

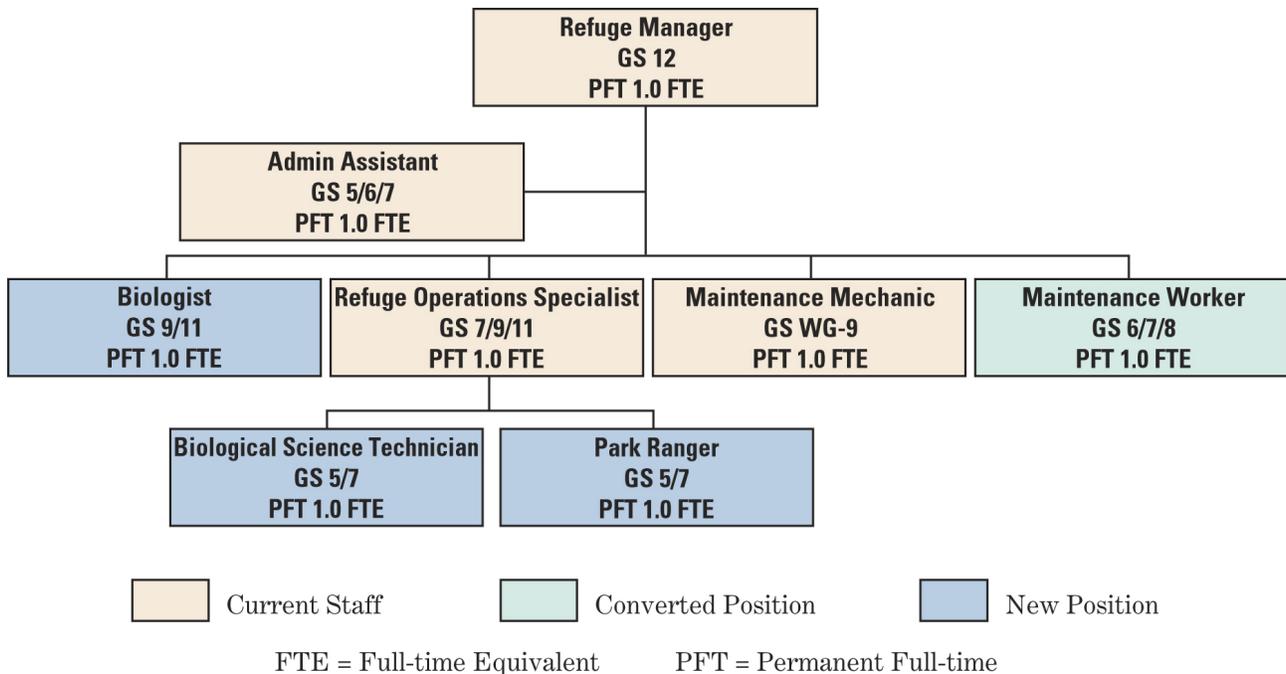
# Chapter 5. Implementation and Monitoring

## Personnel

Fish Springs NWR currently has a staff of four full-time employees and one career seasonal (8 to 9 months/year). This Plan calls for the addition of three new full-time employees and converting the career seasonal to full-time, an overall increase of 3.5 FTE (Figure 9). These increases will greatly enhance the biological programs on the Refuge, which currently lacks a full-time biological staff.

## Funding

In fiscal year 2003, Fish Springs NWR had a baseline budget of \$330,000 to fund annual operating expenses, including staff salaries. Station backlogs are identified in two databases. The Maintenance Management System (MMS) identifies maintenance project needs for the Refuge. Currently, this database documents \$9.5 million in maintenance backlogs for Fish Springs NWR. The Refuge Operations Needs



**Figure 9. Proposed Organizational Chart for Fish Springs NWR.**

System (RONS) identifies all other Refuge project needs, such as increased staffing and specific on-the-ground projects. This database currently documents \$1.3 million in first year costs and \$250,000 in recurring annual costs for project needs for Fish Springs NWR. The top 15 Refuge Operating Needs System (RONS) and top 10 Management Maintenance System (MMS) priority projects are presented in Appendices H and I, respectively.

The cost of implementing the CCP will mean supplementing the current baseline budget with those funds needed to accomplish all projects identified in the RONS and MMS databases. As stated above, the RONS identifies \$1.3 million in first year costs and \$250,000 in recurring annual costs for project needs for Fish Springs NWR. These costs include the expansion of habitat management activities, increased research and monitoring efforts, and the increased staffing level identified.

The cost of implementing marsh restoration in the Harrison Unit is \$390,000 to \$500,000. This involves the removal of about 3 miles of 8-foot dikes, and about 20 check dams and water control structures (metal culverts, concrete culverts, etc.). This cost estimate does not include vegetation restoration in restored areas such as where the dikes are removed.

### Step-down Management Plans

The Fish Springs NWR CCP is intended to be a broad umbrella plan that outlines general concepts and objectives for habitat, wildlife, public use, cultural resources, and partnerships that will guide Refuge management over the next 15 years. Step-down management plans provide greater detail for implementing specific actions authorized by the CCP. Table 9 presents those plans needed for Fish Springs NWR, their current status, and next revision date.

**Table 9. Step-down management plans for Fish Springs NWR.**

Step-Down Management Plan	Status of Plan Year Completed	Proposed Revision Date
Safety Program/Operations	1990	Not Necessary
Hazardous Materials Operations	1998 HAZCOM	MSDS updated yearly as needed
Law Enforcement	No Plan	2006
Spill Prevention Control and Countermeasure Plan	2003	2008
Integrated Pest Management	2003	2008
Refuge Uses (Compatibility)	2003 (with CCP)	2013
Visitor Services Plan	No Plan	2007
Hunting	1981	2005
Habitat Management Plan	1990 (Marsh Management Plan)	2009
Fire Management	2002	2007 (update annually)
Wildlife Inventory Plan	1990	2007
Exotic Species	No Comprehensive Plan, IPM for exotic vegetation	2009
Cultural Resource Management Plan	No Plan	2010

## Partnership Opportunities

Partnerships are a key component of accomplishing the Refuge's mission. Existing partnerships will continue and, hopefully, new ones will be developed.

Partnership opportunities for the Refuge have been limited, primarily due to its remoteness and small staff. However, there have been partnering successes with organizations and individuals with whom a common interest is shared. The Utah Division of Wildlife has worked with the Refuge on the reintroduction of the threatened least chub, fencing projects, Partners for Fish and Wildlife efforts, coordinating waterfowl hunting, and distributing information about the Refuge. The University of Utah Museum of Natural History has conducted several archaeological surveys, small mammal trapping, and geomorphological research. Brigham Young University and Southern Utah University have conducted various biological research projects. Volunteers have contributed thousands of hours in the past in support of Refuge biological inventories, habitat management, visitor services, and facility maintenance. These partnerships have proven fruitful for all parties. Every indication is that they will continue.

Undeveloped partnership opportunities exist throughout the region. Dugway Proving Ground has expressed an interest in forming an Eastern Bonneville Basin Partnership with Fish Springs NWR, Utah Division of Wildlife Resources, and The Nature Conservancy. The focus of this partnership will be common natural resources management issues, such as landscape-level aspects of providing habitat for species of concern, control of invasive species, and joint law enforcement.

Additionally, the Refuge staff would like to renew participation in regional working groups of national and international

partnerships. Partners in Flight, the Intermountain West Joint Venture, Lincoln Highway Association and the Intermountain West Regional Shorebird Plan team are all potential partners. These groups offer shared expertise, ideas, management strategies, problem-solving, experience, and resources.

## Monitoring and Evaluation

Appropriate monitoring and evaluation are key to meeting the mission of Fish Springs NWR because they provide the information necessary for adaptive management, a flexible approach to long-term management. Results from the monitoring program and other information will be used to evaluate the effectiveness of strategies laid out in this CCP and whether management goals and objectives are being met. Changes will be made to strategies and/or objectives as necessary based on this evaluation.

In this CCP, habitat management and monitoring receive the primary emphasis. Many of the wildlife species on the Refuge are migratory birds. Migratory birds are impacted by a variety of factors (drought, disease, pollution, habitat destruction, etc.) on their wintering and nesting grounds and all along their migration routes. Determining if a specific habitat manipulation in a Refuge unit is wholly responsible for a change in a Refuge migratory bird population is difficult. Managers strive to gather current information about the critical habitat needs for targeted species and possible strategies for meeting those needs, and then design and implement a Habitat Management Plan. The development of a Habitat Management Plan is a critical step toward accomplishing the goals and objectives described in this CCP. The habitat can then be monitored to determine if the management strategies are providing the critical habitat needs identified. Whether migratory bird or other wildlife use of the manipulated unit increases

may or may not be directly related to the manipulation. Monitoring populations in the manipulated unit over a long period of time can provide only some general local population trend information and document wildlife use. Managers must then carefully evaluate the data to try to determine if a direct correlation exists with the habitat manipulation.

Biological surveys will be conducted for small mammals, waterfowl, shorebirds, water birds, raptors, passerines, reptiles and amphibians, carnivores, and invertebrates. Additionally, a series of vegetative transects/plots in all habitat types will be established as a long-term monitoring tool. This information will be used to assess the effects of abiotic factors (e.g., weather) and habitat manipulation (e.g., water management, burning, invasive species control) on long-term habitat trends on the Refuge.

Much of the monitoring work will be conducted by Refuge staff. The addition of a

full-time biologist and a biological technician will dramatically increase monitoring capabilities on the Refuge. Some monitoring projects will be conducted through partnerships with universities or with grant assistance. Other monitoring work will be completed by trained volunteers. Additional communication and cooperation with Service partners in the Bonneville Basin will assist in accomplishing landscape-level monitoring, resolving large scale questions, and testing assumptions.

### **Plan Amendment and Revision**

The Fish Springs NWR Manager will use the CCP to ensure Refuge priorities and work is consistent with the CCP goals, objectives and strategies. Appropriate staff will be assigned tasks and projects, identified in the CCP, to accomplish the objectives stated in the CCP. Refuge staff will review the CCP at least annually to decide if it requires any revisions as new information becomes available, ecological conditions change, or Refuge expansion occurs. At a minimum, the CCP will be revised every 15 years.

