

SALINITY REDUCTION: WHAT WON'T WORK



SEA FACTS



The Salton Sea is a unique environment and needs to be preserved as a highly productive link in the Pacific Flyway. For the first time, there is hard science to guide decisions and improve the chance of success.

But, as we actually begin work to restore California's largest lake after more than 50 years of studies, one thing has become evident: there is no silver bullet to reduce salinity.

So, why don't we just transport the lake's water to the ocean through pipes to create an outlet for the Salton Sea and bring ocean water back?



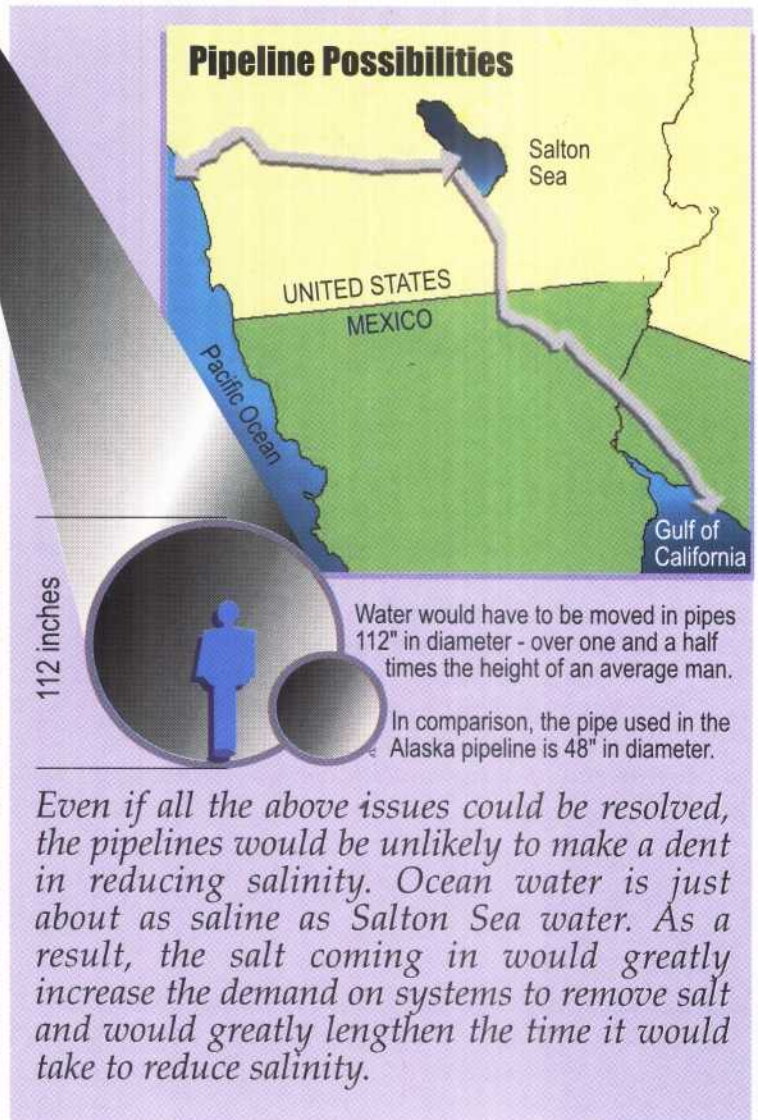
It sounds appealing.

PIPELINES could pump Salton Sea water out to the Gulf of California or the Pacific Ocean and pump ocean water back in. The problem, though, is much more complex. In fact, the practicality of this idea evaporates when costs and environmental issues are closely examined.

The cost, both to build and to operate a pipeline, is estimated at \$3 billion. Each pipeline would have to be huge to handle the volume of water that would need to be moved. Multiple pumping stations would be required and the annual energy demand would be large.

Permits and rights of way for construction and operation would be needed from local, regional, state and federal governments, including Mexico. Parts of the Colorado River Delta and Gulf of California are in an international biosphere reserve with both land- and sea-based endangered species. The California coast contains expensive real estate with influential owners. Neither area would welcome massive pipelines disposing of saline water, and court challenges and appeals would be inevitable.

Scientists and environmentalists are concerned about the inability to control any "little critters" that might be transferred from the ocean to the Salton Sea or vice-versa. Transferring unwanted new species, bacteria and disease, or pollution could be an unwanted outcome and is also prohibited under federal regulations.



Pipeline Possibilities

Water would have to be moved in pipes 112" in diameter - over one and a half times the height of an average man.

In comparison, the pipe used in the Alaska pipeline is 48" in diameter.

112 inches

Even if all the above issues could be resolved, the pipelines would be unlikely to make a dent in reducing salinity. Ocean water is just about as saline as Salton Sea water. As a result, the salt coming in would greatly increase the demand on systems to remove salt and would greatly lengthen the time it would take to reduce salinity.

O.kay. Can a shipping canal work better?



Again, it sounds great. After all, it could be used by boats and be a boost to economic development in the region. But getting the necessary agreements in place to exchange ocean and Salton Sea water would take too long to help the wildlife that is dependent on the lake. And, shipping canals are less effective than the pipelines in moving water.

What about desalinization?

The Salton Sea Authority, in partnership with the Bureau of Reclamation, is presently evaluating the potential of reducing salinity with a combination of passive and active desalinization techniques.

Other options that have been proposed include reverse osmosis, bioremediation and collecting and recycling the water as it evaporates from the salt. None of these options have proven technology at the scale required for the Salton Sea.

Desalinization would require both a very expensive desalting facility and an expensive disposal system for the brine in a process that would extract relatively small amounts of salt. While some of these methods may be a cost-effective alternative or adjunct in the future, the

Salton Sea's need is virtually immediate and cannot wait.

We can't afford to be sidetracked.

Whatever actions are undertaken will take time and one single act will not cure all of the problems. There is no silver bullet. However, we have a window of opportunity now. Interest in restoring this vital resource is very high among governmental and non-governmental leaders at local, state and federal levels. We have enough information to get started now. There are cost-effective options available and we must pursue them.

The Salton Sea is too important to ignore.

SALTON SEA RESTORATION PROJECT

(760) 564-4888 or (702) 293-8129

www.salttonsea.ca.gov