

# Comprehensive Conservation Plan

## *Lee Metcalf National Wildlife Refuge*

Montana

September 2012

Approved by



7/18/12

Stephen D. Guertin, Regional Director  
U.S. Fish and Wildlife Service, Region 6  
Lakewood, Colorado

Date

Prepared by

Lee Metcalf National Wildlife Refuge  
4567 Wildfowl Lane  
Stevensville, Montana 59870  
406 / 777 5552

U.S. Fish and Wildlife Service  
Region 6, Mountain–Prairie Region  
Division of Refuge Planning  
134 Union Boulevard, Suite 300  
Lakewood, Colorado 80228  
303 / 236 8145

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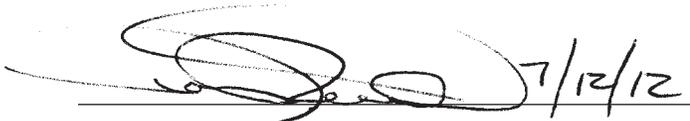
# Comprehensive Conservation Plan

## *Lee Metcalf National Wildlife Refuge*

Montana

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### Submitted by



7/12/12

Tom Reed  
Refuge Manager  
Lee Metcalf National Wildlife Refuge  
Stevensville, Montana

Date

### Concurred with by



7/18/12

W. Dean Rundle  
Refuge Supervisor, Region 6  
U.S. Fish and Wildlife Service  
Lakewood, Colorado

Date



7.18.12

Matt Hogan  
Assistant Regional Director  
U.S. Fish and Wildlife Service, Region 6  
National Wildlife Refuge System  
Lakewood, Colorado

Date



# Contents

<i>Summary</i> .....	XI
<i>Abbreviations</i> .....	XVII
<b>CHAPTER 1—Introduction</b> .....	<b>1</b>
<b>1.1 The Comprehensive Conservation Plan</b> .....	<b>3</b>
<i>Final Decision</i> .....	3
<i>Plan Development</i> .....	3
<i>Plan Amendment and Revision</i> .....	3
<b>1.2 Purpose and Need for the Plan</b> .....	<b>3</b>
<b>1.3 North American Model of Wildlife Conservation</b> .....	<b>4</b>
<b>1.4 The U.S. Fish and Wildlife Service and Refuge System</b> .....	<b>5</b>
<i>U.S. Fish and Wildlife Service</i> .....	5
<i>Service Activities in Montana</i> .....	5
<i>National Wildlife Refuge System</i> .....	6
<i>People and the Refuge System</i> .....	6
<b>1.5 National and Regional Mandates</b> .....	<b>7</b>
<b>1.6 Contributions to National and Regional Plans</b> .....	<b>7</b>
<i>Fulfilling the Promise</i> .....	7
<i>Partners in Flight</i> .....	7
<i>North American Waterbird Conservation Plan</i> .....	8
<i>North American Waterfowl Management Plan</i> .....	9
<i>Intermountain West Regional Shorebird Plan</i> .....	9
<i>State Comprehensive Fish and Wildlife Conservation Strategy</i> .....	10
<b>1.7 Strategic Habitat Conservation</b> .....	<b>10</b>
<i>Climate Change</i> .....	11
<b>1.8 Planning Process</b> .....	<b>12</b>
<i>Coordination with the Public</i> .....	12
<i>State Coordination</i> .....	15
<i>Tribal Coordination</i> .....	15
<b>CHAPTER 2—The Refuge</b> .....	<b>17</b>
<b>2.1 Establishment, Acquisition, and Management History</b> .....	<b>17</b>
<i>Lee Metcalf National Wildlife Refuge</i> .....	17
<i>Summary of Land Acquisition History</i> .....	19
<b>2.2 Purposes</b> .....	<b>19</b>
<b>2.3 Vision</b> .....	<b>21</b>
<b>2.4 Goals</b> .....	<b>21</b>
<i>Bitterroot River Floodplain and Associated Wildlife</i> .....	21
<i>Wetland Impoundment Habitat and Associated Wildlife</i> .....	21
<i>Grassland and Shrubland Habitat and Associated Wildlife</i> .....	21
<i>Invasive and Nonnative Species</i> .....	21
<i>Research</i> .....	21
<i>Cultural Resources</i> .....	21
<i>Visitor Services</i> .....	21

Partnerships . . . . .	22
Operations and Facilities . . . . .	22
<b>2.5 Special Values . . . . .</b>	<b>22</b>
<b>2.6 Planning Issues . . . . .</b>	<b>23</b>
<i>Bitterroot River Migration . . . . .</i>	23
<i>Wetland Impoundments (or Ponds) . . . . .</i>	23
<i>Upland Habitat and Associated Wildlife . . . . .</i>	25
<i>Water . . . . .</i>	25
<i>Invasive and Noxious Species . . . . .</i>	25
<i>Research, Inventory, and Monitoring . . . . .</i>	26
<i>Visitor Services . . . . .</i>	26
<i>Staffing . . . . .</i>	26
<b>CHAPTER 3—Refuge Resources . . . . .</b>	<b>27</b>
<b>3.1 Physical Environment . . . . .</b>	<b>27</b>
<i>Climate and Hydrology . . . . .</i>	27
<i>Climate Change . . . . .</i>	29
<i>Physiography and Geology . . . . .</i>	32
<i>Soils . . . . .</i>	33
<i>Topography and Elevation . . . . .</i>	35
<i>Water Rights . . . . .</i>	35
<i>Hydrogeomorphic Changes . . . . .</i>	35
<i>Air Quality . . . . .</i>	39
<b>3.2 Biological Resources . . . . .</b>	<b>39</b>
<i>Land Cover and Vegetation Communities . . . . .</i>	40
<i>Habitat Modifications since Establishment . . . . .</i>	44
<i>Changes to the Vegetation Communities . . . . .</i>	48
<i>Changes to Fish and Wildlife Populations . . . . .</i>	48
<i>Upland Habitat . . . . .</i>	50
<i>Riparian Habitat . . . . .</i>	51
<i>Wetland Impoundment Habitat . . . . .</i>	52
<i>Remaining Refuge Acres . . . . .</i>	53
<i>Invasive Species . . . . .</i>	53
<i>Wildlife Diseases and Contaminants . . . . .</i>	54
<b>3.3 State and Federally Listed Species . . . . .</b>	<b>56</b>
<i>Species of Concern . . . . .</i>	56
<b>3.4 Cultural Resources and History . . . . .</b>	<b>58</b>
<i>Prehistoric Occupation . . . . .</i>	58
<i>History of the Salish . . . . .</i>	59
<i>Euro-American Settlement and Land Use Changes . . . . .</i>	60
<b>3.5 Special Management Areas . . . . .</b>	<b>64</b>
<i>Wilderness Review . . . . .</i>	64
<i>Important Bird Area . . . . .</i>	64
<b>3.6 Visitor Services . . . . .</b>	<b>64</b>
<i>Hunting and Fishing . . . . .</i>	65
<i>Wildlife Observation and Photography . . . . .</i>	67
<i>Environmental Education . . . . .</i>	68
<i>Interpretation . . . . .</i>	70
<b>3.7 Management Tools . . . . .</b>	<b>71</b>
<i>Water Level Manipulation . . . . .</i>	71
<i>Prescribed Burning . . . . .</i>	71
<i>Prescriptive Grazing or Mowing . . . . .</i>	71
<i>Cooperative Farming . . . . .</i>	71

<b>3.8 Socioeconomic Environment</b> .....	71
<i>Population and Demographics</i> .....	72
<i>Employment</i> .....	72
<i>Public Use of the Refuge</i> .....	72
<i>Baseline Economic Activity</i> .....	73
<i>U.S. Fish and Wildlife Service Employment</i> .....	73
<i>Visitor Spending</i> .....	73
<b>3.9 Partnerships</b> .....	73
<b>3.10 Operations</b> .....	74
<i>Staff</i> .....	74
<i>Facilities</i> .....	74
<b>CHAPTER 4—Management Direction</b> .....	75
<b>4.1 Management Focus</b> .....	75
<i>Target Species Selection Process</i> .....	76
<b>4.2 Goal for the Bitterroot River Floodplain and Associated Wildlife</b> .....	78
<i>Target Species for the Bitterroot River Floodplain</i> .....	78
<i>Floodplain Objective 1</i> .....	78
<i>Floodplain Objective 2</i> .....	80
<i>North Burnt Fork Creek Objective (Including Francois Slough)</i> .....	81
<i>Three Mile Creek Objective</i> .....	82
<i>Riverfront Forest Habitat Objective</i> .....	83
<i>Gallery Forest Habitat Objective</i> .....	84
<b>4.3 Goal for Wetland Impoundment Habitat and Associated Wildlife</b> .....	85
<i>Target Wetland Habitat Species</i> .....	85
<i>Wetland Impoundment Habitat Objective 1</i> .....	85
<i>Wetland Impoundment Habitat Objective 2</i> .....	87
<i>Gravel Pits Objective</i> .....	88
<b>4.4 Goal for Grassland and Shrubland Habitat and Associated Wildlife</b> .....	88
<i>Target Grassland and Shrubland Species</i> .....	89
<i>Grassland and Shrubland Habitat Objective</i> .....	89
<b>4.5 Goal for Invasive and Nonnative Species</b> .....	91
<i>New Invasive Species Objective</i> .....	91
<i>Established Invasive Species Objective</i> .....	91
<b>4.6 Goal for Research</b> .....	93
<i>Research Objective</i> .....	93
<b>4.7 Goal for Cultural Resources</b> .....	94
<i>Cultural Resources Objective 1 (Protection)</i> .....	94
<i>Cultural Resources Objective 2 (Interpretation)</i> .....	94
<b>4.8 Goal for Visitor Services</b> .....	95
<i>Hunting Objective</i> .....	96
<i>Fishing Objective 1</i> .....	96
<i>Fishing Objective 2</i> .....	97
<i>Wildlife Observation and Photography Objective</i> .....	97
<i>Environmental Education Objective</i> .....	99
<i>Interpretation Objective</i> .....	101
<i>Signage Objective</i> .....	102
<b>4.9 Goal for Partnerships</b> .....	103
<i>Partnership Objective</i> .....	103
<b>4.10 Goal for Operations and Facilities</b> .....	103
<i>Staff Objective</i> .....	103
<i>Facilities, Equipment, and Supplies Objective</i> .....	104

<b>4.11 Stepdown Management Plans</b> .....	105
<b>4.12 Research, Monitoring, and Evaluation</b> .....	105
<b>4.13 Plan Amendment and Revision</b> .....	106
<b>Glossary</b> .....	107
<b>Appendixes</b>	
Appendix A—Public Involvement .....	113
Appendix B—Environmental Compliance .....	139
Appendix C—Compatibility Determinations .....	143
Appendix D—Intra-Service Section 7 Biological Evaluation .....	155
Appendix E—Key Legislation and Policy .....	163
Appendix F—List of Preparers, Consultation, and Coordination .....	167
Appendix G—Species Lists .....	169
Appendix H—Fire Management Program .....	195
<b>Bibliography</b> .....	199

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## FIGURES

1 Location map for Lee Metcalf National Wildlife Refuge, Montana .....	XII
2 Area map for Lee Metcalf National Wildlife Refuge, Montana .....	2
3 Process steps for comprehensive conservation planning and associated environmental analysis .....	12
4 Approved acquisition boundary of Lee Metcalf National Wildlife Refuge, Montana .....	18
5 Composite vegetation community models Lee Metcalf National Wildlife Refuge, Montana, for 1964 and 2005 (Heitmeyer et al. 2010) .....	24
6 Ravalli County, Montana, average annual precipitation (inches) (USDA 2012) .....	28
7 Primary channels and sloughs present at Lee Metcalf National Wildlife Refuge, Montana, in the 1940s .....	30
8 Flooding of the Bitterroot River on Lee Metcalf National Wildlife Refuge, Montana, in 1974 .....	31
9 Bitterroot River streamflow near Darby, Montana (USGS 2011) .....	31
10 Network of minor channels occurring in the valley floor on Lee Metcalf National Wildlife Refuge, Montana (Heitmeyer et al. 2010) .....	34
11 Map of Lee Metcalf National Wildlife Refuge, Montana, showing 1-foot contour intervals (Heitmeyer et al. 2010) .....	36
12 Car bodies along the Bitterroot River on Lee Metcalf National Wildlife Refuge, Montana, that were intended for erosion control before refuge establishment .....	38
13 Bank and levee erosion along the Bitterroot River on the west side of Lee Metcalf National Wildlife Refuge, Montana (Heitmeyer et al. 2010) .....	38
14 Maps showing the changes in the main channel of the Bitterroot River in Montana .....	41
15 Hydrogeomorphic-derived map of potential vegetation communities on Lee Metcalf National Wildlife Refuge, Montana, before European settlement in the mid-1800s .....	43
16 Existing habitat and vegetation communities on Lee Metcalf National Wildlife Refuge, Montana .....	45
17 Ponds and upland fields in Lee Metcalf National Wildlife Refuge, Montana .....	46
18 Field planted as dense nesting cover on Lee Metcalf National Wildlife Refuge, Montana .....	47
19 Osprey production on Lee Metcalf National Wildlife Refuge, Montana, 1964–2007 .....	49
20 Mercury concentration in fish from Montana national wildlife refuges .....	50
21 Proposed land use and drainage and irrigation infrastructure on Lee Metcalf National Wildlife Refuge, Montana, in the 1960s (Heitmeyer et al. 2010) .....	62
22 Locations of structures near Lee Metcalf National Wildlife Refuge, Montana (Heitmeyer et al. 2010) .....	63
23 Public use map for Lee Metcalf National Wildlife Refuge, Montana .....	66

24 Roads in Lee Metcalf National Wildlife Refuge, Montana, including Service roads proposed for removal. ....	69
25 Kenai Nature Trail, Lee Metcalf National Wildlife Refuge, Montana. ....	77
26 Adaptive management process. ....	106

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**TABLES**

1 Summary of the CCP planning process for Lee Metcalf National Wildlife Refuge, Montana .....	13
2 Habitat type and associated acreages found on Lee Metcalf National Wildlife Refuge, Montana. ....	19
3 Land acquisition history for Lee Metcalf National Wildlife Refuge, Montana (1964–2009) .....	20
4 Water rights summary for Lee Metcalf National Wildlife Refuge, Montana .....	37
5 Hydrogeomorphic matrix of historical distribution of vegetation communities and habitat types on Lee Metcalf National Wildlife Refuge, Montana .....	40
6 Documented invasive and nonnative plant species on Lee Metcalf National Wildlife Refuge, Montana, as of 2010 and the degree of infestation, priority for treatment, and State noxious status .....	54
7 Montana listed species of concern and Federal birds of conservation concern recorded in the Bitterroot Valley and on Lee Metcalf National Wildlife Refuge, Montana .....	57
8 Target species for the Bitterroot floodplain and their habitat needs. ....	79
9 Wetland impoundment target species and their habitat needs .....	86
10 Target species for the grassland and shrubland areas and their habitat needs .....	89
11 Current and proposed staff for Lee Metcalf National Wildlife Refuge, Montana .....	105
12 Stepdown management plans for Lee Metcalf National Wildlife Refuge, Montana .....	106



# Summary



Bob Danley/USFWS

*View of the Lee Metcalf National Wildlife Refuge from the Bitterroot Mountains.*

The U.S. Fish and Wildlife Service has prepared a comprehensive conservation plan for the Lee Metcalf National Wildlife Refuge in Montana. The Regional Director of the Service's Mountain–Prairie Region selected alternative B from the draft comprehensive conservation plan and environmental assessment, and this alternative is now the final comprehensive conservation plan. Substantive public comments (appendix A) were addressed, resulting in modifications to this final document. Implementation of this plan will be monitored throughout its 15-year effective period.

## The Refuge

Lee Metcalf National Wildlife Refuge, established on February 4, 1964, is a 2,800-acre refuge located in the Bitterroot River Valley of southwest Montana (figure 1). The refuge encompasses a portion of the Bitterroot River and is located between the scenic Bitterroot and Sapphire Mountains. The channel of the Bitterroot River has been altered from levees, bank stabilization, and some channelization; nevertheless, this floodplain refuge provides a diverse mosaic of western mountain valley habitats including gallery and riverfront forest, wet meadow, wetlands, and grassland benches.

The refuge provides opportunities for the public to enjoy compatible wildlife-dependent public use activities including hunting, fishing, wildlife observation and photography, environmental education, and interpretation. The refuge is a very popular community and tourist destination with more than 143,000 visitors annually.

## Issues

Substantive issues were identified following an internal review of refuge information and through public scoping, which began in 2009. The following issues are detailed in chapter 2:

- riparian habitat loss and fragmentation caused by the migration of the Bitterroot River
- overgrown emergent vegetation and eroded levees and water management structures that have compromised the ability to properly manage wetland impoundments
- reduction in the quality and diversity of upland habitats due to invasive plants and lack of native species
- algal blooms that have diminished clarity and quality of refuge waters
- inefficient water supply due to silted and overgrown supply ditches
- invasive species that have become widespread and difficult to control
- lack of baseline research, inventory, and monitoring data to guide management
- small visitor contact area, outdated displays, and inadequate public access by trails
- inadequate staff to manage and enhance refuge habitats and visitor services

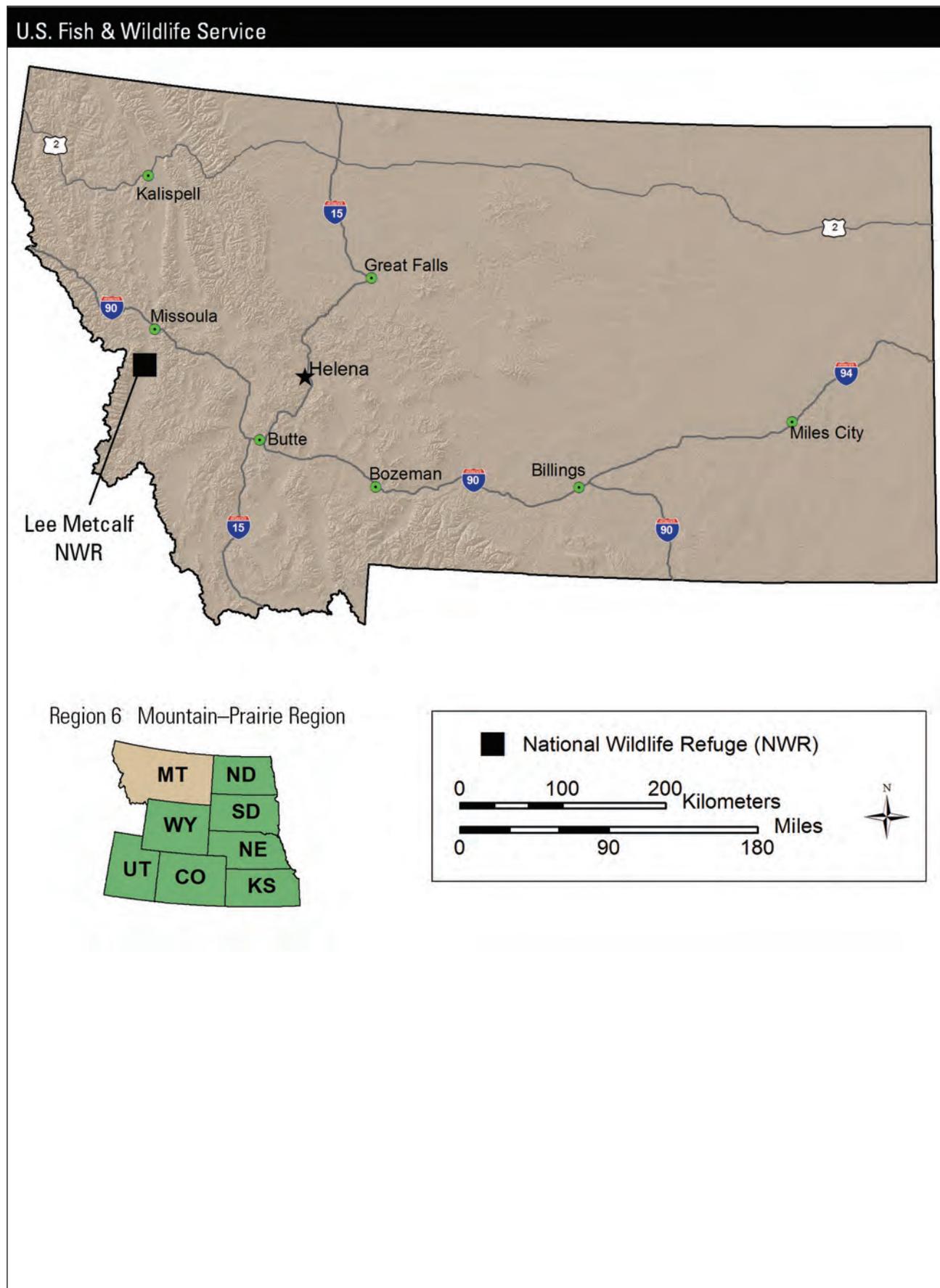


Figure 1. Location map for Lee Metcalf National Wildlife Refuge, Montana.

## The Future of the Refuge

The vision for Lee Metcalf National Wildlife Refuge is based on the establishing purposes of the refuge, resource conditions and potential, and the issues identified during the planning process. The goals were developed to meet the vision for the refuge.

### VISION FOR THE REFUGE

*Lee Metcalf National Wildlife Refuge is a representation of the diverse native wildlife habitat once found abundantly between the Bitterroot and Sapphire Mountains and along the ever-changing Bitterroot River. This floodplain refuge, fed by mountain snow, is a diverse mosaic of forest, grassland, and riparian habitat that provides protected lands and waters for migratory and resident wildlife.*

*The refuge, in partnership with its neighbors, friends, and the community, is a conservation leader in the valley, ensuring that the biological integrity of this refuge and other valley habitats remains intact or, where appropriate, is restored.*

*These protected lands and waters are a place of discovery for visitors to experience fish and wildlife firsthand and where children can experience nature with all their senses. Visitors to the refuge can appreciate the beauty of the setting and experience a sense of wonder and pride to be preserving this part of the Bitterroot Valley and the National Wildlife Refuge System.*

### GOAL FOR THE BITTERROOT RIVER FLOODPLAIN AND ASSOCIATED WILDLIFE

Manage and, where appropriate, restore the natural topography, water movements, and physical integrity of surface water flow patterns across the Bitterroot River floodplain to provide healthy riparian habitats for target native species and to educate visitors about the benefits of sustaining a more natural floodplain.

### GOAL FOR WETLAND IMPOUNDMENT HABITAT AND ASSOCIATED WILDLIFE

Where appropriate, manage wetland impoundments to create a diversity of habitats for target waterfowl, shorebirds, and other associated native wetland-dependent species.

### GOAL FOR GRASSLAND AND SHRUBLAND HABITAT AND ASSOCIATED WILDLIFE

Create the conditions that will allow for the restoration, maintenance, and distribution of native grassland and shrubland species (such as rabbitbrush, needle and thread grass, Junegrass, and hairy golden aster) to provide healthy lands for a diverse group of target native resident and migratory wildlife species and to educate visitors about the historical plant and animal diversity of the valley.

### GOAL FOR INVASIVE AND NONNATIVE SPECIES

Prevent, reduce, and contain the invasion and spread of noxious, invasive, and harmful nonnative species within the refuge while working with partners to address off-refuge infestations within the surrounding landscape.

### GOAL FOR RESEARCH

Pursue and maintain compatible research projects that will provide information on refuge resources and address refuge issues to assist management in making decisions based on the best available information and science.



© Kimi Smith

*Great horned owl is one of ten owl species found on Lee Metcalf Refuge.*



Bob Danley/USFWS

*Under the new management direction described in this plan, environmental education programs will be expanded on the refuge.*

### GOAL FOR CULTURAL RESOURCES

Provide opportunities for visitors to learn about the unique glacial, Native American, and Euro-American history of the Bitterroot Valley while maintaining and protecting the integrity of the refuge’s cultural and historical resources.

### GOAL FOR VISITOR SERVICES

Provide visitors of all abilities with opportunities to participate in and enjoy quality, compatible wildlife-dependent recreation, environmental education, and interpretation programs that foster an awareness and appreciation of the importance of protecting the natural and cultural resources of the refuge, the Bitterroot Valley, and the National Wildlife Refuge System.

### GOAL FOR PARTNERSHIPS

Maintain and cultivate partnerships that help achieve the vision and supporting goals and objectives of the Lee Metcalf National Wildlife Refuge Comprehensive Conservation Plan and support other initiatives designed to protect and restore habitats for Federal trust species within the Bitterroot River Valley.

### GOAL FOR OPERATIONS AND FACILITIES

Prioritize wildlife first and emphasize the protection of trust resources in the utilization of staff, volunteers, funding, and facilities.

### TARGET SPECIES SELECTION PROCESS

Early in the planning process, the Service selected three groups of target species that will be supported by the objectives and strategies described under the habitat goals for the Bitterroot River floodplain, wetland impoundment habitat, and grassland and shrubland habitat. The initial suite of birds, amphibians, or mammals was selected after Service staff reviewed three documents focused on sustaining or recovering species in Montana:

- “Montana Intermountain West Joint Venture Plan”
- “Montana State Conservation Plan”
- “Bitterroot River Subbasin Plan”

The criteria for this species list were based on whether a species either occurred on Lee Metcalf Refuge or could occur on the refuge if its preferred habitat was expanded or restored, as indicated under each goal. The life history needs of over 100 species were examined for similarities and relevance to the proposed goals. Ultimately, 16 species (tables 8, 9, and 10 in chapter 4) were selected based on their ability to represent guilds or because they were good indicators of the quality of a specific habitat type. The habitats that support the migration, foraging, nesting, and migration needs of these selected species should benefit a much broader group of secondary bird species as well as a variety of other wildlife, both migratory and resident.

These target species will be monitored for trends in abundance and distribution to evaluate the effectiveness of the objectives and strategies.

## Management of the Refuge

The comprehensive conservation plan directs the management of the Lee Metcalf Refuge to meet the purposes of the refuge and address issues.

The plan is intended to be a broad umbrella of general concepts and specific objectives for wildlife, habitat, visitor services, and partnerships over the next 15 years. As the plan is implemented, the Service will develop stepdown plans (section 4.11) with additional details for carrying out the actions needed to achieve objectives.

### HABITAT AND WILDLIFE

The Service will focus on the expansion and restoration of native plant communities on the refuge including



Bob Danley/USFWS

*Variegated meadowhawk is one of many dragonfly species found on Lee Metcalf Refuge.*

grasslands, shrublands, and gallery and riverfront forests. Some areas that are currently part of wetland impoundments will be restored to native communities including forest and shrubland. A significant focus of restoration proposals will be controlling invasive species and preventing further spread. Grasses and shrubs native to the uplands, including the alluvial fans (that is, areas of sedimentary deposits where fast-

flowing streams have flown into flatter plains), will begin to be restored to provide habitat for native wildlife including grassland-dependent migratory birds. Some wetland impoundments and Service (non-public) roads will be removed or reduced in size to allow for river migration and to restore native gallery and riverfront forest for riparian-dependent wildlife. The remaining impoundments will be managed to mimic natural conditions for wetland-dependent migratory birds.

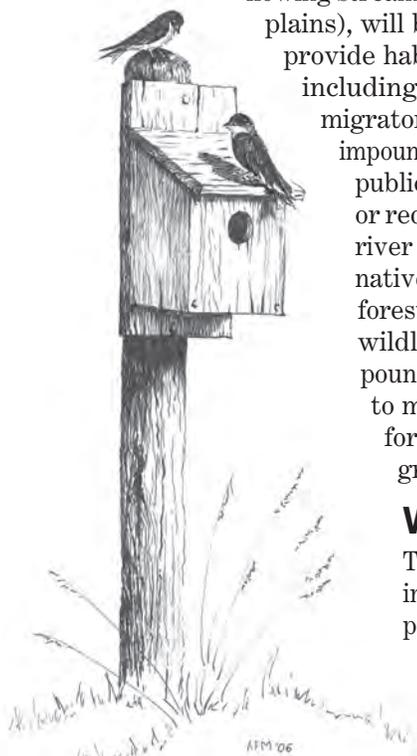
### VISITOR SERVICES

The Service will expand and improve the refuge's compatible wildlife-dependent

public use programs, in particular the wildlife observation, environmental education, and interpretation programs. The visitor contact area will be expanded into a visitor center with new displays and a combination conference room and environmental education classroom. New displays will be professionally planned and produced. The refuge will work with Ravalli County staff to designate the county road in the refuge as an auto tour route, which will include pulloffs and some form of interpretation. A seasonal hiking trail will be added, and current trails will be improved for wildlife observation and photography. Interpretation and environmental education programs will be expanded using added staff and volunteers. All public use programs will provide visitors with a consistent message about the purposes and values of the refuge and the mission of the National Wildlife Refuge System.

### PARTNERSHIPS AND OPERATIONS

Increased research and monitoring, staff, funding, infrastructure, and partnerships will be required to accomplish the goals, objectives, and strategies in this final plan. The refuge staff will be expanded by 3.5 individuals to include an assistant refuge manager (one full-time equivalent), a full-time and a career-seasonal biological science technician (1.5 full-time equivalents), and a visitor services specialist (one full-time equivalent) who will serve as a visitor center manager and volunteer coordinator. Additional staff and funding will be added depending on the regional priorities for those funds given to the Service for management of lands and water within the Refuge System.



*Tree Swallows*  
© Allan F. Meyers



# Abbreviations

<b>A.D.</b>	Anno Domini or “year of our Lord”
<b>Administration Act</b>	National Wildlife Refuge System Administration Act of 1966
<b>amsl</b>	above mean sea level
<b>B.C.</b>	before Christ
<b>B.P.</b>	before present
<b>CCP</b>	comprehensive conservation plan
<b>CFR</b>	Code of Federal Regulations
<b>cfs</b>	cubic feet per second
<b>CO<sub>2</sub></b>	carbon dioxide
<b>CWD</b>	chronic wasting disease
<b>DBH</b>	diameter at breast height
<b>EA</b>	environmental assessment
<b>FONSI</b>	finding of no significant impact
<b>GIS</b>	geographic information system
<b>GS</b>	General Schedule
<b>HGM</b>	hydrogeomorphic
<b>Improvement Act</b>	National Wildlife Refuge System Improvement Act of 1997
<b>IPM</b>	integrated pest management
<b>IWJV</b>	Intermountain West Joint Venture
<b>MFWP</b>	Montana Fish, Wildlife & Parks
<b>mg/L</b>	milligrams per liter
<b>n/a</b>	not applicable
<b>NEPA</b>	National Environmental Policy Act of 1969
<b>PM<sub>2.5</sub></b>	particulate matter less than 2.5 microns in size
<b>POD</b>	point of diversion
<b>refuge</b>	Lee Metcalf National Wildlife Refuge
<b>Refuge System</b>	National Wildlife Refuge System
<b>RLGIS</b>	Refuge Lands Geographic Information Systems database
<b>Service</b>	U.S. Fish and Wildlife Service
<b>SHPO</b>	State Historic Preservation Office
<b>U.S.C.</b>	United States Code
<b>U.S.</b>	United States
<b>USDA</b>	U.S. Department of Agriculture
<b>USFWS</b>	U.S. Fish and Wildlife Service
<b>WG</b>	Wage Grade Schedule
<b>WVA</b>	wildlife viewing area

*Definitions of these and other terms are in the glossary, located after chapter 4.*

