

# **A persuasive case for saving the Salton Sea, California's biggest lake**

**Patt Morrison, Los Angeles Times, 9-18-14**

Even in its reduced and unlovely circumstances, the Salton Sea is the biggest lake in California. It may also pose the biggest quandary for the Southern California ecosystem. Its champions declare that California needs to spend several billion dollars now to save the saltwater sea, or pay dozens of billions — \$29 billion to \$70 billion — down the road in lost economic values, lost environmental values and lost lives. Tim Krantz is the University of Redlands environmental studies professor who's been keeping the data on Salton as its database program manager, and keeping the flame burning for maintaining that quirky body of water as a viable and vital link to California's wetter past and to its drier future.

## **The Salton Sea was part of a prehistoric inland water network. How did it become a stand-alone body of water?**

It was called Lake Cahuilla by Native Americans. At its full stand, it would have been five times the present size, about 1,500 square miles. If you drive along the western shore and look up, you can see a line like a white bathtub ring that was the high stand of the Salton Sea. Carbon dating that "ring" indicated that the Salton Sea has been full to its brim for two-thirds of the last several thousand years.

It was re-formed by a 1905 flood. It happened to be an El Niño year, so the Colorado River rose and took out a flood control levee. The Salton Basin had been dry for 50 or 60 years prior; as the flood broke, [the lake] ultimately captured the entire drainage of the Colorado River. It took two years for the irrigation district, together with the railroad, to build a trestle and [bring] thousands of boxcars full of sand and gravel to fill the breach and stop the flood. By 1907 the river returned to its normal channel.

## **People wonder, why save it? Isn't it an accident?**

Human intervention [in 1905] prevented the sea from becoming Lake Cahuilla once again. They wanted to control the river and keep it from flooding agricultural lands in the Imperial Valley. The agricultural runoff became the primary tributary source of water to the Salton Sea.

## **So why is it drying up now?**

Water politics get a little convoluted. The Imperial Irrigation District and California as a whole have been taking more than their share of Colorado River water for decades. A 2003 agreement will gradually reduce California's draw from the river. The Imperial Irrigation District, the largest California shareholder [of Colorado River water], agreed to sell [water] to the San Diego water district commencing in 2018. This means less water running off fields into the Salton Sea.

## **How did it change from Colorado River fresh water to saltwater?**

The Salton Basin at its deepest is only five feet shy of the lowest spot in the Western Hemisphere. There's no outlet to the ocean; it's below sea level. Any inflow carries dissolved salts and minerals. The water evaporates and leaves the salts behind.

A recent Pacific Institute study funded by the U.S. Bureau of Reclamation argues that doing nothing to keep the Salton Sea viable will end up costing tens of billions more — in human health, environmental and property values — than saving it now, at a cost of perhaps \$10 billion.

Clearly this is not just a local problem. This is a regional, interstate and binational problem. [Because of complex water agreements], the inflows will be reduced. That'll expose about 100, 140, 150 square miles of lake bed. The particles in the sediments at the bottom of the lake are so small — you could get 30 of them in the width of a human hair — that if you breathe them in, you cannot expel them, they can [get] into your bloodstream. Attached to these particles are very toxic things like arsenic, selenium, cadmium. Once airborne, they can travel hundreds of miles.

The Salton Sea hosts the most diverse and probably most significant populations of bird life in the continental United States, rivaled only by Big Bend, Texas. More than 400 species of birds use it as part of their migratory pattern. For many species, it's absolutely critical; the North American white pelican and eared grebe — many of these birds would suffer drastically if we do nothing.

A dead sea characterized by dust storms and stinking, rotting fish is going to impact property values as far west as Palm Springs and the rest of the Coachella Valley. The impact — tens of billions of dollars if we ignore the problem.

A restored sea could create an economic mecca, support a bustling recreational economy, property values would skyrocket — it would be huge for southeastern California.

### **What are some long-term solutions?**

The primary argument is whether to continue to allow Colorado River water [used for agriculture] to flow in, rather than transfer that water to San Diego [for urban use]. We can't guarantee there will ever be enough [agricultural runoff] water to maintain it as it used to be. This would necessitate some sort of connection to the [gulf]. A lock-lift system or inflow-outflow pipes could be done. We've done it with the California Aqueduct. We've drilled through our mountains for a line from the Colorado River to Southern California. We have the technology; it's just a matter of cost.

Whatever water you bring in is going to evaporate and leave even more salt behind. You have to have some exchange. Whatever water you're bringing in, you have to pump out as much, to flush the system of salt. So the sea would be on a sort of permanent transfusion process. It's a lot of water — about 6 million acre-feet a year.

### **You believe public-private energy projects could help the Salton Sea pay for its restoration.**

The feds and the state in these last years are essentially broke. The only solution is a public-private partnership. I'll take some credit for being the first to introduce the idea that renewable energy resources may be part of the solution. The Salton Sea sits on the largest geothermal energy field in the Western Hemisphere. We need to harness renewable energy opportunities in combination with wetlands restoration projects that can keep the lake bed from blowing dust. Geothermal, solar, biodiesel algae pilot projects are in the works. We are looking at creating the renewable energy mecca of the world, with as much as seven gigawatts of power, enough to supply more than 7 million homes.

### **The late GOP congressman Sonny Bono and the late Democratic congressman George Brown wanted to make it a going concern.**

Brown's conception was a navigable lock-lift system; you could board the "love boat" for a cruise in Coachella Valley and sail down into the Gulf of California, around Cabo, back to San Diego! That's one pie-in-the-sky option if cost is not a factor. Potentially with a lock-lift system, you'd have an inland seaport that's similar to Long Beach. You could bring shipping containers all the way into the north Salton

Sea at Coachella Valley. That would become a major transshipment corridor. You could take thousands of trucks off L.A. freeways.

**Do locals use it like a real inland sea?**

Since 1905 it has been a year-round sea. Recreational use was seasonal because it gets so hot. In the 1940s and '50s and into the '60s, it began to be known as the Salton Sea Riviera, where the likes of Dean Martin and Frank Sinatra would [visit]. [Officials] introduced orangemouth corvina and sargo and croaker, fish you find in the Gulf of California, and they thrived. Through the early 1990s the Salton Sea boasted the most productive fishery on Earth, fishing derbies where you would throw in your line without any bait and pull out a fish every second. It was quite remarkable.

**If you had a 30-second TV spot to make your pitch for saving the Salton Sea, what would it say?**

The sea is not an accident. It's not there in the isolated desert. It affects 1.5 million people who live around it. It's not a local, regional problem; it's much broader. To deal with it retroactively, only after thousands of people have lost their lives, only after property values from Palm Springs to the border have declined, only after the fish and wildlife values, the migratory bird values have been lost — we're facing the dilemma in perpetuity, trying to put Band-Aids on the problem. Or we can spend that money now and maybe get a return on our investment in short order.