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Bombay Beach, along the Salton Sea west shore, offers this view of the sunset. Efforts to rescue the state's largest lake are gaining momentum.

# Ailing lake getting lots of attention

By Jennifer Bowles  
The Press-Enterprise

**A**nother long, hot summer is winding down at the Salton Sea. Not the worst summer, nor the best.

Two million fish have died, far below the 15 million deaths last year. A few hundred birds have died, nothing like the 20,000 deaths in 1996. And around the lake, residents weathered the months of heat, humidity and, well, the smell.

But it was not an unremarkable season in the sea's 95-year history.

The Salton Sea has received persistent attention, from Riverside to Washington, D.C., from bureaucrats, politicians and scientists pushing efforts to rescue California's largest lake. U.S. lawmakers designated \$5 million for restoration efforts. Researchers continued trying to figure the best way to get the job done. And local agencies investigated ways to deal with an

► **RESIDENTS:** Most don't complain about the heat and smell. **A-4.**

abundance of fish, alive and dead.

The sea's reaction to the sweltering summer, most agree, plays a key role in its environmental woes. This week, scientists will gather in Riverside to determine just how big a role that is.

In any season, the glistening Salton Sea is a welcome mat for more than 400 species of birds, some that have traveled for miles over mountains and dusty deserts on their journeys north and south.

There are few other places to go.

With 95 percent of the wetlands destroyed on the Pacific Flyway from Central America to Canada, the sea has become a critical haven for migratory birds.

The summer, however, can spell doom for some.

Lurking on the seabed are botu-

lism spores, which germinate in the heated water and produce a toxic byproduct that lands in the stomach of tilapia, one of four fish species in the lake. The feathered predators that swoop down on the sluggish fish are poisoned and soon unable to hold up their heads.

Some never recover.

So far this summer, at least 413 endangered brown pelicans, most less than a year old, have died. An additional 701 birds have been rehabilitated.

While concerned, wildlife officials say the deaths won't put much of a dent in the brown pelican population. The birds, they say, have rebounded since the species was listed as endangered in 1970, a result of poisoning by pesticides such as DDT.

The number that perished at the Salton Sea this summer make up 1 percent to 2 percent of the popula-

Please see **SEA, A-4**



Bert Moreno, left, and his father James, of Indio fish at the Salton Sea. In foreground is a dead

# SEA: Search for a rescue

Continued from A-1  
tion, which also nests in the Gulf of California and Anacapa Island, off Santa Barbara, scientists said.

The impending arrival of white pelicans, whose numbers have been rapidly dwindling, is a bigger worry, researchers say, said Dan Anderson, a pelican expert at UC Davis. "They're already a species of special concern."

Hundreds of millions of fish thrive below the surface of the Salton Sea. Some people say the sea is the world's most productive fishery.

The summer's first major die-off last month was hardly a flicker in the population.

The fish die every summer when a natural process, kicked into high gear by the heat, spawns excessive algae growth. The plants deplete the water of oxygen as they decompose. The fish literally suffocate.

Scientists involved in rescuing the sea will attend a workshop Thursday at UC Riverside Extension's conference center to better understand how that natural process, called eutrophication, fits into the sea's complex web of problems.

"Eutrophication could lead to fish kills, then fish kills could harbor diseases that could be connected to the bird kills," said John Elder, a U.S. Geological Survey lake ecologist. "None of this has really been documented yet."

Some scientists voiced concern when the U.S. Interior Department and the Salton Sea Authority unveiled restoration plans in January, saying the plans failed to address eutrophication.

Several factors contribute to the sea's problems.

Most of the water that feeds it runs through fertilizer-laced crops from the surrounding farms. The rest of the water is from sewage and industrial waste. And all of it carries into the sea various nutrients, such as nitrates and phosphates, with the power to create an underwater jungle of algae and other plants.

"In many ways, it's too alive," said Tom Kirk, executive director of the Salton Sea Authority, a consortium of local agencies.

The sea has no natural outlet to carry off the nutrients, so it has essentially become a giant fish tank that hasn't been cleaned in nearly 100 years.

## Belly up

"See those eight barrels?" asked Richard Console, 61, pointing to the back of his pickup. "They were filled with fish."

Dead fish.

Console, who works for the Salton Community Services District, spends a few days a week picking up carcasses around Desert Shores and Salton City. In June, the Salton Sea Authority decided to spend \$100,000 to study whether the overabundant tilapia could be harvested for cat food, and another study on whether oil-spill cleanup equipment can be adapted to sweep dead fish from the water.

For now, the fish carcasses are hauled to Brawley, a few miles south of the sea, where they are dumped into a trench and sealed with dirt.

It's not a solution to the sea's problems, but researchers think clearing the dead fish helps curb the spread of the botulism that makes birds sick. And, of course, there's the smell consideration. Burying the dead fish keeps them from rotting on the shores.

"They cover them immediately, because they do stink. Those barrels still stink," Console said.

## An invitation

The editors of The Press-Enterprise welcome suggestions for news stories. Please writeto:

Managing Editor  
The Press-Enterprise  
P.O. Box 792  
Riverside, Calif., 92502-0792

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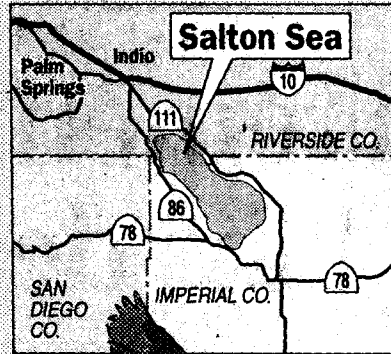


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## Salton Sea primer

The Salton Sea, created in 1905 when the Colorado River jumped an irrigation canal and flowed for nearly two years into a salt flat, is today plagued by high salinity and sporadic wildlife die-offs. At the same time, the sprawling desert sea that straddles Riverside and Imperial counties is a critical haven for migratory birds. Federal and local authorities earlier this year unveiled a plan laying out five options to reduce the salinity. In the summer, though, little can be done to help the heat-induced changes that kill fish and birds.



California brown pelican

### THE HOT SUMMER

**Bird deaths:** The annual outbreak of avian botulism has killed 413 California brown pelicans, an endangered species. Another 701 birds have been rehabilitated at wildlife centers.

**Fish deaths:** 2 million fish, mostly tilapia, died Aug. 27-28 in the summer's first major fish kill.

**Highest temperature:** 120 degrees on Aug. 5 at the Salton Sea State Recreation Area.

**Highest water temperature:** 92 degrees.



Tilapia

### SOLUTIONS:

- Wildlife officials collect dead birds along the shore to reduce the spread of avian botulism that is killing endangered brown pelican.
- Dead fish are collected to clean up the shore line.
- Officials will test the effectiveness of solar evaporation ponds to desalinate the sea.
- Two full-time scientists will be headquartered in nearby La Quinta starting next month to help coordinate the scientific work and the restoration goals.
- Officials want to have a restoration plan by Jan. 1

Sources: U.S. Fish and Wildlife Service, Salton Sea State Recreation Area

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