THE COLORADO RIVER DELTA CONNECTION

SALTON SEA Restoration Project

SEA FACTS

The Colorado River has always been a meandering river. It has also been a river that carried large loads of sediment, collected as it drained from the mountains of Colorado and Wyoming through the canyons of Utah and Arizona to the Gulf of California.

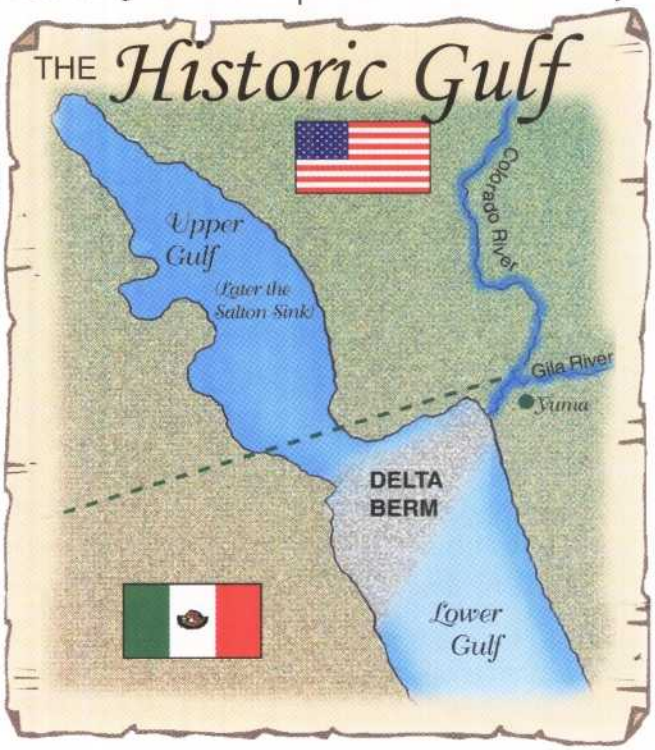
Millions of years ago, the Gulf extended through the Salton Sink to present day Indio. The river intersected the Gulf near what is now Yuma. As deposits of sediment built up in the former delta, a shallow, 10 mile wide berm was created which extended 30 miles from Yuma to the Cocopah Mountains on the west side of the valley. Eventually, the berm divided the north and south sides of the Gulf. The lake left to the north dried up, leaving rich soil from the 1000 feet deep sediments which had been deposited. The Gulf to the south was pushed further and further south as sediments continued to be deposited, creating the rich soils in the Mexicali valley.

The river itself was fickle in where it flowed. Depending on its sediment deposits, it would change course, flowing sometimes south around the large berm to the Gulf and sometimes north to the Salton Sink. Today's New and Alamo Rivers flow in former Colorado River water courses.

The lake which would be formed in the Salton Sink was sometimes a much larger lake than the current Salton Sea. High water lines are easily visible on the mountains on the west side of today's Salton Sea.

Long before European explorers, Colorado River tribes living in present day Imperial County would alternate between fishing in the lake, planting crops in the river's floodplain and planting in the Imperial dunes. The last large infilling of what is now called Lake Cahuilla occurred in the early 1500s; however, at least 6 times during the 1800s water spilled into the sink. In 1891, the lake was 30 miles long, 10 miles wide and 6 feet deep, just 16 years before flooding breached a temporary canal to create today's Salton Sea.

When not flowing into the Salton Sink, the Colorado River continued on its path to the Mexican Delta we think of today. As recently as 50 years ago, the Mexican Delta was a very large marshy area with multiple channels, rich wetlands and abundant wildlife. When the Colorado River was tamed by man's intervention, it stopped its meandering. Because of diversions in the U.S. and Mexico, little water now reaches the Delta regularly. The water diversions, however, do sustain the Salton Sea, the Laguna Salada and the surrounding agriculture and cities.



Governmental and non-governmental organizations have recognized the ecological importance of the lower portion of the Delta. Mexico has designated the Upper Gulf and a portion of the lower Delta as an international biosphere reserve. Flood flows that have reached the Mexican portion of the Delta in recent years have demonstrated that both vegetation and wildlife can make a rapid recovery.

The Current Connection

The historic and geographic Delta extends from the Coachella Valley to the mouth of the Colorado and from the Santa Rosa and Cocopah Mountains to the area just downstream of Yuma.

The Salton Sea and the Mexican portion of the Delta today still share important ecological connections. Besides being part of the same geologic basin, they are connected by riparian corridors along the Colorado, Hardy, New and Alamo Rivers. They share desert corridors through the Cocopah and Coyote Mountains. Both areas support critical diverse habitat types.

Between the 175,000 plus birds which are found at the Mexican delta and 3 million plus found at the Sea on peak winter days, these areas are important wetlands along the Pacific Flyway amid impoverished habitat for migratory waterbirds. Over 90 percent of natural inland wetlands have been lost in California. The endangered Yuma clapper rail, while more frequently found in the Santa Clara Slough in Mexico, relies on both areas for its existence. Some birds from the Sea of Cortez, such as juvenile brown pelicans, disperse to the Sea to take advantage of its abundant food resources.

The upper and lower deltas share strong cultural connections, as well as common challenges. Shared tribal history, agricultural economies and attractions for tourists and those seeking recreation suggest that the efforts to restore the area to abundance can benefit both sides of the border. Figuring out how to proceed in the face of growth and its demands for scarce water resources, dealing with elevated levels of salt and selenium in river water and restoring habitat which is critical to the Pacific flyway call for joint research and cooperative management.

Birds of the Sea

400 bird species found at the Sea

100 breeding bird species

95% of total grebe population use the Sea in some years

80% of white pelican population can be found at the Sea

50% of brown pelican population may be found at the Sea

Let it dry up?

Some advocate restoring the Mexican part of the Delta and letting the Salton Sea dry up. Their reasoning? The Sea was formed by accident. It is fed by runoff from agricultural fields and polluted rivers. The environs are mostly barren desert or cultivated fields. Man has introduced all but one of the species of fish in the lake. The Sea suffers from occasional fish die-offs and outbreaks of bird diseases.

Pristine? - hardly!

In fact, for some humans, the Salton Sea is an easy place to dislike and write off. But the birds and fish don't agree. It is the most productive fishery in the nation, perhaps the world. That is due, in great part, to the little critters - algae and other microinvertebrates present in the Sea which form the base of the food chain. Recent scientific studies found dozens of species not previously identified at the Sea as well as approximately 20 species of microorganisms new to science. In addition to the fish and other life in the Sea, nearby agricultural fields are abundant sources of food for birds.

The reality is that neither the Colorado River nor the Salton Sea remains natural. Both are strongly affected by human intervention, as are many other natural places around the world. An ecological resource should not be judged solely by its natural purity. Both the U.S. portion of the Delta (the Salton Sea and its environs) and the Mexican portion of the Delta (part of the same ecosystem) offer excellent opportunities to experiment with management of manmade systems to rehabilitate damaged water resources. Restoring the Salton Sea starts with our existing, vitally important resources. It's the literal bird in the hand.

SALTON SEA RESTORATION PROJECT
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