0	0	0	0	0	0	0	0	0
Other TOTAL GESE	0	0	0	0	0	0	0	0	0	0
Ducks:										
Mallard	500	500	750	1,000	1,000	1,200	1,500	1,700	2,500	2,500
Black	0	0	0	0	0	0	0	0	0	0
Gadwall	25	25	25	20	20	25	100	100	200	200
Baldpate	0	0	0	0	5	25	50	200	300	300
Pintail	200	1,000	1,000	800	400	500	500	700	1,000	1,500
Green-winged teal	25	50	1,500	2,500	2,500	2,800	5,000	8,000	1,800	5,000
Blue-winged teal	0	0	0	0	0	0	0	0	0	0
Cinnamon teal	500	600	600	600	500	500	500	600	200	800
Shoveler	50	50	50	100	150	175	200	200	200	500
Wood	0	0	0	0	0	0	5	5	5	5
Redhead	0	0	0	0	0	0	10	30	50	50
Ring-necked	0	0	0	0	0	0	10	20	25	25
Canvasback	0	0	0	0	0	0	0	0	0	0
Scaup	0	0	0	0	0	0	0	0	0	0
Goldeneye	0	0	0	0	0	0	0	0	0	0
Bufflehead	0	0	0	0	0	0	0	0	0	0
Ruddy	10	25	25	15	25	50	50	50	25	25
Other										
TOTAL DUCKS	1,310	2,250	3,950	5,035	4,800	4,975	7,925	11,805	8,405	10,305
Coot:	100	200	400	400	400	400	500	500	800	800

WATERFOWL
(Continuation Sheet)

REFUGE PILLEY N. W. E. Delano, California

MONTHS OF September TO December, 1967

(1) Species	(2) Weeks of reporting period							(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total	
	11/12-18	11/19-25	11/26-12/2	12/3-9	12/10-16	12/17-23	12/24-30		18	
Swans:										
Whistling	0	0	0	0	0	0	0	0		
Trumpeter	0	0	0	0	0	0	0	0		
Geese:										
Canada	10	15	20	50	50	150	200		3,145	
Cackling	0	0	0	10	25	50	100		1,205	
Bronze Canada	0	10	35	200	500	1,050	665		17,570	
White-fronted	0	0	0	0	0	25	25		350	
Snow	0	0	0	2	2	2	10		110	
Blue	0	0	0	0	0	0	0		0	
Other TOTAL GEES	10	25	55	262	627	1,277	1,000		22,830	
Ducks:										
Mallard	1,500	2,000	5,000	4,000	5,000	5,000	5,000		20,500	
Black	0	0	0	0	0	0	0		0	
Gadwall	200	200	100	100	200	200	200		72,380	
Baldpate	1,000	1,500	500	1,000	1,500	2,500	2,500		78,360	
Pintail	4,000	10,000	5,000	7,000	10,000	10,000	10,130		149,610	
Green-winged teal	4,500	5,000	2,000	2,500	3,000	3,000	3,000		378,525	
Blue-winged teal	0	0	0	0	0	0	0		0	
Cinnamon teal	200	200	100	100	100	100	100		30,900	
Shoveler	1,000	1,500	200	200	500	500	600		43,225	
Wood	0	0	0	0	0	0	0		110	
Redhead	10	50	10	10	10	10	10		1,750	
Ring-necked	10	10	10	10	10	10	10		1,050	
Canvasback	0	0	0	0	0	0	0		0	
Scaup	10	25	10	110	10	10	10		505	
Goldeneye	0	0	0	0	0	0	0		0	
Bufflehead	0	0	0	0	0	0	0		0	
Ruddy	25	25	50	100	100	100	170		6,000	
TOTAL DUCKS	12,455	20,510	12,900	15,030	20,430	21,430	22,030		1,277,375	
Coot:	1,000	2,000	3,600	4,000	4,000	4,000	4,000		189,700	

(over)

	(5)	(6)	(7)
	Total Days Use	Peak Number	Total Production
Swans	-	-	-
Geese	22,820	1,277	-
Ducks	1,299,375	22,030	-
Coots	189,700	4,000	-

SUMMARY

Principal feeding areas Flooded areas in Unit 1 and 2

Principal nesting areas _____

Reported by James R. Hood Asst. Refuge Manager

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).

MIGRATORY BIRDS
(other than waterfowl)

Refuge PILGRIM Months of January to April 1967

(1) Species Common Name	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total Estimated Number
	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	
I. <u>Water and Marsh Birds:</u>										
Sandhill crane	42	2/20	42	2/27	40	3/6				45
Common egret	2	3/27	2	3/27	Still present					5
Snowy egret	1	3/27	2	4/24	Still present					1
American bittern	1	3/27	2	4/24	Still present					6
II. <u>Shorebirds, Gulls and Terns:</u>										
Killdeer	Last period		100	4/23	Still present					125
Common snipe	5	4/3	10	4/3	Still present					20
Least sandpiper	Last period		10	4/3	Still present					15
Western sandpiper	5	4/20	15	4/23	Still present					20
American avocet	Last period		10	4/23	Still present					20
Black-necked stilt	Last period		12	4/10	Still present					20

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	4	4/19	16	4/23	Still present
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle	Last period	2	2/77	Still present	
Duck hawk					
Horned owl					
Magpie					
Raven					
Crow					
Marsh hawk	Last period	5	2/27	Still present	
Red-tailed hawk	3	Seen occasionally throughout period			6
Sparrow hawk	4	Seen occasionally throughout period			6
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 (Gaviiformes 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.

MIGRATORY BIRDS
(other than waterfowl)

Refuge Piscataway N.W.D. Months of May to Sept. 1967

(1) Species Common Name	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total Estimated Number
	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	
I. Water and Marsh Birds:										
Fared grebe	2	May 28	2	May 28	Still present					2
Great blue heron	1	May 19	5	Aug. 11	Still present					5
Snowy egret	Last period		2	May 3	Still present					2
Black-crowned night heron	7	May 11	7	May 11	2	June 2				10
II. Shorebirds, Gulls and Terns:										
Bittern	Last period		100	July 22	Still present				90	200
Black-bellied plover	1	Aug. 11	1	Aug. 11	1	Aug. 11				1
Greater yellowlegs	2	June 9	15	Aug. 9	25	Aug. 9				25
Least sandpiper	Last period		20	Aug. 27	Still present					20
Long-billed dowitcher	25	Aug. 9	30	Aug. 27	Still present					35
Western sandpiper	Last period		30	July 21	Still present					35
American Avocet	Last period		125	July 21	Still present				60	160
Black-necked stilt	Last period		100	July 21	Still present				90	170
Western gull	1	May 29	1	July 20	1	July 12				1
Common tern	1	June 11	1	July 2	Still present					1
Black tern	20	May 1	20	May 1	20	May 1				25

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u> Mourning dove White-winged dove	last period	50 June 11	Still present		75
IV. <u>Predaceous Birds:</u> Golden eagle Duck hawk Horned owl Magpie Raven Crow Screech owl Turkey vulture Red-tailed hawk Marsh hawk Sparrow hawk	One seen occasionally during this period	1 Aug. 29	1 Aug. 29	June 2 1 Aug. 29	1 1 2 1 1 2 2
	2 Aug. 11	2 Aug. 11	2 Aug. 11	2 Aug. 11	2
	1 May 28	1 May 28	Still present		1
	Seen occasionally during this period				1
	Seen occasionally during this period				1
	Seen periodically during this period				2
					2
				Reported by.....	James H. Good

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 (Gaviiformes 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.

MIGRATORY BIRDS
(other than waterfowl)

Refuge..... PIKLEY N.W.R. Months of September to December 1967

(1) Species Common Name	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total Estimated Number
	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	
I. Water and Marsh Birds:										
Eared grebe	Last	period	4	Oct. 4	Still	present				6
Western grebe	1	Sept. 15	2	Oct. 12	Still	present				2
Pied-billed grebe	2	Oct. 4	4	Dec. 18	Still	present				10
Double crested cormorant	1	Oct. 13	1	Oct. 13	1	Oct. 13				1
Great blue heron	Last	period	45	Dec. 18	Still	present				50
Common egret	2	Sept. 15	30	Dec. 22	Still	present				40
Snowy egret	Last	period	20	Dec. 22	Still	present				25
Black-crowned night heron	Last	period	1	Sept. 28	1	Sept. 28				5
American bittern	3	Oct. 15	8	Nov. 28	Still	present				10
Sandhill cranes	10	Nov. 3	130	Dec. 18	Still	present				150
II. Shorebirds, Gulls and Terns:										
Killdeer	Last	period	135	Nov. 12	Still	present				150
Common snipe	10	Oct. 13	15	Dec. 22	Still	present				20
Long-billed curlew	2	Sept. 4	1,200	Dec. 12	Still	present				1,500
Greater yellowlegs	Last	period	230	Dec. 12	Still	present				250
Least sandpiper	Last	period	900	Dec. 22	Still	present				1,000
Long-billed dowitcher	Last	period	1,800	Nov. 28	Still	present				2,000
Western sandpiper	Last	period	150	Dec. 12	Still	present				200
Marbled godwit	10		15	Nov. 28	15	Dec. 22				25
American avocet	Last	period	200	Nov. 12	Still	present				250
Black-necked stilt	Last	period	175	Sept. 3	10	Oct. 10				200
California gull	3	Nov. 12	10	Nov. 28	10	Nov. 28				10
Ring-billed gull	10	Dec. 12	10	Dec. 12	10	Dec. 22				10
Common tern	Last	period	1	July 2	1	Sept. 3				1

(over)

Doves and Pigeons:

Mourning dove	Last period	35	Sept. 28	Still present	40
White-winged dove					

Predaceous Birds:

Golden eagle	Last period	2	Oct. 29	Seen occasionally during this period	2
Duck Hawk					
Horned owl	Last period	1		Seen occasionally during this period	1
Magpie					
Raven					
Crow					
Turkey vulture	Last period			Seen periodically throughout this period	4
Red-tailed hawk				Seen occasionally during this period	5
Swainson's hawk	2	Nov. 3		Seen occasionally during this period	2
Marsh hawk	Last period			Seen throughout this period	6
Sparrow hawk				Seen periodically throughout this period	4

Reported by James R. Good

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 Pixley N.W.R. For 12-month period ending August 31, 19 67

Reported by James B. Good Title Asst. Refuge Manager

(1) Area or Unit Designation	(2) Habitat			(3) Use-days	(4) Breeding Population	(5) Production
	Type	Acreage				
Unit 1 Sec. 20-21	Crops		Ducks	3,410,550	125	275
	Upland	700	Geese	24,530		
	Marsh		Swans			
	Water	300	Coots	395,125	70	30
	Total	1,000	Total	3,801,205	185	305
Unit 2 Sec. 19-20	Crops		Ducks	159,184		
	Upland	575	Geese	24,034		
	Marsh		Swans	84		
	Water	5	Coots	100,210		
	Total	600	Total	284,512		
Unit 3 Sec. 16	Crops		Ducks			
	Upland	610	Geese			
	Marsh		Swans			
	Water		Coots			
	Total	610	Total			
Unit 4 Sec. 15	Crops		Ducks			
	Upland	600	Geese			
	Marsh		Swans			
	Water		Coots			
	Total	600	Total			
Unit 5 Sec. 22	Crops		Ducks			
	Upland	320	Geese			
	Marsh		Swans			
	Water		Coots			
	Total	320	Total			
Unit 6 Sec. 23	Crops		Ducks			
	Upland	540	Geese			
	Marsh		Swans			
	Water		Coots			
	Total	540	Total			
Unit 7 Sec. 17-18	Crops		Ducks			
	Upland	210	Geese			
	Marsh		Swans			
	Water		Coots			
	Total	210	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.

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 Pixley N.W.R. For 12-month period ending August 31, 1967

Reported by James R. Good Title Asst. Refuge Manager

(1) Area or Unit Designation	(2) Habitat		(3) Use-days	(4) Breeding Population	(5) Production
	Type	Acreage			
Unit 8 Sec. 20 R. 252	Crops		Ducks		
	Upland	<u>100</u>	Geese		
	Marsh		Swans		
	Water		Coots		
	Total	<u>100</u>	Total		
TOTAL	Crops		Ducks	<u>2,569,734</u>	<u>185</u>
	Upland	<u>2,505</u>	Geese	<u>32,104</u>	
	Marsh		Swans	<u>64</u>	
	Water	<u>308</u>	Coots	<u>107,035</u>	<u>30</u>
	Total	<u>2,813</u>	Total	<u>2,708,937</u>	<u>215</u>
	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.

UPLAND GAME BIRDS

Refuge PINNEY Months of January to April, 19 47

(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 broods obs'v'd.	Estimated Total	Percentage				Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked pheasant	Grasslands	800 acres	None	100	1 ♂	None	None	None	100	Numbers listed are estimates, detailed surveys were not made.

BIRD SURVEY REPORT

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.

UPLAND GAME BIRDS

Refuge Pixley N.W.R. Months of May to Sept., 1957

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'vd.	Estimated Total		Hunting	For Re- stocking	For Research		
Ring-necked pheasant	Grasslands, 870A	8	2		200:100				100	Pertinent information not specifically requested. List introductions here.

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.

UPLAND GAME BIRDS

Refuge PIVLET B.W.S. Months of September to December, 1967

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total		Hunting	For Re- stocking	For Research		
Ring-necked pheasant	Grasslands with some emergent Aquatics through- out 320A	12.8							25	Pertinent information not specifically requested. List introductions here.

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.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge PILLEY

Year ending April 30, 1957

(1) Species Common Name	(2) Density Cover Types & Total Acreage of Habitat Acres Per Animal		(3) Removals					(4) Disposition of Furs					(5) Total Popula- tion	
			Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated		Furs Destroyed
								Permit Number	Trappers Share	Refuge share				
Coyote	Grasslands, 8,000 Acres		None						None				2	
Kit fox													20	
Jackrabbit													1,000	
Cottontail rabbit													100	
Pihsar ground squirrel													100	
San Joaquin squirrel													50	
Striped skunk													5	

* List removals by Predator Animal Hunter

REMARKS:

Reported by James R. Good

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 unprime-ness 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.

Refuge PILLEY N.W.R.

Year 1967

Botulism

Lead Poisoning or other Disease

Period of outbreak None observed

Kind of disease None observed

Period of heaviest losses _____

Species affected _____

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered _____

Number lost _____

Source of infection _____

Areas affected (location and approximate acreage) _____

Water conditions _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.) _____

Food conditions _____

Condition of vegetation and invertebrate life _____

Remarks _____

Remarks _____

PUBLIC RELATIONS

(See Instructions on Reverse Side)

Refuge PIXLEY N.W.R.Calendar Year 1967

1. Visits

a. Hunting none b. Fishing none c. Miscellaneous 271 d. TOTAL VISITS 271

1a. Hunting (on refuge lands)

None

TYPE	HUNTERS	ACRES	MANAGED BY
Waterfowl	-	-	-
Upland Game	-	-	-
Big Game	-	-	-
Other			

Number of permanent blinds -Man-days of bow hunting included above -Estimated man-days of hunting on lands adjacent to
refuge 576

1b. Fishing (area open to fishing on refuge lands)

TYPE OF AREA	ACRES	MILES
Ponds or Lakes	-	-
Streams and Shores	-	-

1c. Miscellaneous Visits

Recreation none Official 3
Economic Use 268 Industrial none

2. Refuge Participation (groups)

TYPE OF ORGANIZATION	ON REFUGE		OFF REFUGE	
	NO. OF GROUPS	NUMBER IN GROUPS	NO. OF GROUPS	NUMBER IN GROUPS
Sportsmen Clubs		-		-
Bird and Garden Clubs		-		-
Schools		-		-
Service Clubs		-		-
Youth Groups		-	1	11
Professional-Scientific		-		-
Religious Groups		-		-
State or Federal Govt.		-		-
Other		-		-

3. Other Activities

NONE

TYPE	NUMBER	TYPE	NUMBER
Press Releases	-	Radio Presentations	-
Newspapers (P.R.'s sent to)	-	Exhibits	-
TV Presentations	-	Est. Exhibit Viewers	-

INSTRUCTIONS

Item 1: Total of a, b, and c, equal d.

"Visit" - definition. Any person who is on refuge lands or waters during a day or part thereof for the purpose of: hunting, fishing, bird-watching, recreation, business or economic use, official visit, or similar interest. INCLUDE - those who stop within the refuge while traveling on a public highway because of an interest in the area. EXCLUDE - persons engaged in oil or other industry not directly related to the refuge, persons using refuge as most direct route or principal avenue of traffic, and those boating on navigable rivers or the Intercoastal Canal, unless they stop to observe wildlife on the refuge.

Computing visits. Where actual counts are impractical, "sampling" is used with midweek and weekend samples varied by season or weather. A conversion factor of 3.5 (of passengers per car) is used when accurate figures are not available. Each refuge will develop a conversion factor for boats based on range of usage. Count a camper once for each 24-hour period or fraction thereof.

Item 1a: Acres - of refuge open for each type of hunting.

Managed hunts require check in and out of hunters, issuance of permits, or assignment of blinds.

Other - INCLUDE crow, fox, and similar hunting.

Lands adjacent to refuge. Normally considered within 1 mile or less of boundary, unless established sampling procedures cover a wider area. For big game hunting, the distance may be greater.

Item 1b: Acres of streams open to fishing, if practical; otherwise just miles open. Information on "shores" is primarily for coastal fishing.

Item 1c: Recreation. INCLUDE photography, observing wildlife, picnicking, swimming, boating, camping, visitor center use, tours, etc. TOTAL Recreation, Official, and Economic Use visits under Item 1.

Industrial. INCLUDE persons engaged in industry, i.e., oil industry or factories. EXCLUDE these from Item 1.

Item 2: INCLUDE the "On Refuge" groups in Items 1c and 1. In "Off Refuge" column include only those group meetings in which refuge employees actually participate. EXCLUDE these from Items 1c and 1.

Item 3: Exhibits - INCLUDE displays, fairs, parades, and exhibits OFF the refuge; EXCLUDE those ON.

Refuge PIXLEY N.W.R. Year 1967

Species	Collections and Receipts (Seeds, rootstocks, trees, shrubs)						Plantings (Marsh - Aquatic - Upland)						
	Amount (Lbs., bus., etc.)	(2) C or R	Date	Method or Source	Cost	(3) Total Amount on Hand	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount and Nature of Propagules	Date	Survival	Cause of Loss
NONE													

- (1) Report agronomic farm crops on Form NR-8
- (2) C = Collections and R = Receipts
- (3) Use "S" to denote surplus

Remarks:

Total acreage planted:

Marsh and aquatic _____
 Hedgerows, cover patches _____
 Food strips, food patches _____
 Forest plantings _____

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge PIXLEY N.W.R. County TULARE State CALIFORNIA

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water-fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
Millet (volunteer)	-	-	-	-	50	1,000	-	-	50
								Fallow Ag. Land	-

No. of Permittees: Agricultural Operations - Haying Operations - Grazing Operations 4

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
None				1. Cattle	850	2,202	11105.32	3060
				2. Other				-
				1. Total Refuge Acreage Under Cultivation				-
Hay - Wild				2. Acreage Cultivated as Service Operation				-

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

REFUGE GRAIN REPORT

Refuge PIXLEY N.W.H.

Months of January through December, 1956

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
NONE											

(8) Indicate shipping or collection points _____

(9) Grain is stored at all grain for Pixley is stored in Kern Refuge headquarters granary.

(10) Remarks _____

*See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

PIXLEY N.W.R.

ANNUAL REPORT OF PESTICIDE APPLICATION

Proposal Number

Reporting Year

1967

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		SEE BELOW						

10. Summary of results (continue on reverse side, if necessary)

NO CONTROL DONE DURING PERIOD