

# **VISION, GOALS, OBJECTIVES**

## **VISION**

The Refuge will be a key portion of a healthy Bear River delta, containing a broad diversity of plants and animals. Management programs will be coordinated with other agencies and private landholders in the vicinity and throughout the flyway. The area will serve as an important link in migrations for at least 209 species of birds as well as being a production area for at least 62 species. Habitat diversity will provide a stable, productive and flexible resource.

Wetland habitats will have a legally secure water supply from the Bear River. Summer flows will be augmented through upstream storage or water exchange agreements to provide optimum wetland conditions. Water management facilities make for more efficient use of water, bypassing high flows, maintaining desired food and cover plants, and providing optimum diversity.

Grassland habitats will be healthy and diverse, sustaining a variety of both migratory and resident birds as well as other wildlife.

Research and environmental education opportunities will be provided. A visitor/educational center will assist with interpreting the values of wildlands and wildlife to over 200,000 visitors annually. Opportunities for outstanding aesthetics, hunting, fishing, and other compatible uses will be provided.

## **GOALS AND OBJECTIVES**

Refuge goals and objectives ensure that activities and programs are responsive to Refuge purposes and consistent with the mission and goals of the Refuge System (Appendix B). Wildlife species depend on specific habitats for various functions at specific times of the year (Appendices C and D). Objectives are to provide a spatial and temporal distribution of habitats to maintain feeding, breeding, and resting for all species using the Refuge (Appendix E). These objectives will be accomplished within the 15-year life span of the plan. The exact time of accomplishment will depend on the availability of funds, Service directives, and staff levels.

### **HABITAT MANAGEMENT GOAL**

The primary habitat management goal for the Refuge is to provide the life requirements of native migratory birds. Mammals and non-migratory birds will also benefit from more habitat.

## **HABITAT MANAGEMENT OBJECTIVES**

### ***UPLANDS***

Provide 1,700 acres of uplands containing three categories of vegetative structure. The first category is coarse structured vegetation. A mix of tall grasses provide an overstory, while short grasses, sedges, and forbs provide an understory. The second vegetative category is fine structured with a height of 6 to 12 inches. The third vegetative category consists of sparsely vegetated low-growing grasses and forbs interspersed with seasonally flooded mudflats. All three habitat types are interspersed with emergent marsh and open water.

Discussion: Dabbling ducks and ring-necked pheasants benefit from the cover provided by the coarse structured vegetation. The fine structured vegetation will benefit white-faced ibis and a variety of shorebirds. Shorebirds and nesting plovers are the primary beneficiaries of the sparsely vegetated areas. Mice, voles and other small mammals use grasslands and forbs in various stages of succession.



Ring-neck Pheasant

### ***DRY MUDFLATS***

Provide 6,400 acres of bare soil areas with no standing water although small amounts of temporary sheet water may be present after snow melt or rain.

Discussion: These areas provide security from predators for resting birds and desired nesting sites for snowy plovers and other shorebirds. Snowy plovers nest and feed on large expanses of remote, undisturbed mudflats with nearby water areas. Eagles also use these areas for resting.

### ***WET MUDFLATS***

Provide 28,800 acres of shallow water areas interspersed with exposed soils. These areas will receive up to 2 inches of surface water during high river flows or heavy precipitation. In addition to bare soils, zones of saltgrass flats and/or salicornia will be found on the mudflats.

Discussion: Black terns nest on wet mudflats during late June and July in some years. White-faced ibis feed and stage on the mudflats. Waterfowl utilize these areas early in the spring when they receive runoff waters. Salicornia provides a valuable food source in early spring and late fall, and insects are important foods during the warm weather months. Some shorebird nesting occurs. Primary use is by shorebirds as well as migrating and resting waterfowl.

Management will be aimed at maintaining a mix of bare mud and low growing vegetation. Naturally occurring high river flows flood the mudflats during springtime and thus maintain bare mud and sparse vegetation.

#### ***WET MEADOWS***

Provide 7,700 acres of well vegetated soils consisting of mixed grasses, forbs, sedges and rushes with water flows, up to 1 inch deep, covering the area several times during the growing season.

Discussion: Dense vegetation provides excellent nesting cover for dabbling ducks and raptors. Abundant food is provided by invertebrates, rodents, and vegetative growth. Excellent quality nesting cover is provided from the dense growths of vegetation primarily for dabbling ducks and raptors. Other bird use includes; feeding ibis, shorebirds, and a variety of passerines.

#### ***SHALLOW EMERGENT MARSHES***

Provide 8,000 acres of marshlands with 4 to 8 inches of standing water throughout the growing season, predominantly containing alkali bulrush.

Discussion: High populations of insects and seed from alkali bulrush provide food. These areas are used predominately by dabbling ducks during migrations and feeding. Long billed shorebirds also make extensive use of the area for feeding.

#### ***MID-DEPTH EMERGENT MARSHES***

Provide 6,000 acres of marshes covered with 6 to 12 inches of standing water with 50 percent interspersion of emergent vegetation consisting of a mix of alkali bulrush in shallower areas and hardstem bulrush and sago pondweed in the deeper zones.

Discussion: Winter cover is provided for resident birds in thick stands of emergent vegetation. Food supplies for birds include high populations of insects and seed from bulrush. These marshes function as brood habitat for waterfowl, and support a wide variety of waterbirds throughout the year. Waterbirds, grebes, coots, and passerines nest in these marshes. Winter cover is provided for resident birds in thick stands of emergent vegetation.

#### ***DEEP EMERGENT MARSHES***

Provide 1,800 acres of marshes covered with 6 to 24 inches of water predominately vegetated with dense stands of hardstem bulrush interspersed with open water containing sago pondweed.

Discussion: Primary use is by diving ducks, especially redheads, for nesting and brood rearing. Ibis, herons, egrets, and other waterbirds nest here. Winter cover is provided for resident birds in thick stands of emergent vegetation.

#### ***SHALLOW SUBMERGENT MARSHES***

Provide 8,500 acres of marshes covered with 4 to 16 inches of water containing predominately sago pondweed.

Discussion: Huge supplies of sago attract all waterfowl species, swans, pelicans, cormorants, grebes and a wide variety of waterbirds for feeding and resting. These marshes are particularly important during spring and fall migrations for a wide variety of waterfowl and during August for molting pintails.

#### ***DEEP SUBMERGENT MARSHES***

Provide 3,500 acres of marshes with 18 to 36 inches of water with sago pondweed but little emergent vegetation.

Discussion: Fish populations survive in these marshes since the water is deeper. Species that are most attracted to the increased depth of water include swans, molting geese, diving ducks, cormorants, grebes, and pelicans. Fish also provide an important source of food for wintering bald eagles.

#### ***OPEN CHANNELS***

Provide 550 acres of meandering natural waterways carved out by flowing water from the Bear River and constructed canals and borrow areas adjacent to dikes.

Discussion: These areas represent a small acreage, yet are used extensively by a variety of birds. The open channels contain running water and remain ice free throughout all or most of the winter months. The abundance of fish and open water attracts wintering bald eagles and other raptors. Throughout the other seasons, fish eating waterbirds such as pelicans frequent these areas. Wintering waterfowl use the open channels exclusively.

## ***PUBLIC USE AND EDUCATION GOAL***

Provide opportunities for the public, of all abilities, to observe, appreciate, and understand wildlife and people's role in the environment, compatible with Refuge purposes.

## ***PUBLIC USE AND EDUCATION OBJECTIVES***

### ***EDUCATION***

Provide opportunities for the public to become informed about the Service and the natural world through a visitors center and educational outreach program.

Discussion: Utah's most densely populated area, the Wasatch Front, is within a one hour drive to the Refuge. This allows a large number of Utah residents access to the Refuge. Interstate 15 runs along the eastern side of the Refuge, providing a large supply of impulse tourists who are seeking to visit points of interest throughout the West.

### ***CONSUMPTIVE WILDLIFE USES***

Provide consumptive use programs for hunting, fishing, and trapping that are compatible with other objectives.

Discussion: Hunting of waterfowl and pheasants has been a traditional form of wildlife dependent recreation since the Refuge was established. Throughout the decades, the public hunting opportunities were considered to be among the finest. Demand for hunting opportunity remains high and has been growing annually as recovery from the flood progresses. Purchase of lands for Refuge expansion has enabled additional lands to be opened to hunting.

### ***NON-CONSUMPTIVE WILDLIFE USES***

Provide auto tour routes, nature trails, and environmental educational areas that are compatible with other uses.

Discussion: See Education discussion above.

## ***CULTURAL RESOURCES GOAL***

Protect and interpret archaeological, historical, and other cultural resources.

Discussion: Forty-three archaeological sites of Fremont Indian graves are listed with the Utah Division of State History. Native Americans and the public are showing increasing interest in protecting cultural items. Such protection is also mandated by the National Historic Preservation Act, the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act (Appendix A). In addition, the Bear River Delta has a rich history of settlement, which should be utilized in interpretive programs.



