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 of Proposed Use: Grazing

The grazing program on the Chincoteague Refuge allows up to 150 adult horses, owned by the Chincoteague Volunteer Fire Company, to graze on approximately 4,000 acres. Details of the grazing program are covered in a 1990 Pony Management Plan, and this program is also 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. These three documents are appended for additional information. This activity is allowed via a Special Use Permit which is issued annually and is appended as Appendix H of the FEIS.

Domestic livestock grazing has long been a part of Assateague Island's history from the time the Eastern Shore was settled during the early 1600's. Early accounts of grazing horses and other livestock on barrier islands indicate this was a common and widespread practice all along the Atlantic Coast. Periodic roundups and so called "pennings" were often held to determine ownership and to count and sell excess or unwanted stock. Since the early 1920's the Chincoteague Volunteer Fire Company has had an annual roundup of ponies from Assateague Island that were herded across the channel to Chincoteague Island (Wroten, 1972).

Authorized grazing of livestock on the refuge began soon after its establishment in 1943, when a grazing permit was issued to Wlye Maddox; this permit allowed the grazing of 150 cattle and horses on 1,343 acres. In 1946, a permit was issued to the Chincoteague Volunteer Fire Company; this permit allowed the grazing of 150 Chincoteague ponies/horses on the refuge. These animals were allowed free range of the entire refuge. Between 1946 and 1952, both permits were in effect; however, in 1953 the only grazing permit issued was to the fire company. This permit was renewed annually and is currently in place, although the conditions of the permit have changed considerably over the years. Since the late 1950's, a number of attempts have been made to fence the ponies out of the most sensitive wildlife areas. The latest attempt, which continues to the present, was begun in 1989, when the fences around two compartments were redone in order to try and more adequately contain the ponies.

The current grazing program includes two compartments. The Black Duck Marsh Compartment consists of 647 acres and the Northern Compartment has 3,413 acres. The compartments were established to keep the ponies off the beach and dune areas and some of the major moist soil management units, in addition to separating them from the visiting public. The maximum number of ponies allowed has remained constant since the initial permit was issued in the 1940's; 150 adult animals are permitted with any recruitment above that number being removed each summer.

Anticipated Impacts on Refuge Purpose(s):

Numerous studies have been conducted and articles written on the effect of grazing on marshes. Some of these studies have been specific to Assateague Island and even to the refuge. Depending on the study, one can find both positive and negative effects of grazing on marshes. Several studies have shown that grazing could have a stimulating effect on grass production (McNaughton, 1979; Hubbard, 1970; Chabreck, 1968; and Ranwell, 1961. McNaughton (1979) found that production of grasses increased up to an optimal level of grazing then declined when subjected to overgrazing. Bakker (1985) determined that grazing of a salt marsh lead to enhanced species diversity, due to the removal of litter. However, Wood (1980) found that the net primary productivity of the marsh on a barrier island in North Carolina was reduced by heavy grazing, but that the exploitation of the salt marsh was not exceeding productivity. Rubenstein et al (1976), working in the same location as Wood, indicated that grazing had no significant effect on above ground biomass but did on the below ground biomass in marsh areas. Turner (1987), in studying grazing on a barrier island in Georgia, indicated that the abundance of the periwinkle snail was reduced due to grazing and that grazing had a substantial impact on the standing stocks of Spartina. Turner (1988), in another study on the same island, determined that the horse population should be maintained at a level to prevent excessive damage to the salt marsh. Zervanos (1978), working on Assateague Island, found little evidence to demonstrate adverse effects from pony grazing on the Maryland end of the island. Keiper (1981), doing research on the refuge, determined that grazing may stimulate additional plant growth, although the vegetation may be shorter but denser; he discovered that more growth was exhibited in the grazed versus ungrazed sites.

Since the ponies are allowed to graze within migratory bird habitat, impacts are likely to occur. Pony grazing on the natural marshes and within moist soil management units can lessen the amount of food and cover available to migratory birds. The value, of areas of the marsh which may be heavily grazed, is less for migratory birds, such as rails and black ducks which utilize this habitat. Nests of ground nesting birds, such as willets, quail, shorebirds, etc. are in danger of being trampled if the nesting occurs within the grazing compartments. Based on the research cited in this determination, some habitat may actually be improved, while others are negatively impacted.
From the establishment of the refuge, the actual amount of grazing has been reduced from two grazing permits to only one, with the number of animals being reduced by half in the early 1950's when the second permit was discontinued. Additional restrictions were also

added to try an reduce any possible impacts to the migratory bird habitat. Since the early 1950's, the number of ponies has been fairly constant at around 150 adult animals; therefore, their impacts can be considered to be fairly constant or even reduced due to the additional restrictions placed in the permit. During the history of the refuge, the long term peak migratory bird populations, particularly waterfowl and shorebirds, have increased and then declined. The increases can be attributed to the construction and management of the moist soil management units, and the decreases are probably more a result of the overall decline in the flyway populations than any action taking place on the refuge.

Determination: (Check One)

This use is compatible __XX__ This use is not compatible

The following stipulations are required to ensure compatibility:

The Chincoteague Volunteer Fire Company will be required to adhere to the special conditions contained in the Special Use Permit (See Appendix H of the appended FEIS) which allows the grazing and portions of the Pony Management Plan (Appended) in order for this activity to remain compatible. The major items include:

- No more than 150 adult ponies can be present on the refuge.
- The ponies must be contained within the two designated compartments, which keep them off the beach and dunes, out of major moist soil impoundments, and away from direct contact with the public. The number allowed in each compartment must be maintained to prevent overgrazing of the area; 30 to 40 in the south compartment and the remainder in the north compartment.
- Piping plover nesting habitat within the North Wash Flats impoundment must be fenced to exclude ponies during the plover nesting season.
- The fire company must maintain the fence line to ensure the containment of the ponies.

Justification:

Grazing on Assateague Island has a long history reaching back to the 1600's, with ponies being on the refuge since the establishment in 1943. This grazing pressure has been constant since the early 1950's with migratory bird populations increasing and decreasing based on other factors. With the current restrictions which keep the

ponies off the most critical habitats, negative impacts to the habitats should be minimal. The refuge will monitor grazing impacts, and each year grazing will be re-evaluated to determine its compatibility.

Prepared by: John D. Schroer, Refuge Manager May 10, 1994
(Name/Title/Signature/Date)

Reviewed by:
(Name/Title/Signature/Date)

(Name/Title/Signature/Date)

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