

BRIGANTINE

NARRATIVE REPORTS

JANUARY - DECEMBER, 1954

Branch of Wildlife Refuges

Narrative Report Routing Slip

Date 2/15, 1955

Mr. Salyer \_\_\_\_\_

Dr. Morley \_\_\_\_\_

Miss. Baum \_\_\_\_\_

Mr. DuMont \_\_\_\_\_

Section of Operations:

Mr. Ball \_\_\_\_\_

Mr. Rogan \_\_\_\_\_

Section of Land Management:

Mr. Ackerknecht \_\_\_\_\_

Section of Habitat Improvement:

Mr. Griffith \_\_\_\_\_

Mr. Kubichek \_\_\_\_\_

Dr. Bourn \_\_\_\_\_

Mr. Stiles \_\_\_\_\_

Stenographers:

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

Refuge

BRIGANTINE

Period

SEPT. — DEC., 1954

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NARRATIVE REPORT  
BRIGANTINE NATIONAL WILDLIFE REFUGE  
PERIOD ENDING DECEMBER 31, 1954  
OCEANVILLE, NEW JERSEY

I. GENERAL

A. WEATHER CONDITIONS:

<u>MONTH</u>	<u>PRECIPITATION</u>	<u>MAX.</u> <u>TEMP.</u>	<u>MIN.</u> <u>TEMP.</u>
September	5.06	74.6	63.3
October	1.67	68.2	55.4
November	4.04	53.2	40.3
December	3.68	43.0	31.1

The month of September in Atlantic City was somewhat warmer than normal while the rainfall was much above normal. The greatest amount of rain for any 24 hours period, 4.43 inches, occurred on the 10th and 11th during passage of Hurricane Edna. The fastest mile of wind was 65 mph from the northwest during morning of 11th. Some flooding on the usual places occurred during the early morning hours of the 11th. A number of store windows blown out, television antennas toppled, some utility wires snapped and also some trees toppled during period of gale winds; but as a general statement Hurricane Edna caused only minor damage along the Southern New Jersey Coastal Sections.

October was rather warm, sunny and dry, except for the moderate and beneficial rainfalls of the 29th and 30th. Highest temperature for month 89 degrees on 4th, established a new all time record for date for past 81 years; highest previous record was 83. Fastest mile of wind 66 mph from S.E. was caused by Hurricane Hazel, the center of which moved inland and passed our latitude about 150 miles west of Atlantic City. Considering the severity and intensity of Hurricane, one can say as a general statement, only minor damage occurred along Southern New Jersey Coastal Sections with little or no flooding of any consequence.

Generally speaking, November in Atlantic City was cool and the rainfall above normal. Average temperature 46.8 is 1.3 degrees below normal while total rainfall 4.04 inches is 0.72 inch above normal. Greatest amount any 24 hour period is 1.77 inches on 20th and 21st. During period of thunderstorm on 2d, hail occurred in the vicinity of stations such as Linwood, Pleasantville and Absecon. Fastest mile of wind, 60 mph from southeast occurred on 2d. Sunshine for month, 58%, is 1% more than normal. No rainfall occurred for a ten day period from

the 6th to 15th inclusive, but during the other 20 days, rainfall of 0.01 inch fell on 14 days.

December generally speaking was windy, average temperature somewhat above normal and precipitation slightly in excess of normal. The monthly sunshine is 3% below normal. Rainfall of one inch or more occurred on 2 days, the 14th and 18th. The greatest 24 hour snowfall was 0.7 inch on 5th-6th while the previous measurable snow in December was 1.6 inches on 14th, 1951. The fastest mile of wind, 61 mph from N.E., occurred on 14th. 5 days in entire month had a full 100% sunshine.

#### B. Water Conditions:

The control structure on this refuge is not complete but is hoped that it will be completed by the next time reporting is due. The impoundment is not complete. Therefore, we have no means of controlling the water levels at this time.

#### FIRES:

C. We had no uncontrolled fires on the area this period.

### II WILDLIFE

#### A. Migratory Birds.

##### 1. Populations and Behavior.

On September 23 a flock of 14 Canada geese visited our decoy pen and another flock of 7 came in on September 25. The seven evidently moved on but the 14 remained. During the period, the third week in September, 7 came back and we had 21 for two weeks. Then in moved 30 additional the first week in October. The first week in December 700 came into the pen each day. This occurred the second week and the third and fourth and fifth weeks it dropped down to 350.

The first Brant were observed on October 19 when a flock of 2,000 came coasting in. By the end of the day we had a total of 5,000 present. By the end of October we had between 75 and 100,000. This number increased by the end of November to 135,000. This continued through the end of December.

At the beginning of the period we had 75 mallards around and during October they increased to 1,000 and by the second week in November had climbed to 2,000. By the end of December we could only locate approximately 300.

Blacks increased from 500 at beginning of period to 22,000 by the third week in November and the population remained at that to end of December.



There was very little change in other species. The Scaup and Golden-eye show a decrease, but the writer is afraid that at the time of peak concentration there were not particularly observed. Because the first week in January revealed that we had a population of approximately 6,500 to 7,000 each.

## 2. Water and Marsh Birds.

The clapper rail population was approximately 10,000 during the first part of September but started declining around the latter part and by November 1st we had only 3,000 on the area. By December they had all moved on with the exception of a few that winter here. This would amount to about 500.

## 3. Shore Birds.

There seemed to be very little change in the population of Egrets with a population estimated at around 225 to 250. Laughing gulls showed very little change. Likewise no change noted in the Herring Gull population amounting to 6,000.

## 4. Food and Cover.

We have sufficient food for all the species. Widgeon grass is still prevalent in the impoundment area.

## 5. Botulism

None

## 6. Lead poisoning.

None

## B. Upland Game Birds.

### 1. Populations and Behavior.

There is no change in the population of Bob-white since last report. We still have approximately 400 on the area.

We have no ring-necked pheasants on the area.

### 2. Food and Cover.

We have sufficient food for all the species mentioned. Lespedeza and beggar-weed.

### 3. Disease.

None.

## C. BIG GAME

### 1. Population and Behavior.

One buck deer observed on the area in early December. His tracks were observed frequently from South of headquarters to borrow pit North of headquarters on Tract 32 and once down and back on the South Dike to Turtle Cove and Back.

### 2. Food and Cover.

Food for this species is scarce, especially in the winter months. However this one seems to survive ok.

### 3. Disease.

None

## D. FUR ANIMALS, PREDATORS, RODENTS AND OTHER MAMMALS.

### 1. Populations and Behavior.

The muskrat is definitely on the increase, especially on Tract No. 32 with an estimated population of 100. They were seen again during the period out as far as the cross dike. Cotton-tail rabbit population still remains high.

Mink are not as prevalent as were observed previously. Signs of this species are not as numerous as was.

### 2. Food and Cover.

We have plenty of food for mink and muskrat, but very scarce for Mr. Cotton-tail. It is expected that we will trap some of the rabbit and plant them on the Killcohook Refuge.

Cover conditions are ideal for all species concerned.

## E. Predaceous birds, including Crows, ravens and magpies.

### 1. Populations and Behavior.

We have a population of approximately 1,000 crows on the area. They are undesirables but they have to live too.

We still have the 4 bald-eagles on the area but have not seen the Golden eagle this year. Have been wondering why the baldie has not increased in population for the past four years.



## F. Fish

Clams and Oysters are the principal livelihood for most of the local Baymen. We have a few salt water rodsman or anglers. Weak fish perch and striped bass are present in tidal waters on the refuge.

## III REFUGE DEVELOPMENT AND MAINTENANCE

### A. Physical Development.

#### 1. General Discussion.

The successful bidder on the contract awarded for the construction of 13,174 linear feet of North Dike to put in an estimated 240,000 cubic yards of solid core fill and throw up muck on both sides, began clearing the borrow pit area on November 22, 1954 and started hauling in core fill on December 9, 1954. The writer went on leave December 10, 1954 and returned on 30th and found the first 1000 feet with width of 50 to 56 feet at base and 44 to 46' at crown at elevation 7.5 at Station 4 and anywhere from elevation 4 to 5' from Station 4 to 10. This figured an enormous excess of material and was reported to the Engineering Branch in the Regional Office. The core fill is to be placed in a completed dike 48 foot base on toe and 14 foot on crown at elevation 9. When the contract was awarded for the North Dike work we had to suspend our force account operations to give way to the contractor. Before suspending our operations we completed raising our South Main dike and Cross Dike to elevation 9. By this time we had completed constructing 4.1 miles and had to replace one mile which was taken out by the November 6, 1953 storm.

We moved the barge and dragline from the North side to South side of South Main dike at Station 21 to start the second casting for sod material sufficient to slop on 5 to 1 slope. We went from Station 20 to Station 40 in December.

With dozer we had to level off and slope our borrow pit where solid fill was taken. We refilled the cut-through at Station 21 where we brought the barge through. (See pictures at end of report)

During the period we completed reposting the entire Refuge Boundary and posted both the areas opened to public hunting.

We also constructed a Radio tower from pipe and put in the foundation for erecting same.

### B. Equipment.

#### 1. General Discussion.

We had to lay off the mechanic on December 31 after overhauling the Clutch and Transmission in D-7 Cable dozer. The equipment is setting up and is having to be maintained by Refuge personnel.

Tournapulls No. 3, 2 and 4 had minor repairs during the period. Put new rollers on D-8 Pusher, top rollers on D-7 Pusher and Cable dozer.



We also had to replace the bull gears, shafts and ring gears in the dragline. Maintenance work was done on all trucks and other heavy equipment.

C. Plantings.

1. Aquatic & Marsh Plantings.

None

2. Trees and Shrubs.

None

3. Upland Herbaceous Plants.

None

4. Cultivated Crops

None

D. Collections.

1. Seed and Other Propagules

None

E. Receipts of Seed and Nursery Stock.

Received 2,000 bushels corn and 100 bushels soybeans from Refuge plantings on the Killcohook Refuge.

IV ECONOMIC USE OF REFUGE.

A. Grazing

None

B. Haying

None

C. Fur Harvest

None

D. Timber Removal

None

E. Other Uses

None

## V. FIELD INVESTIGATION OR APPLIED RESEARCH

### A. Progress Report.

None

### B. Violations

None

## VI. PUBLIC RELATIONS

### A. Recreational Uses.

Under N. J. State supervision in cooperation with the U. S. Fish and Wildlife Service, two areas were opened to Public Shooting on the refuge this season. A total of approximately 400 hunters were checked on both areas and a total of 952 total kill reported. A total of 120 birds were lost as cripples or could not find. The kill is far greater than any other season since the areas were opened to public hunting.

### B. Visitors to the Refuge.

Mr. D. R. Gascoyne, Regional Director, Boston, Mass.  
 Mr. Arthur F. Miller, Regional Supervisor, Boston, Mass.  
 Mr. Donald Buck, Regional Engineer, Boston, Mass.  
 Mr. Robert J. Hawley, Game Agent, Toms River, N. J.  
 Mr. Harry Greenwald, Game Agent, Pennsville, N. J.  
 Mr. Paul Springer, Biologist, Patuxent Research Refuge  
 Mr. Vick Schmidt, Manager, State Refuge Tuckahoe  
 Mr. Tony Bauer, N. J. State Game and Fish  
 Many Bird Observers.

The Christmas Bird Count was taken while the writer was away on annual leave. No record of the number and species have been received from them. Those participating were from Haddon Heights, N. J.

## VII OTHER ITEMS OF INTEREST

### A. Items of Interest.

A contract to construct 13,174 linear feet of North Dike was awarded to the Reid Contracting Company of Woodbridge, New Jersey in the amount of \$131,387.00. The dike is to be completed to cross section 48' wide on toe and 14 feet on crown at elevation 9 for solid core fill and muck thrown up on each side on a 5 to 1 slope leaving a 20 foot berm on either side. The core fill is estimated at 240,000 cubic yards at .52 cents per yard and the muck on a .50 cents linear foot basis.

Mr. Clay L. Gifford reported for duty on September 5, 1954 as Refuge Aid.

During the period the Refuge Manager secured many items of surplus property and made several trips to inspect equipment which was not taken.

We shipped out 18 Chrysler Marine 8 cylinder motors (New) to Region 4 for their use in boats. These motors are ideal for boats 16 to 30 feet long. We put one 6 cylinder 115 h. p. in our gravey and it takes her for a ride.

*Henry E. Whitley*  
Henry E. Whitley  
Refuge Manager.

February 4, 1955

Approved:

*Arthur Miller*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





Barge lying in cut-through awaiting tide



Barge coming through on High tide



Barge coming through cut-through



... getting through successfully



Cut-through just prior to refilling



Tournapulls asleep after giving-way to Contractor





Contractor's clearing along West Line Tract 4



Contractor's clearing along South line Tract 4



Brush heaps by contractor prior to burning



Some of Contractor's equipment



Contractor's Tournapull at Station 2 on way to be loaded



Taken from Station 9 looking west showing the Nice boulevard. This is North Main dike being constructed by Private Contractor.



3-1750

Form NR-1

(Rev. March 1953)

## WATERFOWL

REFUGE Brigantine N. W. Refuge

MONTHS OF September TO December, 19<sup>55</sup>

[illegible]



WATERFOWL  
(Continuation Sheet)

MONTHS OF September 1 TO December 31, 1954

September 1

December 31 54

Weeks of reporting period

Estimated

: Production

[illegible]

Whistling  
Trumpeter

Canada

Cackling	600	600	700	700	350	350	350
----------	-----	-----	-----	-----	-----	-----	-----

Brant	300	300	100	100	300	300	300
White-fronted							

white-fronted	135,000	135,000	135,000	135,000	135,000	135,000	135,000
Snow							

[illegible][illegible]

Mallard	2000	2000	2500	300	300
Black					

Gadwall	22.000	22.000	22.000	15.000	15.000	22.000	22.000
---------	--------	--------	--------	--------	--------	--------	--------

[illegible]

Pintail						
Green-winged teal						

[illegible]

Cinnamon teal	500	500	500	500	500	500
Shoveler						

[illegible]

Redhead	150	150	150	100	100	50	50
---------	-----	-----	-----	-----	-----	----	----

[illegible][illegible]

Goldeneye	1100	1100	1500	1200	1200	2500	2500
-----------	------	------	------	------	------	------	------

Bufflehead	1000	1000	1000	1000	1000
Buddy	500	500	500	500	500

[illegible]

TOPT DES	DES	LOW NUMBER	TOPT LOCATION

**Coot:**

(over)



	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans	****	*****	*****
Geese	5,880,782	135,700	0
Ducks	1,572,415	27,850	0
Coots	---	---	---

# SUMMARY

Principal feeding areas entire refuge

Principal nesting areas none

Reported by Henry R. Whitley

## 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 Brigantine N. E. RefugeMonths of September 1 to December 31 1955

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Clapper Rail	800	9/1	6000	10/15	150	11/12				6,000
Curlew	82	9/1	2500	10/15	14	11/12				2,500
Yellow-legs, greater	40	9/15	800	10/15	5	12/18				1,000
Yellow-legs, lesser	22	9/15	800	10/15	4	12/18				1,000
Great Blue Heron	50	10/15	150	10/31	50	12/18				300

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons</u> :					
Mourning dove					
White-winged dove					
IV. <u>Predaceous Birds</u> :					
Golden eagle					
Duck hawk					
Horned owl					
Magpie					
Raven					
Crow					
<b>Bald Eagle</b>	<b>3</b>	<b>10/15</b>	<b>4</b>	<b>11/12</b>	<b>1</b>
				<b>12/31</b>	<b>4</b>
Reported by <b>Henry E. Whitley</b>					

#### 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.



3-1752

Form NR-2

(April 1946)

## UPLAND GAME BIRDS

1613

Refuge Brigantine N.W. RefugeMonths of September 1 to December 31, 19454

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Bob-white (Quail)	300 A Woodland 2nd Growth	1.3							400	
Ring-neck Pheasant	ditto									None observed this period.



## 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.

3-1752

Form NR-2

(April 1946)

## UPLAND GAME BIRDS

1613

Refuge Brigantine N.W. RefugeMonths of September 1 to December 31, 19454

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks	
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Bob-white (Quail)	300 A Woodland 2nd Growth	1.3				400	
Ring-neck Pheasant	ditto						None observed this period.



## 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.



3-1753  
Form NR-3  
(June 1945)

BIG GAME

Refuge Brigantine N. W. Refuge

Calendar Year 1954

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
none	none													

Remarks:

White-tailed deer sometimes range through upland bordering the refuge, but no evidence of their use of the few acres of upland on the west edge of the refuge has been found.

Reported by Henry E. Whitley



## INSTRUCTIONS

Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: 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 total number of young produced on refuge.
- (4) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE POPULATION: Give the estimated population of each species on the refuge at period of its greatest abundance and also as of Dec. 31.
- (8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

116000



Refuge Brigantine N.W. Refuge Year 1945

## Botulism

Period of outbreak none

Period of heaviest losses \_\_\_\_\_

## Losses:

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

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

Areas affected (location and approximate acreage) \_\_\_\_\_

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

Condition of vegetation and invertebrate life \_\_\_\_\_

Remarks \_\_\_\_\_

## Lead Poisoning or other Disease

Kind of disease none

Species affected \_\_\_\_\_

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

Number Recovered \_\_\_\_\_

Number lost \_\_\_\_\_

Source of infection \_\_\_\_\_

Water conditions \_\_\_\_\_

Food conditions \_\_\_\_\_

Remarks no diseases of any kind observed during period



Refuge Brigantine N. W. Refuge Year 1945

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number re- moved for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
None								

REMARKS:

PLANTINGS  
(Marsh - Aquatic - Upland)

Refuge Brigantine N.W. RefugeYear 1945

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Plant- ing	Survival	Cause of Loss	Remarks
<u>none</u>								

## TOTAL ACREAGE PLANTED:

Marsh and aquatic none  
 Hedgerows, cover patches none  
 Food strips, food patches none  
 Forest plantings none



[illegible]

none



DIRECTIONS FOR PREPARING FORM NR-8  
CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

Use or Location - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or 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. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, brome grass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. Unharvested - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the Bushels column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

COLLECTIONS AND RECEIPTS OF PLANTING STOCK  
(Seeds, rootstocks, trees, shrubs)

1620

Refuge Brigantine N. W. RefugeYear 1954

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
no planting materials collected or received								



Year 194~~x~~ 54

Totals:

Acresage cut for hay none      Tons of hay cut none      Total income Haying

Refuge Brigantine N.W. RefugeYear 1945

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B.F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
no timber removed during period								

Total acreage cut over noneTotal income none

No. of units removed B. F. \_\_\_\_\_

Method of slash disposal \_\_\_\_\_

Cords \_\_\_\_\_

Ties \_\_\_\_\_



## REFUGE GRAIN REPORT

Refuge Brigantine N. W. RefugeMonths of September through December, 1954

(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
See Killcohook N. W. Refuge Report.											

(8) Indicate shipping or collection points \_\_\_\_\_

(9) Grain is stored at \_\_\_\_\_

(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.