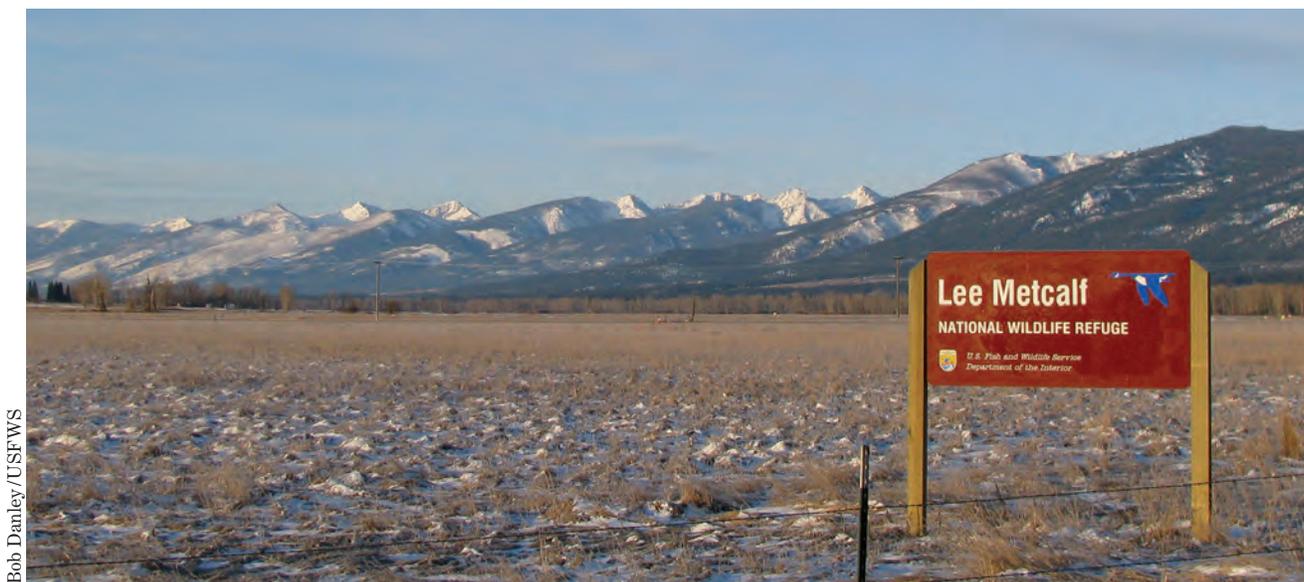


CHAPTER 1—Introduction



Lee Metcalf Refuge is a 2,800-acre refuge located in the Bitterroot River Valley of southwest Montana.

The U.S. Fish and Wildlife Service (Service) has developed this final comprehensive conservation plan (CCP) to provide a foundation for the management and use of the Lee Metcalf National Wildlife Refuge (refuge) in Montana for at least the next 15 years.

This chapter provides an introduction to the CCP with descriptions of the steps in the CCP planning process; the involvement of the Service, the State of Montana, the tribes, the public, and others; and other plans that may be affected or supported by the future management of the refuge.

The remainder of the document contains the information the Service used and the results of the Service's analysis that are the foundation of this final plan:

- Chapter 2 describes the refuge and planning issues.
- Chapter 3 describes the physical, biological, and social environments of the refuge.
- Chapter 4 describes objectives and strategies for all aspects of management of the refuge.

The remaining document contains a glossary of terms, several appendixes, and a bibliography that support the information provided in the CCP.

Lee Metcalf Refuge is a 2,800-acre refuge located in the Bitterroot River Valley of southwest Montana (figure 2). The refuge encompasses a portion of the Bitterroot River and is located between the scenic ranges of the Bitterroot and Sapphire Mountains. This unique

location includes a diverse mosaic of western mountain valley ecosystem types and provides many public use opportunities including recreation, education and discovery, and research. The recreational opportunities and natural beauty of this valley have made it one of the most rapidly expanding human population areas of Montana. This refuge is surrounded by development, including agriculture and housing. The nearby Bitterroot National Forest is visited by thousands of people each year, and annually the refuge has more than 143,000 visitors. The refuge was authorized primarily for management of migratory birds and incidental fish- and wildlife-oriented recreation.

The Service and other Federal, State, and tribal partners have developed this final CCP to provide a foundation for the management and use of the Lee Metcalf Refuge. The CCP specifies the necessary actions to achieve the vision and purposes of the refuge. Wildlife is the first priority in refuge management, and public use (wildlife-dependent recreation) is allowed and encouraged as long as it is compatible with the purposes of the refuge. This final CCP will serve as a working guide for management programs and activities over the next 15 years. Although this document contains management direction for the refuge, greater detail will be provided in stepdown management plans as part of implementing the final CCP. (Refer to table 12 in chapter 4.)

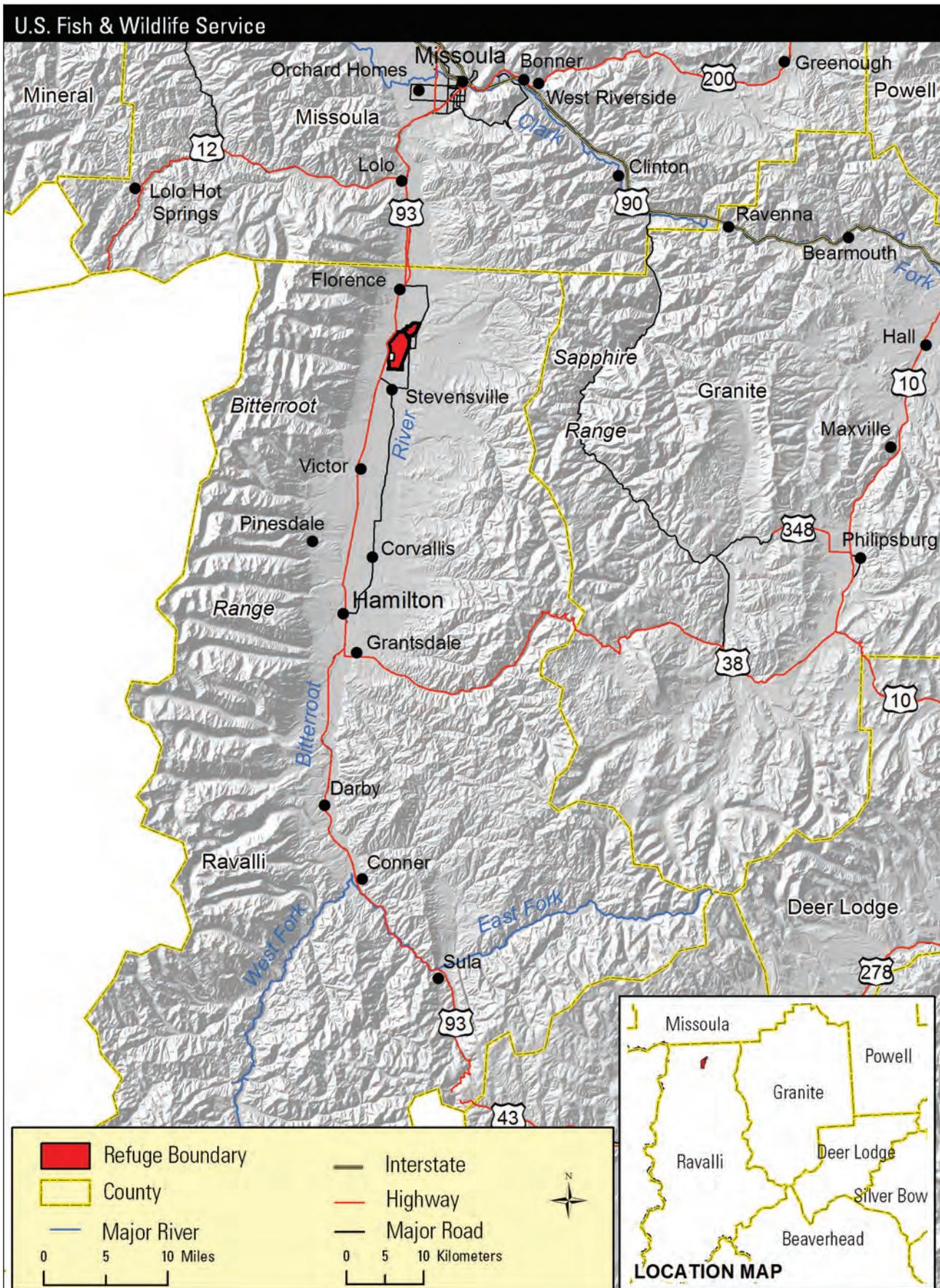


Figure 2. Area map for Lee Metcalf National Wildlife Refuge, Montana.

1.1 The Comprehensive Conservation Plan

The CCP specifies the goals and objectives necessary to achieve the vision and purposes of Lee Metcalf National Wildlife Refuge.

FINAL DECISION

The Regional Director of the Mountain–Prairie Region of the Service selected alternative B from the draft CCP and environmental assessment (EA) as the preferred alternative for the final CCP for Lee Metcalf National Wildlife Refuge. Appendix B documents the Regional Director’s decision in the environmental action statement and the finding of no significant impact. The specifics of the final CCP can be found in “Chapter 4—Management Direction.” Appendix C contains the final compatibility determinations for public uses described in this document. The section 7 biological evaluation (appendix D) documents the effects of CCP actions on threatened and endangered species: a determination of no effect or may affect but not adversely, depending on the species.

The CCP is a broad umbrella plan that provides general concepts and specific wildlife, habitat, visitor services, and partnership objectives over the next 15 years. Implementation begins with publication of the final CCP. The Service will carry out the plan with help from partner agencies, organizations, and the public. As the CCP is implemented, stepdown management plans will be developed to provide greater detail to managers and employees for carrying out specific actions and strategies authorized by the CCP. Table 12 in chapter 4 lists the stepdown plans needed for the refuge.

The CCP details program planning levels that are sometimes substantially above current budget allocations and thus are primarily for Service strategic planning purposes. The CCP does not constitute a commitment for staff increases, operation and maintenance increases, or funding for future land acquisition.

PLAN DEVELOPMENT

The CCP was developed in compliance with the National Wildlife Refuge System Improvement Act (Improvement Act) and Service policy. The actions described in the CCP meet the requirements of the Council on Environmental Quality regulations that implement the National Environmental Policy Act of 1969 (NEPA). Staff from several Montana State agencies, other Federal agencies, and tribes provided critical support in developing the CCP. The Service’s involvement of the public was another important aspect of planning and part of compliance with NEPA. In addition to the initial scoping with the public, there



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was a public review of the draft CCP and EA before the final CCP was completed.

The planning process is described in detail in section 1.8, and the public involvement process is described in appendix A, including the Service’s response to substantive public comments.

PLAN AMENDMENT AND REVISION

The Service will annually review the final CCP to determine the need for amendment. An amendment would occur if significant information became available, such as a change in ecological conditions. The Service will evaluate the plan every 5 years and revise it after 15 years, as necessary.

1.2 Purpose and Need for the Plan

The purpose of this final CCP is to identify the role that the Lee Metcalf Refuge will play in supporting the mission of the National Wildlife Refuge System (Refuge System) and to provide long-term guidance for managing programs and activities. The CCP is needed to:

- communicate with the public and other partners in efforts to carry out the mission of the Refuge System;
- provide a clear statement of direction for managing the refuge;
- provide neighbors, visitors, and government officials with an understanding of the Service’s management actions on and around the refuge;

- ensure that the Service’s management actions are consistent with the mandates of the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act);
- ensure that management supports other Federal, State, and county plans, as appropriate;
- provide a basis for development of budget requests for the refuge’s operation, maintenance, and capital improvement needs.

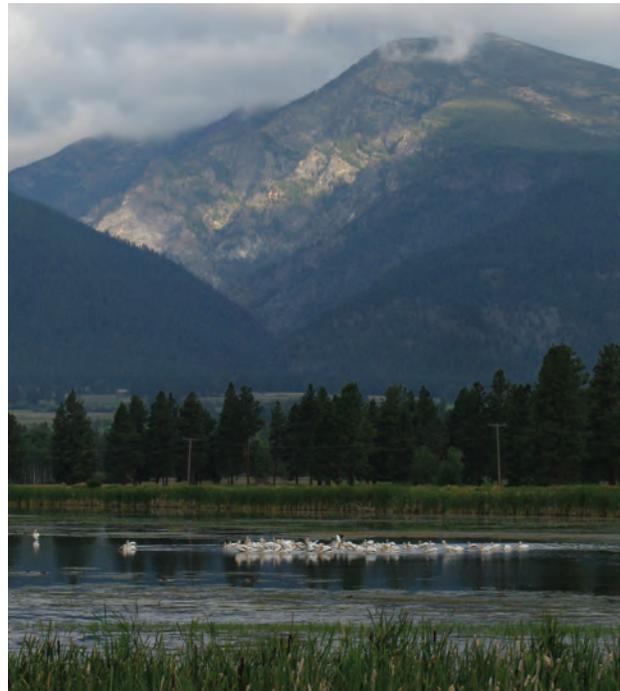
Sustaining the Nation’s fish and wildlife resources is a task that can be accomplished only through the combined efforts of governments, businesses, and private citizens.

1.3 North American Model of Wildlife Conservation

Wildlife conservation in North America evolved to take on a form unique in the world; in recent years, it has come to be known as the North American Model of Wildlife Conservation (Geist et al. 2001). The wildlife conservation movement arose out of the conflict between market hunters and sport hunters in the mid- to late-nineteenth century. Market hunting increased in response to the growth in urban population fueled by the Industrial Revolution. Between 1820 and 1860, the percentage of Americans who lived in cities increased from 5 percent to 20 percent; this fourfold increase is the greatest proportional increase in urban population that ever occurred in the United States (Reiss 1995). The demand for meat and hides—along with feathers for the millinery trade—led to exploitation of game animals by market hunters. Along with the increase in the urban population came a new breed of hunter—one who hunted for the chase and the challenge it provided. These sport hunters valued game animals more when they were alive; market hunters, however, placed value on dead animals they could bring to market. The growing legion of sport hunters started a national movement that resulted in Federal and State governments taking responsibility for regulating the take of wildlife.

The keystone concept of the North American Model of Wildlife Conservation, and the bedrock that allowed government to exercise control, is the public trust doctrine (Geist and Organ 2004). With origins in Greek and Roman law, the Magna Carta, and the 1842 *Martin v. Waddell* U.S. Supreme Court decision, the public trust doctrine as it applies to wildlife conservation is the principle that wildlife belongs to no one; it is held in trust for all by government.

The seven pillars of the North American Model of Wildlife Conservation follow:



Bob Damley / USFWS

American white pelicans use the ponds of Lee Metcalf Refuge for foraging and cover.

- wildlife as a public trust resource
- elimination of markets for game
- allocation of wildlife by law
- wildlife only killed for a legitimate purpose
- wildlife considered an international resource
- science as the proper tool to discharge wildlife policy
- democracy of hunting

For more than 100 years, these pillars have stood the test of time despite significant changes in approaches to wildlife conservation. The original conservation movement championed by Theodore Roosevelt, George Bird Grinnell, and others emphasized stemming wildlife population declines through implementing programs that restricted take and protected lands. During the 1920s, conservationists realized that more was needed, and a committee including Aldo Leopold, A. Willis Robertson, and other leading conservationists of the time authored the 1930 American Game Policy. This policy called for a restoration program for habitats and populations based on scientific research and supported with stable, equitable funding. Within a decade, many needs of this program were fulfilled through landmark legislation, including the Duck Stamp Act to fund land acquisition for national wildlife refuges. In addition, the Pittman–Robertson Wildlife Restoration Act shifted excise taxes imposed on firearms and ammunition to fund wildlife restoration through cooperation between the Service and State fish and wildlife agencies. To use this money, States were required to pass laws that prevented diversion of hunting license

revenues to any purpose other than administration of the State fish and wildlife agency.

In recent decades, wildlife management has placed greater emphasis on overall wildlife diversity. All wildlife species have benefited from the North American Model of Wildlife Conservation pillars, not just game animals. The Refuge System has evolved along with the North American Model of Wildlife Conservation—it today provides refuge for virtually all species found in the United States and recreation for all Americans.

It is a realization of the North American Model of Wildlife Conservation to provide for science-based management of international wildlife resources held in trust for all. The importance of this system to American society can best be appreciated if we were to contemplate its loss. Wildlife connects us to the heritage of this country and our ancestors who built our society. It connects us as well to the natural world of which we are a part, but from which we have become so disconnected. To lose this connection is to lose the basis of our humanity.

1.4 The U.S. Fish and Wildlife Service and Refuge System



The Service is the principal Federal agency responsible for fish, wildlife, and plant conservation. The Refuge System is one of the Service's major programs.

U.S. FISH AND WILDLIFE SERVICE

The mission of the U.S. Fish and Wildlife Service, working with others, is to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people.

In the late 19th and early 20th centuries, America's fish and wildlife resources were declining at an alarming rate, largely due to unrestricted market hunting. Concerned citizens, scientists, and hunting and angling groups joined together and generated the political will for the first significant conservation measures

taken by the Federal Government. These actions included the establishment of the Bureau of Fisheries in the 1870s and, in 1900, passage of the first Federal wildlife law—the Lacey Act—which prohibited interstate transportation of wildlife taken in violation of State laws. Beginning in 1903, President Theodore Roosevelt established more than 50 wildlife refuges across the Nation.

Over the next three decades, the United States ratified the Migratory Bird Treaty with Great Britain, and Congress passed laws to protect migratory birds, establish new refuges, and create a funding source for refuge land acquisition. In 1940, the U.S. Fish and Wildlife Service was created within the Department of the Interior, and existing Federal wildlife functions including law enforcement, fish management, animal damage control, and wildlife refuge management were combined into a single organization for the first time.

Today, the Service enforces Federal wildlife laws, manages migratory bird populations, restores nationally significant fisheries, conserves and restores vital wildlife habitat, protects and recovers endangered species, and helps other governments with conservation efforts. In addition, the Service administers a Federal aid program that distributes hundreds of millions of dollars to States for fish and wildlife restoration, boating access, hunter education, and related programs across the United States.

SERVICE ACTIVITIES IN MONTANA

Service activities in Montana contribute to the State's economy, ecosystems, and education programs. The following list highlights the Service's presence and activities in 2009:

- employed 220 people in Montana
- coordinated 446 volunteers who donated more than 21,780 hours to Service projects on refuge and district lands
- managed two national fish hatcheries, one fish and wildlife management assistance office, six coordination areas, one fish health center, four ecological services offices, and one fish technology center
- managed 23 national wildlife refuges encompassing 1,217,617 acres (1.29 percent of the State)
- managed five wetland management districts
 - 48,026 acres of fee-title waterfowl production areas
 - 146,816 acres under leases or easements
- hosted 690,173 visitors to Service-managed lands
 - 96,866 hunting visits
 - 80,370 fishing visits
 - 506,632 wildlife observation, photography, and interpretation visits
 - 6,305 visits from students participating in environmental education programs

- provided \$9.6 million to Montana Fish, Wildlife & Parks (MFWP) for sport fish restoration and \$17.4 million for wildlife restoration and hunter education
- paid Montana counties \$394,799 under the Refuge Revenue Sharing Act (money used for schools, roads, and any other public purpose)

Additionally, since 1988 the Service's Partners for Fish and Wildlife Program has helped private landowners restore more than 31,759 wetland acres, 360,826 upland acres, and 1,263 miles of river habitat as well as install 45 structures to open 502 river miles for fish passage.

NATIONAL WILDLIFE REFUGE SYSTEM

In 1903, President Theodore Roosevelt designated the 5.5-acre Pelican Island in Florida as the Nation's first wildlife refuge for the protection of native nesting birds. This was the first time the Federal Government set aside land for wildlife. This small but significant designation was the beginning of the National Wildlife Refuge System. One hundred years later, the Refuge System has become the largest collection of lands in the world specifically managed for wildlife, encompassing more than 150 million acres within 553 refuges and more than 3,000 waterfowl production areas providing breeding and nesting habitat for migratory birds. Today, there is at least one refuge in every State as well as in Puerto Rico and the U.S. Virgin Islands.

The Improvement Act established a clear mission for the Refuge System.

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

The Improvement Act states that each national wildlife refuge (that is, every unit of the Refuge System, which includes wetland management districts) shall be managed to accomplish the following:

- Fulfill the mission of the Refuge System.
- Fulfill the individual purposes of each refuge and district.
- Consider the needs of fish and wildlife first.
- Fulfill the requirement of developing a CCP for each unit of the Refuge System and fully involve the public in preparation of these plans.

- Maintain the biological integrity, diversity, and environmental health of the Refuge System.
- Recognize that wildlife-dependent recreation activities including hunting, fishing, wildlife observation, photography, environmental education, and interpretation are legitimate and priority public uses.
- Retain the authority of refuge managers to determine compatible public uses.

In addition to the mission for the Refuge System, the wildlife and habitat vision for each unit of the Refuge System maintains the following principles:

- Wildlife comes first.
- Ecosystems, biodiversity, and wilderness are vital concepts in refuge and district management.
- Habitats must be healthy.
- Growth of refuges and districts must be strategic.
- The Refuge System serves as a model for habitat management with broad participation from others.

Following passage of the Improvement Act, the Service immediately began to carry out the direction of the new legislation including preparation of CCPs for all national wildlife refuges and wetland management districts. Consistent with the Improvement Act, the Service prepares CCPs in conjunction with public involvement. Each refuge and each district is required to complete its CCP within the 15-year schedule (by 2012).

PEOPLE AND THE REFUGE SYSTEM

The Nation's fish and wildlife heritage contributes to the quality of American lives and is an integral part of the country's greatness. Wildlife and wild places have always given people special opportunities to have fun, relax, and appreciate the natural world.

Whether through bird watching, fishing, hunting, photography, or other wildlife pursuits, wildlife recreation contributes billions of dollars to local economies. In particular, money generated from the taxing of sporting arms and ammunition and of fishing equipment that is authorized by the Pittman–Robertson and Dingell–Johnson Acts, respectively, has generated tens of billions of dollars. Distributed by the Service, this money has been used by States to increase wildlife and fish populations, expand habitat, and train hunters across the Nation. Approximately 35 million people visited the Refuge System in 2006, mostly to observe fish and wildlife in their natural habitats (Caudill and Henderson 2006). Visitors are most often accommodated through nature trails, auto tours, interpretive programs, and hunting and fishing opportunities. Local communities that surround the refuges and wetland management districts derive significant economic benefits. Economists report that Refuge System visitors contribute more than \$1.7 billion annually to local economies (Carver and Caudill 2007).

1.5 National and Regional Mandates

Refuge System units are managed to achieve the mission and goals of the Refuge System along with the designated purpose of the refuges and districts (as described in establishing legislation, Executive orders, or other establishing documents). The key concepts and guidance for the Refuge System are in the National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. 668dd–668ee) (Administration Act), Title 50 of the Code of Federal Regulations (CFR), “The Fish and Wildlife Service Manual,” and the Improvement Act (an amendment of the Administration Act).

The Improvement Act amends the Administration Act by providing a unifying mission for the Refuge System, a new process for determining compatible public uses on refuges and districts, and a requirement that each refuge and district be managed under a CCP. The Improvement Act states that wildlife conservation is the priority of Refuge System lands and that the Secretary of the Interior will make sure that the biological integrity, diversity, and environmental health of refuge lands are maintained. Each refuge and district must be managed to fulfill the Refuge System’s mission and the specific purposes for which the unit was established. The Improvement Act requires the Service to monitor the status and trends of fish, wildlife, and plants in each national wildlife refuge and wetland management district.

A detailed description of these and other laws and Executive orders that may affect the CCP or the Service’s implementation of the CCP is in appendix E. Service policies for planning and day-to-day management of refuges and districts are in the “Refuge System Manual” and “The Fish and Wildlife Service Manual.”

1.6 Contributions to National and Regional Plans

Lee Metcalf Refuge contributes to the conservation efforts outlined in the various State and national plans described below.

FULFILLING THE PROMISE

A 1999 report, “Fulfilling the Promise, The National Wildlife Refuge System” (USFWS 1999), is the culmination of a yearlong process by teams of Service employees to evaluate the Refuge System nationwide. This report was the focus of the first national Refuge System conference (in 1998), which was attended by

refuge managers, other Service employees, and representatives from leading conservation organizations.

The report contains 42 recommendations packaged with three vision statements for wildlife and habitat, people, and leadership—all three of these major topics are included in this CCP.

PARTNERS IN FLIGHT

The Partners in Flight program began in 1990 with the recognition of declining population levels of many migratory landbird species. The challenge is to manage avian population growth while maintaining functional natural ecosystems in the face of human population growth. To meet this challenge, Partners in Flight worked to identify priorities for landbird species and habitat types. Partners in Flight activities have resulted in 52 bird conservation plans covering the continental United States. Partners in Flight is a cooperative effort involving partnerships among Federal, State, and local government agencies, philanthropic foundations, professional organizations, conservation groups, industries, the academic community, and private individuals.

The Partners in Flight program was initiated to provide for the long-term health of landbird life of this continent. Its mission can be expressed in three related priorities: helping species at risk, keeping common birds common, and forming voluntary partnerships benefiting birds, habitat, and people. The three goals developed in support of this mission are as follows:

- Ensure an active, science-based conservation design process that identifies and develops solutions to threats and risks to landbird populations.
- Create a coordinated network of conservation partners to implement the objectives of the landbird conservation plans at multiple scales.
- Secure sufficient commitment and resources to support vigorous implementation of landbird conservation objectives (Rich et al. 2004).

Montana Partners in Flight considered 141 species for priority status. It identified 14 high-priority species (priority I) in need of immediate conservation action, 43 moderate-priority species with lesser threats but in need of better monitoring and conservation consideration (priority II), and 51 species of local interest whose habitat needs may influence design and selection of conservation strategies (priority III). The highest priority species are common loon, trumpeter swan, harlequin duck, greater sage-grouse, piping plover, mountain plover, interior least tern, flammulated owl, burrowing owl, black-backed woodpecker, olive-sided flycatcher, brown creeper, Sprague’s pipit, and Baird’s sparrow (Casey 2000).

The highest priority habitats in Montana are mixed grassland, sagebrush steppe, dry forest (ponderosa pine and Douglas-fir), riparian deciduous forest, and

prairie pothole wetlands, some of which occur on the refuge. The primary objectives in each priority habitat are to restore ecological processes necessary to provide suitable habitat for priority (target) species, identify and protect those remaining blocks of habitats that have undergone drastic declines, and develop management prescriptions that can be applied at all geographic scales.

To fully implement the goals of the international Partners in Flight plan, a series of science-based landbird conservation plans with long-term strategies for bird conservation have been developed. The geographical context of these plans is composed of 58 physiographic regions, each defined by similar physical geographic features and wholly or partially contained within the continental United States and Alaska. Lee Metcalf Refuge lies within the physiographic area known as the Central Rocky Mountain Physiographic Region.

Central Rocky Mountain Physiographic Region

The Central Rocky Mountain Physiographic Region is a huge physiographic area, extending from north-west Wyoming to all of western Montana, the northern two-thirds of Idaho, large areas of eastern Oregon and Washington, much of southeast British Columbia, and a sliver of west Alberta. It is an area of high mountains, with elevations exceeding 10,000 feet. Glaciation has left broad, flat valleys between mountain ranges.

Elevation determines the dominant vegetation. The highest areas are alpine tundra. The subalpine zone is dominated by Engelmann spruce and subalpine fir, with ponderosa pine and Douglas-fir in the montane zone below. Stand-replacing fire can change forests in either of these zones to lodgepole pine or aspen. Fire in higher-elevation coniferous forests of the central Rocky Mountains tends to be of high intensity and low frequency. Grass and sagebrush occur under open pine forests that grade downslope into grasslands, wetlands, woodlands, or shrub-steppe. Approximately 28 species of birds have a higher population in the central Rocky Mountains than in any other physiographic area. This is the highest such number in any physiographic area in the contiguous United States, and it seems to represent the huge size of the area and the vast amount of quality bird habitat that still exists.

A huge percentage of the central Rocky Mountains in the United States are in public ownership, mostly managed by the U.S. Department of Agriculture (USDA) Forest Service. Maintenance or restoration of healthy forest ecosystems on public and private industrial lands will be the most important factor in keeping the central Rocky Mountains a healthy ecosystem for so many forest birds.

There are currently 141 species identified for special consideration within the Montana portion of the Central Rocky Mountain Physiographic Region. Generally, priority I species are the highest priority and



Donna Dewhurst/USFWS

A priority I species of the Central Rocky Mountain Physiographic Region, the brown creeper has been documented on Lee Metcalf Refuge.

are the focus of proposed conservation actions. The priority I species identified for this physiographic region are common loon, trumpeter swan, harlequin duck, greater sage-grouse, piping plover, mountain plover, (interior) least tern, flammulated owl, burrowing owl, black-backed woodpecker, olive-sided flycatcher, brown creeper, Sprague's pipit, and Baird's sparrow. The common loon, trumpeter swan, olive-sided flycatcher, and the brown creeper have been documented on the refuge, primarily using the refuge for resting and feeding. No nesting has been recorded.

NORTH AMERICAN WATERBIRD CONSERVATION PLAN

The North American Waterbird Conservation Plan provides a contiguous framework for conserving and managing colonial-nesting waterbirds including 209 species of seabirds, coastal waterbirds (gulls, terns, and pelicans), wading birds (herons and ibises), and marshbirds (certain grebes and bitterns). The overall goal of this conservation plan is to make sure that the following are sustained or restored throughout the waterbirds' ranges in North America: (1) the distribution, diversity, and abundance of waterbird populations; (2) waterbird habitats (breeding, migratory, and nonbreeding); and (3) important sites for waterbirds. The geographic scope of the plan covers 28 countries from Canada to Panama as well as islands and near-shore areas of the Atlantic and Pacific Oceans, the Gulf of Mexico, and the Caribbean Sea. This waterbird partnership consists of Federal, State, and Provincial wildlife agencies; individuals; and nonprofit conservation organizations.

Waterbird planning regions were identified to allow for planning at a practical, landscape-level scale. Planning region boundaries are based on a combination of political considerations and ecological factors.

Sixteen planning regions were identified within North and South Americas. Lee Metcalf Refuge is located within the Intermountain West Waterbird Conservation Region. This is a vast inland area stretching from the Rocky Mountains on the east to the Sierra Nevada and Cascades on the west. The Intermountain West's dispersed high-mountain lakes, large terminal hypersaline lakes, marshes, playas, rivers, streams, riparian zones, and fresh and brackish wetlands host about 40 waterbird species, including many or most of the world's California gulls, eared grebes, white-faced ibises, and American white pelicans. Eleven waterbirds are identified as species of high concern in one or more of the four bird conservation regions within the planning area: yellow rail, Franklin's gull, black tern, eared grebe, western grebe, Clark's grebe, snowy egret, American white pelican, common loon, American bittern, and certain managed populations of the greater and lesser sandhill crane. The Franklin's gull, black tern, western grebe, American white pelican, bittern, loon, and sandhill crane have all been documented using the refuge, primarily for resting and feeding. However, recent years have seen the sandhill cranes nesting with at least two to five successful nests per season.

Waterbirds using this region are highly adaptable to constantly changing wetland conditions and depend on a regional-scale association of wetlands to meet habitat and forage requirements during stages of their annual life cycle. The competing demands for water from agriculture, development, and recreation pose the greatest threats to regional waterbird populations. Also, contaminants such as mercury and dichlorodiphenyltrichloroethane (known as DDT) and its breakdown products significantly threaten the region's waterbirds. Because of the west's feast-or-famine water regime, the "Intermountain West Joint Venture Coordinated Bird Conservation Plan" stresses the necessity of conserving a network of high-quality wetland habitats with secure water sources to provide options for waterbirds during drought and flood cycles (Kushlan et al. 2002).

NORTH AMERICAN WATERFOWL MANAGEMENT PLAN

Written in 1986, the "North American Waterfowl Management Plan" envisioned a 15-year effort to achieve landscape conditions that could sustain waterfowl populations. Specific plan objectives are to increase and restore duck populations to the average levels of the 1970s—62 million breeding ducks and a fall flight of 100 million birds (USFWS and Canadian Wildlife Service 1986). The plan is innovative because of its international partnerships and its implementation at the local level. Its success depends on the strength of the joint ventures, which involve Federal, State,

Provincial, tribal, and local governments; businesses; conservation organizations; and individual citizens.

Joint ventures are regional, self-directed partnerships that carry out science-based conservation through a wide array of community participation. Joint ventures develop implementation plans that focus on areas of concern identified in the plan. Lee Metcalf Refuge lies within the Intermountain West Joint Venture.

Intermountain West Joint Venture

The Intermountain West Joint Venture (IWJV) was established in June 1994 to serve as the implementation arm of the "North American Waterfowl Management Plan" (IWJV 2005a) in the Intermountain West region. The focus of the IWJV is conservation of wetland and associated habitats. The IWJV comprises multilevel partnerships between diverse public and private organizations who share common interests in the conservation, maintenance, and management of key ecosystems in the Intermountain West region.

The IWJV encompasses much of the Intermountain West region, from the Sierra Nevada and Cascades on the west to just east of the Rocky Mountains, and from the Mexican border on the south to the Canadian border on the north. This extensive geographic region encompasses portions of eleven western states and includes an enormous diversity of avian habitat.

In 2005 the IWJV Montana steering committee developed a "Coordinated Implementation Plan for Bird Conservation in Western Montana" (IWJV 2005b). This team divided the State of Montana into Bird Habitat Conservation Areas to be used for all bird conservation projects over the next 5–7 years. Lee Metcalf Refuge is located in the Bitterroot Valley Bird Habitat Conservation Area. The priority habitat types for this area include dry forest (ponderosa pine and Douglas-fir), riparian (such as cottonwood), wetland (reservoirs, lakes, and marshes), and burned forest (recent fires). The refuge has two of these high-priority habitat types, the riparian and the wetland.

INTERMOUNTAIN WEST REGIONAL SHOREBIRD PLAN

As noted above, the Intermountain West is a huge region, stretching from Canada to Mexico and from the Rocky Mountains to the Sierra Nevada and Cascades. The six bird conservation regions of the Intermountain West include an array of habitats from saline sinks to alpine streams (Oring et al. 2010). The refuge is located in the Northern Rocky Mountain Bird Conservation Region, an area characterized by low lying desert flats surrounded by rugged, boreal mountain ranges. Stream and river valleys occur in the mountains along with many small wetlands and natural and constructed lakes. Sewage lagoons near many urban areas also host numerous shorebirds. The area is of some importance for breeding of several shorebird species and of modest importance to many species of transients. Eleven species of shorebirds regularly

breed in the Intermountain West, and 23 additional species are annual migrants.

The most important issue facing shorebird conservation in the Intermountain West is the very great human-driven competition for water. Finding ample high quality fresh water will be the greatest challenge faced by future shorebird conservation interests.

The “Intermountain West Regional Shorebird Plan” recognizes the Lee Metcalf Refuge as 1 of 79 managed shorebird sites in the nation, 1 of only 3 identified in Montana (Oring et al. 2010).

STATE COMPREHENSIVE FISH AND WILDLIFE CONSERVATION STRATEGY

“Montana’s Comprehensive Fish and Wildlife Conservation Strategy” (MFWP 2005) is for all vertebrate species known to exist in Montana including both game and nongame species, as well as some invertebrate species such as freshwater mussels and crayfish.

Although game species are included in Montana’s conservation strategy, the priority is those species and their habitats “in greatest conservation need”—that is, focus areas, community types, and species that are significantly degraded, declining, federally listed, or for which important distribution and occurrence information is lacking. The conservation strategy uses five ecotypes to describe the broad areas of Montana’s landscape that have similar characteristics. Lee Metcalf Refuge is located in the intermountain and foothill grassland ecotype. The intermountain and foothill grassland ecotype is a mosaic of private and public land that extends from the glaciated Flathead River Valley to the north, south to the Centennial Valley, and east to the Little Belt Foothills, where there remain some of Montana’s most diverse fish and wildlife habitats. This western Montana ecotype harbors more wildlife communities than any other in Montana. It also harbors Montana’s largest human population concentration in and near the towns of Kalispell, Missoula, Helena, and Bozeman. The attraction for wildlife and people is western Montana’s broad, lush, and sweeping valleys cradled by the peaks of the Rocky Mountains. The intermountain and foothill grasslands are cut and formed by meandering rivers that create core riparian zones and wetland areas that often include glacial lakes and potholes that attract nesting waterbirds. Addressing the challenges that accompany the interface between human settlement and fish and wildlife and their habitats will be critical to the conservation of these areas.

Within each of the ecotypes, tier 1 geographic focus areas (that is, those in greatest need of conservation) were identified for all terrestrial and aquatic areas of the State. Lee Metcalf Refuge is located within the Bitterroot/Frenchtown Valleys focus area, which is dominated by views of the jagged peaks of the Bitterroot Range to the west and the lower Sapphire Mountains to the east. The Bitterroot River bisects the

valley floor north to Missoula. The valley is arid, flat, or gently rolling landscapes between 2 and 15 miles wide. While the valley supports many habitats—from grassland and riparian to forest and sagebrush—most of the area is now in subdivided for home sites interspersed with some agricultural production. The rolling mountain foothills at the valley edges are important elk, white-tailed deer, and mule deer winter ranges. In the valley bottoms, the cottonwood riparian habitats are some of the most productive wildlife habitats in the State and are home to a wide variety of birds, mammals, reptiles, and amphibians. Of the 16 tier 1 priority (target) species for this area, 8 have been documented on the refuge: boreal toad, long-billed curlew, black tern, olive-sided flycatcher, common loon, trumpeter swan, bald eagle, and Townsend’s big-eared bat. The target species for this area that have not been documented on the refuge are the Coeur d’Alene salamander, northern leopard frog, harlequin duck, flammulated owl, black-backed woodpecker, northern bog lemming, gray wolf, and grizzly bear.

The “Montana Comprehensive Fish and Wildlife Conservation Strategy” (MFWP 2005) outlines five conservation concerns and strategies for the Bitterroot/Frenchtown Valleys focus area. The key concerns are:

- habitat loss, degradation, and fragmentation, especially as a result of human population growth and development of transportation infrastructure;
- invasive and exotic plant and animal species;
- range and forest management practices;
- streamside residential development.

All of these conservation concerns identified in this State plan for the Bitterroot/Frenchtown Valleys focus area are affecting the management and future protection of the Lee Metcalf Refuge.

1.7 Strategic Habitat Conservation

In the face of escalating challenges such as land use conversion, invasive species, water scarcity, and refuge issues that have been amplified by accelerating climate change, the Service has evolved from its ecosystem approach of thinking about conservation to developing a broader vision.

A cooperative effort by the Service and U.S. Geological Survey culminated in a report by the National Ecological Assessment Team (USGS 2006). The report outlines a unifying adaptive resource management approach for conservation at a landscape scale, the entire range of a target species or a suite (or guild) of species. This approach is strategic habitat conservation—a structured, science-driven approach for making

efficient, transparent decisions about where and how to expend Service resources for species, or groups of species, that are limited by the amount or quality of habitat. It is an adaptive management framework integrating planning, design, delivery and evaluation.

Since 2006, the Service has taken significant steps to turn this vision into reality and has defined a framework of 21 geographic areas. Experts from the Service and U.S. Geological Survey developed this framework through an aggregation of bird conservation regions. Lee Metcalf Refuge lands and waters lie in geographic area 6—the great northern. This geographic area is unique in social values, natural resources, and managerial challenges. The great northern geographic area includes one of the largest surface areas of all of the geographic areas in North America and spans more than 447,000 square miles in the United States (57 percent) and Canada (43 percent). Ecologically, this area represents one of the most relatively intact and functional ecosystems in the United States with diverse groups of species and important conservation and restoration opportunities. Habitats support plant and animal species with cultural significance to multiple Native American tribes and important societal and conservation value to the United States, Canada, and the world. Cultural traditions are tied closely to the land's natural resources as are contemporary ways of life, such as ranching, logging, and recreational and subsistence hunting and fishing. The Nation's largest communities of free-roaming bison, elk, deer and other ungulates, wolves, and bears as well as diverse salmon and trout populations are hallmarks of the great northern geographic area.

The Service is using this framework of geographic areas as the basis to locate the first generation of landscape conservation cooperatives. These cooperatives are conservation–science partnerships between the Service and other Federal agencies, States, tribes, nongovernmental organizations, universities, and other entities. Designed as fundamental units for planning and science, the cooperatives have the capacity to help the Service carry out the elements of strategic habitat conservation—biological planning, conservation design and delivery, and monitoring and research. Coordinated planning and scientific information will strengthen the Service's strategic response to accelerating climate change, land use conversion, invasive species, water scarcity, and a host of other challenges.

CLIMATE CHANGE

The Service expects that accelerating climate change will affect the Nation's fish, wildlife, and plant resources in profound ways. While many species will continue to thrive, some may decline and in some instances go extinct. Others will survive in the wild only through direct and continuous intervention by managers. In 2010, the Service drafted a strategic plan to address

climate change for the next 50 years entitled “Rising to the Challenge—Strategic Plan for Responding to Accelerating Climate Change” (USFWS 2010). The strategic plan employs three key strategies: adaptation, mitigation, and engagement. In addition, the plan acknowledges that no single organization or agency can address climate change without allying itself with others across the Nation and around the world (USFWS 2010). This plan is an integral part of the Department of the Interior's strategy for addressing climate change as expressed in Secretarial Order 3289 (September 14, 2009).

The Service will use the following guiding principles from the strategic plan (USFWS 2010) in responding to climate change:

- priorities setting—continually evaluate priorities and approaches, make difficult choices, take calculated risks, and adapt to climate change
- partnership—commit to a new spirit of coordination, collaboration, and interdependence with others
- best science—reflect scientific excellence, professionalism, and integrity in all the Service's work
- landscape conservation—emphasize the conservation of habitats within sustainable landscapes, applying the Service's strategic habitat conservation framework
- technical capacity—assemble and use state-of-the-art technical capacity to meet the climate change challenge
- global approach—be a leader in national and international efforts to meet the climate change challenge

Scientific information suggests that the great northern landscape has already undergone observable environmental and ecological changes as a result of climate change trends. Current patterns in climate change are expected to affect high-mountain ecotypes and lower-elevation, snowmelt-dependent watersheds more acutely than it will affect some other geographic areas. Because of the valley-floor location of this refuge, it is expected that ground water would continue to surface at least though the life of this plan. In consideration of anticipated climatic changes and the resulting potential ecological impacts, the following 12 species are currently considered to be focal species for the great northern geographic area: bull trout, pacific lamprey, salmon, steelhead, greater sage-grouse, Lewis's woodpecker, trumpeter swan, willow flycatcher, Columbia spotted frog, cutthroat trout subspecies, Arctic grayling, and wolverine. Four of these focal species have been documented on Lee Metcalf Refuge: Lewis's woodpecker, trumpeter swan, willow flycatcher, Columbia spotted frog, and westslope cutthroat trout (in the Bitterroot River). To address the ongoing effects of climate change, any proposed management changes must continue to adapt to a changing environment.

1.8 Planning Process

The final CCP was prepared in compliance with the National Wildlife Refuge System Improvement Act and Part 602 (National Wildlife Refuge System Planning) of “The Fish and Wildlife Service Manual.” Additional requirements and guidance are contained in the Refuge System’s planning policy, issued in 2000. This policy established requirements and guidance for refuge and district plans—including CCPs and step-down management plans—to make sure that planning efforts follow the Improvement Act. The planning policy identified several steps of the CCP and environmental analysis process (figure 3).

The Service began the preplanning process in July 2009 by establishing a planning team composed primarily of Service staff from the refuge. Additional contributors included staff from other Service divisions; MFWP; Bitterroot National Forest; Confederated Salish and Kootenai Tribes; local schools; and Greenbrier Wetland Services, as well as several other partners (appendix F).

During planning, the team identified and reviewed current programs, compiled and analyzed relevant data, and determined the purposes of the refuge. An additional part of this process was the preparation of

a habitat analysis report by Greenbrier Wetland Services, a company that focuses on wetland conservation and management. Its report entitled, “An Evaluation of Ecosystem Restoration and Management Options for Lee Metcalf National Wildlife Refuge,” took more than 2 years to research and prepare and resulted in some sound recommendations for the restoration and future management of the refuge.

The planning team provided opportunities for public involvement as detailed in appendix A. Following public review of the “Draft Comprehensive Conservation Plan and Environmental Assessment—Lee Metcalf National Wildlife Refuge,” the Service analyzed the comments received. The planning team reviewed all comments both individually and as a team. Modifications, including clarifications, were made to this final document based on the public review. Responses to substantive comments appear in appendix A.

Following the Regional Director’s decision on which alternative to implement (refer to previous section 1.1), the planning team prepared the final CCP.

Table 1 lists the specific steps in the planning process to date for the preparation of this final CCP.

COORDINATION WITH THE PUBLIC

During preplanning, a mailing list of more than 270 names was prepared that included private citizens;



Figure 3. Process steps for comprehensive conservation planning and associated environmental analysis.

local, regional, and State government representatives and legislators; other Federal agencies; and interested organizations (appendix A). The Service coordinated the following efforts to provide information and request ideas and comments from the public:

- Web site. The CCP Web page displayed background information on the refuge, the CCP development schedule, public meeting information, planning contacts, and electronic versions of planning updates, the draft plan, and other planning documents.
- Two planning updates. These fact sheets were sent to everyone on the project mailing list. Information was provided on the history of the refuge, the CCP process, and the alternatives in the draft CCP and EA. The updates included invitations to public meetings and provided information on how to provide written comments.
- Public meetings. The Service presented information about the planning process; the resources; and the draft CCP and EA. Attendees were encouraged to offer comments and ask questions.
- Public review of the draft CCP and EA. The public had 34 days to review and provide comments about the draft plan for the refuge.

Table 1. Summary of the CCP planning process for Lee Metcalf National Wildlife Refuge, Montana.

<i>Date</i>	<i>Event</i>	<i>Outcome</i>
July 13, 2009	Kickoff meeting	The planning team learned about the CCP process; discussed the initial planning team list; developed a mailing list, planning schedule, and the first draft of internal issues and qualities list; and reviewed biological data needs.
July 14, 2009	Vision statement development	The planning team developed a proposed vision statement for the draft CCP.
August 11, 2009	Public scoping planning	The planning team discussed an effective outreach plan for public scoping.
September 9, 2009	Planning update mailing	The first planning update was sent to mailing list recipients. This update described the planning process and announced upcoming public scoping meetings.
September 29, 2009	Public scoping meeting	Public attendees learned about the CCP process and discussed issues and ideas for future management.
September 30, 2009	Notice of intent publication	A notice of intent to prepare the CCP was published in the Federal Register.
October 1, 2009	Public scoping meeting	Public attendees learned about the CCP process and discussed issues and ideas for future management.
November 17, 2009	Visitor services workshop	A panel of visitor services experts from State, tribal, and Federal agencies gathered to discuss and propose options for managing the refuge's visitor services programs and facilities.
January 26–27, 2010	Review of draft habitat analysis report	Service staff reviewed the draft analysis and recommendations (prepared by Greenbrier Wetland Services) that described the proposed future ecological restoration and management of the refuge's wetland and floodplain complex.
January 27, 2010	Review of draft grasslands restoration and management report	Service staff reviewed the draft analysis and recommendations (prepared by Aeroscene Land Logic) that described proposed future ecological restoration and management of the refuge's grassland areas.
March 3, 2010	Goals workshop	The planning team prepared draft goal statements in support of the proposed vision statement.
April 7, 2010	Alternatives development	The planning team began developing and evaluating three alternatives for managing visitor services.
April 20, 2010	Target species determination	The planning team determined CCP target species by reviewing State and national priorities species lists for the Service, the State of Montana, and the Bitterroot Valley.
May 26–27, 2010	Alternatives development and evaluation	The planning team began developing alternatives for biological programs and continued evaluating alternatives for managing visitor services.

Table 1. Summary of the CCP planning process for Lee Metcalf National Wildlife Refuge, Montana.

<i>Date</i>	<i>Event</i>	<i>Outcome</i>
June 23–24, 2010	Alternatives review and consequences development	The planning team reviewed the alternatives table and discussed environmental consequences.
July 8, 2010	Environmental consequences review	The planning team continued to review the alternatives table and discussed environmental consequences.
July 20–22, 2010	Alternatives and consequences workshop	An expanded team of partners from the Service and other Federal, tribal, and State agencies assembled to review three alternatives and determine the environmental consequences of each. Alternative B was selected as the proposed action.
November 16, 2010	North Burnt Fork Creek meeting	The planning team met with scientists from other Service divisions and State and Federal agencies to discuss options for reconnecting North Burnt Fork Creek to the Bitterroot River.
November 17, 2010	Objectives and strategies workshop	The planning team drafted objectives and strategies for the proposed action.
January 13, 2011	Map and figure review	The planning team developed a list of needed maps and figures for draft CCP and EA.
January 25 and February 2–3, 2011	Proposed alternatives review	Refuge staff met to review and revise the list of proposed alternatives.
March 21–22, 2011	Proposed action review	The planning team reviewed the list of objectives, strategies, and rationale for the proposed action (chapter 4 of this CCP).
February 2011–September 2011	Internal draft plan preparation	The planning team prepared the draft CCP and EA, including maps. The document was edited and prepared for internal review.
September 12–30, 2011	Internal review of draft plan	The draft CCP and EA was sent to a list of internal reviewers consisting of Service, State, tribal, and other Federal staff. Comments were collected and resulted in several modifications to this public draft.
October 2011–March 2012	Public draft plan preparation	The planning team prepared the public draft CCP and EA. The document was edited and prepared for public distribution.
March 28, 2012	Notice of availability publication, draft plan public review, planning update distribution	The notice of availability of the draft CCP and EA was published in the Federal Register (volume 77, number 60, pages 18852–18853). The draft CCP and EA was made available on the project Web page, and hard copies were distributed per requests. The public was provided 34 days to review and comment on the draft CCP and EA. A planning update was sent to the mailing list; the update summarized the draft plan and announced the upcoming public meeting.
April 9, 2012	Public meeting	The public had an opportunity to learn about and provide comments on the draft CCP and EA.
April 30, 2012	End of public review period	Public comments that would be considered had to be received or postmarked by this date.
May 7 and 9, 2012	Public comments review	The planning team reviewed the public comments and determined needed changes for the final CCP.
May 10–July 13, 2012	CCP revision	The planning team made revisions to the draft CCP based on substantive public comments.
July 18, 2012	Decision on preferred alternative	The Regional Director selected the preferred alternative and signed the finding of no significant impact.
August 2012	Final CCP preparation	The planning team finished revising and editing the final CCP for printing and distribution.

The Service recorded all comments given at the public meetings. In addition to oral comments, the planning team received written comments through email, comment forms, and letters. Planning team members, individually and as a team, reviewed all comments. Some modifications, including clarifications, were made to this final document based on the public review. Appendix A contains more detail about the Service's involvement of the public, including responses to substantive public comments on the draft CCP and EA.

STATE COORDINATION

At the start of the planning process, the Service's Regional Director (Region 6) sent a letter to MFWP, inviting its staff to participate in the planning process. State biologists and outdoor recreation specialists have since been involved in the planning process, offering input on current and future biological and visitor services programs. At the start of the process, each office of Montana's U.S. congressional delegation—Senator Jon Tester, Senator Max Baucus, and Representative Dennis Rehberg—were sent letters that notified them

of the planning process and invited their comments. Five Montana State senators and representatives and Governor Brian Schweitzer were sent similar letters.

The State has been most concerned with the visitor services programs, and State staff participated in the planning meetings to discuss the proposed future management of these programs. The State has been supportive of the planning process.

TRIBAL COORDINATION

Early in the planning process, the Service's Regional Director (Region 6) sent a letter to tribes with potential cultural and historical connections to the area in which the refuge is located. Tribes contacted were the Confederated Salish and Kootenai and Nez Perce tribal councils and culture committees. A staff person and tribal member from the Confederated Salish and Kootenai Natural Resources Division offered her assistance in developing and reviewing the alternatives for the visitor services and cultural resources programs. Each contacted tribe was provided an opportunity to comment on the draft CCP and EA.

