

ADAPTIVE MANAGEMENT PLAN

FOR UTE LADIES' TRESSES  
(*Spiranthes diluvialis*)

ON THE CHESTER WETLANDS SEGMENT,  
SAND CREEK WILDLIFE MANAGEMENT AREA

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## I. Introduction

The Chester Wetlands Segment (CWS) of the Sand Creek Wildlife Management Area is located in Fremont County, 6 miles northeast of St. Anthony, along the northwest bank of the Henry's Fork of the Snake River. The headquarters is located in the center of the property at the end of North River Road. The property is accessible by the public along North River Road.

The Chester Wetlands encompasses 1,501 acres of deeded land, 1,481 acres of which can be irrigated. Wetlands cover 762 acres with an associated 30 ponds, and 371 acres of the property have been farmed historically. The property has a 37.2 cfs decreed water right, 1260 acre feet storage in Henry's Lake, and 589 acre feet in Island Park Reservoir all through the Dewey Canal. Topography of the area is gentle with flat pastures that are broken with ponds and small hills. The northern boundary lies along the transition from river bottom to upland habitat. The southeast boundary is along the Henry's Fork of the Snake River with 1.75 miles of river frontage. The south and western boundaries cut across irrigated pastureland. The property is at an elevation of 5,000 feet. Summers are warm and winters generally long and cold. Snow depths range from two feet to three feet or more. The mean annual temperature is approximately 43<sup>0</sup> F with summer temperatures reaching 100<sup>0</sup> F at times and winter temperatures dipping to -40<sup>0</sup> F. Typically there are only 90 frost free days each year. Annual precipitation is around 15 inches and is distributed nearly evenly throughout the year with slightly less in July, August, and September.

## II. Background

Prior to acquisition, the Chester Wetlands Segment (CWS) of the Sand Creek Wildlife Management Area (SCWMA) was privately owned and operated as a farm and ranch for many years. In the recent past, a proposal to establish a 59-lot subdivision on the property by the owner prompted a combined effort by numerous individuals, agencies, and organizations to protect the property. As a result, the Nature Conservancy (TNC) purchased the property on August 1, 2001 with an agreement to sell the property to the Idaho Department of Fish and Game (IDFG) as funding became available. Through an interim cooperative agreement, IDFG assumed management responsibilities on August 2, 2001. Ownership was transferred to IDFG in the spring of 2003.

A long range Management Plan for the Chester Wetlands Segment was completed in May, 2002. (*Management Plan for the Chester Wetlands Segment of the Sand Creek Wildlife Management Area, Jeff Short, IDFG*). The CWS plan includes provisions for plant surveys on the property to determine the presence of rare plant species and provides direction to, "develop and implement plans to provide optimum protection and habitat security for species at risk."

As a result of a survey conducted on August 30 and September 11- 12, 2002 at the CWS by Chris Murphy, Assistant Botanist with the Idaho Conservation Data Center, Ute ladies' tresses (ULT) were located on the property in several locations (*2003 Inventory for (Spiranthes diluvialis) Chester Wetlands (Sand Creek WMA) and Deer Parks WMU/Gem State WMA, Chris Murphy, and, Ute ladies' tresses (Spiranthes diluvialis) in Idaho: 2002 Status Report, Chris Murphy*). The remaining CWS was surveyed by IDFG personnel in August 2005 and several more populations were located.

ULT surveys were conducted by walking a meandering transect, targeting the route through habitat with hydrologic conditions and plant communities having the highest likelihood of supporting the orchid. Typically, annual surveys have been conducted during late August into early September. In 2002, 433 individual plants were recorded. Surveys were not conducted during 2003. A total number of 102 orchids were counted in 2004, and 172 were counted during 2005.

IDFG worked in coordination with Ducks Unlimited biologists and engineers to install piezometers in appropriate locations at the CWS in March 2003 to develop a hydrologic baseline for the property in general and for ULT locations in particular. Measurements were taken regularly to monitor water regime changes over time.

### **III. Summary of Existing Conditions**

Most of the CWS is irrigated grassland pasture and is interspersed with wetlands. There are over 30 ponds, two irrigation canals and approximately 1.75 miles of river front present on the CWS creating large wetlands and riparian habitats. There are several stands of cottonwoods, aspen groves and willows along the river, irrigation canals and on the edges of the ponds.

Irrigation water from the Henry's Fork is available starting April 1 and during most years water is initially diverted to ponds on the CWS on this date. During years of average snow pack and precipitation, diverted water continues to be run to the ponds until mid-July. After this time, pond water levels gradually recede due to evapotranspiration and infiltration. During years of below average snow pack, diverted water may be cut off at any time during the irrigation season.

Existing water management infrastructure in ponds and irrigation canals is largely in a state of disrepair. Yearly "blowouts" occur within the ditch system leading to unwanted flooding of areas and resultant costly repair. Maintaining traditional water levels in flood irrigated ponds is difficult, at best, due to degraded water delivery canals and earthen dikes, antiquated water control structures and/or lack of dikes and water control structures. Proposed project activities will include repair and improvement of irrigation canals and dikes, replacement of water control structures and installation of dikes and water control structures in additional areas.

## IV. Adaptive Management Strategies

### A. Habitat Management

#### 1. Water Level Management

- a. IDFG will deliver water to the Chester Wetlands property to provide necessary water for preservation of known subpopulations of ULT, within legal water rights and capabilities of the water delivery system.
- b. In general, most ponds on the CWS will be filled beginning April 1 to maximize foraging opportunities for migrating waterfowl and other waterbirds. Water will continue to be delivered to ponds through mid-July to provide brood-rearing habitat for nesting birds. However, on Big Pond and Middle Pond where known subpopulations of ULT exist within the “footprint” of the proposed maximum water surface elevation, water levels will be drawn down to traditional water surface elevations (i.e. below ground surface elevation of respective ULT subpopulations) on May 1 to allow growth of the plants. This will be accomplished by opening water control structures at the outlet of each pond to actively lower the water surface to the desired elevation. Staff gauges will be installed next to water control structures so that the desired elevation can be visually confirmed. In addition to the benefits provided for migrating birds and other wetland dependent wildlife, this water management scheme will also help in reducing the vegetative competition in and around the ULT subpopulations.
- c. Data will be recorded from piezometers on a monthly basis during the period April 1 – October 1.

#### 2. Vegetation Management

- a. Farming activities on CWS to provide food and lure crops for wildlife species will avoid ULT occupied or potential habitat and will be located in areas previously cultivated.
- b. IDFG will conduct weed control practices in occupied and potential ULT habitat to reduce or eliminate competition by weedy species if necessary. Weed control will not be applied to occupied or potential ULT habitat during ULT life history stages vulnerable to impact from these methods. Weed control will be conducted to minimize impacts to ULT insect pollinator species. Methods may include biological, mechanical, manual, or prescribed burning. Chemical control will not be used within a 25m buffer zone of ULT.

### 3. Access Management

- a. IDFG will protect known ULT occupied habitat. A 25 meter buffer around occupied and immediately adjacent unoccupied potential habitat as identified by surveys will be established and any activities that may adversely affect ULT at these sites will be avoided or mitigated.
- b. IDFG has established a motorized route through the CWS to be used for management purposes only which avoids ULT habitat.
- c. Public access is restricted to foot traffic only.

## B. Population Monitoring

### 1. Ute Ladies' Tresses

- a. Surveys will occur in August and/or September. Permanent vegetation transects including measurement of woody vegetation and exotic species, digitally mapped polygons delineating occupied and potential habitat, and photo points will be established to monitor vegetative changes over time in response to management activities.
- b. ULT monitoring at CWS will be completed annually by CDC and IDFG personnel. Monitoring will follow established protocol outlined in "*Monitoring the Habitat of Ute ladies' tresses (Sprianthes Diluvialis) on the South Fork Snake River, Idaho—Methods and First Year Results, Murphy, 2002,*" and will include additional vegetation and hydrologic data collected on the site as it becomes available.

## V. Evaluation and Adjustments

As referenced in Section 15 of the *Management Plan for Ute Ladies' Tresses and Bald Eagles On The Chester Wetlands Segment Sand Creek Wildlife Management Area*, based on monitoring of ULT populations and habitat an annual count below 225 flowering plants may indicate a population reduction and will trigger action to identify potential causative factors and develop remediation measures. This will be done in cooperation with the U.S. Fish and Wildlife Service and the CDC.