

ENVIRONMENTAL ASSESSMENT

PUBLIC FISHING PLAN  
PRIME HOOK NATIONAL WILDLIFE REFUGE  
MILTON, DELAWARE

DEPARTMENT OF THE INTERIOR  
U.S. FISH AND WILDLIFE SERVICE

For further information contact:

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## I. PURPOSE AND NEED

The Prime Hook National Wildlife Refuge (PHNWR) was established in 1963 primarily to preserve coastal wetlands that are of high value as waterfowl habitat. The refuge is located in the Atlantic Coastal Plain on the west shore of Delaware Bay, east of Milton, Delaware (Figure 1). Prime Hook is managed to provide nesting, resting and feeding habitat for migratory waterfowl. Currently providing black duck wintering habitat is an important part of this objective. Waterfowl production, especially black duck and wood duck is becoming increasingly important. Refuge recreational objectives are to provide wildlife oriented recreational opportunities compatible with habitat and wildlife objectives.

The refuge encompasses 8,817 acres of marsh and water, timber, and croplands. In addition, flowage easements have been obtained on 884 acres. For management purposes, the refuge is divided into four management units (Figure 1) by four State roadways which transect the refuge.

Since establishment of the refuge, fishing has been permitted in freshwater ponds and access has been provided for fishing in refuge tidal waters under an interim hunting and fishing plan. A new fishing plan has been prepared to update the refuge's public fishing program and to provide a legal framework for refuge fishing by listing PHNWR as an area open to fishing under 50 CFR, Part 33.

The refuge contains a sizeable fishery resource which can be used as a base for consumptive wildlife recreation. The objectives of this fishing plan are:

- 1) To provide quality wildlife - oriented recreation.
- 2) To provide for harvest of a renewable resource.
- 3) To minimize conflicts with the refuge's primary objectives or other refuge users.

The plan addresses fishing in freshwater ponds and access for fishing in tidal waters within the refuge. Under State law, navigable waters are controlled by the State and are open to all people. The Service controls only the access to these waters and the land surrounding these waterways which are in Service ownership.

In May 1984, construction of water control structures on Prime Hook Creek and Petersfield Ditch was completed (Figure 2). Technically, tidal action in these waterways will continue as we manage water levels in Unit III, because tidal water in excess of management levels will flow over the stoplogs. In addition, from February through June, no water management will be practiced. The State Division of Fish and Wildlife must decide whether the control structures will change the definition of these waters from tidal to non-tidal waters

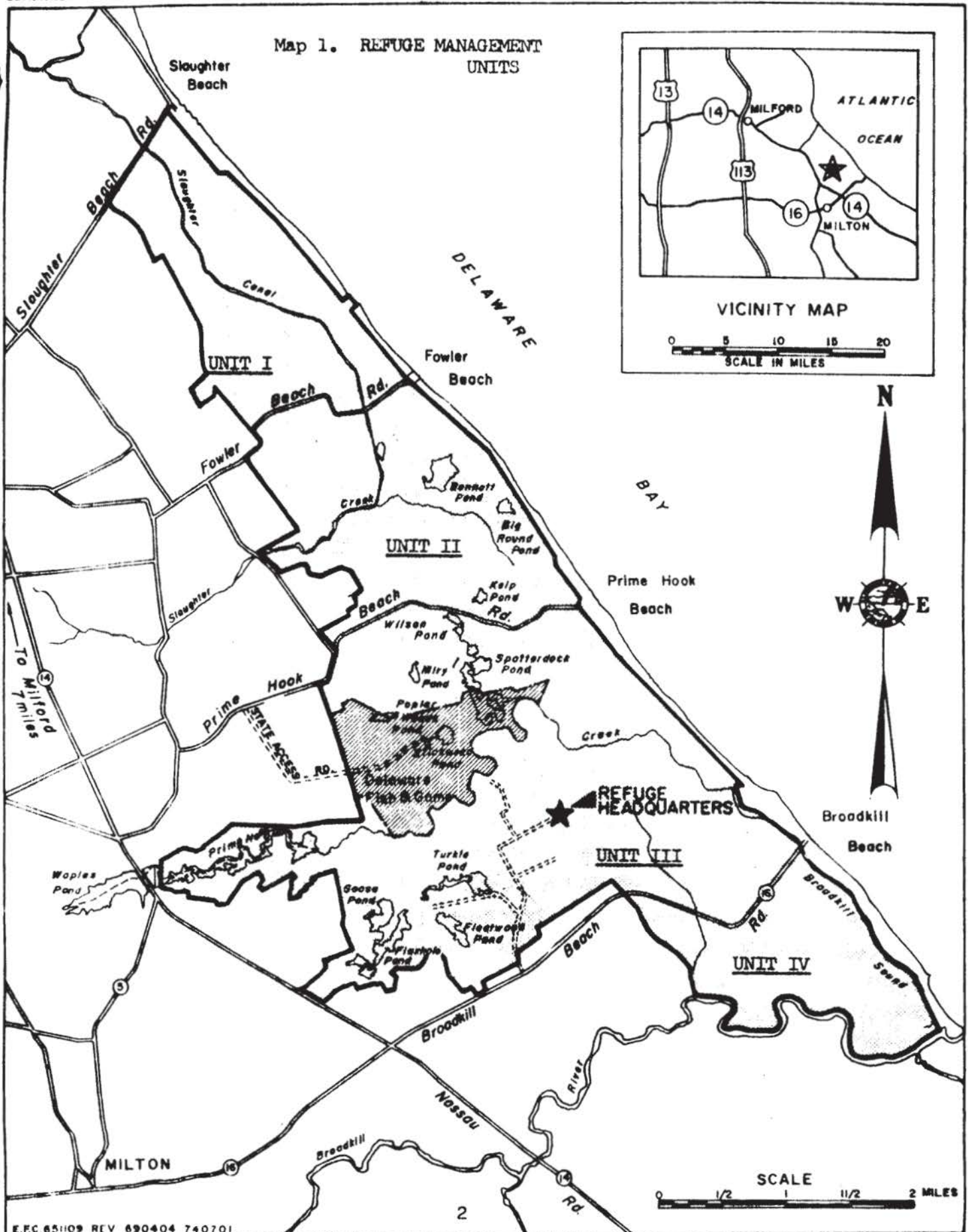
PRIME HOOK NATIONAL WILDLIFE REFUGE  
SUSSEX COUNTY, DELAWARE

MAP 1

UNITED STATES  
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE

Map 1. REFUGE MANAGEMENT  
UNITS



under State law. A State fishing license is required for anglers to fish in non-tidal waters.

## II. ALTERNATIVES

### A. No Action

No action, in essence, would close the refuge to public sport fishing as the refuge had not been legally opened to this activity.

Legal mandate requires the Fish and Wildlife Service to list areas open to public fishing in 50 CFR Part 33. The Service could not continue to permit public sport fishing without this legal authority. As a result, under this alternative, refuge personnel would be required to enforce the closure of PHNWR to public fishing in ponds, and prohibit access from refuge lands for fishing in refuge tidal waters.

### B. Implement Fishing Plan

Public fishing has been permitted on the PHNWR since its establishment under an interim hunting and fishing plan. Implementation of the revised fishing plan would give legal status to the refuge's fishing program by listing PHNWR in 50 CFR Part 33 as an area open to public fishing. The plan incorporates the fishing program as it is currently permitted. Minor changes or revisions have been made to update the plan.

The plan provides for access for fishing in refuge tidal waters, limited access for bank fishing in tidal waters, and freshwater pond fishing in Turkle and Fleetwood Ponds. Regulations would protect wood duck nesting boxes by closing those portions of the ponds in which the boxes are located during the primary nesting season (March 1 to July 1). In those areas that are open to fishing during the nesting season, a fisherman would be encouraged to maintain a minimum distance from a nest box while on the water. Boats would be permitted in accordance with State laws and regulations. However, boats used in Turkle and Fleetwood Ponds would be restricted to being propelled manually or by electric motor.

Species, seasons, and limits would be in accordance with State laws and regulations as set by the Delaware Division of Fish and Wildlife. Fishing would be permitted from sunrise to sunset daily throughout the year, except that Turkle and Fleetwood Ponds would be closed to the public in August and February to conduct waterfowl capture operations for pre-season and post-season banding.

C. Open Entire Refuge, under State Regulations, With No Further Refuge Restrictions

This alternative would open all refuge waters to sport fishing. Fishing regulations established by the Delaware Division of Fish and Wildlife would be the only regulations applicable to sport fishing on the PHNWR except for basic refuge regulations permitting access from sunrise to sunset.

III. AFFECTED ENVIRONMENT

A. Physical Considerations

PHNWR contains three main waterways: Prime Hook Creek, Petersfield Ditch and Slaughter Creek and Canal. Prime Hook Creek starts at Waples Mill Pond east of State Route 16 and flows easterly across Unit III to Broadkill Beach, then south to the Broadkill river, a distance of about 11 miles. Petersfield Ditch branches off from Prime Hook Creek about 1.5 miles west of Broadkill Beach and flows southerly, parallel to Prime Hook Creek until joining the Broadkill River, a distance of about 2 miles. Slaughter Creek flows easterly across Unit II, joining with the man-made Slaughter Canal near Oak Island. The canal flows northerly across Units I and II joining Cedar Creek north of the refuge before entering the Mispillion River. Within the refuge boundary the system is about six miles in length. Future references in the assessment will refer to the entire system as Slaughter Creek.

PHNWR is dotted by a series of small ponds, ditches and potholes. Most are not accessible by boat as many connector ditches have been filled from bank sloughing and sedimentation.

In May 1984, construction was completed on water control structures on Prime Hook Creek and Petersfield Ditch. In the future, the Service will be able to manage water levels within Unit III as a result of this work. At this time, however, the status of Prime Hook Creek and Petersfield Ditch will remain classified as tidal, since tidal water in excess of management levels will be permitted to flow over the stoplogs to enter or leave the unit.

Within Unit III, about 20 small ponds are connected to Prime Hook Creek or Petersfield Ditch by smaller ditches.

Salinity levels within the refuge are variable, partially dependent on the amount of freshwater running into Prime Hook Creek and Slaughter Creek from upland areas. Salinity levels up to 8 PPT have been recorded in Slaughter Creek at the Fowler Beach Road Bridge. In Unit III salt water seldom reaches more than 3 miles upstream on Prime Hook Creek. Salinity levels range from 0-12 PPT in Headquarters Ditch.

Combined, the creeks, ditches and ponds contain approximately 800 acres of fresh and brackish waters. The western end of Prime Hook Creek is referred to locally as the Prime Hook Creek Impoundment although the area is not actually impounded. This area is the widest section of the creek averaging about 150 feet wide for a distance of about 1.75 miles. At the east end of the "impoundment" the creek narrows to about 50 feet wide and remains at that width for most of the remainder of its course.

Slaughter Creek is about 50 feet wide along its entire length. There are few potholes or ponds near or adjacent to Slaughter Creek, that are accessible from the creek.

Unit III contains several non-tidal freshwater ponds: Turkle Pond (14 acres); Fleetwood Pond (12 acres); Oak Pond (4 acres); Horseshoe Pond (3 acres) and Beach Pond (1 acre).

## B. Biological Considerations

### 1. Vegetation

The western portion of Slaughter Creek is dominated by cattails (Typha spp.) and marsh mallow (Hibiscus palustris). Water willow (Decodon verticillatus) is beginning to encroach upon the marsh. White waterlily (Nymphaea odorata) and pickerelweed (Pontederia cordata) are also common along this section. From Oak Island north to the refuge boundary, the creek is dominated by phragmites (Phragmites australis), salt marsh hay (Spartina patens), saltgrass (Distichlis spicata), and high tide bush (Iva frutescens and Baccharis halimifolia).

Starting at Waples Mill Pond at the western end, Prime Hook Creek is bounded by woodlands dominated by red maple (Acer rubrum) for its first six miles. Aquatics are well defined along this section of the creek. Common species include, white and yellow water lilies, arrowroot (Sagittaria spp.), pickerelweed, and wigeon grass (Ruppia maritima).

The next portion of the creek is dominated by phragmites with some pockets of cattails. This type extends for about two miles. The remainder of Prime Hook Creek contains a narrow band of salt hay and saltgrass with phragmites and brush adjoining. The northern 1.0 miles of Petersfield Ditch is dominated by phragmites which blends to marsh hay with a narrow strip of narrow-leaved cattail in between.

The higher banks of both Slaughter Creek and Petersfield ditch contain saltgrasses, high tide bush and myrtle (Myrica pensylvanica).

Bladderwort (Utricularia sp.), a submergent aquatic, is abundant in all freshwater ponds and in other shallow areas. Submerged and floating aquatics are lacking in tidal ponds on the southern end of Unit III and along Slaughter Creek, probably due to high populations of carp.

## 2. Wildlife

Prime Hook is an important nesting and feeding area for migrating waterfowl. Peak fall/winter populations occur in October and November with up to 20,000 to 25,000 geese (both Canada and Snow) and up to 8,000 ducks. By April most geese have gone northward. Spring duck populations seldom exceed 3,000 birds.

Wood duck, black duck, mallard, gadwall and blue-winged teal are the common nesting species. An average of 700-800 birds are produced annually. Wood ducks are the most common breeder, nesting primarily in 200 nest boxes placed in Unit III. The largest concentration of boxes and the highest nesting success is in Goose Pond and the Flaxhole/Teal Pond complex. Use of boxes by wood ducks in this area is 100%. Portions of Turtle and Fleetwood Ponds also contain nest boxes. Over all, about 80% of all nesting boxes are used by wood ducks.

Most black duck nesting occurs in grassy and brushy areas and occasionally along the banks of Slaughter Canal and Petersfield Ditch. Some nesting is suspected on uprooted trees in the western part of Prime Hook Creek.

Use of the refuge by endangered species is low. An occasional bald eagle or peregrine falcon is observed. Eagle sightings have become more frequent since a nest was established about eight miles southwest of the refuge. Ospreys are frequently seen in the Prime Hook Creek area, however no local nesting is known to occur. No threatened or endangered fish species are known to inhabit the refuge.

Use of the refuge by shorebirds and marsh and water birds is extensive. There has been no known conflict between these species and fishermen, as these species prefer shallow waters or mud flats.

Prime Hook contains a significant fishery resource. A list of shellfishes and finfishes known to inhabit refuge waters is appended (Table 1). The refuge basically supports freshwater fish species and some anadromous species.

From a sport fishery aspect, the most important species are largemouth bass, white perch, black crappie, brown bullhead, yellow perch, bluegill, and chain and redbfin pickerel. Blue crab are the most popular shellfish species. Numbers of individual fish species are not known.

Table 1. FISHES OF PRIME HOOK NATIONAL WILDLIFE REFUGE

FISHES - Prime Hook NWR

## Shellfish

Blue Crab  
Fiddler Crab

Scientific Name

Callinectes sapidus  
Uca sp.

FinfishCommon Name

Gizzard shad  
Hickory shad  
Alewife  
Menhaden  
Anchovy  
Eastern mudminnow  
Chain pickerel  
Redfin pickerel  
Carp  
Golden shiner  
Silverline shiner  
White sucker  
White catfish  
Black bullhead  
Brown bullhead  
American eel  
Mummichog  
Spot-fin killyfish  
Tidewater silverside  
Mosquito fish  
White perch  
Largemouth bass  
Pumpkinseed  
Mud sunfish  
Bluegill  
Yellow belly sunfish  
Black crappie  
White crappie  
Bluespotted sunfish  
Banded sunfish  
Yellow perch  
White mullet  
Summer flounder  
Bluefish  
Atlantic croaker  
Cravelle jack  
Naked goby  
Spot

Scientific Name

Dorosoma cepedianum  
Alosa sapidissima  
Alosa pseudoharengus  
Brevoortia tyrannus  
Anchoa mitchelli  
Umbra pygmeoa  
Esox niger  
Esox americanus  
Cyprinus carpio  
Notemigonus crysoleucas  
Notropis amoenus  
Catostomus commersoni  
Ictalurus catus  
Ictalurus melas  
Ictalurus nebulosus  
Anguilla rostrata  
Fundulus heteroclitus  
Fundulus luciae  
Menidia buyllina  
Gambusia affinis  
Morone americana  
Micropterus salmoides  
Lepomis gibbosus  
Acantharchus pomotis  
Lepomis macrochirus  
Lepomis auritus  
Pomoxis nigromaculatus  
Pomoxis annularis  
Enneacanthus gloriosus  
Enneacanthus obesus  
Perca flavescens  
Mugil cephalus  
Paralichthys dentatus  
Pomatomus saltatrix  
Micropogon undulatus  
Carnex hippos  
Gobisoma boscii  
Leiostomus xanthurus



Table 2

## Fish Collections Data

Department of Fisheries  
August 28 and 29, 1968

| Species              | Flaxhole<br>Pond<br>6 acres | Petersfield<br>Canal<br>2 miles | Fleetwood<br>Pond<br>7 acres | Prime Hook<br>Creek<br>6 miles | Turkle<br>Pond<br>5 acres |
|----------------------|-----------------------------|---------------------------------|------------------------------|--------------------------------|---------------------------|
| Largemouth bass      | 13                          | 1                               | 4                            | 10                             | 2                         |
| Chain pickerel       | 16                          | -                               | 4                            | 1                              | -                         |
| Redfin pickerel      | -                           | -                               | 1                            | -                              | -                         |
| Black crappie        | 11                          | -                               | 4                            | 4                              | 2                         |
| White crappie        | -                           | -                               | 1                            | -                              | -                         |
| White perch          | -                           | -                               | -                            | 2                              | -                         |
| Pumpkinseed          | 43                          | -                               | 85                           | 7                              | 44                        |
| Bluegill             | 69                          | -                               | 61                           | 12                             | 11                        |
| Redbreast sunfish    | 3                           | -                               | -                            | -                              | -                         |
| Gizzard shad         | -                           | 2                               | -                            | -                              | -                         |
| Mud sunfish          | 1                           | -                               | 5                            | -                              | 3                         |
| Blue-spotted-sunfish | 4                           | -                               | -                            | 1                              | -                         |
| Banded sunfish       | 2                           | -                               | 5                            | -                              | 2                         |
| Yellow perch         | 4                           | -                               | 8                            | 4                              | 7                         |
| White mullet         | -                           | 3                               | -                            | -                              | -                         |
| Black bullhead       | -                           | -                               | 1                            | 4                              | 6                         |
| Brown bullhead       | -                           | 2                               | -                            | 2                              | 8                         |
| White sucker         | -                           | -                               | 1                            | -                              | -                         |
| Eastern mudminnow    | 1                           | -                               | -                            | -                              | -                         |
| Golden shiner        | 11                          | -                               | -                            | -                              | 3                         |
| Silverline shiner    | -                           | -                               | 21                           | -                              | -                         |
| Carp                 | Observed                    | 18                              | Observed                     | 12                             | Observed                  |
| White catfish        | -                           | 1                               | -                            | -                              | -                         |

Fish catches from Primehook Impoundment  
July 1975.

| SPECIES          | STAKE NETS<br>CATCH PER<br>NET/DAY |                   | SEINE CATCH<br>(800 SQ. FT.) |                   | ROTENONE SAMPLE       |                         |                   |                   |
|------------------|------------------------------------|-------------------|------------------------------|-------------------|-----------------------|-------------------------|-------------------|-------------------|
|                  | Number                             | Weight<br>in gms. | Number                       | Weight<br>in gms. | No. 1/4<br>Acre Shore | Grams 1/4<br>Acre Shore | % Total<br>Number | % Total<br>Weight |
| Black crappie    | 0                                  | 0                 | 2.0                          | 3.0               | 0                     | 0                       | 0                 | 0                 |
| Bluegill         | 0.8                                | 86.0              | 2.0                          | 87.0              | 22.3                  | 13.40                   | 20.8              | 50.0              |
| Chain pickerel   | 3.0                                | 2547.5            | 0                            | 0                 | 0                     | 0                       | 0                 | 0                 |
| White perch      | 3.5                                | 701.0             | 0                            | 0                 | 0                     | 0                       | 0                 | 0                 |
| Golden shiner    | 2.0                                | 169.3             | 0                            | 0                 | 0                     | 0                       | 0                 | 0                 |
| Creek chubsucker | 5.5                                | 1931.3            | 0                            | 0                 | 0                     | 0                       | 0                 | 0                 |
| Carp             | 0                                  | 0                 | 2.0                          | 2041.0            | 0                     | 0                       | 0                 | 0                 |
| Gizzard shad     | 0.3                                | 15.0              | 0                            | 0                 | 0                     | 0                       | 0                 | 0                 |
| Menhaden         | 0                                  | 0                 | 8.0                          | 14.0              | 84.8                  | 13.4                    | 79.2              | 50.0              |
| Brown bullhead   | 20.8                               | 3466.8            | 1.0                          | 227.0             | 0                     | 0                       | 0                 | 0                 |
| Yellow bullhead  | 0.3                                | 24.8              | 0                            | 0                 | 0                     | 0                       | 0                 | 0                 |
| White catfish    | 1.0                                | 454.8             | 0                            | 0                 | 0                     | 0                       | 0                 | 0                 |
| Totals           | 37.2                               | 9396.5            | 15.0                         | 2372.0            | 107.1                 | 26.8                    | 100.0             | 50.0              |

## C. Social and Economic Consideration

Fishing has always been a popular activity at PHNWR. An average of approximately 2,000 visits are made annually resulting in an average of nearly 6,000 hours of enjoyment. Over 1,500 visits totaling over 3,000 hours are made annually for crabbing.

The waters of Prime Hook Creek, Turkle and Fleetwood Ponds have a long history of providing fishing opportunity for local residents and visitors. Highway bridges across Petersfield Ditch (Route 16) and Slaughter Creek (Routes 199 and 224) have provided excellent fishing and crabbing opportunities. This activity also occurs along the banks of these waters. Although there are several bait and tackle shops in the area, the impact of the refuge is not significant. A private canoe rental business is located at Waples Mill Pond just west of the Refuge. Rentals are available for access into Prime Hook Creek.

At this time, a State fishing license is required only in the refuge's freshwater ponds. Prime Hook Creek, Slaughter Creek, Petersfield Ditch, and the ponds off of these waterways are considered by the State to be tidal waters and licenses are not required for fishing. Fishing license fees are \$4.20 for Delaware residents and \$9.50 for non-residents.

## IV. ENVIRONMENTAL CONSEQUENCES

### A. No Action

The closure of the refuge to sport fishing is the major consequence of the no action alternative. Over 3,500 annual refuge visits for fishing and crabbing would be lost. Adverse reactions from the fishing public would result and the refuge's public relations effort would suffer. The loss of revenue to the State for fishing licenses would be minor as most persons fishing in refuge non-tidal waters also fish in other freshwater ponds within the State.

Closing of the refuge to fishing would lessen the extent of trampling of aquatic vegetation, however some trampling would still occur from other refuge visitors. Soil erosion from boat wakes would be reduced.

Migrating and nesting waterfowl and other migratory birds would encounter slightly less disturbance as a result of closing of the refuge to fishing, however, current regulations already hold such disturbance to a low level. Some additional nesting of black ducks and mallards could occur in the long run. No action would probably not impact, adversely or positively on mammals or reptiles and amphibians. Closing of the refuge to fishing probably would not result in an increase in use by endangered species. Water quality may improve slightly in Prime Hook Creek because gasoline powered outboard motors would not be

operating in tidal waters where accidental, small scale spills could occur.

The absence of the litter associated with sport fishing, particularly from crabbing, would improve the overall aesthetics of the refuge.

Populations of some fish species would probably increase with a closure of the refuge to fishing. Some overcrowding and stunting is also likely to occur.

#### B. Implement Fishing Plan

Under this alternative the refuge would continue to allow public fishing in accordance with the revised Refuge Public Fishing Plan.

Operation of gasoline powered outboard motors in the refuge's tidal waters may result in some fuel and oil entering the water accidentally. The amount of fuel spilled has been minor in the past and is not expected to increase as a result of this action. Any spills would soon be dissipated and carried out of the area by tidal action. There would be no long-term adverse impact on water quality or any long-term accumulation of oil and gas residues.

Wakes from outboard motors may cause some erosion of the banks of the tidal waterways, temporarily increasing turbidity. The long-term impact is not considered to be significant. A speed limit will be placed on boats using refuge tidal waters if a significant erosion problem occurs. The use of electric motors or manual propulsion in Turtle and Fleetwood Ponds has eliminated the potential for fuels entering those ponds. Boat wakes will not pose a problem in those ponds open to fishing.

Bank fishing at Turtle Pond, Fleetwood Pond, Petersfield Ditch and Slaughter Creek will result in some trampling of vegetation and some soil compaction. Bank fishing in both ponds is restricted to small sections by wooded vegetation. Less than one-acre would be involved at both Ponds. The impact of sport fishing along the banks of Slaughter Creek and Petersfield Ditch will be minimized by limiting bank fishing to within 250 yards from State highways. Closed areas would be posted.

Some loss of pickerelweed and arrow arum will occur in Turtle and Fleetwood Ponds, due to trampling, however, the loss will be minor. Fishing from boats, whether in ponds or tidal waters, including Prime Hook Creek, will have only a minor impact on submergent or emergent aquatics. Some bladderwort and water-lillies will be snagged by hooks or disturbed by outboard motors. The long-term effect is expected to be negligible.

The fishing plan has been prepared to minimize conflict with migrating and nesting waterfowl. Most fishing occurs between March and November when populations of migratory waterfowl are fairly low.

Heaviest fishing use is on the western 3 miles of Prime Hook Creek, in Turkle and Fleetwood Ponds, and in Slaughter Creek and Petersfield Ditch near State highways.

Some disturbance to resting waterfowl occurs on Prime Hook Creek, as birds are flushed by approaching boats. Species involved are primarily wood duck and blue-winged teal feeding in the shallow edges of the creek. Considering the number of boats (maximum one time use of 30 observed) the disturbance is minor.

Those portions of Turkle and Fleetwood Ponds (including Oak Pond) which contain wood duck nesting boxes (a total of 8 acres) will be closed to public fishing from March 1 to July 1 each year. Flaxhole, Goose, Teal, Horseshoe and Beach Ponds will be closed to all public sport fishing as these ponds are important wood duck nesting areas and will serve to provide brood rearing areas free from disturbance. Horseshoe and Beach Ponds are normally closed in and clogged with floating vegetation by July 1. At that time, portions of Turkle and Fleetwood Ponds, which were closed to fishing during the nesting season, are reopened to anglers.

Implementation of the plan is not expected to impact on black duck nesting. In this locale this species prefers to nest in fields, field edges and brushy areas. Limiting access for bank fishing to 250 yards from State highways will also serve to limit any conflict with black duck or other waterfowl species nesting.

Turkle and Fleetwood Ponds will be closed to all public entry from August 1 to mid-September and again in February to mid-March for waterfowl banding operations. Fishing activity in these ponds in August is minimal due to persistent sheep fly populations.

Use of the refuge by endangered species is limited to occasional use by bald eagles and peregrine falcons. Implementation of the fishing plan is not expected to impact on-refuge use by these species.

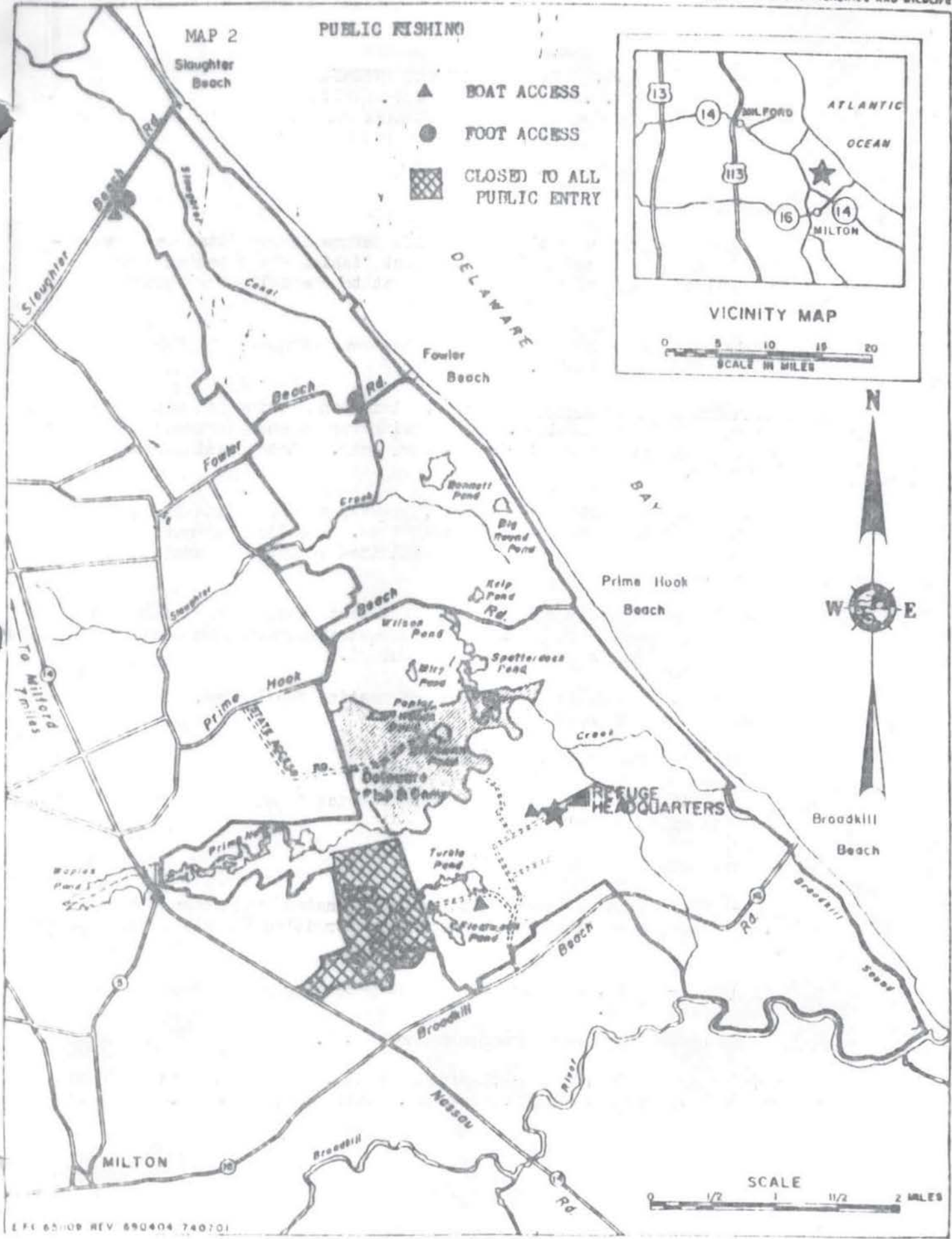
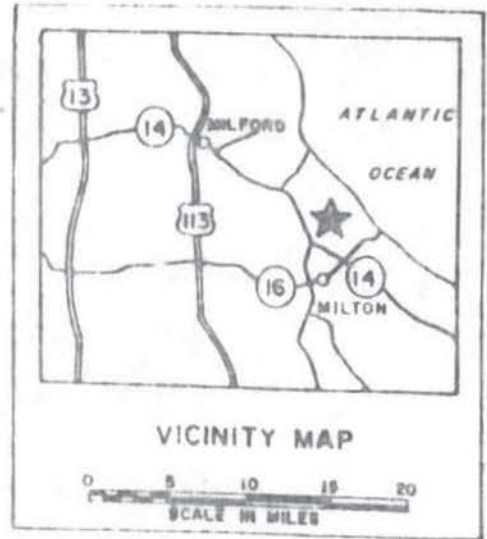
Some minor disturbance to shorebirds and marsh and waterbirds will occur. These species frequent shallow waters and mudflats where only minor fishing activity occurs.

The effect of fishing and crabbing on particular species of fish is considered insignificant. After 20 years of public sport fishing on the refuge, fish populations and angler success appear to be basically unchanged. Many anglers return their catch to the water after their trip. Few largemouth bass are retained. Angler success is estimated at 3 fish per visitor per day. An estimated 2.5 fish per angler per day are removed from refuge waters. White perch, crappie, and bluegill will be the most commonly taken species. Lesser numbers of largemouth bass, carp, yellow and brown bullhead, pumpkinseed and chain pickerel are also taken. These

MAP 2

PUBLIC FISHING

- ▲ BOAT ACCESS
- FOOT ACCESS
- ▣ CLOSED TO ALL PUBLIC ENTRY



EF 65109 REV 890404 740701

U.S. DEPARTMENT OF THE INTERIOR  
U.S. FISH AND WILDLIFE SERVICE  
PRIME HOOK NATIONAL WILDLIFE REFUGE  
MILTON, DELAWARE 19968

FISHING REGULATIONS

Fishing on the Prime Hook National Wildlife Refuge is permitted on areas designated by signs as open to fishing. Sport fishing shall be in accordance with all applicable State regulations subject to the following special conditions:

Season- Fishing is permitted during open seasons designated by the Delaware Division of Fish and Wildlife.

Species, Limits and Equipment - Species, limits and equipment must be in conformance with State regulations. Boats using Turkle and Fleetwood Ponds may be propelled manually or by electric motors only. State boating regulations are applicable.

Permit - No refuge permits are required, however a valid State license is required to fish in Turkle and Fleetwood Ponds. The license must be carried on the person at all times and must be exhibited to Federal and State officers upon request.

General - Fishermen <sup>ARE REQUESTED TO REMAIN</sup> must remain at least 150 feet away from nesting boxes. The portions of Turkle and Fleetwood Ponds containing wood duck nesting boxes are closed to the public from March 1 to July 1.

The destruction, disturbance or removal of nesting facilities, plants, animals or public property is prohibited.

Weapons and littering are prohibited.

Pets are permitted if on a leash, one end of which is secured so as to restrict the movement of the animal.

Camping and open fires are prohibited.

Vehicles - Motor vehicles are permitted on designated roads open to public travel. Maximum speed is 25 MPH. Parking is permitted in designated parking areas.

Boat Launching - Boats, for access to tidal waters or ponds must be launched from designated points.

Hours - The refuge is open from sunrise to sunset.

For further information, contact, Refuge Manager, Prime Hook National Wildlife Refuge, RD # 1, Box 195, Milton, Delaware. Tel: (302) 684-8419.

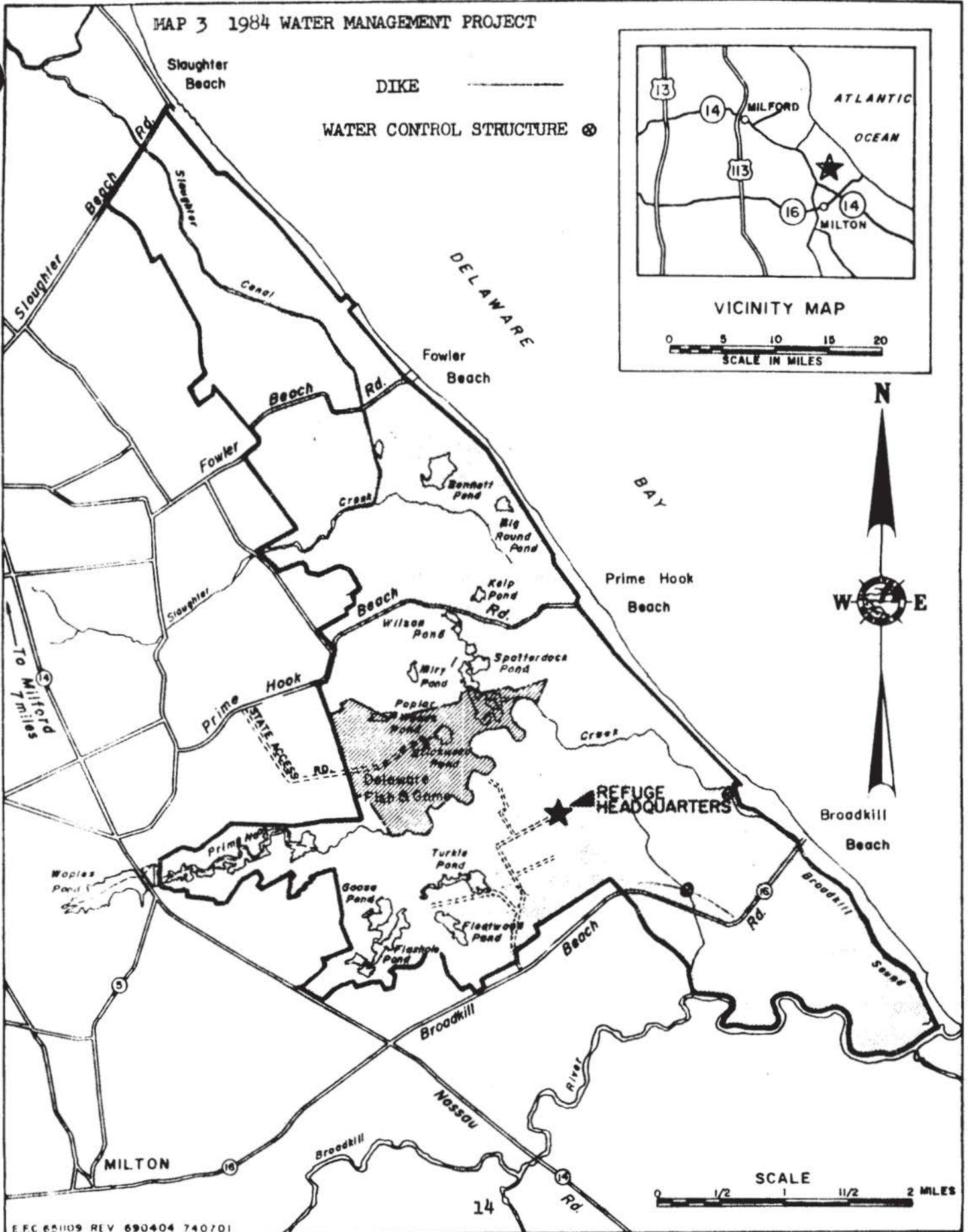
# PRIME HOOK NATIONAL WILDLIFE REFUGE

SUSSEX COUNTY, DELAWARE

UNITED STATES  
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE

## MAP 3 1984 WATER MANAGEMENT PROJECT





species have a high reproductive potential. The long term effect of fishing on these species is expected to be negligible.

Individual species such as largemouth bass and white perch may be more adversely effected by natural conditions than by sport fishing. The March, 1962 coastal storm significantly increased refuge salinity levels in Unit III, and seriously reduced bass populations. Populations of white perch were heavily impacted by the 1977 drought, when the ditches leading to many of the tidal ponds dried up before the ponds. Adult fish and fry were trapped in the ponds and died when the oxygen level in the water dropped as the ponds went dry. Management of water levels in Unit III will prevent this occurrence in the future.

Implementation of the fishing plan will not have a significant impact on local bait and tackle shops or the local private canoe rental business. The number of visits to the refuge for sport fishing, including crabbing, is not expected to increase significantly as a result of implementations of this plan. The refuge should continue to realize around 2,000 visits annually for fishing and over 1,500 visits annually for crabbing. No increase is expected as this alternative would provide the legal framework to continue to allow sport fishing on the refuge as it has been permitted in the past.

Some minor conflicts between anglers and waterfowl hunters occur in October and November. These conflicts are generally minor in nature. Should a problem occur, future regulations will be sought to close the section of Prime Hook Creek containing waterfowl hunting blinds to sport fishing on days when waterfowl hunting is in progress.

Fishing and crabbing in the refuge may decrease the quality of the wildlife/wildlands experience for some people. This will be offset by those people who feel that fishing is in itself a worthwhile wildlife/wildland experience.

#### C. Open Entire Refuge to Fishing Under State Regulations

Water quality in freshwater ponds may be reduced as outboard motors would be allowed in the ponds. Small fuel spills would likely occur. Fuel residues entering these Ponds would accumulate with possible long-term impacts on vegetation and invertebrate species. In addition, the use of outboard motors in the ponds could cause erosion along the pond banks, causing trees to topple and turbidity to increase.

Considerable trampling of vegetation and littering would likely occur if this alternative was chosen. Such a problem was noticed in the past when unrestricted access was permitted for bank fishing along tidal streams throughout the refuge. The fragile salt marsh grasses (salt marsh hay and saltgrass) are the grasses most likely to to be damaged. Experience has shown that persons walking more than a few hundred feet from the road are less likely to pick up their litter and trash, perhaps

hoping that it will not be found. Aquatics along the pond edges may also be trampled as a result of this alternative. Resting, feeding, and nesting waterfowl would be severely impacted by this alternative. Black ducks and mallards nesting along the banks of ditches would be disturbed by anglers. With no restrictions and no closed areas, wood duck nesting would be severely affected as anglers would be permitted to enter portions of Turkle and Fleetwood Ponds where nesting boxes are located, at any time. Also, under this alternative, Teal, Goose and Flaxhole Ponds would be open to fishing. As a result annual production of wood ducks would drop significantly. Similarly, waterfowl nesting and feeding in these same ponds would also be disturbed. The impact on the fishery resource by opening of the entire refuge to fishing would probably be little different from the preferred fishing plan. Initial success in Goose, Flaxhole and Teal Ponds would be excellent, however, within a few years the success would be similar to that in other freshwater and tidal freshwater areas.

Opening of the entire refuge to fishing would probably not result in a significant increase in angler use in the long-term. Initially high use would occur in the newly opened ponds because fishing had not legally existed before. Perhaps a few trophy fish would be caught but that would be the exception. Mid-summer weed and fly problems would keep fishing use near current levels over the long-term.

The use of gasoline outboard motors in Turkle and Fleetwood Ponds adjacent to which much of our non-consumptive use occurs would decrease the quality of the wildlife/wildland experience for some people.

To open the Goose/Flaxhole/Teal Pond areas to fishing would require that the Service construct ditches from Fleetwood Pond to Flaxhole Pond or to acquire permission for the public to obtain access across privately-owned lands to reach the ponds. Construction of a ditch would produce significant impacts on refuge wetlands.

#### V. CONSULTATION AND COORDINATION

This assessment and fishing plan were prepared with input from the Division of Fishery Services, Fish and Wildlife Service, Gloucester Point, Virginia. Informal discussions were held with Kathy Martin, Fishery Biologist, Delaware Division of Fish and Wildlife.

A news release was circulated in 1980 indicating our plan to prepare an environmental assessment for fishing on the Prime Hook Refuge. No comments were received. During the past few years we have received verbally, comments, views and suggestions from numerous anglers contacted in the field. Comments primarily concern additional access points to Prime Hook Creek, night fishing, and opening of Flaxhole, Teal, and Goose Ponds. Additional access points to Prime Hook Creek are not feasible at this time due to private ownership and the

refuge's lack of rights-of-way.

A news release announcing the availability of this EA has been prepared and is attached. A proposed rulemaking will appear in the federal register which, when finalized, will result in the "official" opening of the refuge to public fishing. Comments received by the public during the comment periods will be considered prior to finalizing this assessment.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
PRIME HOOK NATIONAL WILDLIFE REFUGE  
R.D. 1, BOX 195  
MILTON, DELAWARE 19968

6-17-86

George F. O'Shea  
Assistant Refuge Manager  
(302) 684-8419

NEWS RELEASE: IMMEDIATE

SPORT FISHING ANNOUNCED

The U.S. Fish and Wildlife Service plans to formally open portions of Prime Hook National Wildlife Refuge to sport fishing, Refuge Manager Paul D. Daly announced today. Access will be available for fishing and crabbing in refuge tidal waters including Prime Hook Creek, Petersfield Ditch and Slaughter Creek/Slaughter Canal. Freshwater fishing will be permitted in Turkle and Fleetwood Ponds.

An environmental assessment has been prepared for this action. A copy of the environmental assessment is available for public inspection at the Prime Hook Refuge Office.

The Prime Hook National Wildlife Refuge, located east of Milton, Delaware, contains 8,817 acres. The refuge is managed to preserve habitat for migratory birds. The refuge consists of both tidal and freshwater and contains a diverse fishery resource.

Comments should be sent to Refuge Manager, Prime Hook National Wildlife Refuge, RD 1, Box 195, Milton, Delaware 19968.

XXXX

## SECTION 7 EVALUATION

REFUGE: Prime Hook National Wildlife Refuge

DESIGNATION: Region 5 - FY 86

PROGRAM: Refuge: Sport Fishing

LISTED SPECIES OR CRITICAL HABITATS CONSIDERED:

Bald Eagle  
Peregrine Falcon

NAME AND DESCRIPTION OF ACTION:

Opening of portions of the Prime Hook National Wildlife Refuge to sport fishing as designated in the Refuge Fishing Plan is proposed.

The following areas will be open for sport fishing and are shown on the attached map:

| <u>Areas</u>               | <u>Acreage</u> |
|----------------------------|----------------|
| Fleetwood Pond             | 12             |
| Turkle Pond                | 14             |
| Oak Pond                   | 4              |
| Prime Hook Creek and Ponds | 420            |
| Slaughter Creek/ Canal     | 100            |

LOCATION (MAP ATTACHED) :

Prime Hook National Wildlife Refuge  
Sussex County, Delaware

OBJECTIVES OF ACTION:

Sport Fishing- Furnish an opportunity for the recreational pursuit of fin fishes and blue crabs.

EXPLANATION OF IMPACT ON LISTED SPECIES OR CRITICAL HABITAT:

A total of approximately 550 acres, 7% of the refuge total acreage, will be open to sport fishing.

No conflict between anglers and bald eagles is expected. Bald eagles are most frequently observed during January through early June with up to two birds sighted. A single bird is infrequently observed from July to October. There is an active nest approximately 12 miles Southwest of the refuge.

Peregrine falcon sightings are rare (once or twice per year) and are most frequently observed near Unit III and Unit IV. No conflict between anglers and peregrine falcons is expected.

CONCLUSION (CROSS OUT ONE):

A. May-affect

B. Will not affect

RECOMMENDATION:

It is recommended that public sport fishing be opened as presently proposed. Anglers will be advised of the species presence. If eagle or peregrine falcon activities increase in areas to be opened to sport fishing, the area will be closely monitored and warnings will be posted to preclude harassment of either endangered species.

PROJECT LEADER \_\_\_\_\_ DATE \_\_\_\_\_

REFUGE MANAGER Paul D. Daly DATE 1-8-86

COMMENTS:

ARD-WR Donald Young DATE 1/28/86

COMMENTS:

ARD-FA Paul R. Nielsen DATE 1/29/86

COMMENTS: NO LISTED SPECIES INVOLVED WITH OR IMPACTED BY THE ACTION.

**ACTING** REGIONAL DIRECTOR William I. Kelly DATE 1/30/86

COMMENTS:

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

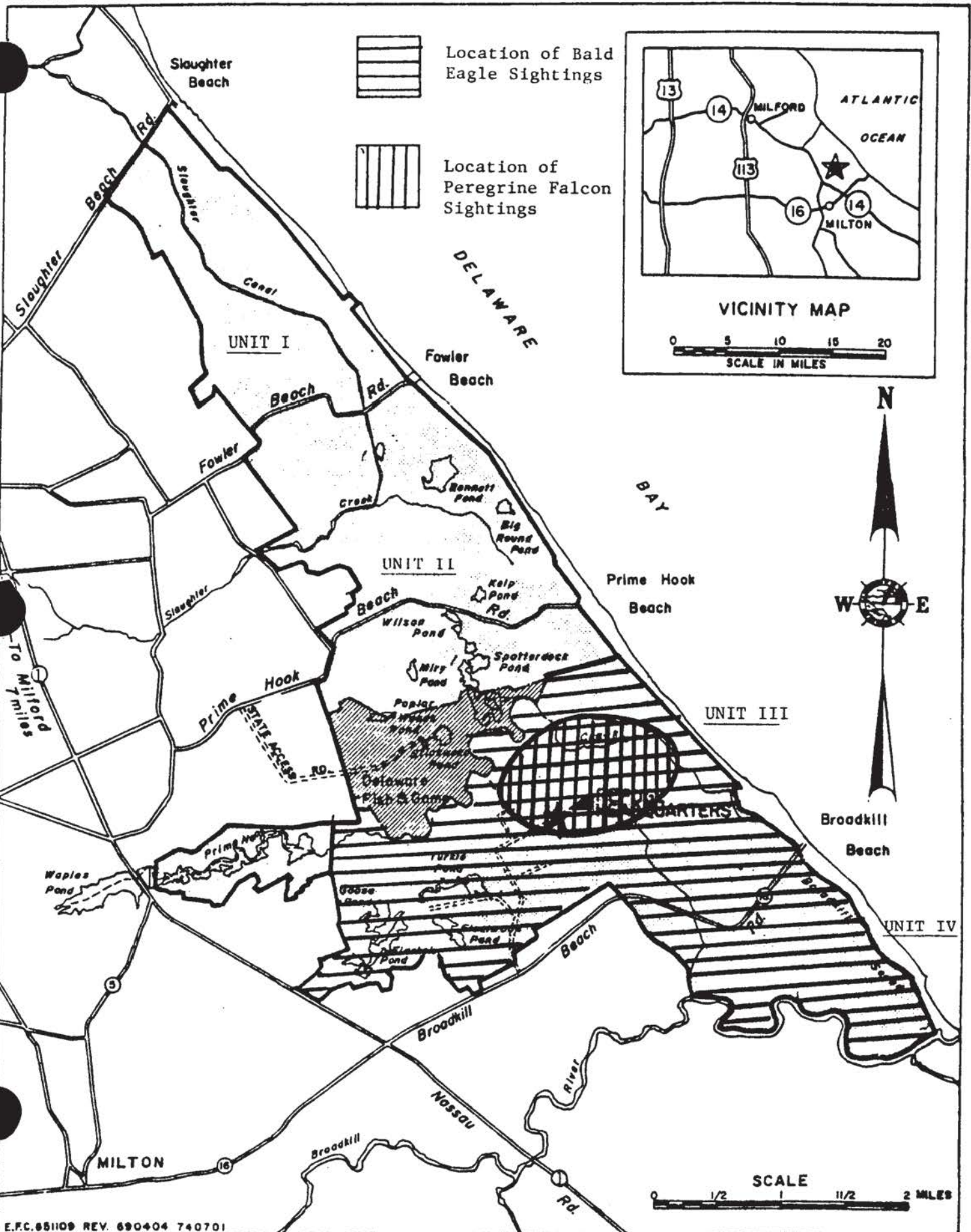
COMMENTS:

# PRIME HOOK NATIONAL WILDLIFE REFUGE

SUSSEX COUNTY, DELAWARE

UNITED STATES  
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE





*Sisk Plan*

UNITED STATES FISH AND WILDLIFE SERVICE

ENVIRONMENTAL ACTION MEMORANDUM

Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the action of

"Opening of Prime Hook National Wildlife Refuge to Sport Fishing."

- is a categorical exclusion as provided by 516 DM 6 Appendix 1. No further documentation will be made (see instructions on back).
- X* is found not to have significant environmental effects as determined by the attached Environmental Assessment and Finding of No Significant Impact.
- is found to have special environmental conditions as described in the attached Environmental Assessment. The attached Finding of No Significant Impact will not be final nor any actions taken pending a 30-day period for public review (40 CFR 1501.4(e)(2)).
- is found to have significant effects, and therefore a "Notice of Intent" will be published in the Federal Register to prepare an Environmental Impact Statement before the project is considered further.
- is denied because of environmental damage, Service policy, or mandate.
- is an emergency situation. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

Other supporting documents (list):

An Environmental Assessment, Sport Fishing Plan and Section 7 Evaluation have been prepared.

*ACTING* *James E. Weaver* *8/8/86*  
Regional Director Date

(1) *Anthony J. Legg* *8-6-86*  
*Paul Daly*  
Initiator Date

(3) *Donald Young* *8/8/86*  
ARD-Wildlife Resources Date

(2) *Edward S. Moses* *8-6-86*  
Refuge Supervisor Date

(4) *Paul W. Ahle* *8/8/86*  
Reg. Env. Coordinator Date

FINDING OF NO SIGNIFICANT  
IMPACT TO ALL INTERESTED GOVERNMENTAL  
AGENCIES AND PUBLIC GROUPS

Based on a review and evaluation of the information contained in the supporting reference enumerated below, I have determined that opening of Prime Hook National Wildlife Refuge to sport fishing is not a major federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969. Accordingly, the preparation of an Environmental Impact Statement on the proposed action is not required.

Supporting References

An environmental assessment has been prepared. This document summarizes the environmental impacts and the reason why a statement is not required. The assessment is on file at this office and is available for public inspection upon request.

ACTING James E. Weaver  
Regional Director

August 8, 1986  
Date