

## 6. Implementation and Monitoring

The Togiak Comprehensive Conservation Plan will be implemented through specific actions and various step-down plans (section 6.1). Each of these plans has its own focus and revision schedule. Part of the implementation process is the Refuge's involvement with partnership opportunities, as discussed in section 6.1.2. Monitoring the outcome of implementation is effected by means of surveys, inventories, creel censuses, etc. may lead to amendment or revision of the Plan (Section 6.1.3).

### 6.1 Implementation of the Conservation Plan

#### ***6.1.1 Key Step-Down Plans***

Step-down management plans deal with specific management subjects. They describe management strategies and implementation schedules and provide details necessary to fulfill management goals and objectives identified in the Comprehensive Conservation Plan. Step-down plans for the Refuge include the following:

##### ***Fisheries Management Plan***

The Fisheries Management Plan describes the fishery resource, the ways in which humans have used the resource, the history of fisheries management on the Refuge, and major issues and concerns. The plan provides for continued use of fishery resources by subsistence, commercial, and recreational users. It provides direction to ensure the conservation of fishery resources and habitat. It describes objectives and tasks to address the issues and concerns and assigns priorities and costs for Federal tasks. The Togiak Refuge Fisheries Management Plan was completed in 1991 and is scheduled for review in 2008.

##### ***Wildlife Inventory and Monitoring Plan***

A wildlife inventory plan and monitoring plan guide the annual program of wildlife related surveys conducted on the Refuge. This plan supports Service policy to collect baseline information, monitor critical parameters and trends, and base management on biologically and statistically sound data. This plan will guide collection of data on species of management concern. It will identify priorities for wildlife related surveys and describe the types of surveys that will be used, emphasis of the studies, sampling design and data standards, reporting requirements, how the data will be stored, and when data will be updated. A

wildlife inventory plan for the Refuge is expected to be completed by 2008.

***Public Use Monitoring Plan***

Due to the complex nature of public uses within the Refuge, a detailed system for measuring change over time is needed to evaluate the effectiveness of actions taken as outlined in this Comprehensive Conservation Plan. To accomplish this task, the Refuge will work with cooperators to identify important indicators of subsistence and wildlife-dependent recreational opportunities. The Public Use Monitoring Plan will also establish standards for each of these indicators needed to meet Refuge goals and objectives, along with management actions to be taken should these standards be threatened or exceeded. Techniques to be used for measuring indicators will be identified through this step-down plan.

***Cultural Resource Management Plan***

This step-down plan will provide guidance to Refuge staff in meeting legal requirements to protect and manage the cultural resources of the Refuge. A cultural resource guide will provide a ready reference to the cultural resource guidance provided by law and regulation, by the Service Manual, and by the Cultural Resource Management Handbook. As a guide, it will outline roles and responsibilities, summarize legislation governing management of cultural resources, and contain information of potential use to the refuge manager. It will describe the current state of our knowledge of the prehistory and history of the region. It will include a list of projects that would fill in gaps in knowledge or would complete existing work. A cultural resource overview was completed in 1987. A cultural resource guide for the Refuge is scheduled for completion in 2010.

***Environmental Monitoring Plan***

Refuge staff will develop an ecosystems model for the Togiak Refuge and its surrounding environment to better illustrate relationships among fish, wildlife, plants, habitat and public use. Based on this model, the refuge should design and implement a comprehensive environmental monitoring program taking advantage of protocols and methods already accepted by the National Park Service and others in southwestern Alaska to address Refuge questions and objectives. Upon review of available meteorological data from the National Oceanic and Atmospheric Administration, the Refuge could establish National Weather Service stations and/or remote automated weather stations within or adjacent to the Refuge.

***Fire Management Plan***

The Fire Management Plan (FMP) describes the fire management activities that will occur on the Togiak Refuge. The FMP is the framework for all Refuge fire management decision-making. It specifies the uses of fire that are consistent with national fire policy, Service national and regional direction, and Refuge goals and objectives. Service policy requires all refuges with vegetation capable of sustaining fire to develop a fire management plan. The FMP describes the relationship to land management goals and fire policy, wildland fire management strategies and components, organization and budget, monitoring and evaluation, public safety, reviews and coordination and collaboration. An approved FMP is a prerequisite to implementing prescribed fire and wildland fire use. Wildland fires occasionally occur within the Refuge, and a fire management plan is in production.

***Land-Protection Plan***

A land-protection plan (LPP) focuses on private lands within the Refuge boundaries with the goal of identifying and conserving high-quality habitat on those lands. The plan will guide the Refuge's land conservation activities and provide a framework for refuge and private landowner cooperation. Any course of action would require mutual consent. The plan does not obligate either the Refuge or the landowners to undertake any of the land-conservation measures identified. The Refuge must consider management goals, priorities, and the availability of funds when approached by private landowners with land-conservation proposals. The Refuge's LPP was completed in 2000.

***Wilderness Stewardship Plan***

This plan is a step-down management plan that provides detailed strategies and implementation schedules for meeting the broader wilderness goals and objectives identified in the

Conservation Plan. The Wilderness Stewardship Plan will integrate portions of other step-down plans that affect the Wilderness resource. The Togiak Wilderness Stewardship Plan will be completed within 3 years of adoption of this plan.

### ***Visitor Services Plan***

A Visitor Services plan guides the management of recreational and subsistence uses, including hunting, trapping, fishing, guiding, camping, photography, sightseeing, hiking, and wildlife viewing. It summarizes how the public was involved in developing issues and alternatives and describes the alternatives that were developed to manage public use. The previously completed (1991) Public Use Management Plan and the revision of that plan (included in this document) will be incorporated into the Visitor Services Plan.

### ***Water Resources Plan of Study***

A water resources plan guides collection of hydrologic data on waters within and draining onto the Refuge. Objectives of this plan are to document the occurrence, quantity, distribution, and movement of surface waters and to quantify instream water rights needed to maintain and protect fish and wildlife habitats. The plan describes the water bodies of interest, and the goals, objectives, priorities, and methods of study needed. A Water Resources Plan for the Refuge was developed by the Water Resources Branch in 1997 and continues to be implemented.

Collection of water quality data was added after the initiation of the 1997 Water Resource Plan. Measurement and analysis of physical, nutrient and inorganic chemical water quality variables occurred in conjunction with operating stream gages and was guided by the WRB Quality Assurance Plan for Inorganic Water Quality Assessment in Alaska Refuges.

### ***Vegetation Inventory and Monitoring Plan***

Present descriptions of the vegetation of Togiak NWR are qualitative and general. A plan is needed to develop a quantitative understanding of the vegetation through field inventory. The objectives of such a plan are to describe major coastal plant communities along representative gradients, identify the main vegetation types using numerical classification, and interpret the vegetation types in relation to selected site factors.

#### ***6.1.2 Partnership Opportunities***

Partnerships with other organizations are among the ways in which the Service fulfills its mission “Working with others to conserve, protect, and enhance fish, wildlife, and plants and

their habitats for the continuing benefit of the American people.” Partnership opportunities would be consistent throughout all alternatives.

The Refuge exists within a dynamic ecosystem. Fish, wildlife, and other resources do not respect artificial boundaries, and many of the resources within the Refuge are of national and international importance. The Service recognizes that the public, organizations, and other government agencies have interests in the Refuge. Implementation of many Refuge programs requires community involvement and assistance.

Examples of existing, past, and potential partnerships include the following.

Biologists of Togiak Refuge and the Alaska Department of Fish and Game routinely collaborate to assess status and trends of Mulchatna caribou, moose, salmon, Dolly Varden, and other species for which shared concerns for management exist.

The Nushagak Peninsula caribou herd, which was reintroduced in 1988, is managed in partnership with the Nushagak Caribou Planning Committee with representatives from the six village councils that were instrumental in making the reintroduction successful. The Committee meets to discuss herd management, harvest allocation, and other issues related to the herd.

The Mulchatna caribou herd occupies range that, in recent years, has encompassed parts of the Togiak Lake Clark National Park, the Becharof and Yukon Delta NWRs, and BLM land interspersed throughout the region. The Refuge also cooperates with ADF&G in the status assessment and management of this herd, and partners with the other affected federal agencies and refuges that share this resource.

The Natural Resources Department of the Bristol Bay Native Association works with the Refuge in accomplishing a number of mutual objectives. Summer interns employed by BBNA provide valuable assistance on Refuge projects each year. A traditional and ecological knowledge project undertaken by the Refuge, with funding provided by the Office of Subsistence Management (OSM), has received broad support from BBNA including funding and staff time to complete the project. A partnership with BBNA, to complete OSM funded subsistence projects has been undertaken in the past and continues to be a component of any project for which the Refuge shares mutual objectives of information collection.

The Togiak Refuge serves as the setting for a number of universities conducting studies on climate change. The Refuge has partnered with the Universities of Colorado, Northern

Arizona, Mt. Holyoke, and Chicago to conduct analysis and long-term climate studies to help assess how flora and fauna may have changed over time in the region.

Education and outreach continues to be a central component essential to successful management of the Refuge. Partnerships with Southwest Regional Schools, Dillingham School District, the Lower Kuskokwim School District, and all of the affected communities allow this to be successful. Some of the elements of this partnership include the Bristol Bay Salmon Camp, Cape Peirce Marine Science and Yup'ik Culture Camp, and the Ecology and Outdoor Skills Camp held each summer. Classroom visits by refuge staff are made periodically during the school year to conduct environmental education programs, generate interest for the science camps, provide migratory bird calendar content information, and other purposes.

A program of inholding acquisition has been taking place on the refuge for a number of years. To implement this program, the Refuge works in partnership with the Southwest Alaska Conservation Coalition, which includes an array of Native interests, commercial operators, conservation groups, land managers, and others working together to protect natural resources of southwest Alaska.

The common occurrence of moose on many parts of the Refuge is a fairly recent phenomenon. Refuge staff work in partnership with ADF&G and the villages of Togiak, Twin Hills, Manakotak, and Dillingham through the Unit 17A Moose Management Working Group to monitor the status of the moose herd in that unit and develop management strategies. Work continues with the villages of Goodnews Bay, Platinum, and Quinhagak to develop management goals for expanding moose herds in drainages most used by those villages.

### ***6.1.3 Conservation Plan Amendment and Revision***

Periodic review and revision of this Plan will be necessary. As knowledge of the Refuge's resources and users improves, changes in management directions may be identified. Fish and wildlife populations, user groups, adjacent land users, and other management considerations change with time, often in unforeseen ways. Obstacles also may be encountered in implementing the Plan.

Revisions are a necessary part of the adaptive management approach used by the Refuge. This means that objectives and strategies to reach goals can be adjusted. Most of the resulting changes will fine-tune the plan. These changes will not require modification of this document because minor changes will be

addressed in the more-detailed Refuge management plan, step-down plans, and annual work plans. Only if a significant change is required in the management of the Refuge will it become necessary to develop a plan with a new environmental impact statement.

The Refuge will hold meetings periodically—or use other techniques—to solicit comments for evaluation purposes and to enable Refuge users; adjacent landowners; local, state and federal agencies; and other interested parties to express their views on how the Refuge is being managed. By encouraging continuing public input, the Refuge will be better able to serve the public, to determine potential problems before they occur, and to take immediate action to resolve existing problems.

Every three to five years, Refuge staff will review public comments, local and state government recommendations, staff recommendations, research studies, and other sources to determine if revisions to the Plan are necessary. If major changes are proposed, public meetings may be held or new environmental assessment and environmental impact statements may be necessary. Full review and updating of the Plan will occur every 15 years.