ROUTING SLIP DIVISION OF WILDLIFE REFUGES DATE: January 14, 1947.

MR. SALYER		SECTION OF HABITAT IMPROVEMENT:	
~~MR. ELLER~~		~~Mr. [illegible]~~	REG 4-7
MR. KRUMMES		~~Dr. Bourn~~	WSB 1/1X
~~MR. DUMONT~~	PRD 3/31	~~Miss Cook~~	Due 1-15-47
SECTION OF OPERATIONS:		SECTION OF LAND MANAGEMENT:	
Mr. Regan		~~Mr. Hall~~	
Mr. Ball		~~Mr. Krummes~~	
Miss Baum		~~Mr. Ackerknecht~~ ~~Mr. Dalton~~	WA 4-1
SECTION OF STRUCTURES:		STENOGRAPHERS:	
~~Mr. Taylor~~	MWT 3/27		

REMARKS:

MONTEZUMA NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

SEPTEMBER - DECEMBER 1946.

Return to:

11528

Montezuma National Wildlife Refuge
September-December, 1946

Index

Montezuma National Wildlife Refuge
September-December, 1946

I - GENERAL

A - Weather Conditions were rather normal except for the precipitation during December which was only 1.98 inches as compared with an average of about 3. Only slightly more than half of this was in the form of snow - 15.25 inches - which is way below the average for the month. Following is a summary of the conditions as recorded at the Mays Point Lock of the New York State Barge Canal.

Month	Snow	Rain	Max.T.	Min.T.
September		4.02	80	38
October		4.16	75	30
November		2.33	69	28
December	1.16	.82	63	6
Totals	1.16	11.33	80	6

B - Water Conditions were satisfactory and both the storage and main pools had to be lowered to normal during September and October. This was accomplished by opening the connecting spillway and Mays Point spillway slightly for several weeks. The storage pool has been maintained fairly constant at 384.5 and the main pool at 382.5.

II WILDLIFE

A - Migratory Birds have been conspicuous during this period by their unusual numbers while the migration thruout the country was reported to be very scanty. With the completion and flooding of the refuge pools the migratory population of waterfowl has gradually increased from about 10 thousand the first year to an estimated usage of 30 thousand during the fall of 1946. Hunting in the vicinity has also gradually improved until this year when it was very poor. Feeding was primarily on the aquatic and marsh vegetation of the pools but some groups utilized refuge fields of buckwheat, millet and smartweed in the immediate vicinity. It is notable that the ducks did not follow their usual practice of feeding in grain fields near the refuge. Hunters reported no ducks at all in nearby fields and very few on Cayuga Lake during the entire season while concentrations of 20 thousand gathered on the refuge.

Pintails, baldpate, blacks and mallards comprised the bulk of the migration but there were also increases in blue and green winged teal. Many of the blacks, mallard and blue winged teal were produced on the refuge and around ponds, streams and sloughs in the vicinity.

Food and Cover was very satisfactory, the rank production of sago and bushy pondweed, smartweeds, duckweed, bulrush, chufa, burreed, coontail and other food plants in lesser quantity serving their purpose well. Sections of marsh denuded of cattail by muskrats have provided excellent protected openings for ducks. Larger open water areas were little used except to some extent by scaup, canvasback and redhead.

A few shorebirds stopped in this season, primarily greater and lesser yellow-legs, killdeer and Wilson snipe. The few mud flats and shores along dikes afforded the primary attraction for this group.

B - Upland Game Birds consisting of the ring-necked pheasant were conspicuous by their near absence. A few broods were successfully produced but their numbers are still very small. This condition is comparable to that in general thruout the State, the result of the severe winter of two years ago.

C - Big Game Animals continued on an even keel as regards population. Bucks were not too common althe hunters took a fair number in the vicinity during the fall open season. While there are plenty of food and yarding areas on the refuge the present number of deer is about right so that they do not become a nuisance in nearby farm fields. Deer feed every night on the lawn in front of the headquarters dwelling.

D - Fur Animals, Predators, etc - Muskrats have increased as per usual and in spite of the depletion of some of the cattail area it is believed that the population is just as great as usual.- about 20,000. The storage pool marsh near highway 414 is the heaviest pppulated and it is expected we'll trap from this 100-acre marsh alone 3500 - 5000 muskrats. For several years our total removal has been near 8000 and it is possible the figure may approach 10,000 this year. During September the writer flew by plane over the marshes in order to gain a general idea of house concentrations and it is believed that a very close estimate can be made this way of the number of houses per acre.

In several denuded areas of the main pool muskrats have continued to build houses and it is planned to trap these live houses as well as feeders in these locations. This seems to be one condition for which nature does not provide since it has been our experience that the meagre food supply that does exist there is soon depleted and the rats then die of starvation in their houses.

Since the sales figures usually are not known for reporting on the January-April NR-4 Form we will report here the proceeds from last winter's muskrat hides. On July 23, 1946 there were sold 3705 muskrat hides for a net total of $14,684.14 which amounts to $3.95 per pelt. According to all indications prices won't be quite so good this year.

During the fall predator program 3 trappers covering the entire refuge removed 109 raccoon, 33 mink, 21 red fox and 6 gray fox. This is similar to the normal catch except that a few more fox were taken than usual. We feel that there is still a populations of over 500 raccoon and that trapping alone never will sufficiently reduce the animal to keep it in proper control. Damage is continually

observed and reported during the summer and fall both on and in the vicinity of the refuge. Duck traps were molested intermittently by raccoon and many waterfowl nests are without question also destroyed.

Other fur animals include the possum, skunk, weasel and gray squirrel.

E - Predaceous Birds consist primarily of crows which have become so numerous in the vicinity that their numbers must be many thousand. Destruction of birds eggs is apparently their ffequent and primary objective.

F - Fish in the pools include carp, bullheads and dogfish with the emphasis on carp. This scavenger is increasing each year and is rather difficult to seine in the refuge pools.

SR-6 Mgt C

III REFUGE DEVELOPMENT and MAINTENANCE

A - Physical - Under this category the following items were handled;

- Painted patrolman's residence and the Hq tower cab.
- Poured improved concrete floor in Hq dwelling.
- Poured outside basement wall & installed foundation drain in patrolman's dwelling to help waterproof it.
- Hauled 30 truck loads of cinders for road and driveway improvement.
- Shipped D6 Caterpillar, angledozer and LeTourneau carryall.
- Installed bottled gas line at patrolman's residenc.e.
- Painted several rooms in patrolman's dwelling.
- Repaired numerous doors, windows and storm windows.
- Installed outside lights at office and patrolman's dwelling.
- Put up 6-foot chicken wire on exhibition pond fence to hold pinioned ducks.
- Trimmed around and maintained boundary signs.
- Creosoted the White Brook Spillway catwalk.
- Maintained water pumps in 3 buildings.
- Overhauled 2 pickups and 1 dump truck.
- Repaired plumbing, built coal bin and cupboards in Hq dwelling.
- Made a shipment of barbed wire.
- Collected wildcelery and shipped it as well as millet & smartweed.
- Installed front pull hook assembly on Caterpillar 22 tractor.
- Repaired grate in furnace.
- Constructed electric motor mounting & flexible shaft outfit.

Many other smaller maintenance jobs were too numerous to mention such as(Caesar) tire repairs, office and shop cleanup, and welding and shop jobs to facilitate each day's work, and many regularly recurring jobs.

B - Plantings included the sowing of wild millet and smartweed seed along a section of newly graded dike slope. However, being so late in the fall germination could not be expected until spring. Cultivated crops raised by croppers for the Government share were oats, corn, buckwheat, wild millet and smartweed. All were successful and good yields were produced but the corn was entirely destroyed by crows, blackbirds and raccoon before it was quite ready to harvest.

C - Collections consisted of the hand gathering of about 50 pounds of wildcelery seed pods in Cayuga Lake for shipment to Moosehorn.

IV ECONOMIC USE

C - Fur Harvest - The take of the three trappers on the predator program was described under item II-D. Average prices obtained by the trappers were about $2 for raccoon, $15 for mink and $3 for fox. Trappers were given 60 % of these furs for their share.

D - Timber Removal - during this time has been for the purpose of making clearings in the tract of swamp timber south of Highway 20. Openings then provide shrubs and reproduction of value as food for more wildlife such as deer and various song birds. The sales have been at the rate of $.50 per standard cord.

E - Other Uses include the sale of flagg(cattail) for cooperage from areas of the marsh where openings would be desirable. All such cuttings do not necessarily mean an opening but under certain conditions the cattail is killed out as a result of such cutting.

V FIELD INVESTIGATION or RESEARCH

Banding waterfowl was continued this year but a relatively small number were taken due to the fluctuating water levels. Even a 1 - 2 inch change in level affects the operation of a duck trap in the locations where it is necessary that we place them. The writer is planning the development of a floating raft for a trap that can be towed into into any desirable location and not affected by minor changes in water level.

VI PUBLIC RELATIONS

B - Refuge Visitors recorded are as follows:

Mr Arthur Miller, Refuge Supervisor,	9/23,24,	inspection
Mr Philip Dumont, Central Office,	10/20	inspection
Mr Arthur Miller, Refuge Supervisor,	11/13,14	inspection
Mr Johnson, Central Office	11/13	"
Mr Henry Markus, Reg. Office	11/13	"
Sgt LJFox, State Police	12/7	investigation

In addition several hundred hunters visited the refuge during the period as well as the general public. Many hunters stopped in after an unsuccessful morning after ducks.

C - Refuge Participation - The Service film, Haunts For the Hunted, was shown to the newly organized Montezuma Sportsmens Club of about 100 members.

F - Violations - None were apprehended this period but the usual long hours were spent on patrol to prevent hunting of deer on and in the vicinity of the refuge.

VII OTHER ITEMS

A great amount of the manager's time during the period was required in the preparation of management and trapping programs, reports and records. Too much time is also required for typing, card records, filing memoranda and regulations and the numerous routine items. A full time clerk should be a "must" for the refuge in 1947 in order to keep pace with the growing programs.

Arthur Fraiewl	Merton Radway
Regional Officer	Refuge Manager
1-8-47	January 7, 1947
Date	Date

WATERFOWL

Refuge Montezuma Months of September to December 1946

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I. Swans:									
Whistling swan									
II. Geese:									
Canada goose			500	10/10	25	10/16			500
Cackling goose									
Brant									
White-fronted goose									
Snow goose									
Blue goose									
III. Ducks:									
Mallard			6000	10/30	200	11/30			10000
Black duck			5000	10/30	200	11/30			8000
Gadwall									
Baldpate			1500	11/5	100	12/3			2000
Pintail			5000	11/5	500	11/25			6000
Green-winged teal			500	11/6	25	11/15			800
Blue-winged teal			800	10/10	25	11/15			1000
Cinnamon teal									
Shoveller			25	11/5					50
Wood duck			1000	10/25	100	10/30			2000
Redhead			100	11/20	100	12/1			200
Ring-necked duck			50	11/20	5	11/30			100
Canvas-back			500	11/20	100	12/3			1000
Scaup			800	11/25	500	12/5			1000
Golden-eye			25	11/25	2	12/5			50
Buffle-head			100	11/5	25	11/25			200
Ruddy duck			50	10/20					100
American merganser			50	12/29					100
IV. Coot: Flor.gallinulo			800	11/1	100	11/20			1000
American coot			2000	11/6	100	11/20			2200

3-1750
(July 1946)

(over)

Form NR-1

SUMMARIES

Total Production:

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period 36,000

Peak waterfowl numbers 20,000

Areas used by concentrations All areas at various times.

Principal nesting areas this season _____

Reported by _____

Merton Radway, Refuge Mgr.

INSTRUCTIONS

(1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.

(2) First Seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.

(3) Peak Concentration: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned in the reporting period.

(5) Young Produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

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

2338

3-1751
Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)

Refuge Montezuma Months of September to December 1946

(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. Water and Marsh Birds:										
pied billed grebe			50	9/15	5	10/15				100
herring gull			50	11/25						500
American bittern			50							50
great blue heron			150	9/30	2	11/15				200
bl. crowned night heron			200	9/30	25	11/10				300
Wilsons snipe			10	9/30						50
greater yellow-legs			25	9/30						100
lesser yellow-legs			50	9/30						200
II. Shorebirds, Gulls and Terns:										
black tern			100	9/20	50	10/5				300

(over)

(1)	(2)		(3)		(4)		(5)		(6)
III. Doves and Pigeons:									
Mourning dove			10	9/30					100
White-winged dove									
IV. Predaceous Birds:									
Golden eagle									
Duck hawk									
Horned owl									Est. 10
Magpie									
Raven									
Crow			5000	Anytime					25,000
bald eagle			10						25

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 Gruiiformes)
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 Montezuma Months of September to December, 194[illegible]

(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.
Ring necked pheasant	Revert. agric. Grass-brush								50 10	Previous estimate still too high.

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 Montezuma Calendar Year 1946

(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	
White tailed deer	Swamp-brush	25							2 (Highway Loss) 10			60 Previous estimate believed too high.	60	1-10

Remarks:

Reported by _____

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 <u>each species</u> 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.

116008

Form NR-6 FISH 1617

Refuge Montezuma Year 1946

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
carp	Very common							
bullheads	Searce							

REMARKS: No Use Permits were issued thru the year for commercial fishing.
No restocking and no removals.

Form NR-7

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge Montezuma Year 194 6

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Wild millet and Smartweed (Largeseed & nodding)	Dike slope (Newly graded)	50 lb. acre (seed old)	About 2 ac.	Seed	9/46			

TOTAL ACREAGE PLANTED:

Marsh and aquatic 2 acres
Hedgerows, cover patches
Food strips, food patches
Forest plantings

1618

3-1758
Form NR-8
(April 1946)

CULTIVATED CROPS

Refuge Montezuma Year 1946

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Location	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
							Harvested		Unharvested		
					Acres	Bu. Harvested	Acres	Bu.	Acres	Bu.	
Anthony Salerno	12825	Agric Fields 5,6,7,9,10	None								Fields too wet this season
John Salerno	8565	Hay Field 1, Agric Fields 3,14,15	Beans	20 bu	30	500					
			Corn	20 bu	5	None			3	60	Eaten by birds prior to harvest
			Oats	20 bu	5	100	1	20			
			Smartweed	5 bu					1	5	
Roland Belknap	12650	Parts of LA Tr 28a & 29	Beans	22 bu	25	550					
			Buckwheat	10 bu					2	10	
			W.Millet	8 bu					1	8	
			Smartweed	5 bu					1	5	
			Corn	20 bu					1	20	

Summary of Crops Grown:

Crop	Acreage	Permittee's Share Acres	Permittee's Share Bushels	Government's Share Harvested Acres	Government's Share Harvested Bu.	Government's Share Unharvested Acres	Government's Share Unharvested Bu.
Beans	42	42	1050				
Corn	9	5	None			4	80
Oats	6	5	100	1	20		
Smartweed	2					2	10
Wild millet	1					1	8

Total Revenue $

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, bromegrass, 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.

3-1759
Form NR-9

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

Refuge Montezuma Year 1946

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
wildcelery seed pods	50 lb.	October,1946	By hand with beat	@ $.10 lb.				Shipped to Moosehorn

Form NR-10

HAYING AND GRAZING

Refuge Montezuma Year 194 6

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
Salvatore Giardina	12830	Near Refuge Headquarters	5 acres		5 tons	7/29 to 8/31/46	$1.00	$5.00	Poor hay.

Totals:

Acreage grazed _____ Animal use months _____ Total income Grazing _____

Acreage cut for hay 5 acres Tons of hay cut 5 tons Total income Haying $5.00

1621

3-1761
Form NR-11

TIMBER REMOVAL

Refuge Montezuma Year 194 6

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
John Forjone	12837	South End		40 cords	$ .75	30.00	Clear cut	Swp. maple, elm and ash
Roland Belknap	12832	South end		10 cords	.50	5.00	clear cut	"
Stewart Chalker	12827	Tract 12		14 cords	.25	3.50	clear cut	"
Cecil Reynolds	12831	Tract 5		25 cords	1.00	25.00	clear cut	"
Robert Scott	12826	Tract 5		6 cords	1.00	6.00	clear cut	"
Soc. Vac. Oil Co.	16275	Tract 28a		100 cords	.25	25.00	clear cut	"
Soc. Vac. Oil Co.	12829	Tract 28a		49 cords	.25	12.25	clear cut	"
Robert Scott	12833	Tract 5		6 cords	1.00	6.00	clear cut	"
				Flagg Removal				
Foster Helmer	12828	Main pool		200 bundles	.01	2.00	—	cattail
Foster Helmer	12834	Main pool		500 "	.01	5.00		"
LeRoy Goldsmith	12836	27a & 53		250 "	.01	2.50		"
				950 bundles		9.50		

Total acreage cut over.....

Total income $112.75

No. of units removed B. F.....

Cords 250

Ties.....

Method of slash disposal Scatter

3-1761
Form NR-11

TIMBER REMOVAL

Refuge Montezuma Year 1946

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
John Ferjone	12837	South End		40 cords	$ .75	$30.00	Clear cut	Sug. maple, oak and ash
Roland Folkemp	12832	South end		10 cords	.80	8.00	clear cut	"
Stewart Chalfor	12827	Tract 12		14 cords	.55	7.70	clear cut	"
Cecil Reynolds	12831	Tract 5		25 cords	1.00	25.00	clear cut	"
Robert Scott	12826	Tract 5		6 cords	1.00	6.00	clear cut	"
Sun. Vac. Oil Co.	12279	Tract 28a		100 cords	.25	25.00	clear cut	"
Sun. Vac. Oil Co.	12280	Tract 28a		49 cords	.25	12.25	clear cut	"
Robert Scott	12825	Tract 5		6 cords	1.00	6.00	clear cut	"
				Fence Removal				
Tudor Heimer	12828	Main pool		200 bundles	.02	2.00	—	cattail
Tudor Heimer	12834	Main pool		300 "	.02	6.00		"
Leroy Goldsmith	12836	27a & 25		290 "	.01	2.90		"
				890 bundles		8.90		

Total acreage cut over ..... Total income $123.70

No. of units removed B. F. ..... Method of slash disposal Burnt

Cords 890

Ties .....

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