





For the wildlife enthusiast, a visit to the Klamath Basin Refuges at any season is a voyage of never-ending discovery. Year to year and season to season the dynamic ebb and flow of wildlife is a process of constant change. Over 490 wildlife species have been observed in the basin including 353 species of birds. Fall and spring bring the drama of one to three million ducks, geese and swans using refuge wetlands as a vital stopover in their annual migrations. Winter bald eagle numbers peak in mid February with basin populations ranking as the largest recorded in the contiguous United States. Thousands of wetland nesting birds also raise their young on the six Klamath Basin National Wildlife Refuges.

## Why are the refuges here?

# Once extensive wetlands

Historically, the Klamath Basin was dominated by approximately 185,000 acres of shallow lakes and freshwater marshes. These extensive wetlands attracted peak fall concentrations of over 6 million waterfowl and supported abundant populations of other water birds including American white pelican, double crested cormorant, and several heron species.

Sandhill cranes with Mt. Thielson in background



#### Wetlands drastically reduced

In 1905, the U.S. Bureau of Reclamation initiated the Klamath Reclamation Project to convert the lakes and marshes of the Lower Klamath and Tule Lake areas to agricultural lands. As these wetlands receded, the reclaimed lands were opened to agricultural development and settlement. Today, less than 25 percent of the historic wetlands remain.



### **Refuge habitats**

# Refuges protect what remains

Northern pintail



To conserve much of the basin's remaining wetland habitat, six National Wildlife Refuges have been established; Lower Klamath, Tule Lake, and Clear Lake Refuges in northern California, and Bear Valley, Upper Klamath, and Klamath Marsh Refuges in southern Oregon. The U.S. Fish and Wildlife Service manages these refuges to enhance wildlife and benefit the American people. Agricultural and water programs are coordinated under an agreement between the Fish and Wildlife Service and the Bureau of Reclamation.

# Diverse habitats support diverse wildlife

Klamath Basin Refuges consist of a variety of habitats including freshwater marshes, open water, grassy meadows, coniferous forests, sagebrush and juniper grasslands, agricultural lands and rocky cliffs and slopes. These habitats support diverse and abundant populations of resident and migratory wildlife with 493 species having been observed on or near the refuges. In addition, each year the refuges serve as migratory stopover for about three-quarters of the Pacific Flyway waterfowl, with peak fall concentrations of over one million birds.

 $Tule lake\ basin$ 



# Fall August and September are good months to view water birds such as the American white pelican, double-crested cormorant, and various herons, gulls, terns, and grebes. Most will have departed the basin by late October. Waterfowl migration begins in early September with the arrival of northern pintails and greater white-fronted geese. Peak numbers of over one million ducks, geese, and swans are usually present by early November with other major species including mallard, American wigeon, green winged teal, snow, Ross', and Canada geese, and tundra swan.

# **Seasonal wildlife highlights**

#### Winter



From December through February, the Klamath Basin hosts the largest concentration of bald eagles in the contiguous United States. Some vears, more than 1,000 of these majestic birds are present with most daytime use occurring at Tule Lake and Lower Klamath Refuges. During these months a large number and diversity of other raptors, including golden eagle, northern harrier, and red-tailed and rough-legged hawks, also can be found. Waterfowl numbers on the refuges increase dramatically in February with the arrival of the first northbound migrants.

#### **Spring**

Waterfowl numbers peak in March with more than one million birds present some years. April and May are alive with activity as many songbirds, water birds and shorebirds arrive in the basin to rest and build fat reserves for their continuing journey north. Others remain in the basin to nest. Three of the West's few remaining American white pelican breeding colonies are located at Upper Klamath, Lower Klamath, and Clear Lake Refuges.

#### **Summer**

(left) Tundra swans

(below) Canada geese with goslings Refuge wetlands are among the most prolific waterfowl and marsh bird production areas in the Pacific Northwest. An estimated 45,000 ducks, 2,600 Canada geese, and thousands of other water birds are raised on the refuges each year. Large numbers of young can be viewed from June through August.



### **About the refuges**

#### Lower Klamath National Wildlife Refuge

Sandhill crane



Tule Lake National Wildlife Refuge

Established by President Theodore Roosevelt in 1908, Lower Klamath Refuge is our nation's first waterfowl refuge. This 46,900-acre refuge is a varied mix of shallow freshwater marshes, open water, grassy uplands, and croplands that are intensively managed to provide feeding, resting, nesting, and brood rearing habitat for waterfowl and other water birds. A marked 10-mile auto tour allows visitors year-round access to great wildlife viewing opportunities. The refuge also has a number of photo blinds which are strategically situated for great early morning photography.

Established in 1928, Tule Lake Refuge encompasses 39,116 acres of mostly open water and croplands. Approximately 17,000 acres are leased by farmers under a program administered by the U.S. Bureau of Reclamation. Refuge permit holders farm another 1,900 acres of cereal grain and alfalfa. These crops, together with the waste grain and potatoes from the lease program, are a major food source for migrating and wintering waterfowl. A ten-mile auto tour route allows wildlife observation throughout the year.

#### Upper Klamath National Wildlife Refuge

Tricolored blackbird



Upper Klamath Refuge was established in 1928 and is comprised of 15,000 acres of mostly freshwater marsh and open water. These habitats serve as excellent nesting and brood rearing areas for waterfowl and colonial nesting birds, including American white pelican and several heron species. Bald eagle and osprey nest nearby and can sometimes be seen fishing in refuge waters. A boat is a must for those visitors who wish to explore this refuge. A marked canoe trail is open year round and canoes may be rented nearby.

### **About the refuges**

#### Clear Lake National Wildlife Refuge

Mountain bluebird



Klamath Marsh National Wildlife Refuge

White-headed woodpecker



Established in 1911, this 46,460 acre refuge consists of approximately 20,000 acres of open water surrounded by upland habitat of bunchgrass, low sagebrush, and juniper. Small, rocky islands in the lake provide nesting sites for the American white pelican, doublecrested cormorant, and other colonial nesting birds. The upland areas serve as habitat for pronghorn antelope, mule deer, and sage grouse. Except for limited waterfowl and pronghorn antelope hunting during the regular California State seasons, the refuge is closed to public access to protect fragile habitats and to reduce disturbance to wildlife. The Clear Lake Reservoir is the primary source of water for the agricultural program of the eastern half of the Klamath Basin with water levels regulated by the U.S. Bureau of Reclamation.

Klamath Marsh Refuge was established in 1958 when approximately 16,400 acres were purchased with Federal Duck Stamp funds. In 1990 and 1998, additional acquisitions boosted refuge acreage to 40,646. Originally designated as Klamath Forest National Wildlife Refuge, the refuge was recently renamed as virtually all of the historic Klamath Marsh now lies within refuge boundaries. This large natural marsh provides important nesting, feeding, and resting habitat for waterfowl, while the surrounding meadowlands are attractive nesting and feeding areas for sandhill crane, yellow rail, and various shorebirds and raptors. The adjacent pine forests also support diverse wildlife including great gray owl and Rocky Mountain elk. During summer months, opportunities to canoe in Wocus Bay allow wildlife observation and great wetland scenery.

### **About the refuges**

#### Bear Valley National Wildlife Refuge

Bald eagles feeding on a goose



Bear Valley Refuge was established in 1978 to protect a major night roost site for wintering bald eagles. The refuge consists of 4,200 acres, primarily of old growth ponderosa pine, incense cedar, and white and Douglas firs. These mature stands of trees have open branching patterns of large limbs which allow easy

eagle access and can support many birds. Located on a northeast slope, the roost also shelters these raptors from the harsh and prevailing winter winds. In recent years, as many as 300 bald eagles have

used the roost in a single night. Bear Valley Refuge also serves as nesting habitat for several bald eagle pairs. Bear Valley Refuge is closed to all public entry, except for walk-in deer hunting before November 1, to reduce disturbance to the birds.

#### An eagle's view from Bear Valley Refuge



### **Recreational Activities**

# **Enjoy your visit**

Refuge Headquarters and Visitor Center



You are encouraged to stop at the refuge headquarters and visitor center when you first arrive. Refuge wildlife are colorfully described by exhibits, and information regarding wildlife viewing opportunities, road conditions, upcoming events, and

regulations is available.

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The refuge headquarters and visitor center is located on Hill Road, 5 miles west of Tulelake, California, and is open seven days a

week, 9am to 4:00pm. The center is closed on major federal holidays.

#### **Auto Tour Routes**



Auto tour routes (see map) are available at both Lower Klamath and Tule Lake Refuges. These routes are primarily improved gravel roads and exhist to enhance your enjoyment and understanding of Lower Klamath Refuge. The variety of habitats along these routes contribute to excellent wildlife viewing. Staying in your vehicle will increase your observation opportunities and reduce disturbance to wildlife.

Yellow-bellied Marmot.



### **Recreational Activities**

# Photography Blinds



The varied wildlife and habitats of Klamath Basin Refuges are a photographer's delight as photographic opportunities abound. A limited number of blinds are



available on Tule Lake and Lower Klamath Refuges on a first come first serve basis. Contact refuge headquarters for further information.

#### **Canoe Trails**



Self-guided canoe trails are provided at Tule Lake and Upper Klamath Refuges. These areas may be seasonally closed due to fluctuating water levels or for management purposes. Canoes may be rented



for use at Upper Klamath National Wildlife Refuge at nearby Rocky Point Resort. A map of the Upper Klamath Canoe trail may be found at the refuge's website.

#### **Hunting**



Hunting opportunities for waterfowl, ring-necked pheasant, and several other wildlife species are provided on some parts of the refuges in accordance with state and federal



regulations.
Descriptive
documents
are available
on the refuge
website. Special
opportunities exist
for youth and
women during late
afternoon hunts.

#### **Recreational Activities**

#### **Interpretive Trails**



Interpretive trails are available at Tule Lake and Klamath Marsh Refuges. Trailside exhibits provide interpretation of the area's natural and cultural histories. A very steep, 0.3-mile foot trail near the visitor center at Tule Lake Refuge provides a spectacular view of the surrounding area from 150 feet above the basin. Also, near the visitor center, Discovery Marsh allows for up close investigations of diffent types of wetland habitats. Interpretive wayside exhibits describe wetland management and wildlife. At Klamath



Marsh Refuge (see map), a 10-mile trail meanders by the marshland and through the forested upland. Open to hiking, cross country skiing, and mountain biking, the route also serves as vehicle access to the refuge canoe area.

#### **Fishing**



Fishing is permitted in designated areas of Upper Klamath and Klamath Marsh Refuges in accordance with state and Federal regulations. The most sought after species is rainbow trout.

# **Education Programs**



**Visiting Hours** 



be arranged by contacting refuge headquarters.

The refuges are open during daylight

Wildlife oriented teacher workshops

schools and other organizations may

and interpretive programs for

The refuges are open during daylight hours only, except as modified by refuge hunting regulations.

# Wildlife Viewing

# Wildlife Viewing

Yellow bellied marmot



 $Short\text{-}eared\ owl$ 



White pelican



River otter



Black-necked stilt



Western pond turtle



 $We stern\ grebe$ 

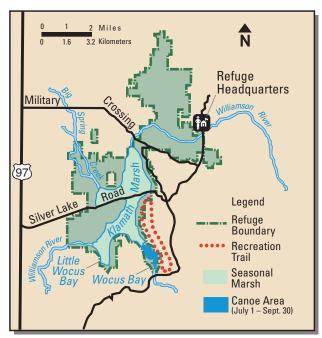


Mule deer

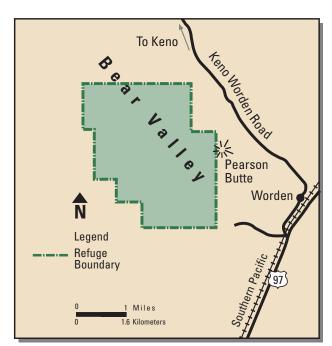


# **Refuge Maps**

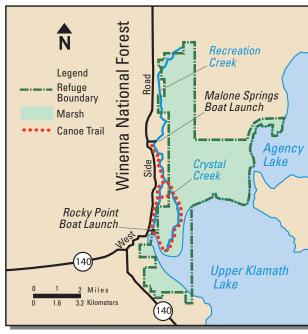
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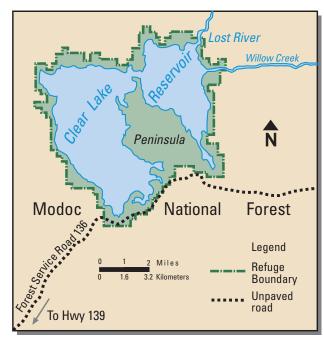
Klamath Marsh National Wildlife Refuge



**Bear Valley National Wildlife Refuge** 



**Upper Klamath National Wildlife Refuge** 



**Clear Lake National Wildlife Refuge** 

