SALTON SEA Restoration Project

SEA NOTES

June 2002

A newsletter of the Salton Sea Restoration Project

At Risk

Air Quality

Authority Adopts Resolution

Milt Friend Photo

The map to the right highlights some of the areas in California that are monitored for PM10 levels, which are used to measure air quality. For the year 2001, both the Imperial and Coachella valleys were in non-attainment for PM10 state standards. The concern is that a major reduction of inflows to the Sea could potentially expose over 100 square miles of seabed, releasing particles that can be carried by winds (such as seen in the photo, blowing across Davis Road) to communities surrounding the Sea, further aggravating air quality conditions.

Source: Salton Sea Database Program, University of Redlands

1999 PM_{10}

Annual average of 24-hour measurements from air quality management district monitoring stations in micrograms per cubic meter ($\mu g/m^3$)

- Within standards (less than 50.0 $\mu g/m^3$)
- Exceeds state standards (50.0 - 150.0 $\mu g/m^3$)
- Exceeds federal and state standards (greater than 150.0 $\mu g/m^3$)

Asthma hospital discharge rates

Number of asthma-related discharges per 100,000 people for children aged 0 to 14 by County, 1995 - 1997

- less than 100 children
- 101 - 200
- 201 - 300
- 301 - 400
- more than 400 children

The Salton Sea Authority has unanimously approved a resolution expressing concerns about adverse air quality impacts of the water transfer and opposed transfer projects that would significantly lower the level of the Salton Sea.

The resolution also calls for the Imperial Irrigation District board of directors "to pursue water transfer solutions which meet the terms of the Quantification Settlement Agreement and which properly mitigate impacts on the Salton Sea, and addresses economic and social impacts in the Imperial and Coachella valleys."

The Authority resolution states, "any mitigation identified and implemented for the transfer be done in a manner consistent with the goals and objectives of the full restoration of the Salton Sea."

The Authority board adopted the resolution March 28, 2002 after several presentations by local officials and Salton Sea area residents.

"The possibility of adverse air quality impacts in eastern Riverside County from a shrinking Salton Sea is of great concern to me," said Authority Board President Roy Wilson.

"I am pleased that my colleagues on the SSA board share that concern. The parties engaged in the water transfer must accurately identify the impacts that will occur from reduced inflows and commit to mitigating those impacts."

See Air Quality, page 3

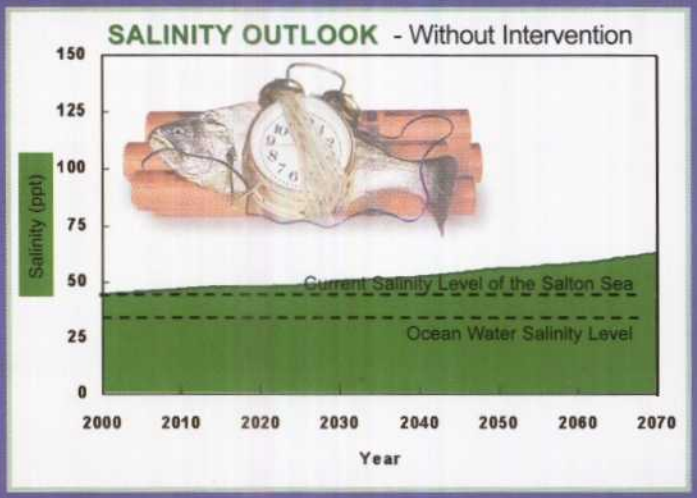
TESTIMONY BEFORE

"The Authority understands the need and generally supports implementation of the California 4.4 Plan. However, the Authority is deeply concerned about how water will be transferred and the environmental effects of the water transfer."

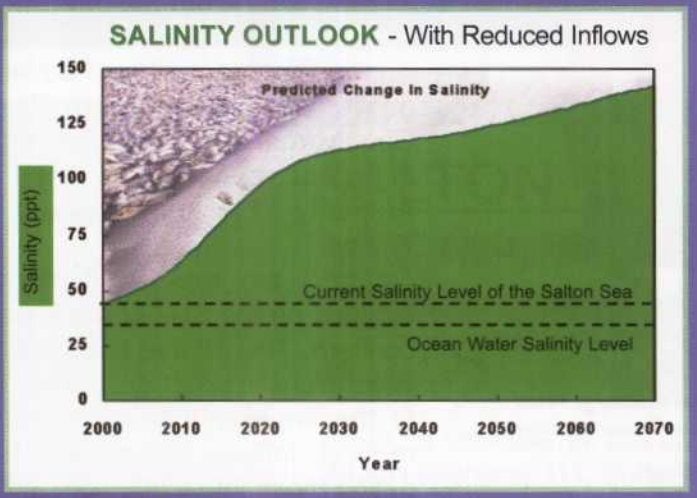
The Salton Sea Authority has told state water officials it is strongly opposed to water transfer projects that would significantly lower the level of the Salton Sea.

In testimony submitted to the California State Water Resources Control Board, the Authority also explained that the future of the Salton Sea must be factored in to any decision regarding any transfers.

The Salton Sea Authority is not opposed to the Quantification Settlement Agreement nor, necessarily, to the transfer of water from the Imperial Irrigation District to San Diego and the Coachella Valley.



The current salinity trend shows that without intervention, the fishery could collapse some time before 2060.



With reduced inflows, the fishery could collapse even sooner - perhaps as early as 2012.

"The Authority understands the need and generally supports implementation of the California 4.4 Plan," according to the Authority's testimony. "However, the Authority is deeply concerned about how water will be transferred and the environmental effects of the water transfer," it states.

The Salton Sea is one of the most important ecological places in the United States and, as proposed, water transfers could make restoration of the Salton Sea infeasible.

The proposed project as presented by the IID suggests that water conservation will occur through reducing or eliminating tail water and improving delivery systems in the Imperial Valley.

Under efficiency improvements, virtually all the water generated for the transfer is generated from reductions of inflow to the Sea, and none from crop evapotranspiration reductions that would be a result of fallowing land. Generally, water "conserved" through reducing crop evapotranspiration, would limit damage to downstream uses, like the Salton Sea.

The Sea is now 25 percent saltier than the ocean and if levels are allowed to increase, its fish and wildlife will be threatened. The current salinity trend shows that without intervention, the fishery could collapse anywhere up to the year 2060.

Scientists and engineers have been aggressively pursuing ways of removing salt from the Sea. The most pragmatic approach is the extraction of salt from the lake and a number of pilot projects to achieve this are now underway.

With the present inflows, 4-6 million tons of salt must be removed each year from the lake. Restoration would cost about $250 million in present value.

These costs would balloon to well over $1.7 billion under reduced inflows.

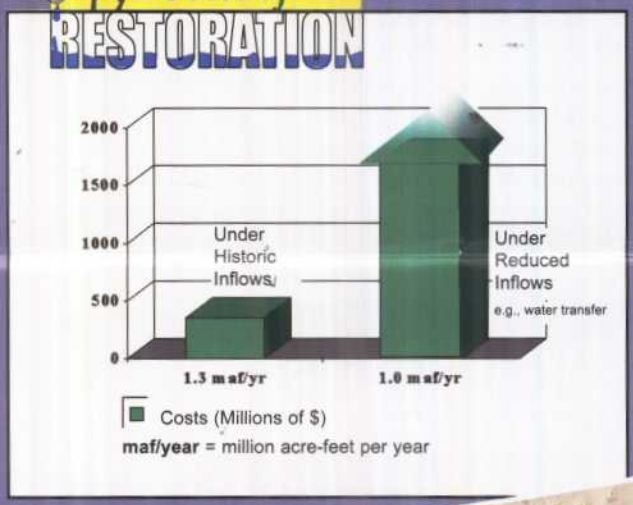
That difference, between restoring the Sea under current inflows and restoring the Sea under reduced inflows is staggering. Even if all of the political and financial support were available within a few years, it is unlikely that restoration could occur in time to preserve a fishery at the Sea and the values that the fishery supports.

The testimony also criticized the reasoning of those who say that the Sea is going to die anyway and the transfer is just speeding up the inevitable.

"This is the 'you are going to die anyway in fifty years, mind if I shoot and kill you today' argument," said Authority Executive Director Tom Kirk.

THE STATE

Costs of RESTORATION



Air Quality

(Continued from Page 1)

Buford Crites, a city councilman from Palm Desert and chair of the Coachella Valley Association of Government's Energy and Environment Subcommittee, also praised the resolution.

"There is significant evidence that water transfers would have adverse effects on wildlife at the Salton Sea as well as water quality and air quality. The dust would have significant negative economic and environmental impacts in the Coachella and Imperial valleys," he said.

Crites added, "If the Salton Sea were in the front yards of Los Angeles, San Diego and Orange counties, the current transfer proposal would be off the table."

Additional support for the resolution was offered by landowners and residents from around the Salton Sea, who presented petitions with over 1000 signatures, and by three major environmental organizations.

Wind Patterns

for the Salton Sea Area

These patterns create an impact on air quality downwind, affecting the Imperial Valley in the winter and Coachella Valley in the summer.

Source:
Salton Sea Database Program, University of Redlands

PM10

Particulate matter pollution consists of very small liquid and solid particles floating in the air. Of greatest concern to public health are the particles small enough to be inhaled into the deepest parts of the lung. These particles are less than 10 microns in diameter - about 1/7th the thickness of a human hair - and are known as PM10 . . . PM10 can increase the number and severity of asthma attacks, cause and aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections.

- California Air Resources Board

SALTON SEA AUTHORITY

RESOLUTION NO. 02-02

RESOLUTION OF CONCERN REGARDING THE EFFECT OF WATER TRANSFERS ON THE SALTON SEA

WHEREAS, the Salton Sea Authority was organized in 1993 to protect and enhance the environmental and economic qualities of the Salton Sea; and

WHEREAS, the Salton Sea is a valuable economic and recreational resource of the Imperial and Coachella Valleys, receiving over 200,000 visitors per year at the State Parks alone; and

WHEREAS, the Salton Sea is among the most important bird resources in North America, with the greatest biodiversity of bird species in California and the second most in the Nation; and

WHEREAS, the Salton Sea will become more saline unless a plan for salinity control is implemented and its resources as we know them, will be lost; and

WHEREAS, the Salton Sea Authority understands the need and generally supports the implementation of the "California 4.4 Plan," which is designed to reduce California's use of Colorado River water in normal years to 4.4 MAF, without causing major economic and social impacts to the Imperial and Coachella Valleys; and

WHEREAS, the Salton Sea Authority understands that the QSA is a time sensitive matter with an existing signature date of December 31, 2002 and that without agreement the Secretary of the Interior will limit California to 4.4 MAF which will reduce the supply to coastal Southern California or create water reallocations; and

WHEREAS, water transfers are a business arrangement between agencies to sell and buy water and are an essential component of the proposed "California 4.4 Plan" and the QSA; and

WHEREAS, in the recently released Imperial Irrigation District (IID) Water Conservation and Transfer Project Environmental Impact Report/Environmental Impact Statement on the water transfer of up to 200,000 acre-feet per year of water to the SDCWA and the transfer of 100,000 acre-feet to the Coachella Valley indicates that the transfer could significantly reduce flows to the Sea; and

WHEREAS, a major reduction of inflows to the Sea will likely lead to a reduction in sea elevation of up to 22 feet, potentially exposing over 100 square miles of seabed and diminish the vitality of the Sea; and

WHEREAS, a major reduction of inflows greatly accelerates salinity increase in the Sea; and

WHEREAS, with or without transfers, significant changes to habitat threaten bird biodiversity and abundance at the Salton Sea; and

WHEREAS, the aforementioned physical changes in the Sea could lead to significant air quality, biological, and economic impacts; and

WHEREAS, the Imperial Valley is a non-attainment area for Particulate Matter smaller than 10 microns (PM10) and the Coachella Valley may soon be redesignated as a PM10 non-attainment area; and

WHEREAS, particulate matter contributions from exposed lakebed might jeopardize the Imperial and Coachella Valley's compliance efforts and lead to significant economic disruptions and health impacts; and

WHEREAS, major reductions of inflow will greatly increase the cost of restoring the Salton Sea and thereby risk making restoration financially and practically infeasible; and

WHEREAS, Congress and the California legislature have authorized studies of the Salton Sea and a plan approved by Congress and the California legislature does not exist for the restoration of the Salton Sea; and

WHEREAS, the IID Water Conservation and Transfer Project Environmental Impact Report/Environmental Impact Statement contains several options to develop the water for the transfers including the option of fallowing land which would have less impact on the Salton Sea; and

WHEREAS, efforts are underway to relax environmental compliance laws to facilitate the water transfers; and

WHEREAS, The Salton Sea Authority acknowledges that the California "fully-protected species" laws may need to be updated to allow "take" provisions similar to the California Endangered Species Act; and

WHEREAS, for all of the above reasons it is prudent to proceed cautiously with those parts of the "California 4.4 Plan" which have serious economic and environmental impacts while continuing to proceed expeditiously with those parts of the Plan which are essential to meeting the California Colorado River Allotment; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Salton Sea Authority to oppose projects which significantly lower the level of the Salton Sea; and

BE IT FURTHER RESOLVED to support efforts by Congresswoman Mary Bono to ensure that the impacts of water transfers on the Salton Sea and the Imperial and Coachella Valleys are complying with environmental laws; and

BE IT FURTHER RESOLVED to urge the IID Board of Directors to pursue water transfer solutions which meet the terms of the QSA, which properly mitigate impacts on the Salton Sea, and which address economic and social impacts in the Imperial and Coachella Valleys; and

BE IT FURTHER RESOLVED that any mitigation identified and implemented for the transfer be done in a manner consistent with the goals and objectives of the full restoration of the Salton Sea; and

BE IT FURTHER RESOLVED to support stringent reviews of any State and/or Federal legislation that relax environmental laws at the detriment of economic or environmental values of the Salton Sea, Imperial or Coachella Valleys; and

BE IT FINALLY RESOLVED that certified copies of this Resolution be sent to Senator Dianne Feinstein, Senator Barbara Boxer, Congresswoman Mary Bono, Congressman Duncan Hunter, and the rest of the Congressional Salton Sea Task Force, other appropriate members of Congress, the Secretary of the Interior, State Senator Jim Battin, Assemblyman Dave Kelley, State Senator Sheila Kuehl, other appropriate members of the State legislature, the California Resources Secretary, the Secretary of the Environmental Protection Agency, other appropriate State and Federal agencies, and the member agencies of the Salton Sea Authority.

PASSED AND ADOPTED THIS 28TH DAY OF MARCH, 2002.

SALTON SEA AUTHORITY

Supervisor Roy Wilson
County of Riverside
President, Salton Sea Authority
Director Andy Horne
Imperial Irrigation District
Vice-President, Salton Sea Authority
Supervisor Wally Leimgruber
County of Imperial
Director Stella Mendoza
Imperial Irrigation District
Supervisor Gary Wyatt
County of Imperial
Secretary, Salton Sea Authority
Director Peter Nelson
Coachella Valley Water District
Director Corky Larson
County of Riverside
Supervisor James Venable
Coachella Valley Water District

ATTEST:
Tom Kirk
Executive Director
Salton Sea Authority

From the Science Office

Workshop provides insight into impact of water transfer

While finding it difficult to predict what will happen without actually observing drawdown conditions, the scientists agreed that without mitigation, serious problems would result.

A group of air quality experts have agreed that without mitigation, there could be serious air quality problems in the region if the Salton Sea's lakebed is exposed by a reduction of inflows.

The group also expressed concern that the Imperial Irrigation District/San Diego water transfer environmental impact analysis had some serious shortcomings. They faulted the report for assuming that crusts would form which would mitigate most of the air quality problems from a receding Sea and presenting no scientific support for such a conclusion.

While problems at the sea are not likely to be as severe as Owens Lake -- the worst source of dust emissions in the nation --Ted Schade, manager of the effort to get dust under control there, pointed out "If the Salton Sea has only one percent, or even one-half of one percent, of the emissions at Owens Lake, the area will exceed air quality compliance standards," he said.

The 12 air quality experts met April 2-4 in La Quinta to tour the Salton Sea and discuss the probability of air quality problems if the Sea's elevation is dropped, exposing shoreline around the Sea.

The meeting was conducted by the Salton Sea Science Office on behalf of the Salton Sea Authority and the U.S. Bureau of Reclamation. Larry Biland, with the U.S. Environmental Protection Agency, noted that this was the best and brightest group of experts he has ever seen come together to address issues of dust associated with dry lakes.

The question of blowing dust is of particular concern because both the Imperial and Coachella Valleys already violate dust standards set under the Clean Air Act. Scientists were surprised by the complexity of conditions around the Sea. Differing soils, wind conditions, ground moisture, and water chemicals, among other factors, will affect the likelihood of dust storms.

While finding it difficult to predict what will happen without actually observing drawdown conditions, the scientists agreed that without mitigation, serious problems would result. The groups suggested that various areas might blow under differing conditions. In other words, the problem may not be limited to a few predictable "hot spots."

Factors that will affect the amount of dust include soil and sediment composition, chemistry of the salts in the soil, winds, temperature, ground moisture, vegetation, and precipitation. The group also suggested what actions could mitigate blowing dust, including limiting the draw-down, keeping exposed areas wet, covering exposed areas with gravel or vegetation, and keeping people and other disturbance out of "hot spots" to avoid break-up of fragile soil crusts.

Sylvia Oey, from the California Air Resources Board, said, "Mitigation efforts should begin as soon as levels start dropping rather than waiting until a problem develops." Mitigation at Owens Lake is estimated to cost up to $400 million.

On-Sea Cleanup Boats Viewed

Board members from the Salton Sea Authority had an opportunity on May 16 to look at the systems that will be used for cleanup of fish from the Salton Sea. Environmental Recovery Solutions, the contractor that will be doing the actual on-sea clean up, had boats available for viewing at Johnson's Landing in Salton City.

E D U C A T I O N

SALTON SEA DATABASE PROGRAM

University of Redlands to Develop Curriculum

The Salton Sea Authority Board has approved a contract with the University of Redlands to develop an environmental education curriculum focused on the Salton Sea.

"This program will provide an exciting, informative and innovative educational experience that will allow children to better appreciate the Sea and its relationship to the local environment," said Authority Board President Roy Wilson, a member of the Riverside County Board of Supervisors.

The curriculum will be designed for grade three through high school.

"Once a program gets established for students in the Imperial and Coachella valleys, it may be extended to children in lower grade levels and possibly to students who live further from the Sea," Wilson said.

The curriculum is expected to make extensive use of innovative technologies, such as geographic information systems.

The Redlands proposal is a partnership between faculty in the university's school of education and the Salton Sea Database Program, which was developed for the Authority and is managed by the University of Redlands Institute.

The proposal calls for a geographic information system-supported environmental curriculum, centered around the Salton Sea that will allow students to explore the complex ecosystem and develop important skills of analysis.

"Students who live in the watershed area of the Salton Sea may have little knowledge or understanding of the rich and complex ecosystem that is literally in their backyards," said Carol Franklin, who will head the project on behalf of the University.

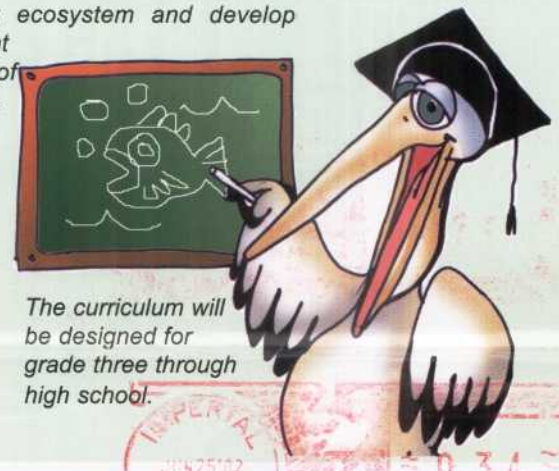
"This program will not only include a way to address content curriculum acquiring skills and knowledge, but it also will provide them an opportunity to understand the work in agribusiness, land use management and information management technology," she added.

All of the curriculum will be linked to California K-12 Academic Content Standards as well as needs of individual school districts in the region.

"We are extremely pleased to get this effort launched," said Authority Executive Director Tom Kirk. "This has been one of the major priorities of our outreach effort — to tap into the wealth of educational opportunity provided by the Salton Sea."

THE REDLANDS INSTITUTE
UNIVERSITY OF REDLANDS

The geographic information system-supported environmental curriculum provided by the University of Redlands will center around the Salton Sea that will allow students to explore the complex ecosystem and develop important skills of analysis.



The curriculum will be designed for grade three through high school.

Meetings Schedule

Board of Directors Meeting
6/20/02 10:00 a.m.
VFW
50 Desert Shores Dr.
Desert Shores

Technical Advisory Committee Meeting
7/11/02 10:30 a.m.
Imperial Irrigation District
81-600 Avenue 58, La Quinta

Board of Directors Meeting
7/18/02 10:00 a.m.
Imperial Irrigation District
81-600 Avenue 58, La Quinta

August Recess

SALTON SEA AUTHORITY

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