U.S. Fish & Wildlife Service

Willapa National Wildlife Refuge

Plants and animals from land, rivers, and ocean are all present at Willapa National Wildlife Refuge - and all are dependent on the delicate balance of the estuary.

In this coastal environment, the incoming tides combine life-giving nourishment of the ocean with the nutrient-laden fresh waters of rivers and streams to create one of the most productive environments on the Pacific Coast.

Preserving a Rich Natural Heritage

Willapa National Wildlife Refuge is located on Willapa Bay, one of the most pristine estuaries in the United States. Willapa Bay is the second largest estuary on the Pacific coast and includes over 260 square miles of water surface.



The "Blue Goose" has become the symbol of the National Wildlife Refuge System.

Willapa NWR was established in 1937 by President Franklin D. Roosevelt to protect migrating and wintering populations of brant, waterfowl, shorebirds, and other migratory birds and their habitats. The Refuge was established at a time when many estuaries were rapidly being destroyed from the effects of diking, draining, dredging, sedimentation, and pollution.

Visitors to Willapa NWR can enjoy viewing a wide variety of wildlife, from Roosevelt elk on Long Island, to tens of thousands of shorebirds crowding the beaches of Leadbetter Point.

Willapa National Wildlife Refuge is one of over 560 refuges in the National Wildlife Refuge System, a nationwide network of lands managed by the U.S. Fish and Wildlife Service specifically for wildlife. The System is a living heritage, conserving wildlife and habitat for people today and for generations to come.

> Chum salmon © Shari Erickson





SFWS

The Refuge preserves a number of unique ecosystems including diverse salt marshes, muddy tideflats, raindrenched old growth forests, and dynamic coastal dunes and beaches. Freshwater marshes and grasslands

are found along the southern shore of the bay.

Many different salmon species are found in the waters of Willapa Bay, including chum, chinook and coho.



The Nature of Water

Willapa Bay has been shaped by many forces of nature including wind, glaciers, earthquakes, floods, and tsunamis. The Long Beach Peninsula is a natural barrier, protecting the



Shorebirds © Courtesy of Dr. Madeline Kalbach

bay and its wildlife from storm winds and waves.

An average of 110 inches of precipitation falls each year in the area, swelling streams that carry nutrient-rich water and sediment into the bay. Chum, chinook, and coho salmon spawn in streams on the Refuge.

The bay's shallow water and mudflats support vast beds of eelgrass and shellfish. Eelgrass provides critical spawning habitat for fish and is the staple food of brant, a sea goose that migrates along the Pacific Coast between Alaskan nesting grounds and more southerly wintering grounds.

> Throughout much of the bay, seemingly barren mudflats teem with worms, clams, and crustaceans hidden just beneath the surface. Low tide exposes these vast acres of mudflats creating prime foraging habitat for shorebirds.

Freshwater streams and salt marshes make perfect habitat for great blue herons and river otters, where they feed on small fish, frogs and other small animals. Roosevelt elk graze in open fields year-round and use wooded areas for cover and shelter:



During the peak spring migration, the number of shorebirds present at Willapa Bay exceeds 100,000, making it one of the most important sites for shorebirds on the west coast of North America! Isolated sandbars near the mouth of the bay provide pupping grounds for harbor seals and rest sites for migratory birds. Seabirds, such as sooty shearwaters and brown pelicans, stream into the mouth of the bay from the ocean during summer and fall to feast on abundant small fishes.

River otters

Great blue heron USFWS

Leadbetter Point

In 1788, explorer John Meares named this land of sand dunes, grasses, and small shrubs Low Point. In 1852, the name was changed to Leadbetter



Point in honor of Lt. Danville Leadbetter of the U.S. Coastal Survey.

Leadbetter Point constantly changes as dunes shift, become stabilized or erode away.

This is a world of sand covered with patches of dune grass, lupine, wild strawberry, sand verbena, sea rocket and beach pea. Potholes scoured by the wind between the dunes fill with winter rains and support stands of willow and freshwater marsh plants. The bay side of the point contains some of the most significant saltmarsh habitats remaining in the state of Washington.

Leadbetter Point provides food and cover for a diverse array of wildlife. Biologists have recorded over 100 species of birds on Leadbetter Point alone. Fall and spring migrations bring dizzying concentrations of sandpipers, sanderlings, plovers, dowitchers and other shorebirds to the Refuge shores and tideflats. Peak numbers of dunlin occur in the winter.

Snowy plover



Peregrine falcons and bald eagles are among the most common raptors occurring at Leadbetter Point, and dramatic bursts of bird flight can be seen when these predators pursue their prey. Occasionally a pure white snowy owl can be seen perched on a log during the winter.



Snowy owl

The threatened western snowy plover reaches the northern limit of its breeding range in Washington. Leadbetter Point is the largest of only two remaining nesting areas in the state. These small cryptic shorebirds nest on the upper ocean beaches in small scrapes in the sand. Their well camouflaged eggs can be inadvertently stepped on by people or run over by vehicles. Incubating adults are easily frightened off the nests, allowing sand to cover the eggs or predators to destroy them. A portion of Leadbetter Point along the ocean beach side is closed to ALL public entry, including foot travel, generally from March through September to protect the nesting snowy plovers.

Recreational Activities at Leadbetter Point



Pacific Ocean

Birdwatching

Hiking

Hunting

For optimal birdwatching opportunities, plan your visit during the fall (October) and spring (April) migration periods.

There are many miles of foot trails at Leadbetter Point, half on refuge lands and the others on the adjacent state park. These trails are flooded with deep water throughout the rainy season (October through May), so plan accordingly. During the summer. check with the Refuge office or look for posted signs that indicate the closed snowy ployer nesting area.

The Leadbetter Point Unit is open for waterfowl hunting. Please check the state Migratory Waterfowl and Upland Game Seasons pamphlet for season dates and regulations.

© Gary Kramer

Brown Pelicans can be seen all along the shore of Leadbetter Point during summer and fall. These large birds are characterized by their high dives in search for one of their favorites foods, anchovy.

Long Island

Long Island is unique in being the Pacific Coast's largest estuarine island. Long Island's 5,460 acres contain a rare 274-acre remnant

> of old growth lowland coastal forest known as the Cedar



Western red cedar

Wildlife

Grove, Some western red cedar trees in this grove have been growing for more than 900 years. The rain-drenched forests on Long Island grow rapidly and densely, with salal, huckleberry and salmonberry bushes carpeting the forest floor beneath tall western hemlock. Sitka spruce and western red cedar trees. Fallen trees, called nurse logs, provide shelter and a rich growing medium for young trees to grow. The damp, moss-laden forests, sand and mud beaches, tidal saltgrass marshes, and mudflats offer rich habitats for a wide variety of animal species.

The forests of Long Island are home to mammals such as black bear, Roosevelt elk, black-tailed deer, beaver, and river otter. The mature forests provide special niches for numerous sensitive wildlife species.

Long Island



The largest trees provide wide sturdy limbs suitable for the platform nests of marbled murrelets, a seabird that has lost much of its historical nesting habitat due to logging of old growth forests. Bald eagles and great blue herons also nest in large trees on the island.



Standing dead trees, or snags, contain nesting cavities for species such as pileated woodpeckers, flying squirrels, and spotted owls. Roosting

Van Dyke's Salamander

silver-haired bats and Pacific tree frogs find cover in the loose and creviced tree bark of old trees. Fallen trees provide habitat for the rare Van Dyke's and Dunn's salamander. Willapa NWR has more amphibian diversity than any other wildlife refuge in the state of Washington.

The nutrient-rich marine environment surrounding Long Island supports oysters, clams, crabs, salmon, steelhead and numerous other marine organisms. There are vast beds of eelgrass on the west side of Long Island that provide important nursery grounds for young fish including Pacific herring, salmon, sea perch and sole. Brant also concentrate here in spring to forage on eelgrass in sheltered portions of the bay.

Marbled Murrelet © Gary Braasch

Long Island <i>continued</i>	Long	sla	nd	cont	inued
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Recreational Visitors can observe or photograph Activities wildlife while canoeing, kavaking, or hiking. Long Island can only be accessed by boat. There is no potable water on the island so bring your own. Caution Carry a tide table, since tidal fluctuations, currents, extensive mud Hiking flats and weather can make getting to and from the island difficult and occasionally dangerous. Launch facilities are available at the Port of Peninsula in Nahcotta and on U.S. Highway 101 at the Diamond Point Refuge headquarters. To maintain the quiet, remote nature of the island, motor vehicles and power equipment, such as chain saws and generators, Camping are prohibited on Lewis Campground Long Island. 2 campsites 6' tide Lewis Slough Kaffee Slough Paradise Point Jensen Point Baldwin Clamming Sawlog Campground Slough 6 campsites 5' tide A 60 Sand Spit Campground 3 campsites Smoky Hollow Campground 4 campsites Areas Open to Clamming Don Bonker Hunting **Cedar Grove Trail** miles n Pinnacle Rock Campground 101 5 campsites Refuge Headquarters Landin High Point



encouraged to produce less impact on Refuge resources. Please stay on the trails. Hike along the beaches on the west side of Long Island or the roads to Baldwin Slough and Paradise Point. From the boat landing on the south end of the island, walk north along the main road for 2 ¹/₂ miles to the Don Bonker Cedar Grove Trail, a ³/₄ mile loop trail in the awe-inspiring, old growth Cedar Grove.

Marbled godwits

There are five primitive campgrounds on Long Island with a total of 20 campsites. Camp only in designated campsites for up to 14 days. Sites are available on a first-come-first-serve basis. Leaving items unattended to hold a campsite is prohibited. Camp "bear friendly" by hanging food and packing out your garbage. Adopt the "leave no trace" ethic and burn only downed wood in the existing fire pits.

Clams may be harvested from public tidelands located on the western side of Long Island. Check the state Sport Fishing pamphlet for regulations. Be mindful of boundaries as many privately owned tidelands surround Long Island and are closed to the public.

Archery hunting is allowed on Long Island for black bear, elk, deer and grouse. Consult the state Big Game Hunting pamphlet for season dates and regulations as well as the Refuge headquarters for registration information. No hunting firearms are allowed on the island. South Bay Units: Riekkola, Tarlatt, Lewis and Porter Point

The grasslands established on diked tidelands at the south end of the bay provide shelter and feeding areas for migrating Canada geese, ducks and shorebirds.

> Grazing cattle in the summer create fields of short grass in fall for cackling and Canada geese, including the rare Aleutian and Dusky subspecies. The grasslands and neighboring forested areas provide habitat for bear, elk, and bobcat.

Tarlatt

Riekkola

Located off of Sandridge Road between 85th and 95th Streets on the Long Beach Peninsula is a mixture of grasslands, freshwater wetlands, and forested habitats that provides habitat to migrating geese, waterfowl, songbirds, bear and elk.

© Courtesy of Kathleen Sayc



Hike the 1 mile round trip South Bay Trail along Tarlatt Slough to observe wildlife and beautiful views of Willapa Bay. The observation blind provides fantastic wildlife observation and photography opportunities.

Lewis and Porter Point

The Lewis and Porter Point Units provides freshwater streams and salt marsh habitat for a diverse assemblage of waterbirds, as well as amphibians, anadromous fish, and aquatic mammals. Migratory waterfowl, rearing habitat for salmonids, and shorebirds forage on invertebrates both in the freshwater environment and mare habitats.



Hunting

Waterfowl hunters can hunt geese from assigned blinds for a small user fee during the goose season in late fall/early winter. Free-roam waterfowl hunting is also allowed in the Lewis and Porter Point units. Check the state Migratory Waterfowl and Upland Game pamphlet for season dates and regulations and visit the refuge website for specific information about the blind selection process and hunting days.

Designated portions of the Riekkola, Porter Point & Lewis units are open for elk and deer hunting. Check the state Big Game pamphlet and refuge website for season dates and regulations.

No hunting is allowed at Tarlatt.

Chinook salmon Illustration: Gary Whitley

The History of Wildlife Habitats

The Chinook, Chehalis, and Kwalhiogua peoples lived and hunted the area in and around Willapa for at least 2,000 years. Native wildlife and



the diverse sea life, especially salmon, provided enough food for the people to support themselves throughout much of the year. They camped, fished, gathered clams and ovsters, and hunted in the area, including Long Island. Today they use the island for spiritual and cultural events.

Post card and logging company photo courtesy Pacific County Historical Society.

Fishing

Logging

IEADER BRAND Wild salmon

not only provided Native Americans with a rich source of food but the salmon fishery once supported a short lived cannery during the 1880s on the southern tip of Long Island.

Logging on Long Island began in the early 1900s by independent loggers who skidded logs down sloughs and into the bay; logs secured in "rafts" were floated to mills on the shores of Willapa Bay as well as milled on the island. A floating logging camp which housed thirteen workers was constructed and situated on the slough near the Sawlog Campground.

A Wildlife Refuge Lands within and surrounding Willapa Bay that once supported

industries like grazing, logging and fishing have gradually been added to the Refuge. These lands now preserve a rich heritage of wildlife for environmental conservation and wildlife dependent recreation.



Tools used by the Chinook people are from left to right: a bowl carved from rock; a weight used to hold down fish nets; and a maul, usually of harder rock, used like a hammer.

Clamming Industry

Diamond Point, located on the northern tip of Long Island, once harbored the small population of Diamond City, founded in 1867. Diamond City, originally called I'oneville, was named for the many discarded oyster shells which were thought to shimmer in the sun like diamonds.

Information to Plan Your Visit





Here are a few tips to make watching wildlife enjoyable and rewarding. To observe and photograph wildlife in their natural environments, move uniatly and maintain distance between

quietly and maintain distance between yourself and the animals. Although animals often disappear when you arrive, they may return shortly if you are quiet and remain still. A wildlife observation blind is available at the Tarlatt Unit.

Binoculars and telephoto lenses will help you get a good look or photo.



Bring a field guidebook to help you identify various species and learn what habitats they prefer, when they are active, and what they eat.



Collecting and removing archeological or historic objects is prohibited, as well as removing any natural material such as plants, mushrooms, berries, and antler sheds.



No dogs except service dogs and those used while hunting waterfowl are allowed on the Refuge.



ATVs, horses, and bicycles are not permitted on trails.

Refuge Hours

The Refuge is open daily from dawn to dusk. The Refuge headquarters is open 7:30 a.m. to 4:00 p.m. Monday through Friday, excluding federal holidays. Wildlife are more active in morning and late afternoon.

Additional Hiking Opportunities

Art Trail

Teal Slough

Greenhead

Local Tourism

Information

Slough

The Art Trail is located at Refuge Headquarters. A curving ADA accessible boardwalk brings visitors up close to the tideland marsh and stream. Artwork located along the boardwalk tells the story of the stream and the many species who live there. An additional 2/3 mile loop hiking trail, the "Cuthroat Climb", leads hikers up the valley near the ridgeline and to the headwaters of the stream. Although fairly short, this upper trail can be a real workout!

Located approximately 1.5 miles north of the Refuge Headquarters is a great place to take a short hike. Walk two tenths of a mile up the main logging road to the entrance of a spur road located on the north side of the main road to find a small remnant of old growth forest. Pease do not block the gate!

Located approximately 4 miles south of the Refuge Headquarters on Hwy 101, Greenhead Slough is a short half mile hike. Drive over the bridge and park in designated area. Trail begins at the gate.

For information on local accommodations and campgrounds contact:

Long Beach Peninsula Visitors Bureau P.O. Box 562 Long Beach, WA 98631 (360) 642-2400 or (800) 451-2542 www.funbeach.com

Coots, wigeons, and gadwalls. © Gary Kramer

Willapa National Wildlife Refuge 3888 State Route 101 Ilwaco, Washington 98624-9707 360/484 3482 http://www.fws.gov/willapa

Washington Relay Service TTY 1 800/833 6388 Voice 1 800/833 6384

U.S. Fish & Wildlife Service http://www.fws.gov 1 800/344 WILD

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This brochure is available in an alternative format upon request.