

Chincoteague National Wildlife Refuge
Chincoteague, Virginia

ANNUAL NARRATIVE REPORT
Calendar Year 1981

U.S. Department of the Interior
Fish and Wildlife Service
NATIONAL WILDLIFE REFUGE SYSTEM

MAR 16 1982



#12-13-81 EEB

Personnel

<u>NAME</u>	<u>TITLE</u>	<u>GRADE</u>	<u>- EOD</u>	<u>STATUS</u>
1. Dennis F. Holland	Refuge Manager	GM-13		PFT
2. Deborah S. Paul	Asst. Refuge Manager	GS-7	01/05/81	PFT
3. Evan P. Gallagher	Biological Technician	GS-5		PFT
4. James P. Oland	Asst. Refuge Manager	GS-11		PFT
5. James H. Kenyon	Recreation Assistant	GS-5		PFT
6. Stanley A. Skutek	Outdoor Recreation Planner	GS-7	09/06/81	CS
7. Robert J. Bowden	Administrative Officer	GS-7		PFT
8. Susan W. Merritt	Secretary (Typing)	GS-5		PFT
9. Yvonne M. Schultz	Outdoor Recreation Planner	GS-7		PFT

-continued-

Review and Approvals

[Signature] 2/25/82
 Submitted By Date

[Signature] 2/25/82
 Area Office Review Date

[Signature] 3/8/82
 Regional Office Review Date



#12-5-81 DSP

Personnel

<u>NAME</u>	<u>TITLE</u>	<u>GRADE</u>	<u>LOD</u>	<u>STATUS</u>
10. Kevin Bowden	YACC Enrollee			
11. Noah S. Williams	Maintenance Worker	WG-7		PFT
12. Julie Ann Beutel	YACC Enrollee			
13. Carlton W. Collins, Jr.	Maintenance Worker	WG-5		PPT
14. Sheryl B. Lewis	Clerk-typist	GS-3		PPT
15. Otho D. Justice	Maintenance Supervisor	WS-8		PFT
16. Robert E. Cherrix	Maintenance Worker	WG-7		PFT
17. Grover E. Wilgus, Jr.	Maintenance Worker	WG-7		PPT
18. Paul E. Benvenuti	Outdoor Rec. Planner	GS-11		PFT
19. Irvin W. Ailes	Wildlife Biologist	GS-9		PFT
20. Edward E. Britton	Asst. Refuge Manager	GS-7		PFT
Jeffrey E. Marshall	Laborer	WG-2		CS
Gerald E. Franz	Outdoor Rec. Planner	GS-7	05/03/81	PFT
Thomas A. McFadden	Outdoor Rec. Planner	GS-5	07/12/81	CS



YACC PERSONNEL

1. Sherry Pettit
2. Yvonne Lewis
3. Peggy Marshall
4. Robert Pettit
5. Ceylon Trader
6. Juergen Ervin
7. Dean Southall

Sam Clark
 Douglas Dickerson
 Douglas Fish
 Sharon McIntosh
 Curtis Merritt
 Pam Phillips
 Kim Shank
 Ron Strickland
 Eddie Taylor
 George Tripp
 Michael White
 Stuart Reed

George Leonard
 David Heiston
 Bobby Scott
 Susan Poulson
 Julie Ann Beutel
 Kevin Bowden
 Michael Clark
 Jarvis Bailey
 Stevie Harris
 Dexter Jackson
 Eric Tomlinson

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K. FEEDBACK

A. HIGHLIGHTS

Major efforts to improve habitat through use of prescribed burning were initiated during January and February. (Section F)

On August 5, 1981, Maintenance Worker Robert E. Cherrix was seriously injured while working on a portable aluminum extension ladder. (Section E-6)

Assistant Manager Ed Britton was nominated as one of the Outstanding Young Men of America for 1981 - an honor that recognizes young men throughout the nation for professional achievement and community service. Ed's biography is featured in the 1981 Outstanding Young Men of America awards volume.

On August 24 Assistant Refuge Manager James P. Oland was awarded a Quality Performance Award. The award cited Jim for his superior degree of performance when he assumed the position of Acting Refuge Manager during the period 02/21/80 to 09/21/80. A Quality Within Grade was awarded. The award was presented by Regional Director Howard N. Larsen and Manager Dennis F. Holland.

Overwash of the primary dune system occurred at several locations on Tom's Cove Hook starting with high tides on November 13th and 15th.

Six Armco CMP water control structures were placed with new concrete structures under our FY81 BLHP project. (Section I-2)

A visitor died of a heart attack in the refuge VCS on July 11, 1981. CPR administered by Paul Benvenuti and subsequent efforts by local medical personnel were unsuccessful.

B. CLIMATIC CONDITIONS

Climatic and habitat conditions over the last few years have favored the establishment of dense stands of Three-square, Dwarf and Tall Spikerush and Sago pondweed in the impoundments. This resulted in large concentrations of Greater snow geese and Canada geese and ducks spending much of December feeding on the refuge instead of the mainland. Consequently waterfowl hunting around refuge boundaries were poorer than previous years. The abundant rainfall in December (5.5 inches) brought water levels in all impoundments to near maximum depths. A total of 39 inches of rain fell in 1981.

Northeast winds caused flooding and destruction of the bathhouse and other visitor facilities at the NPS portion of the refuge beach. A 2 mile section of the Spur Road (paved with chip and seal) was closed in October and will remain closed all winter. Continuous flooding along this beach section has destroyed the dunes in several areas and the pavement is now being destroyed. All visitor facilities at the



#6-14-81 DSP
Menhaden, or "bunker" litter the beach after a mysterious washup of the smelly fish in June.



#10-7-81 JHK
Overwash along the Spur Road was a frequent problem late in the year, and in November most of the road was closed off to regular traffic.

beach are being removed and replacement at another location is questionable due to funding. Major beach work will be in order to accomodate the million plus sunbathers that visit the Chincoteague Refuge beach.

<u>Month</u>	<u>Temperature</u>			<u>Precipitation (inches)</u>	<u>Max. Wind (mph)</u>
	<u>Max.</u>	<u>Min.</u>	<u>Average</u>		
Jan.	61	3	30	.74	40
Feb.	63	15	39	3.08	23
March	75	22	43	1.37	17
April	86	32	56	3.70	20
May	83	41	61	3.09	15
June	95	53	74	2.86	15
July	94	58	77	3.85	16
Aug.	93	54	73	2.79	21
Sept.	88	47	69	4.36	33
Oct.	84	36	57	2.32	40
Nov.	70	27	41	.80	41
Dec.	65	12	38	5.5	42

C. LAND ACQUISITION

1. Fee Title

A final environmental assessment was received for the proposed acquisition of Wildcat Marsh. This parcel of land is located on the north end of Chincoteague Island west of the Wash Flats portion of the refuge. The area, currently owned by a group of businessmen, has historically been a site for hunting by local residents. If the area is acquired, management plans will need to be developed with careful consideration being given to this historic use and the need to maintain a good relationship between the refuge and the local community.

D. PLANNING

2. Management Plan

Two management plans prepared in CY 81 are in the review process at Area and Regional Offices. These are 1) the Wash Flats management plan which specifically identifies management goals for shorebirds, waterfowl and endangered species (Peregrine falcon); 2) Trapping management plan which identifies species to be trapped and methods to be used.

4. Compliance with Environmental Mandates

Environmental assessments and Corps of Engineers permit procedures were completed for the water control structures and dike work associated with the FY 81 BLHP project. Additional information was provided for revision of the environmental assessment, prepared for a storage building which was funded by a congressional add-on in FY 79. Still no building.

5. Research and Investigations

Chincoteague NR81 - "A Behavioral Study of Delmarva Peninsula Fox Squirrels (*Sciurus niger cinereus*) through Radio Telemetry" (51570-81-1)

This study was established by the refuge biologist to gather data on fox squirrel response to relocation into new habitat and to determine range movements for a possible transplant to selected areas off the refuge. Initially, two squirrels were fitted with radio collars and released in the northern part of the refuge (Ragged Point). After a couple of false starts, due to malfunction of collars, a male and female were successfully released and tracked for three months. Tentative results indicate extensive movement by both sexes throughout the transplant area and non-use of boxes placed in the area. This study will continue through the end of the fiscal year.

Chincoteague NR81 - "Winter Dietary Requirements of Sika Deer (*Cervus nippon*) on Chincoteague National Wildlife Refuge" (51570-81-2)

Ms. Rene' Kochenberger, a graduate student from Millersville State College, PA initiated this study in October 1980. The objective of this study was to determine the winter dietary requirements of sika deer on the refuge with a concurrent study on the use of dorsal spot patterns for individual identification. Ms. Kochenberger had planned to identify important food items of sika deer from late fall through early spring; the time most critical for deer nutritional needs. Data will be collected by direct observation, study of browsed vegetation, and collection of rumen samples during the refuge bow and gun hunt. This study was to conclude in September 1981. As of yet, no report has been received.



#11-17-81 DSP
The attachment of radio telemetry collars to endangered Delmarva fox squirrels will allow monitoring of range movements of transplanted squirrels. This information will be valuable in planning future transplanting programs to areas off the refuge.



#7-14-81 DSP
The abomasal parasite count (APC) technique is not of value in monitoring sika herd health, according to findings of a herd check conducted by the Southeastern Cooperative Wildlife Disease Study Team in July. The pathogen-free sika appear to have a distinct edge in competing with the native white-tailed deer.

Chincoteague NR81 - "A Study of Raccoon (*Procyon lotor*) Abundance on
Chincoteague National Wildlife Refuge, VA (51570-81-3)

The refuge biologist initiated this study to determine the relative abundance of raccoon on the refuge and to determine the reliability of several survey methods of determining raccoon abundance. The methods employed included dummy nest transects, scent station transects, and night surveys with a high intensity light.

Results based on the three methods above indicate raccoons are quite abundant on parts of the refuge. Dummy nest results have shown predation by raccoons as high as 53% of nests destroyed. Of those nests destroyed, 63% were within three days of placement.

Results of the scent stations and the beach surveys were less conclusive. Scent station data revealed a visitation rate of less than 20% over a three night period. The beach survey was conducted from 5-11 through 8-25; a total of six survey nights. An average of seven raccoons with a range of 1-12 per night were found from the 7th to the 17th km along the beach. No raccoons were observed south of the 7 km mark.

Chincoteague NR81 - "Vegetative and Reproductive Patterns in the
Dioecious Woody Composite (*Baccharis halimifolia*) (51570-81-4)

This study was initiated in October 1980 by Ms. Vera Krischik, a graduate student from the University of Maryland, College Park, MD. This study is concerned with growth and reproductive patterns in male and female *Baccharis halimifolia*. Analysis of allocation of resources among defensive, vegetative and reproductive structures may reveal differential male and female strategies that exist among these categories. These allocation patterns will then be related to herbivory by generalist and specialist insects. This study will continue through the end of CY 82.

Chincoteague NR81 - "Snapping Turtle Food Habits Within the Managed
Impoundments on Chincoteague National Wildlife Refuge (51570-81-5)

Snapping turtles (*Chelydra serpentina*) are common in the managed impoundments on Chincoteague National Wildlife Refuge. Previous studies on snapping turtles have reported that their food habits are proportionate with food availability. During the waterfowl breeding season, water levels (determined by rainfall) in the refuge impoundments are generally low causing broods to be concentrated wherever water is available. The purpose of this study was to evaluate duckling predation by snapping turtles.

Twenty-one male and 9 female snappers were captured using underwater traps, throw nets and hand capturing. Average weight of males was 15.5 lbs (ranged 2 to 28 lbs.) and females averaged 11.71 lbs (ranged 1 to 18 lbs.). Seven of the nine females contained developed eggs: 46;40;39;35;33;26; and 17 eggs respectively.

Twenty-eight snapper stomachs were analyzed for food contents, 17 contained vegetable matter only and 11 contained both vegetable and animal matter. Only one stomach contained a larger portion of animal than vegetable matter - this one having just eaten a 15" hognose snake weighing 126 grams (versus 1 g. vegetation).

Nematodes (possibly *Camallanus*) were present in 18 (65.3%) of the 28 stomachs analysed. Several of the stomachs had heavy infestations (several hundred in clumped masses) while others had very few (1-10 worms).

Analysis of 28 stomachs indicated that ducklings were not a primary food source of the snapping turtle within the managed impoundments on Chincoteague Refuge. Downy feathers were found in a single stomach. Results of this study show that vegetable matter is a primary food source for snapping turtles within the managed impoundments on Chincoteague Refuge. All stomachs analyzed contained vegetable matter (avg. 90.8 g.) while only 39.2% contained animal matter (avg. 15.0 g.).

Chincoteague NR81 - "Tern Management by Controlled Placement of an Enclosure (51570-81-6)

Enclosures have been used effectively to protect nesting terns. The method of use is to initially locate a tern colony and then construct an enclosure (fence) around the nesting birds. A disadvantage of this technique is that on heavily visited public beaches, human recreational activity may not allow the terns an opportunity to begin nesting activities. Therefore, constructing an enclosure around the nesting birds is improbable. Controlled placement is the construction of an enclosure in preferred nesting habitat prior to the arrival of terns at the breeding ground. Regardless of the human recreational activity and associated habitat disturbance that occurs outside, the enclosure's interior remains protected from direct disturbance. The enclosure-protected beach habitat located in an area surrounded by human recreational disturbance would be subsequently attractive to terns as a nesting site.

Controlled placement of an enclosure was conducted on a natural ocean beach during the 1978-1981 nesting seasons on Chincoteague National Wildlife Refuge, Assateague Island National Seashore, Virginia. This barrier island beach historically supported a large tern nesting colony but human recreational activity had resulted in habitat disturbance to an extent that nesting was no longer possible. In 1979, the ten acre enclosure contained a nesting colony with 238 nests and was the first successful breeding season for terns on Chincoteague Refuge since 1971; despite the fact that one and a half million public visitors and 11,300 off-road vehicles utilized the beach area adjacent the enclosure.



#7-17-81 DSP

In 1981, there was a colony of about 100 pairs of least terns nesting in the enclosure on Tom's Cove Hook.



#9-8-81 EEB

Least tern chicks, one and two days old, hatched in a nest within the enclosure.

During 1978, 1980 and 1981 predation of tern nests by red fox and fish crow caused abandonment of the enclosure after re-nesting attempts were destroyed. In 1981 there was a nesting colony of approximately 100 pairs of least terns within the enclosure. Sixty-nine nests containing 118 eggs were observed. Fish crows and red fox accounted for 68% predation while the remaining 22 nests (32%) were flooded resulting in no production. Various attractants have been experimented with inside the enclosure and included the displaying of tern decoys while playing a recorded sound track of tern vocalizations. An electric fence was used to deter fox predation. An intensive educational program was developed to inform the visiting public of the tern management program.

E. ADMINISTRATION

1. Personnel

Listed below are the several personnel changes that took place during CY81.

Incoming

<u>NAME</u>	<u>DATE</u>	<u>FROM</u>
Debbie Paul	01-05-81	Reelfoot NWR
Stan Skutek	09-06-81	WA, Annapolis, MD

Outgoing

<u>NAME</u>	<u>DATE</u>	<u>TO</u>
Gerald Franz	05-03-81	Tinicum NEC
Thomas McFadden	07-12-81	Great Swamp NWR

Susan W. Merritt was re-classified from a Clerk (Typing) GS-301-5 to Secreatry GS-318-5 effective April 19, 1981. This was done to improve our organizational concept. The position functions under the supervision of the Administrative Officer.

A Five-Year Comparison of On-Board Strength

	<u>Full-Time</u>	<u>Permanent Part-Time</u>	<u>Career Seasonal</u>	<u>Temporary</u>
FY 81	14	2	3	2
FY 80	15	3	2	11
FY 79	16	3	2	14
FY 78	14	3		13
FY 77	13	4		6

2. Youth Programs

After many long hours spent preparing Form 4s, reviewing applications for Group Leader and Camp Director positions, and advertising for enrollees, our YCC camp was cancelled shortly before its scheduled opening.

The YACC program has been extremely valuable to Chincoteague Refuge, providing many cheap staff hours of labor. Phase-out of the program resulted in the termination of Senior Group Leader Keith Privett on September 18, and Group Leader Charles Marshall transferred into a Recreation Assistant position at Dismal Swamp Refuge on October 16. Size of the YACC crew has fluctuated from 20 to the 7 on board Dec. 31. Several of the enrollees during 1981 possessed college degrees in wildlife, and were utilized in our public use and biological programs. Other YACC'ers spent many long hours on brush control, facility maintenance, and other manual labor projects. This source of manpower will be sorely missed in the future, as evidenced by the following partial list of specific projects YACC was utilized on during 1981: controlled burning, snapping turtle trapping, Visitor Contact Station interpretive duties, shorebird nesting study, fox den survey, wood duck box cleaning, brush control, telemetry study, raptor survey, waterfowl surveys, staining and painting of buildings, chopping firewood, etc.

4. Volunteer Program

During CY 81 Chincoteague Refuge established several positions and utilized the volunteers with mixed success. Volunteers used were as follows:

Marilyn Ailes - Raptor Surveys
 Kevin Keller - Student Intern Volunteer
 Ray Daisey - Weekend & Evening I & R
 Wini Benvenuti - I & R Programs and Computer Asst.
 Karen Terwilliger - Biological Studies & Surveys

With the exception of Mr. Keller the volunteers have provided reliable assistance for our biological and I & R programs. Mr. Keller, who was scheduled to work on a volunteer basis as a student intern only stayed for one week. Obviously the time spent in developing a training program and processing the volunteer agreement for him was not recovered.

5. Funding

Funding was adequate to perform most refuge programs planned, with the exception of Subactivity 1240 Interpretation and Recreation. In the past we have hired several temporary personnel to assist in our Interpretation and Recreation programs (see 5 year strength above). This year we used maintenance personnel to perform duty in the Visitor Contact Station, conduct interpretive tours and to assist in the many other various recreational programs. Remember, visitation to the refuge exceeded 1,391,000 for CY 81.

A graphic display of funding over a five-year period is shown on the next page.

6. Safety

Once again high refuge visitation (1.4 million) has created the potential for safety related incidents, accidents and other problems. NPS and FWS together handled a total of 213 safety incidents ranging from stubbed toes, minor lacerations, and jellyfish stings to minor automobile accidents, serious illnesses and one fatal heart attack.

An advanced first aid course (60 HR) was given by Supervisory ORP Paul Benvenuti as part of the continuing safety education program. Seven FWS personnel and one YACC person attended. Rapid response to emergency situations, CPR, patient transport, bandaging technique, and treage were among the topics covered. One doesn't have to be a wild critter to be in good hands at Chincoteague.

One serious injury involving FWS personnel was reported this year. Maintenance crew member Robert Cherrix was injured in a fall while working at the manager's residence. Bob is recovering quite well and may still be seen, albeit with cane inhand, around the refuge. Bob's accident occurred while working from a ladder extended to 20 feet on the outside wall of Quarters Q-3. The base of the ladder slipped and Bob was thrown to the pavement below where he sustained a fracture of the left knee/leg. Lost Time for this accident was 45 days, continuation of pay was necessary for a maximum of 45 days. Bob returned to "light duty" on 09-28-81 and continued this duty status through CY 81. Corrective actions were taken to insure that all ladders have effective non-skid bases and personnel are available to stabilize the ladders when work at high elevation is necessary.

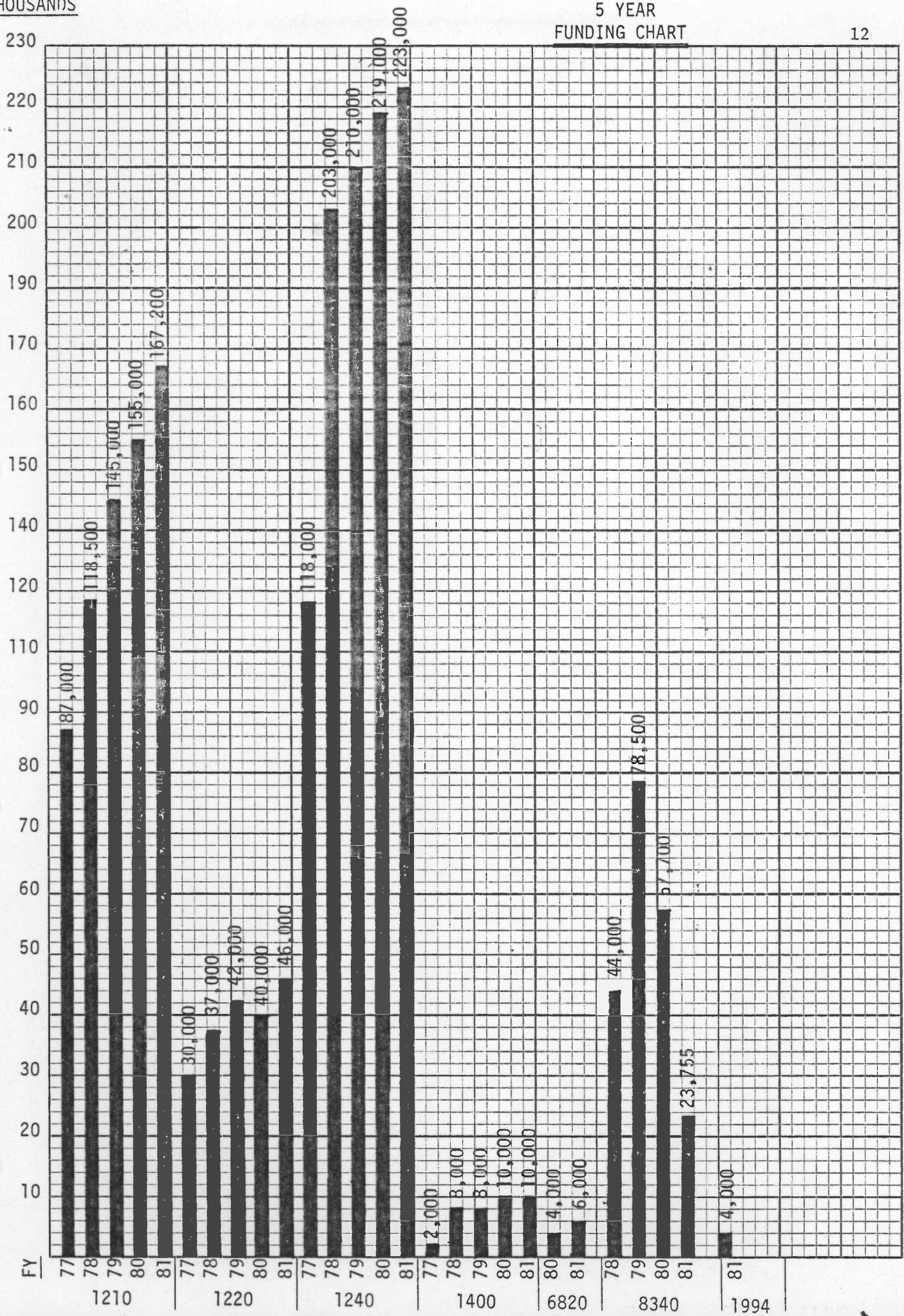
Nine major first aid incidents (4 dislocations, 3 fractures, 1 serious illness, and 1 fatality) were handled by FWS and NPS personnel. The fatality, a heart attack, occurred in the Visitor Contact Station. CPR was administered by ORP Supervisor Benvenuti during patient transport to the physician's office where all attempts to restore heart function failed.

Visitors were involved in eight minor automobile accidents including three vehicle/wildlife (2 deer and 1 pony) incidents. Fortunately, no injuries to vehicle occupants occurred but one deer was killed, one with apparent broken leg could not be located, and the pony was last seen limping from the scene of the accident.

Overall, efforts to inform people that feeding the ponies may be dangerous were successful, however, there are always those few that cannot be or will not be informed. They think it's fun to play with or feed the ponies - one person even got a "KICK" out of it and three others were bitten.

Bicyclists were also involved in several accidents. Of ten bike incidents, only one was serious resulting in a laceration and leg fracture to the bicycle passenger. First aid was administered at the scene and the patient, a 2½ year old boy, was transported to a physician's office by a refuge employee.

HEWLETT-PACK 9270-1006



August was the month of stinging marine organisms at the beach front. Thirty-nine encounters with these slimy critters resulted in a "rash" of minor first aid treatments.

Beach user related incidents accounted for a majority of the 109 minor first aid cases, mostly minor lacerations from stepping or falling on sharp seashells. Abrasions and anatomical dislocations were suffered by those attempting to surf without surfboards (body surfing).

Twenty-one hazardous condition incidents including reckless driving DUI cases were handled by FWS and NPS enforcement personnel.

Safety related equipment purchased by the refuge during FY 81 consisted of five fire suits and five (2-way) radios for vehicles. Communications between employees is now assured, even under "heated" conditions.

7. Technical Assistance

Technical assistance was provided to the Chincoteague Chamber of Commerce in developing a program for the 1981 Decoy Contest and Exhibit which was held at a local campground.

Assistance was also provided to the Nature Conservancy for the development of a management plan for the Brownsville, Virginia tract which TNC is developing.

8. Other Items

Assistant Manager Oland completed a course in Prescribed Fire and Smoke Management given at the Withlacoochie State Forest in Florida. The course was sponsored by the National Advanced Resources Technology Center at Marana, AZ.

The U.S. Forest Service, Blacksburg Office, presented a "basic fire fighting training" (S-103) course on February 2 and 3. Forty individuals from six refuges and the local NPS attended the two-day session. Techniques on basic fire fighting and practical field experience were presented.

Mr. Phil Norton (RF, Washington, DC) and Debbie Jacobsen (PM, Newton, MA) met with Chincoteague employees in the 485 and 486 series to discuss the development of new "Classification Standards" for these series.

Russ Fielding (Legislative Affairs, Washington, DC) and members of his staff visited Chincoteague Refuge along with staff personnel from the Merchant Marine and Fisheries Committee.

Chincoteague Refuge hosted an interagency meeting on the International Year of the Disabled Person. The refuge facilities and programs for handicapped visitors to the refuge were shown to the attendees. Among the attendees were Ambassador John MacDonald representing the White House; Dr. Andy Adams, Human Access Committee Chairman DOI; Area Manager John Green and Regional Director Larsen.

As part of the 1981 Refuge Course for Latin American Wildland/Wildlife Personnel, six Latin American wildlife managers visited Chincoteague NWR on September 17 and 18. The program included two meetings with National Park Service officials to discuss coordination between FWS and NPS in management of the refuge and seashore on Assateague Island.

On December 8, Mrs. Inger Lise Skarstein, a United Nations Delegate and Member of the Norwegian Parliament, and her family toured Chincoteague Refuge to observe the various wildlife management methods utilized here. Mrs. Skarstein is on the Wildlife Committee of the Norwegian Department of the Environment. She is a representative to the 36th Session of the United Nations General Assembly. Her visit to Chincoteague was for personal interest and was not related to her position on the Wildlife Committee. Mrs. Skarstein and her family were given a grand tour of the refuge. She commented that the enormous concentrations of waterfowl were spectacular. She stated that the majority of waterfowl that are seen in Norway "parks" are tame birds with clipped wings and bands on both legs of every bird; and related that many of the Norwegian beaches are nearly destroyed due to the "regular" oil-spills that occur from off-shore drilling. Mrs. Skarstein expressed great interest in cooperative exchange programs for wildlife managers and biologists.

On June 2 the refuge was visited by Professor Dobrowolski of Warsaw University. He was accompanied by Ms. Lucja Swiatkowski, a State Department interpreter and Dr. Bill Sladen from Johns Hopkins University. The purpose of this visit was to observe the management activities on the refuge and discuss our methods of doing business.

In late July and early August the refuge had several meetings to coordinate security and arrange for a visit by Mrs. Anwar Sedat on August 7. Dinners had even been ordered from a local restaurant prior to the cancellation of the visit on August 6.

On September 10 and 11 refuge personnel cooperated with the U.S. Coast Guard in planning and conducting a hurricane drill which included lost persons and injuries on the refuge. The entire Oland (Asst. Mgr.) family was evacuated by boat (not likely during a real hurricane). This drill proved that future drills need better organization. The lost person stayed lost because the search and rescue team thought they were looking for a fictitious "body".

Cooperative ties with the Marine Science Consortium (MSC) were strengthened in 1981, and plans are developing for utilizing MSC graduate students on research projects beneficial to the refuge.

Refuge Manager Dennis F. Holland organized a State Coordination Meeting involving the Regional Director, Area Manager, Refuge Managers, and personnel from the Virginia Commission of Game and Inland Fisheries. The meeting, held October 29 & 30, focused on improving coordination and cooperation between agencies.



#7-11-81 JHK

Several staff members completed the Advanced First Aid and Emergency Care course taught by Outdoor Recreation Planner Paul Benvenuti. Participants earned a three-year certification by the American Red Cross.



#10-5-81 DSP

Participants in the State Coordination Meeting hosted by Chincoteague Refuge included Dennis Holland, Refuge Manager; Les Terry, Wildlife Assistance; Dick Cross, Director of Virginia Commission of Game and Inland Fisheries; John Green, Area Manager; and Howard Larsen, Regional Director.

F. HABITAT MANAGEMENT

1. General

Prescribed burning, a management tool not utilized to any significant degree here since 1971, was a major habitat manipulation method used on Chincoteague NWR in 1981. Approximately 2,300 acres were burned in January, February, and March. Burning was concentrated on areas located east of the service road and north of the beach road, involving marsh, impoundments, and forest. Prescribed burning costs amounted to \$.74 per acre, an extremely cost-effective management tool. YACC personnel were used extensively and contributed a great deal to the low cost of the burning operation.

Water level manipulation capabilities were greatly enhanced in 1981 by the completion of a major water control structure rehabilitation project (see "Construction"). Control of water levels in the 12 impoundments has been a key factor in achieving habitat management objectives.

2. Wetlands

The key elements to wetlands management on Chincoteague NWR are prescribed burning and impoundment water level manipulation.

Since very little prescribed burning was conducted on the refuge during the past 10 years, the primary purpose of 1981 burning was to remove undesirable vegetation and accumulated litter. Dense stands of phragmites, wax myrtle, and Spartina patens have developed in the marshes and impoundments. Periodic burning should enhance conditions for more desirable vegetation such as three-square and, when combined with disking and/or deep flooding, control the wax myrtle and phragmites pests.

Twelve freshwater impoundments are maintained on the refuge. Production of emergent and submergent wetland vegetation for snow geese and other wintering waterfowl is the main objective of impoundment management; the Wash Flats impoundments also have important management objectives for endangered peregrine falcons and shorebirds.

Installation of six new water control structures in the dikes at Sow Pond, Ragged Point, Old Fields and between A, F, and B pools, coupled with the 1980 construction of a crossdike with a double water control structure in the Wash Flats, should result in much better control over water levels in these impoundments. Without pumping capability, however, little water level manipulation will be possible if drought conditions such as those experienced in 1980 recur. In the fall of 1981 the rehabilitated water control structure system enabled us to catch several inches of water from high spring and storm tides, enhancing habitat for wintering waterfowl and hopefully aiding efforts to retard encroachment of undesirable vegetation.



#4-6-81 IWA

Photographic plots were established to monitor the response of loblolly pine and wax myrtle to the prescribed burning conducted during the spring. Little permanent damage occurred to the pine--scorched needles were dropped and replaced with new needles within a few months.



#7-10-81 IWA

Although much of the above-ground wax myrtle vegetation was killed, the plant showed vigorous resprouting from its base. Repeated burning will hopefully destroy the plant completely.

YACC crews spent a great deal of time in 1981 removing brush encroachment from the impoundment areas. Dense stands of wax myrtle are developing on the refuge, and whenever possible crews were detailed to saw or chop the brush down. Tordon was applied to some of the myrtle stumps; it's effective but time-consuming and costly. Attempts were also made to remove the heavy cattail growth in B pool by manual chopping before winter deep-flooding.

Phragmites encroachment is yet another problem in management of refuge wetlands. Indications are that 1981 burning failed to destroy the root systems, and in effect actually fertilized the phragmites stands. By flooding the impoundments more deeply during winter and early spring, reburning, and whatever other tricks possible, we hope to control the phragmites stands before they spread and become a major problem.

3. Forests

Prescribed burning was conducted in the pine woodlands adjacent to C and D pools. The primary objectives of woodland burning on Chincoteague NWR are to maintain optimum habitat conditions for endangered Delmarva fox squirrels and the resident sika and whitetail deer populations. Prescribed burns will also reduce the possibility of wildfire in the woodlands.

4. Croplands

The refuge maintains 15 small farm fields, totaling 32 acres, primarily for the production of Canada and snow goose browse. Past success in planting these fields was severely limited due to poor condition of the old drainage ditches and resultant inability to regulate water levels. Using the new backhoe acquired in the 1981 BLHP project, refuge personnel rehabilitated 14,330 linear feet of ditches in and around the fields. Reopening of these ditches should facilitate both draining and flooding as needed to conduct farming activities or manage for moist soils and wetland vegetation. If outrageous fertilizer and fuel costs can somehow be overcome, planting can be resumed to put the fields back into production. Meanwhile, each field was burned in February to encourage regeneration of browse food for migratory waterfowl and to inhibit brush encroachment.

5. Grasslands

No true grasslands exist on Chincoteague NWR. However, a permit to graze up to 150 of the famous Chincoteague Ponies has been issued to the Chincoteague Volunteer Fire Company at an annual fee of \$180.00. The ponies are actually grazing in wetlands composed of salt marsh (Spartina alterniflora), salt meadow (S. patens), and grassy interdune cones, utilizing about 11% of available vegetation.

7. Grazing (see Section F-5)

9. Fire Management

During prescribed burning operations for habitat management underway on March 26, gusting winds of 15 knots caused fire to cross the fire line at the Maryland/Virginia state line. A total of 1.4 acres were burned on the Maryland portion of Assateague, in the immediate vicinity of a house on a private inholding on National Park Service property. There was no damage to the house.

While fire teams were striving to control the wildfire at the Maryland/Virginia border, another refuge fire totally destroyed a small wooden outbuilding at Pope's Island Lifesaving Station on National Park Service property. The small building was in deteriorated condition, and its only value lay in the fact that it was the sole remaining structure of the old Lifesaving Station.

12. Wilderness and Special Areas

A research natural area is located on the southern portion of the refuge, containing about 150 acres of loblolly pine/wax myrtle woodland and Spartina marsh habitat. There was no specific management attempted in this area.

There is a proposed wilderness area of 1,300 acres extending north of the Wash Flats to the Maryland/Virginia state line, excluding the Old Fields impoundment and service road area. No action has been reported on this 1977 proposal, which includes a portion of the wild beach ORV enthusiasts wish to drive on (see ORVs).

G. WILDLIFE

1. Wildlife Diversity

There are no activities aimed specifically at increasing the diversity of wildlife on the refuge. However, our prescribed burning program undoubtedly increases or changes wildlife diversity by changing the successional stage in some areas.

Unusual sightings of species not expected to be found in our geographic area include lesser black-backed gull, ruff curlew sandpiper, avocets (seem to be more common each year), Wilson's Phalarope and black-necked stilt.

2. Endangered and/or Threatened Species

There are three endangered species on the refuge: the peregrine falcon, Delmarva peninsula fox squirrel, and the bald eagle. One threatened species, the Atlantic loggerhead sea turtle, is sometimes found.

The Delmarva fox squirrel is presently restricted to four counties in southern Maryland and on Assateague Island, Virginia.. The population on the refuge was established by transplanting 40 squirrels from refuges in Maryland during the period 1968 through 1971. The population on the refuge is now self-sustaining and stable at approximately 150 to 200 animals.

The Nature Conservancy's Brownsville Preserve has completed their management plan for the area. This area has been inspected and tentatively approved by the Delmarva Fox Squirrel Recovery Team as a possible transplant site for fox squirrels from the refuge. It is anticipated that approximately 12 to 24 squirrels will be transplanted to this area sometime in CY 82.

In addition to the above, twice yearly squirrel nest box checks are conducted on the refuge to determine utilization. This year's checks were conducted on 8 January and 3 June. Utilization was 35% in January and 30% in June. Nine squirrels were found in boxes in January with only two in June. The area of heaviest utilization was the Pony Trail section of the refuge.

In cooperation with the Peregrine Fund of Cornell University's Laboratory of Ornithology and the College of William and Mary, a peregrine falcon hacking program was initiated on the refuge in 1980. This year's birds were delivered on 19 May. A total of 6 4-week old peregrines were placed in the hacking box on top of the tower. This year's program was complicated by the presence of an adult peregrine at both Wallops Island (see Section G.2 Wallops Island Annual Narrative) and later at the Chincoteague tower. All birds were released from the hack box around the 1st of June. Within a short time of their release, the adult peregrine from the Wallops Island tower began chasing the young birds from the area. All but one of the young peregrines is believed to have survived through the end of the hacking period. This is expected to be the last year of the hacking program. It is anticipated that a pair will nest in this tower or the one at Wallops Island this coming year.

The bald eagle is an infrequent visitor to the refuge. Most observations occur in "B" and "F" pools and the Wash Flats Impoundments. At least two birds were seen on the refuge this year. The nearest known nest is on the mainland about 10 miles away.

The Atlantic loggerhead sea turtle is the only threatened species found at times on the refuge. Since the termination of the egg transplant program, only monitoring of turtle activity along the beach is being conducted. This year there were no turtle crawls or beached (dead) loggerheads reported on the refuge.

3. Waterfowl

Waterfowl use for CY 81 amounted to 1,672,174 use days, an increase of 9% (137, 934) from 1,534,240 in 1980. Peak populations of waterfowl occurred in November with 11,000 snow geese and over 6,000

ducks of nineteen species being sighted. Snow geese, black duck and pintail were the principal species again this year comprising 58% of the total use-days. Table 1 shows waterfowl use trends from CY 1974 until CY 1981. Moderate Rainfall during November and December raised water levels to optimum height bringing an increase in waterfowl utilization.

Though slightly higher than last year, waterfowl production remained low due to high mammalian predation and lack of nesting cover. Based on breeding pair and brood counts production was up 6% from 1980. A total of 265 birds were produced in comparison to 248 in 1980. Black duck production was up slightly with 44 young produced as compared with 42 in 1980. Gadwall production was up with 97 young produced as compared with 75 in 1980. Canada geese had a disappointing year with 36 young produced as compared with 56 in 1980. Wood ducks had a good year with 23 young being produced as compared to 15 in 1980.

4. Marsh and Water Birds

Fifteen species of marsh and water birds were found on the refuge for a total of 98,909 use-days. Great, snowy and cattle egrets, glossy ibis, Louisiana, great and little blue herons arrived during April along with Forster's, least, common, black, royal and Caspian terns. Small flocks of American avocets were commonly observed during late summer in Swan Cove and Snow Goose pool.

5. Shorebirds, Gulls, Terns and Allied Species

Many shorebirds arrived during late April and early May. April arrivals included black-bellied and piping plovers, greater yellow-legs, least sandpipers, short-billed dowitchers, ruddy turnstones, willets, whimbrels and dunlin. May arrivals included semipalmated, pectoral, stilt, western and white-rumped sandpipers along with many others. Some of the summer's more notable shorebird sightings include; two Wilson's phalaropes and a king rail during June, and a lesser golden plover and two black-necked stilts during July and August.

The refuge "wild beach" was censused during late June and early July to determine the extent of shorebird nesting. Four piping plover nests containing 8 eggs and 3 young were discovered. A few additional pairs of piping plovers were observed along with least terns but no nests were found. (See Research and Investigations for Shorebird Nest Exclosure Summary).

6. Raptors

An abundant and very active small mammal and bird population supports several species of raptors on the refuge. Marsh hawks, kestrels, osprey and sharp-shinned hawks are the most easily identified and observable. Sharp-shinned hawk, Coopers hawk, and peregrine falcon numbers are high during fall migration along with merlins and marsh hawks. A total of 1,186 raptors of 10 species were censused during

TABLE 1.

Species	1974 CY	1975 CY	1976 CY	1977 CY	1978 CY	1979 CY	1980 CY	1981 CY
Whistling Swan	72,723	28,506	48,730	47,040	51,900	56,360	39,500	41,501
Brant	59,056	25,654	35,058	330,720	43,440	93,916	45,110	56,987
Snow Goose	511,994	335,766	702,317	406,860	485,400	463,870	538,560	501,787
Canada Goose	165,780	144,052	139,280	95,250	70,500	119,842	111,530	118,030
Total Goose Use (1)	809,562	506,181	925,385	879,870	651,240	733,988	704,565	728,305
Mallard	126,941	114,024	115,594	90,860	75,420	119,210	86,848	99,380
Black	438,884	537,088	295,105	245,150	343,020	317,322	222,580	245,615
Gadwall	142,856	121,168	144,983	176,670	44,550	137,488	86,800	101,500
Baldpate	108,458	28,712	96,809	99,840	55,830	51,410	37,840	41,450
Pintail	344,259	323,216	263,454	236,970	221,550	199,710	205,400	231,508
Green Winged Teal	100,002	192,120	49,022	54,570	76,800	100,860	82,210	97,780
Blue Winged Teal	57,345	78,914	99,917	102,450	12,060	64,140	56,130	67,550
Shoveler	135,840	95,009	78,574	36,510	27,120	138,339	32,390	41,008
Bufflehead	5,520	2,028	1,712	1,200	1,680	2,670	2,760	1,808
Ruddy	24,205	10,248	84,423	12,390	9,780	12,090	11,410	10,090
Total Duck Use (2)	1,497,782	1,516,378	1,230,944	1,162,760	867,810	1,143,239	825,553	937,689
Coot	145,014	1,570	115,056	10,230	1,770	52,095	4,122	6,180
Total Waterfowl Use	2,452,508	2,024,129	2,271,385	2,052,860	1,520,820	1,929,300	1,534,240	1,672,174

(1) Indicates all species of geese using area. (2) indicates all species of ducks using area.

the fall 1980 survey.

A golden eagle sighting was reported by visiting birdwatchers during October. The sighting, however, could not be verified by refuge staff.

7. Other Migratory Birds

Birds in this category are numerous. Most commonly encountered are warblers, sparrows, swallows, grackles, starlings, red-winged blackbirds, eastern meadowlarks, doves, robins and wrens.

During the May Day Spring Count 121 species on both Chincoteague Refuge and the mainland annex were censused.

During the Christmas Bird Count 152 species were counted.

8. Game Mammals

Two members of the deer family coexist on the refuge. The Virginia whitetail population numbers approximately 250. The sika, the other species, is an oriental elk which was introduced to the island in 1923. The sika has successfully adapted to the barrier island habitat and its population is now estimated to exceed 750. A recent herd health check revealed whitetail numbers to be near peak capacity while the sika population showed no signs of stress. Populations of both species are controlled by an annual harvest, which includes the legal taking of does.

9. Marine Mammals

On two occasions during 1981 common dolphins washed ashore on the refuge beach. The first was an adult female carrying a full term pup found near Fishing Point. The second was a sub-adult male which washed ashore near the peregrine hacking tower on the Wash Flats. In both cases Charlie Potter of the Smithsonian Institution was contacted and portions of the animals were salvaged for further study by Smithsonian personnel.

10. Other Resident Wildlife

The fourth consecutive fox den survey showed a decrease in red fox denning activity on the refuge. This year 36 active dens were identified, a decrease of 46.3% from last year. Other activity was still high however, judging by the abundant scats and tracks in the area. Other mammalian species occasionally seen are opossum, raccoon, river otter and muskrat.

A red bat was found on the refuge this year, bringing the number of bat species known to occur here to four. Other bats are the silver-haired, the hoary, and the little brown myotis.

Coveys of bobwhite quail are frequently seen along the roadsides and in the loblolly pine forests on the island. No direct surveys have been conducted for this species, but covey sizes often number more than 15 individuals.

Seven turtle species and eight snake species are present on the refuge. The turtle species include the spotted turtle, red-bellied turtle, Atlantic loggerhead, eastern mud turtle, eastern diamondback terrapin, snapping turtle and the eastern painted turtle. The snake species, all non-poisonous, include the eastern and southern hognose snakes, rough green snake, eastern garter snake, black rat snake, black racer, and the brown and northern water snakes.

An abundant food source for many of the refuge predators is the Fowler's toad. Other amphibians on the refuge include the green tree frog, the southern leopard frog, and the bullfrog.

11. Fishery Resources

Although no quantitative information is collected on the fishery resources, our management activities in A pool (Black Duck impoundment) and F pool (Swan Cove) are conducted to enhance blue crab, white perch and American eel populations. To accomplish these management goals water control structures are opened during spring high tides and a pump is run at night with the suction under a light. The light attracts larval crabs which are pumped into the impoundment where they provide food for fish and birds and recreation for visitors.

15. Animal Control

Raccoon numbers remain high. These predators have become a nuisance in fox squirrel and wood duck nesting boxes. Raccoon have also had an adverse effect on waterfowl nesting success. To control the raccoon, a live-trapping program was initiated. Animals caught were removed from the island and released on the mainland annex.

16. Marking and Banding

Waterfowl Banding

Banding totals for the year were 108 black ducks, 37 mallards and one black duck x mallard hybrid for a total of 146 ducks. Sixty-five black ducks and six mallards were subsequently retrapped during the project. Low duck numbers on the refuge resulted in the inability to reach the suggested quota of 150 black ducks and 100 mallards. Mild temperatures during late January and February also proved to be a problem, as most of the ducks were banded during heavy freeze-overs when open water was maintained at banding sites.

Peregrine Falcon

Dr. Scott Ward and his team banded a total of 92 peregrine falcons this year as compared to 126 in 1980.

Sika deer

Seventeen sika deer have been collared since the initiation of a sika deer trapping and collaring population study. Refuge biologists hope to collar thirty or more deer in an effort to determine herd size. Two Stephenson-box traps were constructed and utilized in 1981 to prevent injuries due to movement in the larger "dog cage" trap. Trapping of deer was terminated in June due to the abundance of natural foods and low trap success.

H. PUBLIC USE

1. General

Interpretation and recreation programs on Chincoteague Refuge are provided by both the Fish and Wildlife Service and the National Park Service. Through continued cooperation between the two agencies, programs were scheduled to avoid direct competition whenever possible. A joint schedule for the fall was published again this year.

The distribution of our eight refuge leaflets was greatly reduced in 1981. The orientation map, refuge regulations and refuge activities were the only leaflets placed in our brochure boxes. Information on other brochures was posted and distribution was per request only.

Refuge visitation continued to grow in 1981 with 1,391,163 visits, an increase of 6% over 1980. All but three months (January, February and October) showed increases over last year.

Winter hours were again implemented this year from December 1 through March 31. Open hours were one half hour before sunrise to one half hour after sunset. These hours were slightly modified in December to accommodate the deer hunters. Normal operation hours, 4AM to 10PM were in effect during the rest of the year.

2. Outdoor Classroom - Students

The Marine Science Consortium located near the NASA Wallops Station conducted the bulk of our Environmental Education. Their outdoor classrooms for students in marine biology and wildlife resource studies totalled 9,799 activity hours on the refuge.



#8-25-81 DSP

A total of 1,391,163 visitors were accommodated at Chinco-teague Refuge during 1981. Although a total of 900 car spaces are provided in the National Park Service assigned area for beachfront parking, the parking lots are often filled to capacity during summer months.



#8-21-81 DSP

Visitors violating refuge regulations may find a "boot" attached to their vehicle. This vehicle immobilization device aids in enforcement of restrictions on camping and pets, parking regulations, and closure hours.

TOTAL NUMBERS OF VISITS TO THE REFUGE

MONTHS	1977	1978	1979	1980	1981
January	35,565	34,116	32,759	35,128	31,152
February	30,004	29,753	34,675	33,098	31,145
March	42,636	48,297	25,517	31,503	36,138
April	87,113	79,242	81,879	72,022	89,062
May	112,729	85,014	79,091	108,461	109,527
June	150,743	168,290	148,252	174,634	179,347
July	251,798	220,285	201,672	245,505	249,649
August	227,292	271,558	235,829	274,441	316,509
September	109,388	145,788	151,426	169,587	182,809
October	69,437	75,357	76,799	86,124	78,732
November	44,136	66,066	61,412	50,486	55,586
December	25,583	35,843	27,981	31,341	31,457
Total	1,186,424	1,259,609	1,157,292	1,312,226	1,391,163

REFUGE VISITATION BY QUARTER EXPRESSED AS A PERCENTAGE OF TOTAL VISITATION

Season	1977	1978	1979	1980	1981
Winter (Dec-Feb)	7.5%	7.3%	9%	7.3%	6.7%
Spring (March-May)	20.6%	17.4%	16%	16.2%	16.9%
Summer (June-August)	54.8%	54%	50.2%	53.1%	53.6%
Fall (Sept-November)	17.2%	21.2%	25.2%	23.4%	22.8%

1% = 13,900 Visits

I & R VISITATION FIGURES 1977 - 1981

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Visitor Contact Station	36,486	45,148	38,194	50,622	57,702
Evening Programs	*	5,336	6,250	8,652	13,768
Guided Walks	-	334	389	2,558	2,347
Conducted Tours	2,662	1,444	752	3,795	853
Concession	11,275	13,026	11,619	9,109	12,947
Oil Shed	7,167	6,750	5,466	5,949	6,297
Wildfowling Exhibit Shed	*	-	420	927	2,162
Wildlife Art Show	*	1,859	1,500	2,000	2,573
Waterfowl Week (service road)	3,745	4,301	5,056	3,772	5,282
Deer Hunt (visits)	-	-	883	724	1,176

* 1977 - Evening Programs & Wildfowling Shed & Art Show = 24,871

I & R VISITATION FIGURES 1981

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>	<u>Totals</u>
VCS	-	-	1156	5128	5544	6949	10,815	11,481	6658	5433	3014	1524	57,702
NPS Tom's Cove *	*	*	*	*	*	*	*	*	*	6515	3912	2235	12,665
FWS Evening Prog.-	-	-	-	316	811	1733	3103	3642	1786	821	637	359	13,208
NPS Evening Prog.*	*	*	*	*	*	*	*	*	*	245	150	165	560
FWS Guided Walks -	-	-	-	307	177	334	288	646	216	256	83	70	2,377
NPS Guided Walks *	*	*	*	*	*	*	*	*	*	204	105	167	476
Conducted Tours -	-	-	128	138	169	-	-	30	40	-	152	196	853
Concession Tours -	-	-	-	260	342	1560	3692	4124	1838	910	187	34	12,947
Oil Shed -	-	-	-	-	472	794	1234	1464	520	600	781	432	6,297
Wildfowling Shed -	-	-	-	400	-	144	527	952	139	-	-	-	2,162
Art Show -	-	-	-	2573	-	-	-	-	-	-	-	-	2,573
Waterfowl Week -	-	-	-	-	-	-	-	-	-	-	5282	-	5,282
Deer Hunt 52**	-	-	-	-	-	-	-	-	-	436	451	289	1,140
(visits)													

* NPS figures were not available until October.

** January visits are from 1980-1981 hunt not 1981-1982 totals.

WATERFOWL WEEK November 21-29, 1981

	<u>Sat. 21</u>	<u>Sun. 22</u>	<u>Mon. 23</u>	<u>Tue. 24</u>	<u>Wed. 25</u>	<u>Thur. 26</u>	<u>Fri. 27</u>	<u>Sat. 28</u>	<u>Sun. 29</u>	<u>Totals</u>
Entrance Station	2,880	2,906	1,219	944	1,338	3,136	4,237	5,139	3,331	21,994
Service Road	716	696	122	136	194	572	956	1,234	656	5,282
VA Vehicles	115	158	33	27	35	119	131	134	122	884
Out-of-state veh.	162	116	32	35	49	127	207	292	115	1,135
FWS Aud. Programs	35 & 41	32	14	6	8	42	70 & 84	78&85	-	495
NPS Aud. Programs	77	-	-	-	-	-	-	78	-	155
FWS Walks	12 & 8	12	-	-	2	-	-	41&23	6	104
NPS Walks	25	20	-	-	-	-	-	30	40	155
VCS	380	170	73	46	80	287	389	514	254	2,193
Oil Shed Exhibit	133	164	-	-	-	-	-	307	125	729

PUBLIC USE REPORT

CY 81

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TR Code	Organization Number	Name	Report Period	Yr	Mo
2 3 4	5 6 7 8 9	10 11 12 13 14	15 16 17		
3 0 1 0		0 0			

OUTPUT TYPE	LINE CODE										NO. VISITS	ACTIVITY HOURS	NON-STD TOT. REUS
	18	19	20	21	22	23	24	25	26	27-35	36-45	46-55	
INTERPRETATION													
Wildlife Trails - Nonmotorized													
Self Guided	0	1	1	0	0	0	0	P	S	29,434	29,434	1,471,700	
Conducted	0	1	2	0	0	0	0	P	C	2,252	2,252	-	
Wildlife Tour Routes - Motorized													
Self Guided	0	2	1	0	0	0	0	P	U	184,731	92,366	4,618,275	
Conducted	0	2	2	0	0	0	0	P	T	13,800	22,534		
Interpretive Center	0	3	0	0	0	0	0	P	R	-		-	
Visitor Contact Station	0	4	0	0	0	0	0	P	Q	70,364	14,073	-	
Interpretive Exhibits - Demonstra													
Self Guided	0	5	1	0	0	0	0	P	A	2162	541		
Conducted	0	5	2	0	0	0	0	P	M	601	941		
Other On-Refuge Programs	0	6	0	0	0	0	0	P	P	22,638	13,055		
ENVIRONMENTAL EDUCATION													
Students	1	0	0	0	0	0	0	P	E	2475	7431		
Teachers	1	1	0	0	0	0	0	P	B	846	2368		
RECREATION-WILDLIFE CONSUMPTIVE													
Hunting Mig. Birds - Waterfowl													
Ducks	2	0	1	0	0	0	0	P	D	-	-	-	
Geese	2	0	2	0	0	0	0	P	G	-	-	-	
Swans	2	0	3	0	0	0	0	P	N	-	-	-	
General Waterfowl	2	0	4	0	0	0	0	P	W	-	-	-	
Hunting Mig. Birds - Other	2	0	5	0	0	0	0	P	X	-	-	-	
CONTROL TOTALS	9	9	2	0	0	0	0	R		2328,303	184,995	6,089,975	

Region Five Station Chincoteague Date Prepared _____
 Name _____ Form 3-239a
 Rev. 12/75

PUBLIC USE REPORT

Report Code	Organization Number	Name	Report Period
Yr - Mo			
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17			
3 0 1 0			

Page 2 of 3

OUTPUT TYPE	LINE CODE										NO. VISITS	ACTIVITY HOURS	NON-STD TOT. RES.
	18	19	20	21	22	23	24	25	26	27-35	36-45	46-55	
RECREATION-WILDLIFE CONSUMPTIVE (c't)													
Hunting Resident Game													
Upland Game Birds	2	1	1	0	0	0	0	P	L				
Big Game				(Species Code)									
Deer - Gun - white-tail	2	1	2	8	5	4	0	P	H	62	299	17,940	
Deer - Bow - white-tail	2	1	3	8	5	4	0	P	J	116	509	-	
" Gun - Sika	2	1	4	8	5	7	0	P	K	352	1367	82,020	
" Bow - Sika	2	1	4	8	5	7	0	P	K	662	2885	-	
	2	1	4					P	K				
	2	1	4					P	K				
Small Game	2	1	5	0	0	0	0	P	Z				
Other Game	2	1	6	0	0	0	0	P	U				
Trapping	2	1	7	0	0	0	0	U	G				
Fishing													
(1) Saltwater	2	2	1	0	0	0	0	U	W	13,400	20,100		
Coldwater	2	2	2	0	0	0	0	U	C				
(2) Saltwater	2	2	3	0	0	0	0	U	S	60,465	181,395		
(3) Clams, Crabs, Oysters, Frogs	2	2	4	0	0	0	0	U	Y	69,525	104,288		
(4) Other Consumptive Wildl. Rec.	2	3	0	0	0	0	0	U	M	335,279	502,919		
RECREATION-WILDLIFE NON-CONSUMPTIVE													
Camping	3	0	0	0	0	0	0	U	H				
Picnicking	3	1	0	0	0	0	0	U	B				
GRAND TOTALS	9	9	2	0	0	0	0	R	Z	479,861	813,762	99,960	

Region Five Station Chincoteague Date Prepared 0

IR Case				Organization Number							Name			Period Yr Mo		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
3	0	1	0						0	0						

OUTPUT TYPE	LINE CODE										NO. VISITS	OUTPUT UNITS	NON-STD TOT. RTU's
	18	19	20	21	22	23	24	25	26	27-35	36-45	46-55	
RECREATION-WILDLIFE NON-CONSUMPTIVE											Act.Hr.		
Wildlife/Wildlands Observation													
Foot	3	2	1	0	0	0	0	U	E	103,630	103,630		
Land Vehicle	3	2	2	0	0	0	0	U	N	459,068	229,534		
Boat	3	2	5	0	0	0	0	U	L				
Other	3	2	4	0	0	0	0	U	P	1530	3060		
Photography	3	3	0	0	0	0	0	U	T	5011	20,044		
Field Trips	3	4	0	0	0	0	0	U	X				
RECREATION - NON-WILDLIFE													
Camping	4	0	0	0	0	0	0	R	C				
Picnicking	4	1	0	0	0	0	0	R	P	475,193	475,193		
Swimming	4	2	0	0	0	0	0	R	S	381,894	763,788		
Boating	4	3	0	0	0	0	0	R	B	3,382	33,82		
Waterskiing	4	4	0	0	0	0	0	R	W				
Off Road Vehicling	4	5	0	0	0	0	0	R	V	12,897	25,794		
Other	4	6	0	0	0	0	0	R	M	2,000	2,000		
TOTAL VISITS TO REFUGE	0	9	0	0	0	0	0	P	V	1,391,113			
FISH & WILDLIFE INFORMATION											Per.Sers.		
Public Inquiries	5	0	1	0	0	0	0	F	P		3,025	90,750	
News Releases	5	0	2	0	0	0	0	F	N		35	212,000	
Personal Appearances	5	0	3	0	0	0	0	F	A		2	15,000	
Professional Services	5	0	4	0	0	0	0	F	S		13	702,500	
Exhibits	5	0	5	0	0	0	0	F	E				
CONTROL TOTALS	9	9	2	0	0	0	0	R	Z	2,835,718	1,629,465	1,020,250	

Form 3-239
Rev. 12/75

3. Outdoor Classroom - Teachers

Outdoor classroom for teachers are conducted by the Marine Science Consortium during most of the year. Their activity hours totaled 2,368 during 1981.

4. Interpretive Foot Trails

The Wildlife Drive and Pony Trail are classified as interpretive trails even though no interpretive information is posted along the trails. Visitors can, however, receive information at the visitor contact station and in our leaflets that help acquaint them with the habitat and management of the areas.

5. Interpretive Tour Routes

Wildlife Drive which is open for vehicular access from 3PM until dark daily is not currently provided with interpretive signing or specific information. However during CY 81 interpretive plans were initiated. Future efforts on this tour route will depend on funding for signs or brochures.

6. Interpretive Exhibits/Demonstrations

The Wildfowling Exhibit Shed, located next to the Refuge Auditorium includes antique decoys and weapons, a sink box, battery guns, skiffs, night lights and a punt gun. Summer operation hours (6PM-7PM daily) resulted in 2,162 visits.

In October we received 5 punt guns, two 10-barrel batteries, two 4-barrel batteries, 2 double barrel shotguns and 2 primitive single barrel shotguns from the Department of the Interior Museum.

7. Other Interpretive Programs

The Visitor Contact Station is now in its eighth year of operation and since its completion in May of 1974 over 340,000 visits have been logged. All but three of those visitors wanted to know where the ponies were. Due to energy conservation and battle fatigue the contact station was closed from December through February. The remainder of the year it was open from 9AM to 4PM daily. Since we did not have seasonal employees in 1981, YACC enrollees and most of the refuge staff helped operate the VCS and conduct other I & R programs.

Plans are underway to design exhibits for the VCS during 1982. Wildlife Management will be the major theme with I & R programs and wildfowling also being emphasized. The exhibits will be designed and fabricated by the Chincoteague staff.

Evening programs were conducted in the refuge auditorium located in the maintenance complex. The projection booth in the auditorium was removed and a accessible box was constructed to house the projectors. The movie screen was placed in the corner of the auditorium to increase the seating capacity from 80 to 99.

In the past we have offered Friday and Saturday night programs during the spring and fall. This year a Sunday night program was added to our spring schedule (April 3 - June 12) and Wednesday and Sunday night programs were added to our fall schedule (September 2-November 28). These programs were dropped, however, by the first of November.

Guided walk figures were down slightly from last year probably due to a healthy population of mosquitoes throughout the summer. During the summer an extra Tuesday walk was added to the schedule despite a reduction in the I & R staff. We also added additional walks to our fall schedule.

Guided walks were scheduled from April 3 through November 28. Groups requesting special tours during that period were encouraged to participate in one of our scheduled programs. The reduction in staff also contributed to the drop in special tour numbers from 3,795 in 1980 to 853 for 1981.

The Oil Shed Exhibit gives wildlife artists an opportunity to display and demonstrate their crafts. The exhibit is located in the Oil Shed adjacent to the lighthouse. Twenty artists from five states participated in the program during the 29 weekends from May 1 through Nov. 29. This year 6,297 visitors saw the exhibit.

Waterfowl Week "open house" was observed November 21-29. It is scheduled to coincide with peak migratory waterfowl populations on the refuge. Opening the north/south service road for vehicular traffic offers visitors an opportunity to observe waterfowl concentrations in our northern impoundments. Also, special programs emphasizing Wildlife Management were presented during the week. A summary of "Waterfowl Week" is presented in Section H.1.

This year's Wildlife Art Show moved back into the maintenance complex area. The Auditorium, Carpenter Shop and Summer Office were cleared to accommodate twenty-four wildlife artists. Several selected outside stands to display their work.

The weekend also featured special film presentations and Tom Reed's popular talk on Outlaw Market Hunting. Art Show attendance for the weekend was 2,573, a 29% increase over 1980.

Pony Penning Week, July 25 - August 1 is always the busiest week of the year on the refuge. At this time the Chincoteague Volunteer Fire Company rounds up the wild ponies and swims them across the Assateague Channel to the town of Chincoteague. The day after the swim foals are auctioned at the Chincoteague Carnival grounds. This year 50 foals were purchased for \$15,225.00 an average of \$300 per foal.

Twice daily during the week we presented a Time-Life film on the ponies. The programs were shown at 1:30 PM and 3:00PM each day to capacity crowds.



#6-16-81 YMS

Nature walks guided by refuge personnel were popular with visitors--until the hordes of hungry mosquitoes arrived.



#4-1-81 JHK

Special programs such as the Art Show and Decoy Show attracted excellent artists--J.L. Swan is shown here--and many visitors.

8. Hunting

The only hunt conducted on the refuge is a deer hunt and it is probably our most intensively managed program involving the public. It serves two purposes: to maintain a large but controlled deer population and to provide an additional form of recreation during a slack visitation period.

Two species of deer occur on the refuge, the Virginia whitetail and the sika (actually a Japanese elk introduced in the 1920's). There are no natural predators of any significance (other than Chincoteaguers). Population estimates are being revised by the biological staff but we currently believe there are about 250 whitetail and 750 sika. Hunters are encouraged to remove does through issuance of a special antlerless deer tag for the first doe taken making it a "freebie" not counting against the hunter's state limit.

Three "devices" are used to reduce possible conflicts between hunters and non-hunters. First, the hunt is run under strict regulations with the hunters being put through a rigorous indoctrination ranging from a fifteen page information packet upon which he is tested, to a classroom style orientation session. Second, the hunt is conducted in less accessible portions of the refuge during low-use periods and third, every effort is made to inform the non-hunting element through signing, handouts, and personal contact that a hunt is in progress.

The hunt consisted of three parts timed to coincide with state seasons: the bow hunt, conducted Mondays through Saturdays from October 10 to November 7; the firearms hunt broken into six Monday through Friday units running from November 16 to January 1 (excluding Thanksgiving week); and the disabled hunt from November 30 to December 4. This year 164 hunters participated and took 89 deer. The smallest taken was 20 pounds (an upward trend after previous years with 18 pounders and last year's embarrassing 14 pounder). The largest deer was a 139 pound 10-point whitetail which was the largest in several years.

A few warnings were given for minor violations but the only violation cited was a bow hunter who was in such a hurry the first day to take a deer that he forgot to purchase the required state license and was somewhat embarrassed when he tried to check his deer.

An effort was made this year to reduce station costs (primarily man-hours) while still maintaining a quality hunt. This was accomplished through a comprehensive hunter orientation package which put more responsibility on the hunter. A sample package with copies of application/permit forms is appended, but a brief summary of significant changes is given below:

1. Application cards printed on heavy stock and the test with a signed statement by the hunter that he had met all qualifications were all the hunter had to submit.
2. New card-type permits replaced complex return-requested letters. Archery applications became permits by adding a staff member's signature after receipt of the \$10.00 fee and application approval. They could be issued

through the mail. Permits also acted as vehicle permits.

3. The number of archery orientations was reduced to two. Attendance was recommended but not compulsory.
4. Firearms hunters had to mark their area/week preferences and availability on their application cards which were then used in the lottery.
5. Firearms orientations, though mandatory were reduced to a "canned" slide program, weapons check, permit issuance, and answering of questions, in all, taking less than an hour. Free time was then provided for the hunters to scout their areas. Hunters were not taken to the rifle range or led around their areas.
6. Two firearms hunters were allowed to share an area with an increased bag of four deer shared between them.
7. Handguns meeting state and refuge requirements were permitted.

This year's hunt is felt to have been a success. More hunters than ever participated with 28 firearms hunters doubling up to share areas. In only one case did the doubling result in the pair taking a fourth deer. It was assumed that this would encourage family (husband/wife, parent/child) participation but this was only true in three cases. In two other cases husband/wife teams chose to hunt separately. Perhaps they felt this was safer?

Lack of required orientation had little effect on bow hunters though many contacted in the field seemed not to have as full an understanding of the hunt that previous years' hunters had.

There were some minor problems reported by the hunters. People entering the hunt areas without blaze orange and disruption of contractor's crews (heavy equipment noise and torn-up roads) drew the most static. When a dike was cut and left unrepaired during a weekend several hunters stranded on the far side made comments too explicit to list here.

New signs received from Prison Industries had advantages and disadvantages. They were attractive, reflective, more people saw them (though few heeded them), and they combined the duties previously served by two small signs, a metal hunt sign and wood supplement with special information. They were also bulky, heavy and presented a nice surface for graffiti.

The disabled hunt is pleasantly losing its "special" status and is taking its place alongside the archery and firearms hunts. Almost no extra man-hours are expended thus demonstrating special needs can be served without detriment to other programs.

HUNT STATISTICS

I. Composition of Bag (1980 vs. 1981)

	<u>Whitetail</u>					<u>Sika</u>					<u>Total</u>		
	<u>Male</u>		<u>Female</u>		<u>Wounded</u>	<u>Male</u>		<u>Female</u>		<u>Wounded</u>		<u>Killed</u>	
	<u>80</u>	<u>81</u>	<u>80</u>	<u>81</u>	<u>81</u>	<u>80</u>	<u>81</u>	<u>80</u>	<u>81</u>	<u>81</u>		<u>80</u>	<u>81</u>
Archery	2	3	1	3	1	10	14	9	5	10		22	25
Firearm	8	11	12	4	2	14	17	23	24	2		57	56
Disabled	0	0	0	0	0	3	2	5	6	0		8	8
Total	10	14	13	7	3	27	33	37	35	12		87	89
%	11	16	15	8		31	37	43	39				

II. Dressed Weights of Bagged Deer

	<u>Sika</u>		<u>Whitetail</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Weight Range (lbs)	35-88	20-63	28-139	28 - 72
Mean (lbs)	53	36	75	62

III. Comparison of Participation and Success (1980 vs 1981)

	<u>Archery</u>		<u>Firearm</u>		<u>Disabled</u>		<u>Total</u>	
	<u>80</u>	<u>81</u>	<u>80</u>	<u>81</u>	<u>80</u>	<u>81</u>	<u>80</u>	<u>81</u>
# Hunters	75	91	54	68	9	6	138	164
% Successful	27	23	67	60	78	83	46	41
# Took 1	18	18	21	29	5	2	44	49
# Took 2	2	2	9	9	1	3	12	14
# Took 3	0	1	6	3	0	0	6	4
Teams w/4	-	-	-	1	-	-	-	1
Hunter Hrs	3198	3394	1911	1499	105	89	5214	4982
Deer Taken	22	25	57	56	8	8	87	89
Hrs/Deer	145.3	135.7	34	26.8	13.1	11.1	59.9	55.9

HUNT REPORT

EOW

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39																																			
TR Code				Organization Number						Name				FY	Hunt No.		Hunt Type	Weapon Codes																	
																		Rifle			Small Arms			Shot- gun			Arrow			Prim. Weapon					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
3	0	6	0	5	1	5	7	0	0	0	C	H	N	2	0	1	0	0	1											1	A	B			

SPECIES NAME	Species Code				S E X	A G E	Retrieved Bag		Wounded Not Taken	Crippling Losses
							Not Recent- ly Wounded	Recently Wounded		
	36	37	38	39	40	41	42-50	51-60	61-70	71-80
SIKA DEER	8	5	7	0	M	A	14		6	
					M	I	0			
					F	A	2		4	
					F	I	3			
Whitetail Deer	8	5	4	0	M	A	2			
					M	I	1			
					F	A	1		1	
					F	I	2			
					M	A				
					M	I				
					F	A				
					F	I				
					M	A				
					M	I				
					F	A				
					F	I	25			
							Season Length (Days)	Number of Hunters	Total Visits	Total Hunter Hrs.
(Hunt Information)	0	0	0	0	X	X	28	91	776	3394
							Huntable Habitat (Acres)	Acres Open to Hunting	Cost of Hunt (Dollars)	
(Hunt Information)	0	0	0	0	X	Y	6183	3446	2750	
CONTROL TOTALS	9	9	9	9	X	Z	6,236	3,537	3,526	3,394

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HUNT REPORT

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TR Code				Organization Number							Name				FY	Hunt No.	Hunt Type	Weapon Codes																
																		Rifle			Small Arms			Shot- gun			Arrow			Prim. Weapon				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
3	0	6	0	5	1	5	7	0	0	0	C	H	N	2	0	3	0	0	1	3	R	L	2	M	T	1	S	L						

SPECIES NAME	Species Code				S E X	A G E	Retrieved Bag		Wounded Not Taken	Crippling Losses
							Not Recent- ly Wounded	Recently Wounded		
	36	37	38	39	40	41	42-50	51-60	61-70	71-80
Sika Deer	8	5	7	0	M	A	17		1	
					M	I	0			
					F	A	22		1	
					F	I	2			
White Tail	8	5	4	0	M	A	9		1	
					M	I	2			
					F	A	4		1	
					F	I				
					M	A				
					M	I				
					F	A				
					F	I				
					M	A				
					M	I				
					F	A				
					F	I	56			
							Season Length(Days)	Number of Hunters	Total Visits	Total Hunter Hrs.
(Hunt Information)	0	0	0	0	X	X	30	68	375	1499
							Huntable Habitat(Acres)	Acres Open to Hunting	Cost of Hunt (Dollars)	
(Hunt Information)	0	0	0	0	X	Y	6183	3750	2050	
CONTROL TOTALS	9	9	9	9	X	Z	6270	3818	2429	1499

Region Five Station Chincoteague Date Prepared 1/11/82
 Name James H. Kingston Page of Form 257
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HUNT REPORT

DIVISION OF WILDLIFE REPORT

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TR Code				Organization Number						Name				FY	Hunt No.	Hunt Type	Weapon Codes																	
																	Rifle	Small Arms	Shot-gun	Arrow	Prim. Weapon													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
3	0	6	0	5	1	5	7	0	0	0	C	H	N	2	0	2	0	0	1	3	R	L	2	M	T	1	S	L						

SPECIES NAME	Species Code				S E X	A G E	Retrieved Bag		Wounded Not Taken	Crippling Losses
							Not Recent-ly Wounded	Recently Wounded		
	36	37	38	39			42-50	51-60		
Sika Deer	8	5	7	0	M	A	2			
					M	I	0			
					F	A	4			
					F	I	2			
Whitetail	8	5	4	0	M	A				
					M	I				
					F	A				
					F	I				
					M	A				
					M	I				
					F	A				
					F	I				
					M	A				
					M	I				
					F	A				
					F	I	8			
(Hunt Information)	0	0	0	0	X	X	5	6	25	89
(Hunt Information)	0	0	0	0	X	Y	6183	310	200	
CONTROL TOTALS	9	9	9	9	X	Z	6196	316	225	89

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 Name James H. Kenyon Page of Form 257 Rev. 1/76

Following last year's decision, data is now separated and reported as three hunts (archery, firearms, disabled) thereby making yearly comparisons easier. Due to difficulty in determining each hunt's cost, the refuge uses the percentage of permits issued for each hunt to determine that hunt's share of the total cost. Processing of applications and issuing of permits represent the bulk of the refuge's expenses.

9. Fishing

Both saltwater and warmwater fishing are available. Saltwater fishing involving primarily blue fish, sea trout, croaker, spot flounder, drum, skate and dogfish is permitted along the ocean beach and in selected locations in Tom's Cove and Assateague Channel. Warmwater fishing for white perch is permitted in Swan's Cove adjacent to the main road.

Neither form of fishing was very productive. A few short-lived blue fish runs were reported at the southern-most tip of Tom's Cove Hook with few fish caught along the main beach. Odd weather and dredging operations may have affected these fish. The perch fishing never has been great and this summer's drought coupled with those of the last few summers have not helped to produce numerous or large fish.

A "fishing only" zone located just north of the protected beach was maintained again this summer to give fishermen a convenient location and to limit the hazard of hooks to swimmers. A buffer zone is designated between the fishing and swimming zones. All use of the water is prohibited in this area. This arrangement does a very good job of keeping swimmers and fish hooks separate. An employee stationed at the fishing zone acted as a mobile visitor center roaming the lower end of the "wild" beach, the fishing zone, and the buffer zone contacting visitors, answering questions, and assisting visitors in the proper use of these areas. National Park Service lifeguards in the abutting swimming zone assist in encouraging visitors to use these zones properly. On heavy use days the FWS employee rarely escaped from the buffer zone where swimmers overflowing from the protected beach had trouble staying out of prohibited waters.

Overnight fishing permits for surf fishermen, especially popular during the summer, were issued to those who believed that fish missing from all the big runs only fed after the refuge closed each night. Though NPS administered the permit system, FWS joined in the fun of issuing permits this year, something we hadn't done in several years. The combined effort helped uncover a low level of abuse of the permits. Campers had finally learned that fishing parties were rarely checked after the permit was issued and that this was a safe way to justify being on the refuge, then camp illegally. Needless to say, as surveillance of permittees was increased the abuse dropped off.

Crabbing and shellfishing are much more popular than the other modes of fishing. They require less equipment and seem to be a novelty to many land-locked visitors. Crabbing is allowed near the main access bridge, in Swan's Cove impoundment adjacent to the main road, and in Tom's Cove. Shellfishing (mussels, clams, oysters) is allowed in Tom's Cove. The season started before Easter with a few optimists and ran until almost Thanksgiving. During most of the summer the main beach road shoulders were packed with crabbers trying to differentiate between tugs of tasty crabs and bait-stealing eels.

Swan's Cove is the only impoundment open to fishing and crabbing. This pool is used for crab management with primary benefits for aquatic species and secondary benefits for recreation. Crab larvae, drawn to a light at night, are pumped from the highly saline Tom's Cove to the brackish Swan's Cove where, as they mature, they serve as food for many refuge species. Upon maturation, the crabs are unable to reproduce due to low salinity and are too large for most food chains. At this point they become a popular harvestable surplus.

11. Wildlife Observation

Although most wildlife observation is focused around the main access road and Wildlife Drive, the Service Road experienced an increase in use as more visitors were willing to walk to the better observation sites located in the northern portion of the refuge. Visitors are permitted to walk almost anywhere on the refuge except selected equipment storage areas and the staff residence area.

Impact to habitat is controlled through restrictions on transportation (remove their wheels and most visitors won't go very far) and through natural barriers such as borrow ditches, brush piles, greenbriar, poison ivy, ticks and healthy mosquitoes. Visitors have suggested the last two may be overgrazing their habitat as browse-lines seemed to form on any exposed skin.

Bike traffic was up this year as full to overflowing racks could be observed every weekend at both visitor centers, at the beach and at the beginning of the service road. We are considering improved bike routes to eliminate the safety hazard along Beach Road, but "consider" is about all we can do at this time.

12. Other Wildlife Oriented Activities

Shelling continues to be a popular activity. Though areas close to parking lots get picked over rapidly, more ~~shells are constantly~~ added through storm action and by visitors who learn the hard way that the further you carry shells, the heavier they become and the more selective you become.

Photography is still popular throughout the year but due to lack of interest, no photography contest was held this year.



U.S. FISH AND WILDLIFE SERVICE
INTER-OFFICE TRANSMITTAL

30930

☒ Director, RF Wash. D.C.
☐ Regional Director, _____
☐ Project Leader, _____
☐ att: Ron Fowler

☐ Regular Mail
☐ Air Mail
☐ Action
☒ Information

From Arew (14K)

Office Reg. 5

Date 4-19-82

Subject CHIXOTRAGUE NWR

ATTACHED copy of Revised page 44, 1981 Annual Narrative
should be included in your copy.

Purpose of the revision is to correct error in date the
north line fence/barricade was constructed.

Ed. Yaw

3-1908
(Rev. 6/63)

(Attach securely to material to be transmitted & mail through regular channels)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1980--600-499--316

13. Camping

With the closing of the youth group campground in January of 1981 and the hike-in site near the Coast Guard Station in the fall of 1980 all legal camping on the refuge ended. Permittees signing up for one of the three sites operated by the NPS in Maryland are still allowed to start out from this end and leave their cars with vehicle passes in a designated part of the main beach parking lot.

Illegal camping activities are discussed in the law enforcement section.

14. Picnicking

Picnicking is permitted in two picnic grounds near the beach and on the beach. Both picnic grounds, although lacking shelter and shade, have tables and grills. They fall within the assigned area for NPS maintenance. They receive very heavy use during the summer but are not sheltered enough to be very popular during the cooler months. Some picnicking occurs elsewhere on the refuge due to the lack of protection and privacy in the legal areas but mosquitoes usually outdo patrolling staff members in herding visitors back to the designated areas.

15. Off-Road Vehicling

Off-road vehicles were one of the first recreational activities allowed on the beach at Chincoteague Refuge. Prior to opening of the refuge to the public via the Assateague bridge in November 1962, ORV's were the only land transportation that could be utilized because of the exceedingly poor condition of the access roads and because only the sandy beach area was open for public use. Fishermen were ferried from the mainland to the Maryland portion of Assateague Island and would travel the beach across the Virginia line to gain access to favorite fishing spots. At this time the entire 17 miles of refuge beach was open to vehicular travel. Restriction of ORV traffic was first enacted in 1960 with the construction of the northern refuge boundary fence at the Virginia line, thus preventing the crossing of vehicles from Maryland. Upon completion of the Assateague Bridge in 1962 the southern 5 miles of refuge beach was opened to ORV traffic. Beach buggy rentals were available by the hour or the day during the summer of 1964. Rentals were managed by the Assateague Bridge and Beach Authority. In 1965, the restriction of ORV travel was extended 1 mile to the south leaving only the southern 4 miles of beach open to vehicular traffic. In 1976 further restrictions were placed on ORV enthusiasts: a \$5.00 oversand vehicle permit was inaugurated; vehicle standards were set and a 42 vehicle quota (allowed on the beach at one time) was initiated. A one-off, one-on policy became effective when the quota was reached. Despite the restrictions placed on ORV's, annual totals have climbed steadily. In 1969 (the first year of ORV record keeping) 1,873 ORV's traveled the refuge beach; in 1981 there were 12,897 ORV visits. Special regulations that governed ORV access in 1981 were: \$15.00 annual ORV special use permit (\$10.00 fee for a seven day permit); each ORV inspected and had to meet vehicle standards;

13. Camping

With the closing of the youth group campground in January of 1981 and the hike-in site near the Coast Guard Station in the fall of 1980 all legal camping on the refuge ended. Permittees signing up for one of the three sites operated by the NPS in Maryland are still allowed to start out from this end and leave their cars with vehicle passes in a designated part of the main beach parking lot.

Illegal camping activities are discussed in the law enforcement section.

14. Picnicking

Picnicking is permitted in two picnic grounds near the beach and on the beach. Both picnic grounds, although lacking shelter and shade, have tables and grills. They fall within the assigned area for NPS maintenance. They receive very heavy use during the summer but are not sheltered enough to be very popular during the cooler months. Some picnicking occurs elsewhere on the refuge due to the lack of protection and privacy in the legal areas but mosquitoes usually outdo patrolling staff members in herding visitors back to the designated areas.

15. Off-Road Vehicling

Off-road vehicles were one of the first recreational activities allowed on the beach at Chincoteague Refuge. Prior to opening of the refuge to the public via the Assateague bridge in November 1962, ORV's were the only land transportation that could be utilized because of the exceedingly poor condition of the accessroads and because only the sandy beach area was open for public use. Fishermen were ferried from the mainland to the Maryland portion of Assateague Island and would travel the beach across the Virginia line to gain access to favorite fishing spots. At this time the entire 17 miles of refuge beach was open to vehicular travel. Restriction of ORV traffic was first enacted in 1963 with the construction of the northern refuge boundary fence at the Virginia line, thus preventing the crossing of vehicles from Maryland. Upon completion of the boundary fence only the southern 5 miles of refuge beach remained open to ORV traffic. Beach buggy rentals were available by the hour or the day during the summer of 1964. Rentals were managed by the Assateague Bridge and Beach Authority. In 1965, the restriction of ORV travel was extended 1 mile to the south leaving only the southern 4 miles of beach open to vehicular traffic. In 1976 further restrictions were placed on ORV enthusiasts: a \$5.00 oversand vehicle permit was inaugurated; vehicle standards were set and a 42 vehicle quota (allowed on the beach at one time) was initiated. A one-off, one-on policy became effective when the quota was reached. Despite the restrictions placed on ORV's, annual totals have climbed steadily. In 1969 (the first year of ORV record keeping) 1,873 ORV's traveled the refuge beach; in 1981 there were 12,897 ORV visits. Special regulations that governed ORV access in 1981 were: \$15.00 annual ORV special use permit (\$10.00 fee for a seven day permit); each ORV inspected and had to meet vehicle standards;



#7-1-81 DSP

Chincoteague Refuge has 4.6 miles of beach open to vehicles. In July, the Assateague Mobile Sportfishermen's Association petitioned the refuge to open an additional 10.5 miles of ocean beach to oversand vehicles. The petition remained under review by the Regional Director at year's end.



#9-13-81 EEB

One of the problems posed by allowing vehicles on the beach: Disturbance of shorebird nesting. In this instance, an ORV actually ran over and crushed tern eggs.

a 42 vehicle quota was enforced. National Park Service personnel manage the ORV permit system and enforcement as a FWS agent. Violations issued to ORV'ers have been minor with an average of 25 citations written annually. Most of these citations were for failure to obtain a special use permit.

ORV's are presently allowed on 12 miles of Assateague Island beach in Maryland (NPS) and 4.6 miles in Virginia (FWS) for 16.5 of the total 37 miles of barrier island beach. In July 1981 the Assateague Mobile Sportfisherman Association (AMSA) and the United Mobile Sportsfishermen (UMS) proposed an additional 10.5 miles of refuge ocean beach be made accessible for ORV access from September 1 through April. A public comment period extended 60 days. More than 8000 comments were received with 62% opposed and 38% supporting the ORV proposal. The Refuge and Area Office recommended no increase in ORV access. Reasons for the recommendation opposing the increase in ORV access were: refuge financial constraints that would not allow proper regulation of ORV access; uncontrollable access of ORV's into refuge interior through proposed emergency crossovers); disturbance to waterfowl and shorebirds within managed impoundments due to increased access; a peregrine falcon hacking tower is located adjacent the proposed area for ORV access and a pair of peregrine falcons have defended territory at the site and are expected to nest in the hack box in 1982; disturbance to large shorebird migration flights that forage and rest on the ocean beach; unknown impacts upon the beach surface, dunes, and invertebrates; unknown impacts associated with disruption to the entire 17 miles of refuge ocean beach by ORV's; disturbance to an adjacent transplant area for the endangered Delmarva Peninsula fox squirrel; and several other concerns were listed.

A decision on the AMSA and UMS proposal will not be finalized until a national policy on the use of ORV's on federally owned beaches is adopted.

16. Other Non-Wildlife Oriented Recreation

Other forms of non-wildlife recreation occurring on the refuge include swimming, sunbathing, ice skating and a few misguided boaters who were quickly relocated off the refuge. The majority of summer visitation is probably oriented towards swimming, sunbathing and looking for the infamous Chincoteague ponies. We make an effort to convert these non-wildlife oriented visitors through entertaining interpretive programs, contact by friendly staff, and one of our most subtle ways - holding them in long lines so that while they wait their turn for access to the beach on crowded days, they have to notice that there are more types of habitat on the refuge than just beach. This year beach closure occurred during most weekends with lines extending as far as Black Duck Drain. This also occurred a few times on weekdays. Beach activities cost the refuge very little as most occur in the assigned area on which the NPS provides visitor services.

Ice skating is slowly increasing but the season of January and February really doesn't provide many opportunities since storms and periodic warm spells tend to rot the ice. Most skating occurs on Black Duck pool and on a football field-sized shallow pool behind the Pony Trail parking lot. These are the only areas where large expanses of ice are protected enough to freeze with a smooth surface and remain frozen long enough to attain adequate thickness.

A few hardy souls come to the refuge for sledding near the lighthouse but conditions for this activity are rarely good for more than one week out of the year. We have the only hills in the area, and have seen little need to discourage the activity.

Periodically double lines of tracks appear in the rare snows indicating the presence of cross-country skiers in the Chincoteague population but this is an uncommon species and hard to locate.

Though not really falling under this category, the annual March of Dimes Walkathon is lumped here because it is definitely not wildlife-oriented recreation. The refuge's involvement consists of making the land available and counselling its coordinators as to routes, times, and dates. Although presenting the opportunity to develop good community relations, the refuge does have qualms about this kind of activity. Minor problems are expected when 600+ teenagers troop through clogging roads, leaving litter, spooking wildlife, and irritating the birders. This year a new twist was added. Reports began filtering in of assaults occurring along the route. The culprit turned out to be a fourteen year old girl, already on probation, who had been brought along to get involved in something positive. She was positively involved in robbing several smaller children and terrorizing others with a stick. Staff curtailed her collection efforts until a county deputy and Walkathon authorities could terminate her participation.

17. Law Enforcement

Enforcement continues to be based on the simple belief of an earlier manager that a patrolman's job can be broken into three parts: to protect visitors from the refuge, to protect the refuge from visitors, and to protect visitors from other visitors and themselves. With protection the key word, the refuge used brochures, signing, physical barriers, high visibility, and visitor contact to exact compliance.

Contact was the preferred method because during an employee's conversation with a visitor, both immediate and future problems could be corrected by clarifying regulations and increasing the visitors appreciation of the situation. These contacts usually resulted in one of three outcomes; a friendly conversation, a warning letter when it was felt a verbal warning was insufficient or needed documentation, or in a violation notice. Though all employees were encouraged to contact and assist visitors, contacts of a serious nature that might lead to a warning letter or violation notice were to be left to commissioned personnel.

At the start of 1981 the refuge had seven commissioned officers including the primary assistant and refuge biologist who are generally weighed down with other duties. The situation quickly deteriorated with one officer leaving in May and another at the beginning of July and a third breaking his ankle. This left only two to perform almost all enforcement.

Under the current Memorandum of Understanding between FWS and NPS, Park Rangers working in coordination with refuge personnel enforced Title 50 as deputy game wardens in their assigned area. Their staffing was also tight with only 2 seasonals returning to assist the 2 full-time rangers.

Violations encountered by either agency were documented on Field Information Reports submitted to the FWS Chief of I & R and reviewed by management for determination of action to be taken based on the situation and citing officer's recommendation. Violation notices prepared in this office were sent to the Senior Resident Agent for delivery to the violator and to the court.

Refuge officers worked the full range of I & R duties but it was clearly defined which person bore patrol responsibilities on any given shift. When summer came and greater demand coupled with reduced staff, changes had to be made. No boat patrols were done and YACC staff assigned to I & R ran the daily honda safety patrols north of D dike. Weekend protection operations were heaviest with the daytime officer usually kept free for responses. At night the officer on duty would assist the interpreter with traffic control and use the quiet hours (if there were any) for paperwork. Thanks to excellent communications between agencies via the scanners purchased in 1980 there is little need for a second person in the car as backup. Usually there was only one NPS ranger closing the assigned area and one FWS officer clearing the other roads. As fall came, day patrol was reduced and officers working nights presented the evening programs.

The only change in general policy was an increasing emphasis on safety-oriented violations. Since staffing was low, officers had to concentrate on only the most obvious incidents which were often traffic associated and representing more than 50 percent of the violations, highest since 1978 (Table IV). Speed, careless driving, dangerous passing, and parking so as to create a hazard led the way. NPS emphasizing a new area but following our same policy about safety, cracked down on the large number of visitors that like to travel the refuge with assorted parts of human anatomy projecting from vehicles. These were cited for careless operation by endangering the safety of others (passengers). One young lady needed to be convinced of the hazards of sunbathing on top of a moving VW bus.

Two types of minor violations often slipped by this year while staffing was stretched thin. The fact that legal camping was terminated was mentioned earlier in the camping section, however, camping was still occurring on the refuge as evidenced by an impressive "saran wrap" tent (impervious to mosquitoes and rain, insulated from the wind, cheap, easy to carry, and innocent-looking) found abandoned in the White Hills

TABLE I. COMPARISON OF VIOLATIONS

Violation	1977	1978	1979	1980	1981
<u>Resource:</u>					
OSV Permit/Equipment	6	29	13	26	19
Trespass	66	43	68	34	23
Disturb Dunes/Veg/Wood	4	7	4	2	1
Camping	3	8	22	19	5
Pets	30	9	46	29	23
Litter/Pollution	1	1	3	9	4
Hunting Regs	1	2	4	4	1
Spec. Regs/Permits		1	1	3	2
Firearms		1	1		2
Boats			5	4	4
Property Damage/Vandalism					3
Aircraft			1		2
Fireworks/Fire			1	4	2
Subtotal	111	101	169	134	91
<u>Conduct:</u>					
Public Intoxication	1	4		4	5
Underage Alcohol	5	2	9	5	
Controlled Substance	1	5	7	33	3
Disorderly Conduct		1	1	2	
Disturbing Employees/Auth. Users		1	2	7	1
Advertising/Audio			1		
Other					2
Subtotal	7	13	20	51	11
<u>Vehicular:</u>					
Driving Under the Influence			2	2	2
Parking	26	77	32	24	30
Speed	89	67	48	50	37
Careless Driving/Right of Way	8	8	11	20	29
Operating Permit	3	8	11	4	9
Traffic Control Device	5	3	14	7	13
Registration	3	3	5	2	10
State Required M. V. Equipment	1	1	1		6
Closed Area					13
Subtotal	135	167	124	109	149
Annual Totals	253	281	313	294	251

area. Most illegal campers are caught because of an unexplained vehicle found during closeout but some campers arrive by foot or bike. Some campers have slipped away because it is policy not to "boot" a vehicle after hours in case an emergency situation exists for its owners. This means that the campers can rise and leave before the morning patrol has a chance to boot their vehicle. Fortunately there are not enough smart, early-rising campers to pose a significant problem.

The other type of camping violation is linked to misuse of overnight fishing permits. One man admitted borrowing equipment to get a vehicle permit, then hiked north to camp.

18. Cooperating Associations

Although the refuge is not directly affiliated with a cooperating association, one does operate on the refuge within the National Park Service assigned area. In accordance with provisions of a Memorandum of Understanding between the NPS and FWS, the NPS is authorized to sell through the cooperating association those items which are approved by the FWS. No funds are available for use by the FWS as a result of this agreement.

19. Concessions

Island Cruises Inc., completed its 12th year of providing quality recreation for the refuge visitor. Program narratives are proof read and performances closely monitored by the I & R section. Again this year Island Cruises offered four different tours.

The Wildlife Safari is a 1½ hour - 15 mile round trip narrated tour along our north/south service road. The interpreter talks about refuge management and identifies the plant life and wildlife along the trail.

The Night Safari lasts from 1½ hours to 2 hours and uses spotlights to observe nocturnal wildlife.

The Osprey Cruise is a 1½ hour narrated boat (49 passenger capacity) tour through the Assateague Channel to the Chincoteague Inlet.

The Family Fishing trip takes place aboard the Osprey. This program accommodates 25 people (maximum capacity) and operates from 7AM to 2PM.

Island Cruises operates on weekends during the spring and fall and daily throughout the summer.



#81-188 YMS

True ingenuity is a rare trait, but we wish the visitor who created this structure of Saran Wrap would funnel his energies into survival training rather than violating refuge regulations against camping.



#10-2-81 YMS

A sika fawn frequently used one of our tractors for shady shelter. The tractor, however, has no protection while we wait patiently for a new equipment storage building identified for construction in a 1978 Congressional add-on package.

I. EQUIPMENT AND SUPPLIES

1 & 2. New Construction and Rehabilitation

In January, 1981, 875 linear feet of new 1½ - inch PVC water line were installed under contract to replace the old line serving the office, headquarters and service buildings. The \$6,125 project might have been a one-week job under a more experienced contract crew, but inexperience in working with PVC during frigid weather conditions kept the 3-man crew here twice that long. When the initial line was tested under pressure, almost every joint leaked; four long and cold working days were spent attaching new fittings and retesting under the watchful eyes of a frozen new assistant refuge manager.

The major construction at Chincoteague NWR in 1981 was rehabilitation of six water control structures in a \$66,500 BLHP project. Contractors removed defunct water control structures from dikes at Sow Pond, Ragged Point, Old Fields, and between pools B and C, A and B, B and F. New concrete structures replaced the old Armco type corrugated metal pipes and risers installed during the 1950's. The new structures at Sow Pond, Ragged Point, and Old Fields have flap-gates on their outlet to the bay end, with stop logs used elsewhere. Rehabilitation of these water control structures was essential for accomplishing water level manipulations critical to habitat management objectives.

As part of the 1981 BLHP project, we completed a force account rehabilitation of the old farm fields ditch system. A new \$44,000 John Deere backhoe was acquired and utilized in cleaning 13,480 linear feet of old ditch and digging 850 linear feet of new connector ditch.

The ditches were dug out to a one-on-one side slope with a three-foot bottom width. Increased ditch capacity and drainage rate will provide a means to alleviate adverse wet and dry conditions in the farm fields; and enhance crop management and production. It will also aid in slowing and reversing the shift of E Pool toward a mesic shrub community by providing an adequate means for water diversion.

We are still waiting for the storage building identified as part of a 1978 \$200,000 congressional add-on construction project. The facility design keeps kicking back to engineering because the lowest bids are well over the project estimates.

The step-ladder type observation tower on Wildlife Drive was removed and replaced with a handicapped-accessible ramp and platform. Board-walk was installed along the footpath from the Visitor Center Parking lot to Wildlife Drive, and on the low-lying portion of Lighthouse Trail.



#1-11-81 DSP

Installation of a new waterline to the headquarters area was finally completed in spite of frigid conditions.



#11-1-81 DSP

Rehabilitation of the old farm fields ditch system was made easy work by the acquisition of a new backhoe.

Old Armco type
metal water con-
trol structures
were replaced
with new con-
crete structures
at six impound-
ments.



#11-9-81 DSP



#11-14-81 DSP



DSP

Refuge Manager Dennis Holland monitors progress of 1981's major construction project, installation of new water control structures at six impoundments.



DSP

The new concrete structures will greatly enhance our water management capabilities for many years to come.

3. Major Maintenance

Much of the routine maintenance work at Chincoteague focuses on our road system. Beach Road, the only road across the refuge to the beach, is deteriorating rapidly and will soon require a major resurfacing job. Meanwhile, shoulder erosion is a constant problem. Several areas along the Beach Road shoulder were cabled off to prevent vehicles from parking on them and help control the erosion. Clay and slag were hauled in to upgrade the Service Road's condition.

Another major maintenance project for 1981 was staining the visitor contact station, restrooms, and all buildings in the compound area. The old headquarters/office building was remodeled to accommodate the refuge manager, primary assistant, administrative officer and secretary.

4. Equipment Utilization and Replacement

During the 1981 calendar year, we acquired a new John Deere backhoe/front end loader purchased with BLHP funds (see I-1). Our 5-ton stake body truck was upgraded by the addition of a dump body which has been very beneficial for hauling material for road and dike repair work.

A Puch moped was acquired primarily for use by interpretive staff during the summer when programs are being offered at various locations and an easy means of moving personnel from one site to another is needed.

A Chevrolet sedan delivery which was excessed by the Wildlife Assistance Office in Annapolis was used as a replacement for our International Travelall - PN544837.

The following property was disposed of as excess during CY 81:

Crane link belt PN 417909
 Copier, Sperry Remington roll paper PN 547200
 Camera, Tele-instamatic PN 547581
 Scope, spotting PN 439629
 Recorder, dictaphone PN 545017
 Saw, chain, Homelite PN 545537 (trade-in)
 Truck, pick-up, Chevrolet PN 547449
 Truck, Travelall, International PN 548075

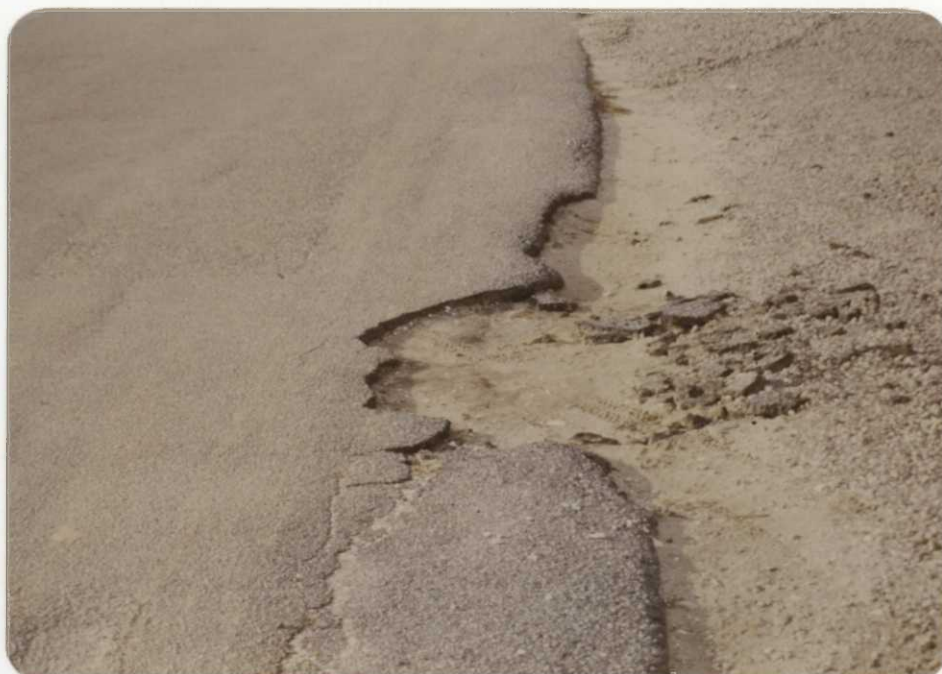
Major equipment repairs included \$2,000 for transmission and clutch work on an International 706 tractor. An additional \$2,500 in overhaul cost were spent on the stake/dump truck. Nineteen hundred dollars of this cost were picked up by YACC which was using the truck when the engine gave up.

The greatest problem we seem to encounter with equipment replacement is that funds seem to be available only on an intermittent basis and not necessarily when the need occurs. On occasion salary savings resulting from transfers, a program such as BLHP or an infusion of pay act funds at the end of the year may allow us to acquire needed equipment. None of these fund sources are predictable, however, and it seems they may be less probable for the next few years. Although



#12-8-81 DSP

Beach Road, the only access route to the beachfront, is deteriorating rapidly and badly needs resurfacing.



#12-11-81 DSP

Cracks and potholes are plentiful along the road, which was constructed in 1967-68.

I would not recommend an amortization schedule, perhaps certain funds should be set aside for major equipment purchase or maybe this should be a line item in the budget request.

5. Communications System

During CY 81 we were able to acquire seven Motorola Mitrex to replace some very inefficient Motorola PT-300s. Prior to this acquisition we could not reliably communicate from one end of the refuge to the other.

6. Energy Conservation

Efforts to conserve energy were primarily the installation of wood stoves in the office, carpenter shop and three residences. Set back thermostats had previously been installed in all buildings with heating and air conditioning.

The following table gives a comparison of energy consumption in CY 79 and CY 81. Increases in diesel fuel use are a direct result of an emphasis on habitat management and work on the FY 81 BLHP project.

	<u>CY 79</u>	<u>CY 81</u>	<u>% Increase or Decrease</u>
Electricity (KWH)	56,671	65,296	+15%
LP (gallons)	6,063	3,673	-39%
Gasoline (gallons)	8,294	7,268	-12%
Diesel	345	703	+103%

J. OTHER ITEMS

1. Cooperative Programs

Under an agreement with NASA (copy attached) the Fish and Wildlife Service is authorized to conduct certain approved wildlife management and survey activities on Wallops Island. The following is a summary of the activities and survey results for CY 81.

Endangered and/or Threatened Species

There is only one endangered species on the refuge; the peregrine falcon and one threatened species; the Atlantic loggerhead sea turtle.

In cooperation with the Peregrine Fund of Cornell University's Laboratory of Ornithology and the College of William and Mary, a peregrine falcon hacking program was initiated on the island. This program was to be coordinated with the ongoing program previously established at Chincoteague NWR. Not long after the tower was constructed, a pair of peregrines established the area as their territory. Consequently, placement of young birds was abandoned in hopes of this pair nesting at this site. An adult peregrine was flushed from the hack box on

May 14 by one of the hacking attendants. Investigations revealed a possible scrape in the gravel. Unfortunately, this disturbance may have been too much for the birds; they were not seen at the tower for quite a long time afterwards.

Atlantic loggerhead sea turtles infrequently come ashore at Wallops to nest. This year, no reports of nesting or stranded turtles were received or observed.

Waterfowl

Waterfowl use-days for FY 81 totaled at 76,222 an increase from FY 79. Snow geese and black duck were the dominant species accounting for approximately 57% of the population use-days.

Marsh and Water Birds

A total of 12 species were found on Wallops for a total of 28,510 use-days. The most common species were the snowy and great egret, glossy ibis and the Louisiana and great blue herons.

Shorebirds, Gulls, Terns and Allied Species

Twenty-five species were found in the area for a total of 218,000 use-days. This compares to 181,860 in FY 79 and 538,008 in FY 78. Dunlin, semipalmated sandpipers and sanderlings were the most abundant shorebird species followed by dowitchers, semipalmated plovers and laughing gulls.

Raptorial Birds

There were 8 species of raptorial birds using the area for a total of 5,815 use-days. These species included peregrine falcon, turkey vulture, American kestrel, osprey, marsh hawk, screech owl, red-tailed hawk and merlin.

Other Migratory Birds

Birds in this category are numerous on Wallops Island, however no surveys were conducted on these species.

Game Mammals

The Virginia whitetail deer is found on Wallops Island, however, no surveys were conducted on this species. NASA administers an annual hunt but no kill data is kept.

Other Resident Wildlife

Fox, opossum, raccoon, cottontail and muskrat are found on the island. No surveys were conducted on these species.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
AGREEMENT WITH THE
FISH AND WILDLIFE SERVICE
FOR USE OF PROPERTY AT WALLOPS ISLAND, VIRGINIA

WHEREAS, the National Aeronautics and Space Administration has acquired certain lands and marshes on and near Wallops Island, Accomack County, Virginia, and

WHEREAS, the Fish and Wildlife Service is the agency of the U. S. Government responsible for conservation and management of nationally significant wildlife resources, and

WHEREAS, the Fish and Wildlife Service now administers the nearby Chincoteague National Wildlife Refuge, and has expressed a desire to carry out, on a secondary role noninterference basis, a program of research on wildlife resources found on the Wallops Island installation, and

WHEREAS, the National Aeronautics and Space Administration is willing to make part of such real estate available to the Fish and Wildlife Service on a noninterference basis under the terms hereinafter set forth.

NOW, THEREFORE, the National Aeronautics and Space Administration, hereinafter called NASA, hereby grants to the Fish and Wildlife Service, hereinafter called the Service, the nonexclusive permission to use for the purposes and subject to terms and conditions hereinafter set forth, any and all areas of land and marsh not used for aerospace or other activities of the mission of NASA at the Wallops Flight Center and Wallops Island, including buffer zones. The areas to be used by the Service shall be for such activities as research and management of ospreys, snow geese, peregrine falcons and other wildlife species in special need of protection because of their diminishing numbers.

The Service shall have use of said property under the following conditions:

1. The Service agrees that the Use Agreement is neither assignable nor transferable by the Service.
2. The Service shall have the right to enter upon and use said lands for the purpose of improving wildlife habitat conditions, and for the protection and study of wildlife.
3. There is reserved to NASA the right to permit any other activity including hunting and fishing on the premises, without reference to the Service. Any such activity shall be in accordance with regulations approved by the Director, Wallops Flight Center.
4. The Service may construct any buildings or other physical improvements on the premises with written approval of the Director, Wallops Flight Center, having first been obtained.
5. The use and occupation of the premises shall be without cost or expense to NASA, and subject to the Wallops Safety Manual and such rules and regulations as the Director of Wallops Flight Center may prescribe from time to time.
6. The use of the premises for refuge purposes by the Service shall at all times be secondary to and shall not interfere with NASA in its use and administration of the property and facilities thereon, but NASA agrees when practicable to consider the needs of the refuge program in order to establish compatibility of operations.
7. The Service shall protect, maintain and keep in good order the premises permitted hereby.

8. The Service agrees that if utilities, supplies or services are furnished to the Service for its use of the premises, the cost thereof will be reimbursed to NASA pursuant to the applicable statutes and regulations governing such reimbursement.
9. This permit may be terminated in whole or in part hereof if the Service fails to use the premises in accordance with the terms and conditions herein, or if in the judgement of the Director, Wallops Flight Center, for any reason, termination is necessary. It may also be terminated at any time at the request of the Service. Any termination under this paragraph shall be without cost to NASA and shall be effective thirty (30) days after notice to the Service as hereinafter provided.
10. Fixtures, equipment, facilities, or other property of the Service constructed or maintained on the said premises shall be and remain property of the Service and may be removed at any time prior to the termination of this permit and at any time within three (3) months after any termination of this permit. Title to any property of the Service not removed from the premises within three (3) months after any termination of this permit shall vest in NASA, provided however that the Service shall remove any and all fixtures, equipment, facilities, alterations or improvements made or installed by the Service if required to do so by NASA, and to restore the premises or facilities to the same or as good condition as existed on the date of entry under this agreement, reasonable wear and tear excepted.

11. All notices by NASA concerning this permit will be addressed to the Regional Director, Fish and Wildlife Service, 1 Gateway Center, Suite 700, Newton Corner, Massachusetts 02158, and conversely, all notices by the Service to NASA will be addressed to Director, NASA Wallops Flight Center, Wallops Island, Virginia 23337.

This permit shall become effective from March 11, 1981, and shall continue in force for a term of five (5) years ending March 10, 1986, unless sooner terminated as provided above.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names as of the dates indicated.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

March 11 1981
(Date)

By Robert H. Kueger
Director, Wallops Flight Center

FISH AND WILDLIFE SERVICE

3/20/81
(Date)

By Wm. C. Calk
ACTING Regional Director

2. Items of Interest

The refuge was involved in a hurricane drill held by the U.S. Coast Guard and coordinated by the local base. This was a test of both the Coast Guard's ability to cope with situations associated with disasters ranging from civil disturbances to crashed aircraft with hazardous materials and their ability to coordinate with other agencies. The refuge's participation included the staff and their families living on the refuge being evacuated during a hurricane with "114 mph winds, calling in flare sightings and requesting assistance in a search and rescue situation. The drill proved that interagency coordination could stand some improvement.

As some of you are aware, Chincoteague is slightly different from most "normal" refuges. During any year we have numerous inquiries from visitors and correspondents. On occasion, one of the inquiries strikes a funny bone. The following is a verbatim copy of one such inquiry. (Never a dull moment.)

Dear Sir:

APPLICATION FOR BOOKS

It seems rather interesting to write to you this short letter asking of your condition of health. Mine is normal.

Please, its unfortunate that I couldn't get your address at the time I supposed. I am therefore asking you to send me copies of your Books. Please, I heard also about your pictures and hope you will send me some of the items. Because God said, ask and you will be given, kindly send it to me in no time so that I might be grateful.

I end here with much greeting to you and your members.

Yours faithfully,
Okudzeto E. K. Godwin
Ghana, West Africa

3. Credits

This report was written, typed and assembled with the combined efforts of all members of the staff and signed by the Refuge Manager.

Nearly all members of the staff were involved in the preparation of this report with the final editing and assembled being done by Manager Holland and Assistant Manager Oland. Typing was done by Sheryl Lewis and Susan Merritt.

K. FEEDBACK

For the past several years public use on Chincoteague Refuge has been steadily increasing. A large portion of this use is non-wildlife oriented and occurs during the summer season which lasts from late June to early September. From numerous discussions with people in both the FWS and private sector, it has become obvious that many people believe these non-wildlife uses should be eliminated or at least severely curtailed. Certainly any effort to eliminate beach use at an area such as Chincoteague would result in an unbearable public outcry. We will undoubtedly continue to have high levels of non-wildlife recreation limited primarily by the availability of parking spaces or accommodations in the local community. Since these people can't be eliminated (even the showing of "Jaws" at the local theater barely had any effect) we can either join them or get them to join us. Usually, we do both, but try to concentrate on the latter during duty hours.

The opportunities are here to contact the general public and educate at least a small portion of them to the function of the FWS and the refuge system. It would seem that many Service facilities could be effectively used to orient the general public to our wildlife resources even though they may initially be at the site for some nefarious non-wildlife reason. If we are going to continue to receive support for our management activities, we will have to sell the concept that all factions of our society benefits from the wildlife resources not just hunters and fishermen.

If the previous comments seem like I'm an advocate of non-wildlife public use on refuges, don't believe it. The point is that at some locations this use is a fact of life and we should take advantage of whatever opportunities are available to promote the activities of the Service. At the same time other areas have an obligation to restrict or prohibit all uses which do not fit our resource management goals.

"Hardtimes"

The preceeding deals with my philosophy in regard to some aspects of public use. God love the Chincoteague ponies and the beach. A person tends to be cynical after dealing with the recurring question "Where are the ponies?" and "Where is the beach?". A fact of life is that 1,391,000 visitors came here last year. Barring a major catastrophe such as no gasoline or money we will have to deal with public use at or about the same levels during 1982.

How do we cope with 10,000 on peak days and still keep the place looking good, roads repaired, fender benders investigated, beer cans picked up, restrooms clean, answer dumb questions, smile, and do so on such extremely short funding. (The '82 AWP Advice is no longer valid - at this writing reductions are drastic but probably in excess of \$50,000).

Oh well! We've seen hardtimes before but with a dedicated staff and a bunch of employees who can respond to about any unexpected occurrence we'll make it. At least we still have our jobs and we enjoy what we do.

My real gripe, (not that we can do anything about it) is why do budget cuts come so late in the fiscal year? Good bye BLHP. You were a tremendous help. Hello Entrance Fee Collections!