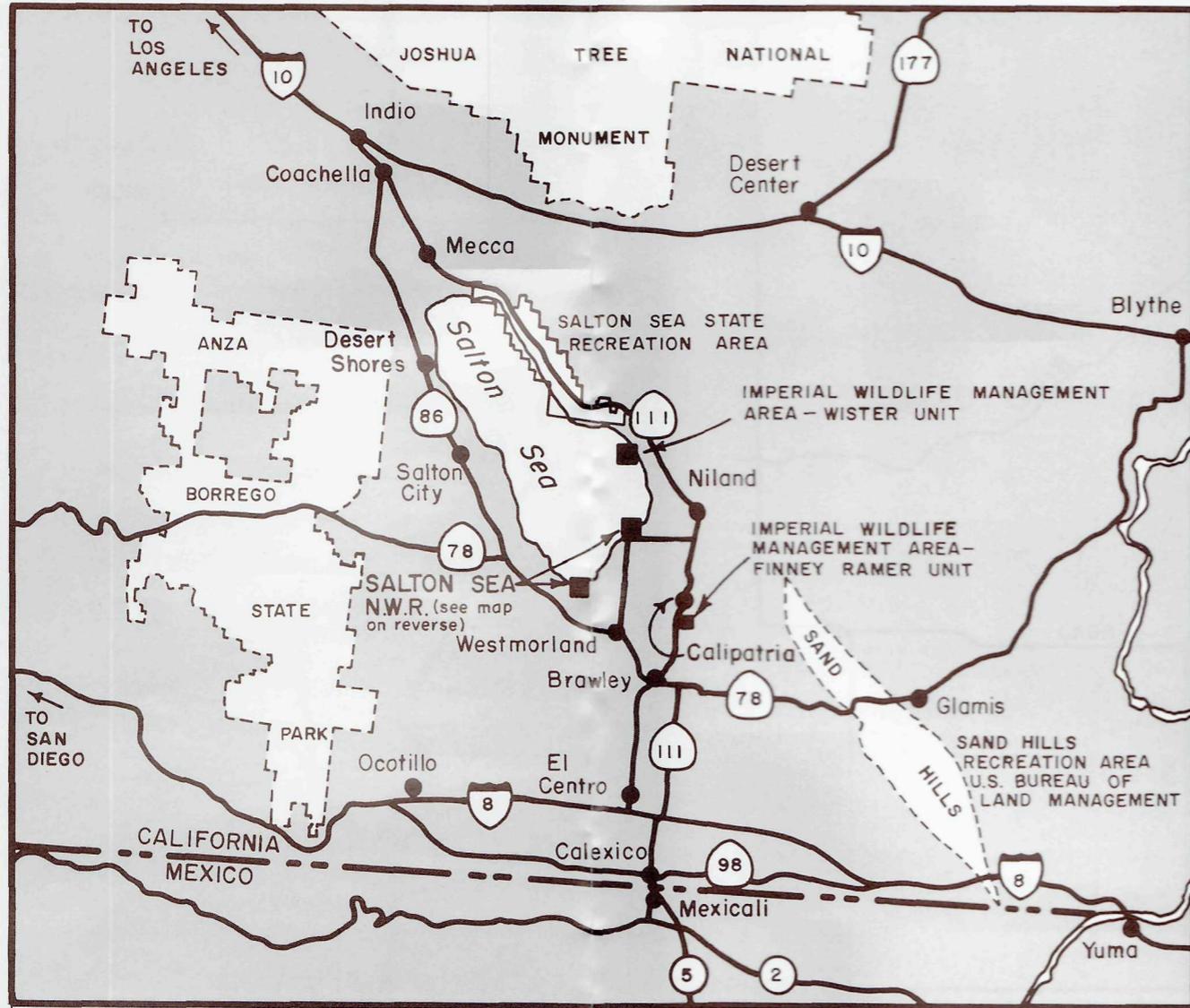


Salton Sea

National Wildlife Refuge

California



Services Available Nearby

Motels are available in Brawley (20 miles), Niland (10 miles), Imperial (28 miles), and El Centro (33 miles). Restaurants, gasoline, and other supplies are available in Brawley, Calipatria, El Centro, Imperial, Niland, and Westmorland.

Camping is permitted at the Wister and Finney Ramer units of the Imperial Wildlife Area and Salton Sea State Recreation Area.



September 1992

UNITED STATES
DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Salton Sea National Wildlife Refuge
P.O. Box 120
Calipatria, CA 92233

OFFICIAL BUSINESS
Penalty for Private Use, \$300



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RF11630

Wildlife and a Changing Sea



Snow Geese

The Salton Sea National Wildlife Refuge has shrunk—The Salton Sea National Wildlife Refuge was established in 1930 by a Presidential Proclamation. It is located along the course of the Pacific Flyway in the Imperial Valley of California. Originally the refuge consisted of approximately 35,000 acres. Now, because of flooding by the Salton Sea, only about 2,200 manageable acres remain. Dikes are expected to keep the sea from further expansion on the refuge.

From Gulf to ancient sea to desert—At one time the Gulf of California extended into what is now known as the Imperial and Coachella valleys. A natural dam was then formed through silt deposits from the Colorado River. This deposit blocked off the Gulf and resulted in the formation of an ancient sea. Through time, the sea evaporated and formed a dry alkaline basin. In the early 1900s only dry desert shrubs were present where the refuge and lake shore is today.

Sea re-created in 1905 from break in irrigation canal—In 1901, Colorado River waters were diverted from Yuma, Arizona, into Mexico and back into the Salton Sea basin for agricultural development. In 1905, failure of a diversion structure caused the Colorado to flow unchecked into the Imperial Valley between 1905-1907, thus creating the present Salton Sea. Agricultural drainage and run-off from the surrounding mountains now supply the Salton Sea. There is no outlet from the sea, and water is removed only by evaporation.

Over 200 feet below sea level—The Salton Sea covers over 380 square miles. Its width varies from 9 to 15 miles, it is 35 miles long with about 115 miles of shoreline. The depth of the Salton Sea varies with the gentle valley slope to a maximum of about 40 feet. The surface elevation is currently about 227 feet below sea level.



Canada Goose

Waterfowl have adapted to changing habits and foods in Imperial and Mexicali Valleys—Before the Salton Sea was formed waterfowl were only found along the marshes and delta of the Colorado River (primarily in Mexico). During the 1920s, as more water was diverted from the Colorado River for agriculture, marshes were inadvertently created. These marshes, at the edges of the then smaller Salton Sea, resulted from agricultural water runoff. Waterfowl were attracted to the marshes from their former winter home in the drying Colorado River Delta. As farming intensified in the 1940s and Salton Sea expanded, marshland once again shrunk and waterfowl turned to farmers' crops for food. Today, crops are grown on the refuge to feed wintering waterfowl and to keep the birds from eating farmers' crops.

Increasing sea salt stresses fish transplants—As the salinity of the Salton Sea began to rise as the result of evaporation, many of the native freshwater fish species began to die out. In the 1950s the salinity of the Salton Sea was nearly that of the Pacific Ocean (35,000 parts per million). Attempts were made to introduce several marine fish. These attempts resulted in the establishment of the Orange-mouth Corvina, Sargo, and Gulf croaker (*Bairdiella*), all transplanted from the Gulf of California. Later tilapia, an African species, were introduced into canals surrounding the Salton Sea. They are now well established in the sea. Unfortunately, the fishery is threatened by increasing salinity. The current salinity level is in excess of 40,000 parts per million, more than 10 percent saltier than the Pacific Ocean.



Long-billed Dowitchers

Other animals introduced into the Salton Sea, accidentally or intentionally, include barnacles, pile worms, and copepods. These animals play a very important part in providing food for the fishery. The relationship between the fish and their food is so close that if one were to disappear the entire system would be significantly affected.

Numerous wildlife now conserved on the refuge—Thousands of waterfowl and other birds spend the winter at the refuge. Canada geese, snow geese, American avocets, black-necked stilts, pintails, green-winged teal, eared grebes, and a wide variety of other species are commonly seen during the winter.

The primary purpose of the refuge is to provide habitat for migrating and wintering waterfowl and endangered species. The refuge is also important in providing feeding, resting, and nesting habitat for a large number of shorebirds and in supporting a diversity of wildlife species throughout the year.



White Pelicans

Endangered species at the refuge—The Yuma clapper rail breeds in marshes along the Colorado River from the Nevada/California border south to the Colorado Delta region of Mexico. It is also found in marsh habitat around the southeastern portion of the Salton Sea. The preferred habitat is mature cattail-bulrush stands in shallow fresh water. Yuma clapper rails occur in suitable habitat throughout the year and breed successfully on the refuge.

Other endangered or threatened species occasionally observed on the refuge include the bald eagle, California brown pelican, and peregrine falcon.

Yuma Clapper Rail



Enjoying the Salton Sea National Wildlife Refuge

REFUGE HOURS—Refuge open sunrise to sunset. Office hours 7:00 a.m. to 4:30 p.m., Monday through Friday.

WILDLIFE OBSERVATION AND PHOTOGRAPHY—These activities are encouraged from designated trails. Self-guided interpretive exhibits are available near the office. A wildlife list is available.

DESIGNATED TRAILS—Walking and hiking are enjoyed on designated trails. Most refuge roads and trails are closed to vehicles.

WATERFOWL HUNTING—Waterfowl hunting is permitted on areas shown on map under California State and Federal regulations. Write the refuge manager for hunting regulations leaflet.

FISHING—Boat fishing only is permitted, except where posted as closed. From April 1 to September 30, areas on the Salton Sea between the buoys and shoreline are open to boat fishing. These areas are closed to all entry at other times of the year. No bank fishing.

PETS—Pets must be on a leash at all times. Hunting dogs on the public hunting areas must be under effective control.

LITTERING—Please help us save your tax money for clean-up. Don't litter.

CAMPING—No camping is allowed on the refuge.

FOR MORE INFORMATION, CONTACT:

Refuge Manager
Salton Sea National Wildlife Refuge
P. O. Box 120
Calipatria, California 92233
Phone (619) 348-5278

Information on other nearby recreation land can be obtained from:

Salton Sea State Recreation Area
P. O. Box 3166
North Shore, California 92254
Phone (619) 393-3052

Bureau of Land Management
333 South Waterman Avenue
El Centro, California 92243
Phone (619) 352-5842

California Department of Fish and Game
8700 Davis Road
Niland, California 92257
Phone (619) 359-0577

LEGEND

-  Refuge Boundary
-  Designated trails open year-round
-  Marsh
-  Agricultural Fields
-  Public Hunting Area, open by permit October–January

All other areas, except designated trails are closed to entry. Write for hunting leaflet.

