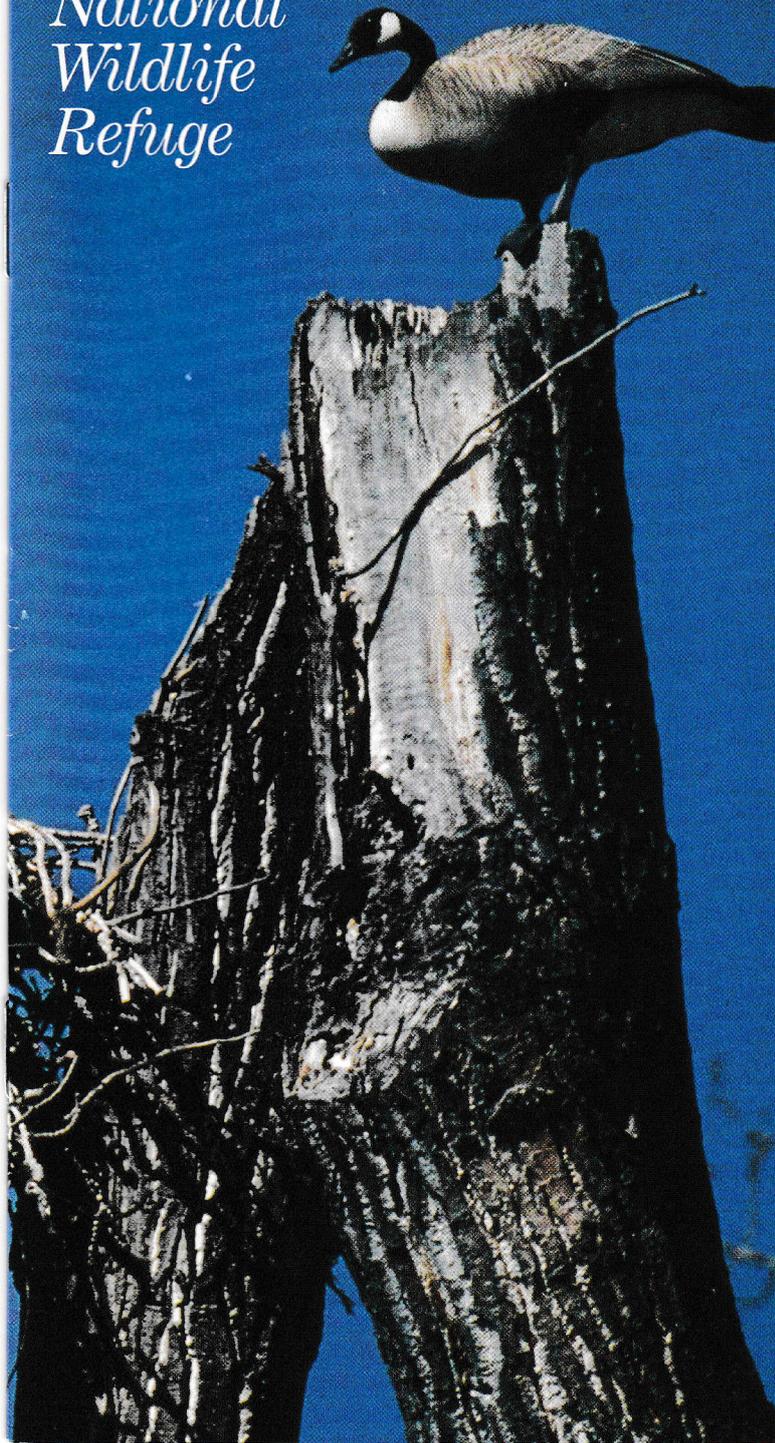
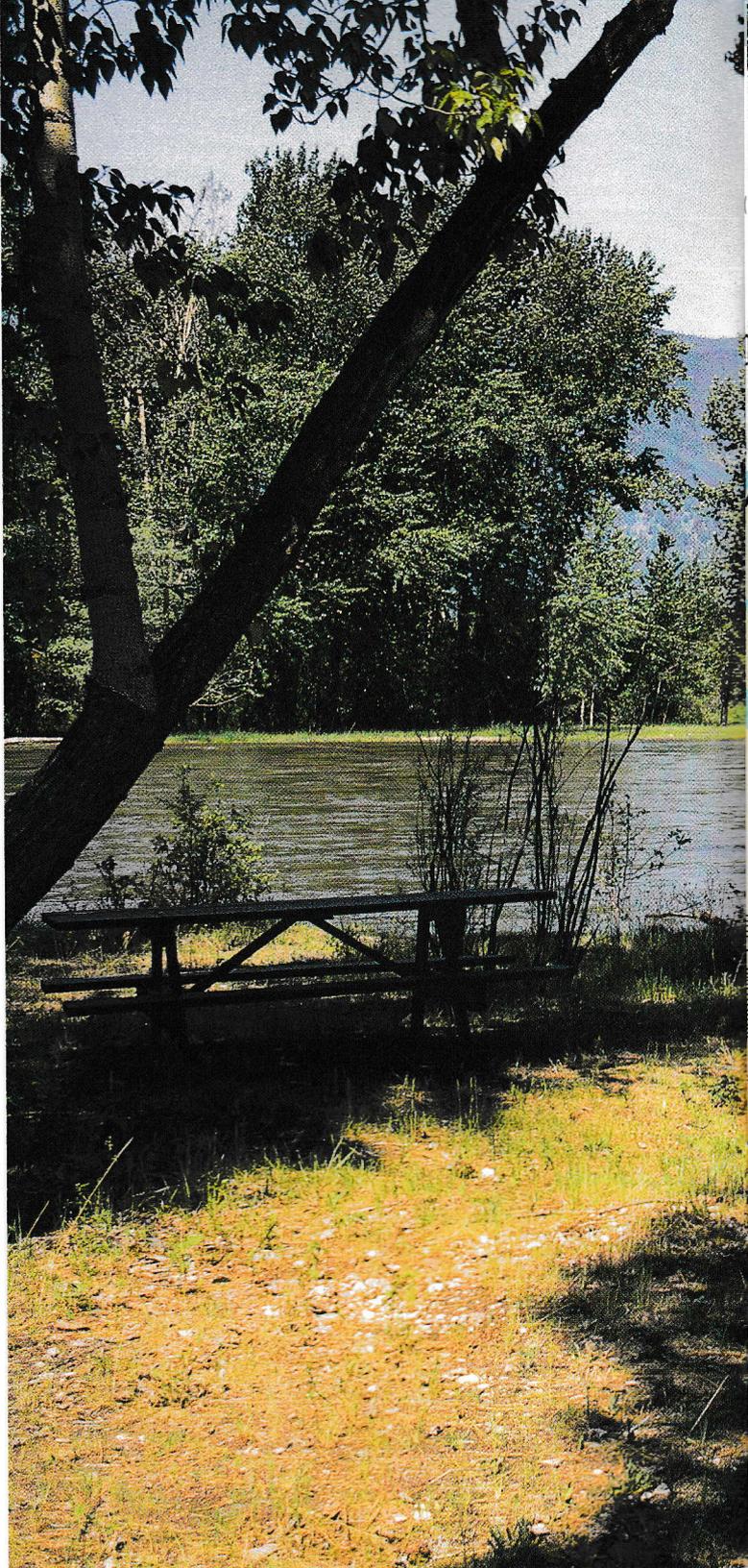


U.S. Fish & Wildlife Service

# Lee Metcalf

*National  
Wildlife  
Refuge*





*Lee Metcalf National Wildlife Refuge is part of the National Wildlife Refuge System administered by the U.S. Fish and Wildlife Service. The Refuge is located in the beautiful Bitterroot Valley 25 miles south of Missoula, Montana and just north of Stevensville. Cradled between the Bitterroot and Sapphire Mountain Ranges and bounded on the west by the Bitterroot River, the Refuge setting is truly spectacular. Although small by refuge standards, the 2,800-acre Refuge is managed to create a variety of habitats that are rich with abundant and diverse plants and animals.*

## The Evolution of a Valley

*A tumultuous beginning . . .*

The Bitterroot Valley evolved under dramatic geologic influences. Between 70 and 90 million years ago, tremendous pressure deep beneath the earth's surface forced molten granite to rise upward through layers of bedrock forming what we now call the Bitterroot Mountains. The unstable upper portion of the developing Bitterroots separated from the rest of the range and slid eastward. The eastern front of the ancient Bitterroots became the Sapphire Mountain Range. Glaciers followed, carving out rugged drainages in the Bitterroot Range.

As the glaciers receded, streams flowed down the mountain drainages into the valley below, joining to form the Bitterroot River. Over time, waters draining from the Sapphire and Bitterroot Mountains deposited sediment onto the valley floor, creating a rich foundation for plant and animal life.

*As life flourished . . .*

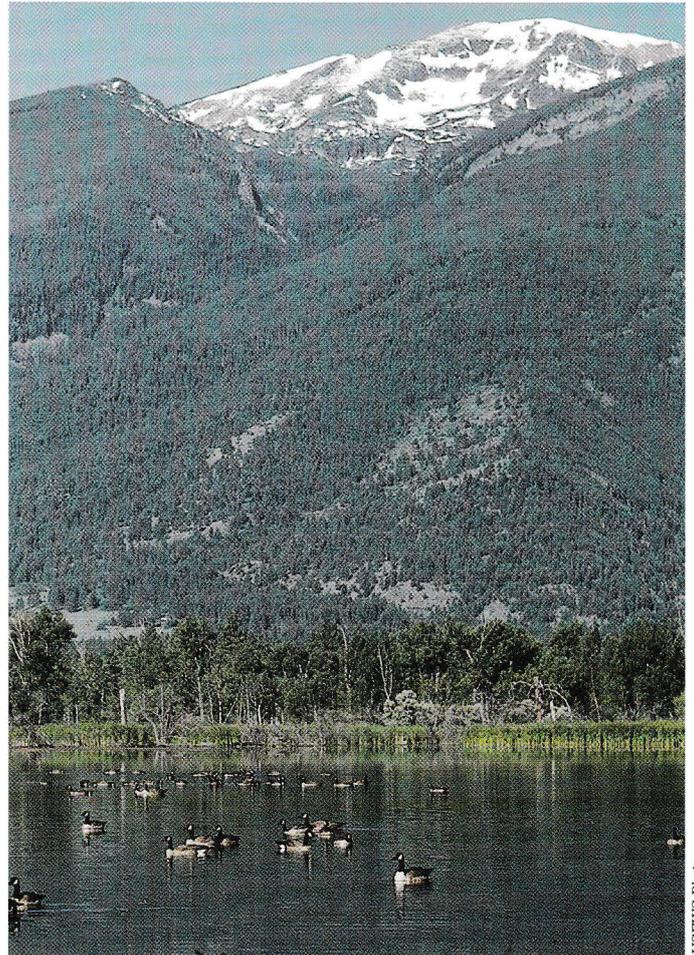
The Bitterroot Valley became a travel route for several Indian tribes that passed through on their way to the eastern plains to hunt bison. Only the Salish-speaking people considered the Valley their home. They were hunters and gatherers who lived off the area's abundant native plants and animals.

It was not long before the Native Americans had to share the abundant resources of this lush Valley. On September 9, 1805, Captain Meriwether Lewis and William Clark crossed the Continental Divide and traveled through the Bitterroot Valley with their Shoshone guide, Toby. Accounts of their travels lured missionaries, trappers, loggers, and other white settlers to the Valley.

*The Valley is transformed . . .*

As missions, homesteads, and settlements became established, new land uses were introduced. The settlers harvested trees and grew crops such as corn, potatoes, and apples in the fertile valley soils. Livestock displaced elk and moose; wolves and grizzly bears were eliminated. As a result of these practices, plants and animals important to the Indians became scarce, and traditional lifestyles were changed forever.

*Ponds, sloughs, and native riparian habitat provide a lush and fertile home for an abundance of birds, fish, mammals, reptiles, and amphibians.*



USFWS Photo

## A Refuge is Born

As farms, ranches, and logging businesses flourished in the Valley, people became aware of dwindling wildlife numbers. Local residents recognized the need to set aside land for the specific benefit of wildlife in the Bitterroot Valley. Using money generated from the sale of Federal Duck Stamps, the U.S. Fish and Wildlife Service purchased lands to establish the Ravalli National Wildlife Refuge near Stevensville in 1963. Senator Lee Metcalf was instrumental in establishing the Refuge. In 1978, the Refuge was renamed to honor the late Senator and to recognize his life-long commitment to conservation.

Under the Duck Stamp program, money collected from hunters, stamp collectors, and conservationists has been used to purchase more than four million acres of wetlands that are now managed by the National Wildlife Refuge System.

## A Refuge for Wildlife and People

The mission of the Refuge is to maintain habitat for a diversity of wildlife species with emphasis on migratory birds and endangered and threatened species, and to provide opportunities for visitors to enjoy wildlife in a manner that is compatible with refuge goals.

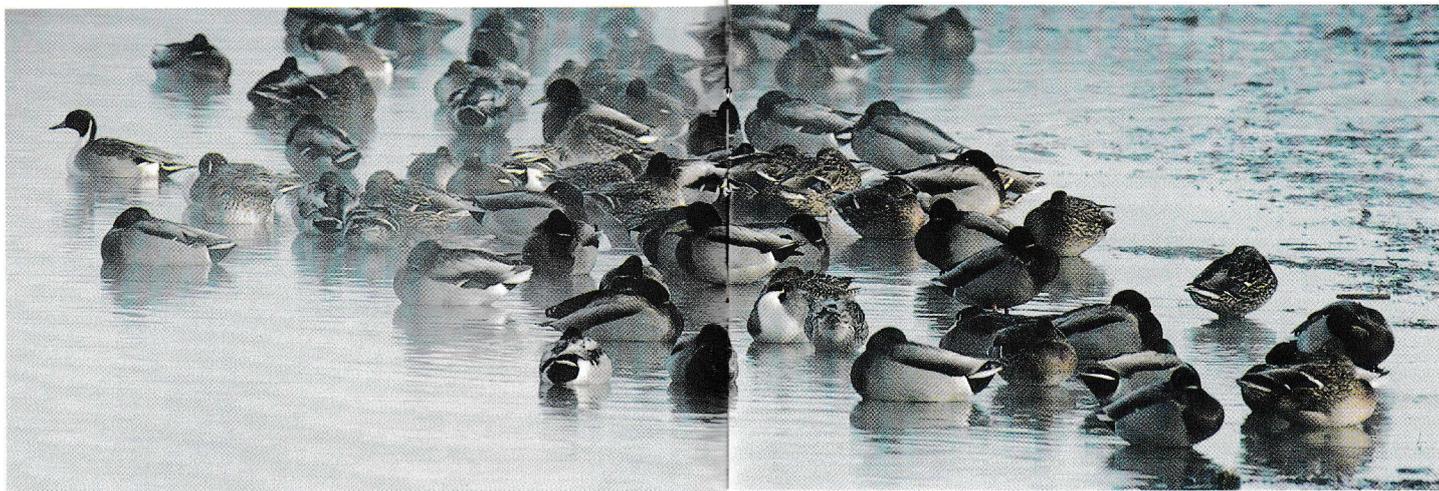
## Management Goals

Refuge riparian and wetland communities are managed to provide optimum nesting, feeding, and cover habitat for migratory birds. Pintails and mallards are among 235 species of birds that have been recorded on the Refuge; 105 species nest here.

The Refuge provides habitat for federally listed endangered and threatened animal and plant species. A pair of bald eagles established a breeding territory on the Refuge in 1990. Other raptor species such as the peregrine falcon occasionally visit the Refuge.



*Bald eagles  
on roost (right);  
mallards and  
pintails (below)  
Adult osprey (top);*



USFWS Photo

Alan Carey

John & Karen Hollingsworth



young osprey (middle); Angora goats (bottom)

Providing fishery resources is a primary goal of Refuge management. Fish-eating birds such as ospreys, great blue herons, double-crested cormorants, bald eagles, belted kingfishers, and other species depend on the Refuge's abundant fishery to survive.

Management of noxious (harmful) weeds plays a critical role in maintaining diverse habitat for wildlife. At least seven noxious weed species occur within the Refuge. Prescribed fire, mowing, re-seeding, hand-pulling, wetland management, livestock grazing, and promoting natural insect predators all play parts in weed management. To help control the spread of hound's tongue and other noxious weeds, several hundred domestic Angora goats graze on the Refuge during the summer months.

USFWS Photo



USFWS Photo

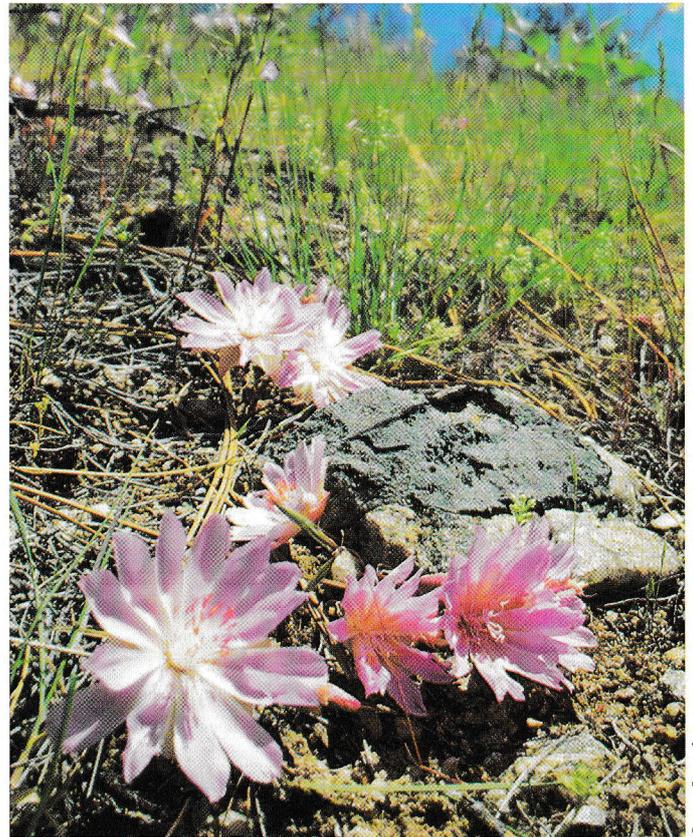


Refuge staff work to identify and protect significant historic, cultural, and natural resources within the Refuge that are unique to the Bitterroot Valley. The blooming of the bitterroot flower recalls the importance of this plant to the Salish-speaking people who once lived here. The Whaley Homestead, built in 1885, reflects the history and lifestyle of early settlers.

Whaley homestead (right); bitterroot flower (below)



USFWS Photo



Larry Javorsky

## Research

The Refuge staff encourages technical research from qualified institutions, such as the University of Montana, in order to gain more knowledge about the wildlife species managed here.



USFWS Photo

Yellow warblers

Researchers shown here with yellow warblers are monitoring the productivity and survival of songbirds as part of larger regional and national programs. Other research projects include biological

control of undesirable weeds and cowbird nest parasitism (cowbirds lay their eggs in active songbird nests). In addition, Refuge staff monitor local populations of osprey, colonial-nesting water birds, waterfowl, shorebirds, and white-tailed deer.

## Visitor Opportunities

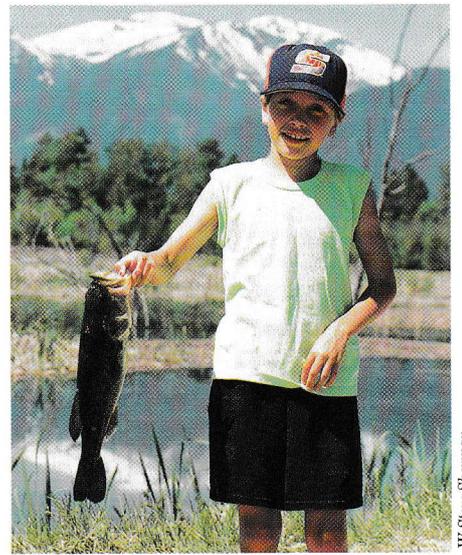
People are attracted to the Refuge because of its beautiful vistas, diverse habitat, and abundant wildlife. These features also set the stage for exceptional educational and recreational opportunities.

*Specially-trained high school students teach younger students about ecology during many field trips to the Refuge.*



USFWS Photo

*The annual Kids' Fishing Clinic is held during National Fishing Week in June. Local children of all abilities attend the event. They have a wonderful time while learning about wetland ecology, fish adaptations, fishing techniques, and angler ethics.*

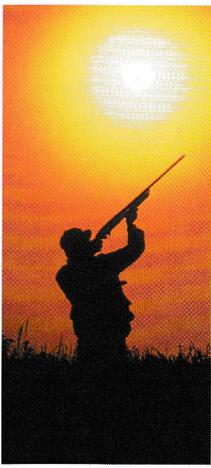


W. Steve Sherman

*Migration Mania celebrates the annual return of migratory birds with a series of family events held throughout the spring.*



W. Steve Sherman



Alan Carey

Waterfowl hunting is permitted during the fall and winter months on designated Refuge ponds. The Refuge adopts the State hunting regulations and enforces several Refuge-specific hunting regulations. There are two wheelchair-accessible hunting blinds. More information is available in the Refuge hunting brochure.

Archery hunting for white-tailed deer is permitted in designated areas of the Refuge. Hunting helps control a large local deer population that threatens the quality of habitat for many other wildlife species.



W. Steve Sherman



W. Steve Sherman

Fishing on the Refuge is permitted in the Bitterroot River Recreation Area, both along the Bitterroot River and in the sloughs. All State fishing regulations apply; only catch and release, artificial lure fishing is allowed in the Bitterroot River. A sheltered, accessible fishing deck overlooks one of the sloughs.

Waterfowl hunter (top); white-tailed deer (middle); fishing deck (bottom)

*Wildlife watching . . .*

The Bitterroot River Recreation Area provides over 2 miles of nature trails that meander along sloughs, through meadows and river bottom woodland, to the Bitterroot River. An orientation kiosk introduces visitors to the area and identifies a 1/2 mile wheelchair-accessible trail that connects the parking area to the picnic area. Here an accessible pavilion, picnic tables, grills, and an outhouse are available. A variety of species such as river otters, beavers, muskrats, pileated woodpeckers, great-horned owls, warblers, mergansers, and wood ducks inhabit this area.



USFWS Photo

Orientation kiosk

The Refuge serves as the Montana point of contact for the Federal Junior Duck Stamp "Conservation Through the Arts" program.



Jie Huang

1995-1996 Federal Junior Duck Stamp

# Lee Metcalf

## National Wildlife Refuge

**LEGEND**

-  Bitterroot River Recreation Area
-  Private land
-  Refuge Boundary
-  County road
-  Accessible Trail
-  Nature Trail
-  Orientation kiosk
-  Parking
-  Accessible outhouse
-  Accessible Wildlife Viewing / Fishing Deck
-  Picnic Area
-  Whaley Homestead

NO POTABLE WATER

