Compatibility Determination

Use: Jogging/Running

Refuge Names: Oxbow National Wildlife Refuge

Establishing Authority: Oxbow National Wildlife Refuge (NWR) was established in 1974 under an Act authorizing the transfer of Certain Real Property for wildlife, or other purposes (16 U.S.C. 667b).

Refuge Purpose: Oxbow's purpose is its "...particular value in carrying out the national migratory bird management program." (16 U.S.C. 667b-d, as amended)

National Wildlife Refuge System Mission: To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Proposed Use: Jogging or running on refuge trails. Maps showing these trail systems are included in each of the Refuge Brochures for Oxbow NWR. Jogging occurs year-round on the refuge with the majority of use from April through October. At Oxbow NWR, jogging occurs mainly on the Tank Road. Occasionally, joggers stop at the informational kiosk to obtain refuge or wildlife viewing information. Use is heaviest during the summer months and occurs more frequently early in the morning and in the evening when individuals jog before and after work and while the weather is more pleasant. Visual observations indicate that total use is moderate to heavy, but exact numbers are currently not available. The activity is primarily athletic in nature. It is likely that some joggers observe wildlife while they are jogging on the refuge. However, such observation tends to be incidental to the primary activity of jogging.

Availability of Resources: Maintenance of the trails and facilities include costs. These costs are not directly related to jogging or running. Jogging and running may cause incremental needs for additional trail maintenance activities. The major portion of the funds needed to support this activity is in the form of salaries to maintain the trails and to provide protection and monitoring; additional funds are needed for maintenance materials and other supplies. The prorated portion of cost to maintain the trails is estimated to be $5,000 and the prorated portion of the cost for law enforcement, resource protection and monitoring is approximately $3,000.

Anticipated Impacts on Refuge Purpose: Jogging or running as conducted on Oxbow and Great Meadows NWRs has not been studied in a rigorous fashion. Jogging has the potential of impacting shorebird, waterfowl, marshbird, and other migratory bird populations feeding and resting near the trails during certain times of the year. Use of upland trails is more likely to impact songbirds than other migratory birds. Human disturbance to migratory birds has been documented in many studies in different locations.

Conflicts arise when migratory birds and humans are present in the same areas (Boyle and Samson 1985). Response of wildlife to human activities includes: departure from site (Owen 1973, Burger 1981, Korschgen et al 1985, Henson and Grant 1991, Kahl 1991, Klein 1993), use of sub-optimal habitat (Erwin 1980, Williams and Forbes 1980), altered behavior (Burger 1981, Korschen et al. 1985, Morton et al. 1989, Ward and Stehn 1989, Havera et al. 1992, Klein 1993), and increase in energy expenditure (Morton et al. 1989, Belanger and Bedard 1990). McNeil et al. (1992) found that many waterfowl species avoid disturbance by feeding at night instead of during the day. The location of recreational activities impacts species in different ways. Miller et al. (1998) found that nesting success was lower near recreational trails, where human activity was common, than at greater distances from the trails. A number of species have shown greater reactions when pedestrian use occurred off trail (Miller, 1998). In addition, Burger (1981) found that wading birds were extremely sensitive to disturbance in the northeastern U.S. In regard to waterfowl, Klein (1989) found migratory dabbling ducks to be the most sensitive to disturbance and migrant ducks to be more sensitive when they first arrived, in the late fall, than later in winter. She also found gulls and sandpipers to be apparently insensitive to human disturbance, with Burger (1981) finding the same to be true for various gull species.

For songbirds, Gutzwiller et. al. (1997) found that singing behavior of some species was altered by low levels of human intrusion. Jogging can impact normal behavioral activities, including feeding, reproductive, and social behavior. Studies have shown that ducks and shorebirds are sensitive to jogging activity (Burger 1981, 1986). Resident waterbirds tend to be less sensitive to human disturbance than migrants, and migrant ducks are particularly sensitive when they first arrive (Klein 1993). In areas where human activity is common, birds tolerated closer approaches than in areas receiving less activity.

Public Review and Comment: The public review and comment period has been announced on refuge kiosks, in a planning update sent to all of the individuals on the CCP mailing list, and on the refuge website.

Determination:
Use is not compatible ___.
Use is Compatible with the following stipulations _X_.

The following stipulations are required to ensure compatibility: Joggers and runners will utilize only established trails and other areas open to the public and not venture into closed areas. The current “refuge open ½ hour before sunrise to ½ hour after sunset” regulation restricts entry after daylight hours, and should be maintained along with “Public Use Restricted to Trails Only”.

We will be undertaking research to examine whether or not there are site specific impacts on the refuges. We will examine impacts to wildlife and impacts to other recreationists

participating in wildlife dependent recreational activities. We will reexamine the compatibility of jogging and running after this research is completed.

Justification: The National Wildlife Refuge System Improvement Act of 1997 (P.L. 105-57) identifies six legitimate and appropriate uses of wildlife refuges; environmental education, interpretation, hunting, fishing, wildlife observation and wildlife photography. These priority public uses are dependent upon healthy wildlife populations. Where these uses are determined to be compatible, they are to receive enhanced consideration over other uses in planning and management.

Jogging and running are to be used only as a means to facilitate the priority public uses identified above.

These activities will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the refuge was established.

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Signature - Refuge Manager: _____
(Signature and Date)

Concurrence - Regional Chief: _____
(Signature and Date)

Mandatory 5-year Reevaluation Date: _____