CHAPTER VI

Conclusions

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CONCLUSIONS

Fifty-four alternative ways of addressing salinity and elevation issues at the Salton Sea were considered in this report. Forty-nine of those alternatives did not meet one or more of the elimination criteria and were, therefore, not evaluated further. The five remaining alternatives all involved the concept of diking a portion of the Sea to concentrate salt loads within an impoundment.

As a way of trying to determine the relative rating among the five alternatives, each alternative was evaluated at an appraisal level using criteria established by the Authority, Reclamation, and the State of California. Figure 4 displays an Analysis Matrix for the five diking alternatives retained for further consideration along with the no action alternative. The matrix was developed as noted in Chapter III to rank the alternatives based on the weighted criteria.

The final summary scores for the five retained alternatives ranged from 655 for the phased impoundments to 766 for both the 40-mi^2 diked impoundment and the 50-mi^2 diked impoundment. All ranked higher than the no action alternative, which had a score of 648. The relatively close grouping of the scores indicated that no individual alternative met the evaluation criteria significantly better than any other alternative. Consequently, it was concluded from this analysis that, while the diking concept is the preferred method of addressing the salinity and elevation problems at the Sea, at this particular time, no particular alignment, configuration, or location can be considered obviously superior.

Final selection of a preferred alternative will be dependant on a number of factors. The location, size, and operational details of the diked impoundment will have both economical and environmental effects on the surrounding area. These effects will need to be evaluated in greater detail in order to implement an alternative that will bring the greatest overall benefit to the area. In addition, biological, chemical, and pathogenic studies will have to be performed to provide assurance that correcting the salinity and elevation problems will also minimize wildlife mortality events and maintain a safe environment for migratory and resident wildlife. It is anticipated that the next step toward project implementation will be further evaluation of the diking concept to formulate a specific preferred project based on engineering, biologic, economic, and public acceptance criteria. Detailed environmental, geologic, engineering, economic, and other technical studies will then be performed for the preferred project. These studies will contain sufficient detail to obtain construction financing and complete State and Federal environmental compliance processes.

FIGURE 4
ANALYSIS MATRIX

Decision Table for selection of the preferred alternative for Salton Sea management.

	Agricultural Interest 33	Wildlife 32	Elevation Control 31	Disposal 24	Water Quality-Salinity 24	Water Quality-Other 21	OME&R Costs 19	Finance Costs 17	Location 17
40 mi² diked impoundment	F/66	G/96	P/31	G/72	G/72	F/42	E/76	F/34	G/51
50 mi² diked impoundment	F/66	G/96	P/31	G/72	G/72	F/42	E/76	F/34	G/51
47 mi² diked impoundment	F/66	G/96	P/31	G/72	G/72	F/42	E/76	F/34	G/51
127 mi² diked north 1/3	F/66	G/96	P/31	E/96	E/96	P/21	E/76	F/34	P/17
Phased Impoundment	P/33	G/96	P/31	G/72	G/72	F/42	G/57	F/34	F/34
No Action	F/66	P/32	P/31	E/96	P/24	F/42	E/76	E/68	E/68

	Construction Costs 14	Sport Fishery 14	Recreation Benefits 12	Economic Development 11	Intergovernmental Cooperation 9	Land 7	Time to Solution 6	Time to Construct 3	Partnering Opportunity 2	Table Summary
40 mi² diked impoundment	G/42	E/56	G/36	F/22	G/27	G/21	F/12	F/6	F/4	766
50 mi² diked impoundment	G/42	E/56	G/36	F/22	G/27	G/21	F/12	F/6	F/4	766
47 mi² diked impoundment	F/28	E/56	G/36	F/22	G/27	G/21	F/12	F/6	F/4	752
127 mi² diked north 1/3	E/56	G/42	P/12	P/11	P/9	F/14	E/24	E/12	F/4	717
Phased Impoundment	E/56	F/28	P/12	F/22	F/18	F/14	G/18	E/12	F/4	655
No Action	E/56	P/14	P/12	P/11	F/18	F/14	P/6	E/12	P/2	648

E = Excellent (4) G = Good (3) F = Fair (2) P = Poor (1)

The numeric score is the rating of the alternative's ability to support the evaluation criteria (E, G, F, or P) times the criteria's weighted value.

A serious effort was made during this portion of the study to identify and evaluate all known methods of managing Salton Sea salinity and addressing the water elevation issue. However, it must be recognized that adjustments to some of the alternatives presented here, combinations of certain alternatives, or even new alternatives may emerge as the study progresses and more detailed analyses are performed. For example, as the diking concept is further developed, a specific plan may evolve which looks somewhat different or that has different features than the diking alternatives described in this report. The intention of this report was not to foreclose the pursuit of any viable option, but to make the most efficient and effective use of available resources by concentrating on alternatives with the highest possibility of success. An attitude of flexibility and adaptability will be maintained during the entire process of alternative design and environmental compliance.

Within the context of the paragraph above, a project will eventually be formulated that will move forward into feasibility design and environmental compliance. The feasibility design will form the basis for a cost estimate that can be used with confidence to procure construction financing. Environmental compliance will satisfy both the National Environmental Policy Act and the California Environmental Quality Act. It can be anticipated that engineering, costs, and environmental considerations during the feasibility investigation may result in adjustments to location, alignment, size, configuration, or other project attributes.

As noted above, future work will include completion of studies and research required for the preparation of a combined Environmental Impact Statement and Environmental Impact Report, satisfaction of all regulatory requirements, and completion of the State and Federal approval processes. The final step prior to construction would then be the identification of funding sources, securing funds adequate for construction, and making arrangements for funding operation and maintenance costs.

While the process used to identify, evaluate, and screen project alternatives may seem a bit ponderous and time consuming, it is hoped that it will result in the most appropriate and acceptable project—one that has the support of the environmental community; is accepted by local residents; has the approval of local, State, and Federal agencies; and is a project that has a realistic potential for funding. Formulation of an acceptable project in concert with committed supporters will culminate in action that reduces salinity, assuring a future for the Salton Sea that addresses environmental concerns, satisfies agricultural needs, provides recreational amenities, and satisfies the desires of local residents.