

Compatibility Determination

Station Name: Chincoteague NWR

Date Established: May 13, 1943

Establishing Authority:

Migratory Bird Conservation Act

Purpose(s) for which Established:

For use as an inviolate sanctuary, or for any other management purpose for migratory birds.

Description Proposed Use: Outdoor Recreation (other): Horseback Riding

Non-wildlife oriented activities, including horseback riding, are covered in the 1992 Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan (FEIS) and the 1993 Chincoteague National Wildlife Refuge Master Plan. Additional information can also be found in the station's 1993 Public Use Plan. These documents are appended.

After the establishment of the refuge in 1943, the only public recreation that occurred on Chincoteague before the bridge was constructed in 1962 was beach use, primarily surf fishing. Visitors would drive down the beach from the Maryland end of Assateague Island. On June 17, 1957, Congress passed Public Law 85-57, Chincoteague National Wildlife Refuge, Virginia - Bridge and Road. This law authorized the Secretary of the Interior to permit the construction of a bridge and road across Chincoteague National Wildlife Refuge. The objective of this law was "to permit the controlled development of a portion of the seashore of the Chincoteague National Wildlife Refuge, Virginia for recreational purposes, ..." This law also authorized the Secretary to enter into agreements for the construction, maintenance, and operation "of a public beach, concession, parking areas, and other related public conveniences,..." The FWS, on April 1, 1959, entered into an agreement with the Chincoteague-Assateague Bridge and Beach Authority whereby certain refuge lands constituting what is known as Toms Cove Hook were assigned to the Authority for the purpose of developing a public beach and recreational facility. The deed of easement also provided for the construction of a bridge and access road to the Toms Cove Hook.

After the construction of the bridge in 1962, visitation steadily rose and by 1968 over 500,000 visits were recorded. During the next decade refuge visits increased by an average of 12% annually. In 1987 visitation peaked at over 1.5 million visits, with over 800,000 occurring during the summer season, June through August. In 1993 the refuge received 1,415,830 visits.

The Wildlife Trail which was located approximately where the Marsh Trail is today was

opened for public use in the early 60's. A 30 car parking lot for trail users was completed in 1968. Also, the Lighthouse Trail was opened in 1968. In 1971, the Pony Trail (now called the Woodland Trail) was opened and the Wildlife Drive (now called the Wildlife Loop) was paved. Swan Cove Trail which connects the Wildlife Loop with the recreational beach area was opened in 1985. The Marsh, Lighthouse and Woodland trails and the Wildlife Loop have trail guides and/or interpretive exhibits. There are two observation platforms on the Wildlife Loop and one on the Woodland Trail.

Horseback riding is allowed on the Beach Road, Spur Road to the ORV zone and, depending on the time of year, the area of Toms Cove Hook that is open to off road vehicle use. In 1993, approximately 71 riders participated in this activity, with the vast majority of these using the beach area.

Anticipated Impacts on Refuge Purposes(s):

The proposed use has the potential of intermittently interrupting the feeding habits of a variety of shorebirds, gulls and terns. Numerous studies have documented that migratory birds are disturbed by human activity on beaches. Erwin (1989) documented disturbance of common terns and skimmers and recommended that human activity be restricted a distance of 100 meters around nesting sites. Klein (1993) in a studying waterbird response to human disturbance found that as intensity of disturbance increased, avoidance response by the birds increased and found that out of vehicle activity to be more disruptive than vehicular traffic. Pfister et al. (1992) found that the impact of disturbance was greater on species using the heavily disturbed front side of the beach, with the abundance of the impacted species being reduced by as much as 50 percent. Roberson et al. (1980) discovered, in studying the effects of recreational use of shorelines on nesting birds, that disturbance negatively impacted species composition. Piping plovers which use the refuge heavily are also impacted negatively by human activity. Pedestrians on beaches may cause eggs (Burger 1987, Hill 1988, Shaffer and Laporte 1992, Cape Cod National Seashore 1993, Collazo et al. 1994). Other studies have shown that if pedestrians cause incubating plovers to leave their nests, the eggs can overheat (Burgstrom 1991) or the eggs can cool to the point of embryo death (Welty 1982). Pedestrians have been found to displace unfledged chicks (Strauss 1990, Burger 1991, Hoopes et al. 1992, Loegering 1992, Goldin 1993). Horseback riders would tend to present some of the same potential impacts as pedestrians.

Besides possible direct disturbance, horseback riding could lead to soil compaction, which could have detrimental effects on invertebrates using the area and therefore limit the amount of forage for shorebirds. However, since this activity occurs in an area open to off road vehicles, the addition of horses is not expected to cause any additional serious consequences to migratory birds, as the result of soil compaction.

Due to the limited amount of this activity and the closures in place to restrict this use, overall disturbance is expected to be minimal.

Determination: (Check One)

This use is compatible X This use is not compatible _____

The following stipulations will ensure compatibility:

Klein (1989) identified several management strategies used to control the negative effects of recreation on wildlife; these included: user fees, travel ease, permits, zoning (Cullen, 1985), public education (Purdy 1987), limiting number of visitors present, and periodic closing. Chincoteague Refuge employs some of these measures in lessening the disturbance to wildlife.

Horseback riding will be restricted to the Beach Road, Spur Road and the ORV zone, in order to minimize disturbance in other areas.

This activity will be limited to times when the refuge is open to the public, which allows for undisturbed migratory bird and other wildlife use of the affected area during some of the evening and early morning hours.

As identified in the Master Plan and FEIS, from March 15 through August 31, all but 1.5 miles of the 4 mile zone will be closed to all public use. The remaining ORV zone will be subject to closure to all public access from March 15 through August 31 if piping plovers establish nesting territory within this zone.

This activity will be monitored and if visits increase to a point where disturbance becomes a problem, additional access restrictions will be implemented.

Justification:

Although horseback riding is considered a nonwildlife-oriented form of recreation, most riders prefer a refuge "wildlands" experience. Use is extremely low and occurs in an area used by ORVs which results in very little additional disturbance. Migratory birds, which are disturbed, also have other areas on the refuge which are undisturbed, particularly the 2.5 miles directly to the south which are totally closed to all public use when shorebird and other beach using bird populations are the highest.

Project Leader John D. Schroer, Refuge Manager July 12, 1994
(Name/Title/Signature/Date)

Review and Concurrence _____
(Name/Title/Signature/Date)

(Name/Title/Signature/Date)

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