



5 Implementation and Monitoring

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Current staffing at the Arapaho National Wildlife Refuge consists of six permanent and four seasonal employees. Additional permanent and seasonal staff will be required to implement the strategies in the comprehensive conservation plan (CCP) and effectively monitor the flora and fauna to determine if the goals and objectives in the plan are being met.

The refuge has an annual base budget of \$381,700 based on fiscal year 2002 figures. These monies support salaries for six permanent personnel and annual operating expenses for the refuge complex.

The current budget represents the minimum needed to maintain current annual activities. It does not adequately support the complex's habitat management, biological monitoring, maintenance, public use, and education programs, or the complex's facilities and structures.

Projects that have adequate funding and staffing will receive priority for accomplishment. Staffing and funding are requested for the 15-year period of the CCP.

This chapter describes resources and actions needed to carry out this CCP.

- personnel
- funding
- step-down management plans
- partnerships
- monitoring and evaluation
- plan amendment and revision

Personnel

Table 6 shows the current staff and additional, target staff required to fully implement the CCP.

If all positions are funded, the refuge complex's staff will be able to carry out all aspects of this plan. This would provide maximum benefits to wildlife, maximum efficiency, and improved facilities. Full staffing would also provide for increased public use.

Table 6. Current and target staff for Arapaho National Wildlife Refuge, Colorado

	<i>Current Staff</i>	<i>Target Staff</i>
Management	Project leader, GS-12 Refuge operations specialist, GS-11	Complex project leader, GS-13 Supervisory refuge operations specialist, GS-12 Refuge operations specialist, GS-9/11* Private lands biologist, GS-9/11
Biology	Wildlife biologist, GS-9/11 Career, seasonal, wildlife biological technician, GS-6 Seasonal biological technicians, GS-4 to GS-5 (3-4 positions)	Complex wildlife biologist, GS-11 Wildlife biologist, GS-9* Career-seasonal, wildlife biological technician, GS-6 Seasonal biological technicians, GS-3 to GS-5 (4-5 positions)* GIS coordinator/data manager, GS-9/11*
Public use		Outdoor recreation planner (dual-function law enforcement), GS-9/11*
Administration	Administrative assistant, GS-8	Administrative officer, GS-9* Administrative assistant, GS-5/6*
Maintenance	Maintenance worker, WG-8	Equipment operator, WG-10 Career-seasonal, maintenance worker (irrigator), WG-8 Career-seasonal, maintenance worker, WG-8*

*Position shared with other stations in Wyoming under management by the Arapaho National Wildlife Refuge complex.

Funding

Projects required to carry out the CCP are listed in appendices K and L, which display funding needs through two different systems.

- The refuge operations needs system (RONS) documents requests to Congress for funding and staffing needed to carry out projects above the existing base budget. Amounts shown include a start-up cost for each program, along with yearly costs that are significantly less.
- The maintenance management system (MMS) documents the equipment, buildings, and other property that require repair or replacement.

All of the RONS projects in appendix K directly support the implementation of the CCP. Table 7 is a summary of funding for these projects.

Table 7. Overall funding needs for Arapaho National Wildlife Refuge, Colorado

<i>Expense</i>	<i>Start-up Needs</i>	<i>Annual Needs</i>
Personnel	\$792,000	\$430,000
Facilities	\$541,000	\$ 0
Habitat projects	\$192,000	\$ 36,000
Research/studies	\$383,000	\$ 10,000

Other funding needs include the maintenance or replacement of existing equipment and facilities. In the past, the complex has had a large backlog of these funding needs. However, in recent years, much of the funding has been provided to eliminate a large number of the backlog projects.

Table 8 lists the remaining needs required to carry out the CCP and maintain structures and equipment to a safe, productive standard for the 15 years of the plan.

Table 8. Funding needs for facilities, equipment, and maintenance at Arapaho National Wildlife Refuge, Colorado

<i>Expense</i>	<i>Cost</i>
Water-control structures and dikes	\$ 146,000
Road, gates, and fences	\$2,341,000
Buildings and facilities	\$ 516,000
Public use facilities	\$ 276,000
Equipment	\$ 531,000
Vehicles	\$ 60,000

A list of the top 18 maintenance priorities is located in the MMS table in appendix L.

The remaining MMS projects do not directly affect CCP implementation and were not included

in this plan. These were mostly projects that were required to be included in the MMS, such as equipment and vehicle replacement, for an additional \$1,964,000 in funding.

Step-down Management Plans

Managers in the Service have traditionally used the refuge manual to guide field-station management. Policy in the manual provides direction for developing a wide variety of plans that are used to prepare annual work schedules, budgets, and public use and land management actions.

The CCP is a broad umbrella plan that provides the following:

- general concepts and specific wildlife, habitat, endangered species, public use and partnership objectives
- examples of strategies that might be used to complete the objectives

The purpose of step-down management plans is to provide detail to the managers and employees who will implement the strategies described in the CCP.

Through the guidance provided in the CCP, refuge staff will revise or develop several step-down management plans to be carried out over the next 15 years.

Step-down management plans to be revised or developed include the following:

- habitat management plan
- public use plan
- fisheries management plan
- Illinois River rehabilitation plan
- integrated pest management plan
- archaeological resources protection plan
- hunting management plan
- water management plan
- fire management plan
- habitat monitoring plan
- wildlife monitoring plan
- station safety plan

Partnerships

Partnerships are an integral part of existing refuge management and are the key to successful management in the future.

The refuge is not an ecosystem, rather it represents merely an island of wildlife habitat. The refuge is dependent on wildlife and habitats provided by

other land managers throughout North Park and the central flyway.

The refuge is not sustainable alone; in fact, it is dependent on other habitats and lands that surround it to be functional, and by itself may serve little wildlife value. —Dr. Richard Knight

The CCP strives to recognize this connection to, and dependence on, other lands. Past and current agricultural practices have provided benefits for wildlife in North Park.

The livelihood of ranchers largely has been dependent on maintaining a healthy plant community. As a result, many plant and wildlife species have benefited from these practices. Ranching has impeded urban development that adversely affects natural communities. Ranchers are one of the land stewards that have protected and preserved wildlife habitats for the past 125 years. Sustainable ranching is one key to continued protection of North Park natural resources.

The refuge will cooperate and develop partnerships with other land managers in North Park to improve wildlife habitats. The refuge has identified a new, private-lands coordinator position within the CCP to facilitate partnerships.

The CCP recommends that short-term variations in management be considered to accommodate other wildlife-related projects within North Park. For example, the refuge would consider allowing additional grazing AUMs to accommodate a 2-year rest following Dixie harrow treatment on adjacent Bureau of Land Management lands. The downside to this approach is that the refuge will achieve its habitat objectives at a slower pace because resources are diverted away from refuge lands. However, the benefits of combining refuge resources with other land managers will result in improved land health for North Park and the refuge.

Additionally, the CCP encourages other partners to join habitat improvement efforts. Through partnerships, the refuge will serve as a demonstration site for sound, land management practices.

Monitoring and Evaluation

Monitoring is essential to successful implementation of the CCP.

- The new habitat-based goals and objectives will change the past monitoring practices.
- Vegetative community function and structure will drive management actions.

- Adaptive management will be used to incorporate new information into existing monitoring techniques.
- Periodic evaluations of vegetation community progress will be used to direct future management strategies.

Monitoring strategies were evaluated and are included in this plan.

- All habitat management activities will be monitored to assess whether the desired effect on wildlife and habitat components has been achieved.
- Baseline surveys will continue for waterfowl, big game, and small-game species.
- Baseline surveys will be conducted for wildlife species for which existing or historical numbers and occurrence is not well known.
- It is also important to conduct studies that monitor wildlife response to increased public use (multi-use trail and moose overlook) to assess impacts of these activities on wildlife.

Required step-down management plans that have been identified will further refine monitoring, methods, techniques, and locations. Additionally, the step-down plan will identify how, when, and who will conduct the monitoring.

Habitat monitoring methods and frequency are being developed cooperatively with wildlife researchers within the U.S. Geological Survey. Evaluation of those methods will occur periodically, and the refuge will consult with U.S. Geological Survey, universities, and other professionals to ensure proper data collection and analysis.

Wildlife research will be encouraged at the refuge. The staff will actively pursue research opportunities, especially those that advance understanding or answer questions related to



refuge management. Research that enhances monitoring (techniques or data analysis) will be encouraged.

The staff will work with researchers to ensure that the studies are applicable and compatible with refuge objectives. Research that does not relate to refuge goals and objectives will be discouraged.

Goals, objectives, and strategies are identified in the CCP. Periodic reviews (a minimum of every 5 years) will ensure goals and objectives are being met. Monitoring and evaluation will be an important part of this process.

Plan Amendment and Revision

The CCP will guide management on the refuge for the next 15 years.

This CCP is signed by the Service's Region 6 director, and provides regional direction to the station project leader.

The project leader at the station will review the CCP every 5 years to determine if it needs revision. In the case of severe circumstances, the project leader has the authority to modify management actions to respond appropriately. The plan will be revised no later than 2018.