**Integrated River Basin/Watershed Planning and Management**

**CEE 6490**

**Project Topic Proposal**

**Bear River Migratory Bird Refuge Environmental Flows**

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**Abstract:**

The Bear River Migratory Bird Refuge is a sanctuary for native bird species managed by the U.S. Fish and Wildlife Services. The Refuge was established in 1928 and to this day operates under a singular conservation 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”. The objectives specific to the Bear River Migratory Bird Refuge relate to the management or manipulation of target water levels of wetland units to foster desired species occupation. This includes the maintenance, recover or enhance plant and wildlife values. However, problems exist within the wetlands that need to be addressed do meet the objectives of the Refuge. These challenges, among acquiring target environmental flows, include the revival of pre-flood (1983-1988) populations of nesting waterfowl species, control of noxious and invasive species abundance (post-flood), and reduction of pest fish species (carp) that occupy some wetland units. The supply of water is imperative when addressing these issues because water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Therefore, we propose to evaluate the Refuge’s current management plans and propose new metrics for evaluating the identified objectives. Furthermore, we will propose additional alternatives to address the problems the Refuge is facing and evaluate our proposed actions with the existing Water Evaluation and Planning (WEAP) model for the Lower Bear River system.

References:

1. Habitat Management Plan. U.S. Department of the Interior, Fish and Wildlife Service, Bear River Migratory Bird Refuge. (2004). http://www.fws.gov/refuge/Bear\_River\_Migratory\_Bird\_Refuge/what\_we\_do/resource\_management.html