

Corps' Letter of Response to the
McQuaid, Metzler, McCormick & Van Zandt, L.L.P.

December 3, 1998

Sacramento Basin Branch

Michael J. Van Zandt, Esquire
McQuaid, Metzler, McCormick & Van Zandt
The Penthouse
221 Main Street
San Francisco, California 94105-1936

Dear Mr. Van Zandt:

Thank you for your correspondence of November 25, 1997, and March 3 and March 31, 1998, providing comments on behalf of Islands, Inc., to our July 1997 draft Project Modification Report (PMR) and Environmental Assessment/Initial Study (EA/IS) for Prospect Island. After a careful consideration of your comments, we are providing the following responses:

1. You state that the EA/IS fails to analyze other reasonable alternatives to the project (except for the no-action alternative) and the breaching of levees on Miner Slough. You also state that the EA/IS failed to analyze the effect on Ryer Island of breaching levees on Miner Slough.

Response: Alternative to Project Site. The purpose of the Prospect Island project is to make modifications to the island which would restore environmental resources that have been degraded by construction and operation of the Sacramento Deep Water Ship Channel and the Sacramento River Flood Control Project. The project is designed to provide habitat for a variety of aquatic, terrestrial and avian species. The proposed levee breaches, one on the Miner Slough and the other on the ship channel, will facilitate salmon migration. Based on its geographic location in the Delta, Prospect Island is strategically located as prime habitat for Federally listed fisheries and waterfowl.

Alternative to Breaching Levees on Miner Slough. An alternative to breaching the levees on Miner Slough was considered. See discussion of Alternative 1 in PMR.

Analysis of Project Effect on Ryer Island. There was an extensive analysis of the potential effect of the project on Ryer Island. The Sacramento District's Hydraulic Design Section constructed a hydraulic model of the project which demonstrated that velocities near the Federal levee on Ryer Island would be very low and range from about 1 foot per second as the tide is going out to about near zero feet per second when the tide starts to come in. See "Hydraulic Analysis for Prospect Island Alternatives," Appendix H, in the PMR. Further, because flow from Miner Slough at the breach is directed downstream, the trajectory of the flow is tangential to the levee and does not hit the levee directly. This model was run during tidal fluctuations and included "surges." The wind-wave runup will be reviewed during the detailed design phase to determine if re-analysis is

necessary. Based on our analysis, we have determined that the Prospect Island project would not have a significant effect on Ryer Island.

2. In your letter of November 25, you state that the Corps failed to adequately analyze the potential environmental effects of the proposed project because it did not develop information necessary to determine seepage at Ryer Island. You contend that the origin of the seepage on Ryer Island is directly related to the flooding of Prospect Island. By letter of March 31, 1998, you provided the Corps with statements from Reclamation District 501 personnel regarding seepage on Ryer Island and photographs of the claimed seepage inside the fields on Ryer Island. In addition, you provided monitoring well data and information on soil types on Prospect and Ryer Island.

Response: The findings in the draft PMR and EA/IS are based on a review of available data by Corps' engineers. These data were obtained from the State Department of Water Resources (DWR) and consisted of observed stage readings for Miner Slough and well observations on Ryer and Prospect Islands for April through June 1996. See "Prospect Island Seepage Analysis," Appendix J, in the PMR. Based on their review, Corps engineers determined that ground-water elevations on Ryer Island may be governed by the water-surface elevations in Miner Slough. However, there is no clear evidence that there is a link between Prospect Island flooding and seepage on Ryer Island.

In addition, the Corps reviewed the report entitled "Preliminary Seepage Analysis Prospect Island, California," May 1998, prepared by Todd Engineers (Enclosure 1). This report evaluated potential hydrologic effects of flooding on Prospect Island. One of the purposes of the report was to analyze the potential for effects from the permanent flooding of Prospect Island as proposed by the Corps. The findings of the report are as follows:

The elevation of the water table beneath Prospect Island and Ryer Island in the vicinity of Miner Slough is controlled predominantly by the stage in Miner Slough.

Seepage through the Miner Slough/Ryer Island Levee is also controlled by the stage in Miner Slough and is not related to the flooding of Prospect Island.

Permanent flooded conditions on Prospect Island as proposed by the Corps are not expected to increase the stage in Miner Slough, and therefore, are not expected to impact water levels beneath Ryer Island.

With respect to the information you provided us in your letter of November 25, 1997, the well data appear to be the same as the data already reviewed by the Corps. As noted above, these data are helpful in providing some insights into water table levels within the first 10 feet of Ryer Island, but are not conclusive of a seepage link between Prospect Island and Ryer Island. The soil map and soil descriptions you provided in the March 31, 1998, letter appears to be from the Soil Conservation Service's "Soil Survey of Solano County, California," 1997. That document provides useful agricultural information about near surface soil types. However, the information

applies only to the upper few feet of soil and therefore does not provide subsurface data from which to draw conclusions regarding foundation seepage.

3. In your letter of November 25, you state: "The EA/IS should have analyzed the potential effects from the project on fish migration patterns, predator species intrusion, water quality degradation, erosion of levees, potential disruption of access to islands, and ship channel degradation." You state you are particularly concerned with levee erosion which could result in failure of a levee and consequent flooding of adjacent Ryer Island and your contention that the Corps has inadequately analyzed the potential effects of flooding Prospect Island on the levees, especially those adjacent to Ryer Island. You further contend that the assessment must analyze the potential effects of a 100-year storm event to determine whether the levees will withstand wind, wave and overtopping.

Response: Analysis of Potential Effects on Levees Adjacent to Ryer Island. Prospect Island is located within the Yolo Bypass and is intended to flood during major storm events. Our analyses indicate that wind and wave run-up effects on the Prospect Island west levee, which is a part of the Federal Sacramento River Flood Control Project, would be no greater, and likely less, than under current without-project conditions. The wind and wave analysis is based on the "design wind," which is computed using observed wind speeds, wind duration, fetch length, and water depth. The design wind is not based on a frequency, but can be considered as a worst case condition.

Currently, the western levee of Miner Slough is lower than the eastern levee of Miner Slough and during large flood events the west levee can be overtopped, creating fetch on the eastern levee. Project design includes creating a wind barrier by planting trees on the Prospect Island side of the west levee of Miner Slough. This measure would greatly decrease the wind effects on the western levee and actually reduce the wave effects on eastern Miner Slough levee during large storm events. Moreover, while it is unlikely that there would be a failure of the western Miner Slough levee following the establishment of the wind barrier, should there be a failure of the eastern Miner Slough levee, the condition would be no worse than existing conditions. In addition, the proposed design for the project includes the construction of internal islands perpendicular to prevailing summer and winter winds, which would reduce fetch and protect Miner Slough and Egbert Cut levees from wind and wave erosion.

In addition, in order to minimize erosion, the proposed project plan includes stabilizing all existing levees with embankments of a 10H:1V slope with a 10- to 40-foot-wide berm, and the breaches would be stabilized with a rock revetment on both sides. These levee embankments would provide additional areas for riparian plantings which would help to prevent wave wash and overtopping of the Miner Slough and Ryer Island levees.

Finally, to further minimize the risk of levee instability due to erosion, the project is proposed to be constructed over a 2-year period in order to allow soils to consolidate and to minimize any potential for landside slope failures at or near the Prospect Island levees. Plants would be maintained and replaced for a 3-year establishment period following the completion of project construction. Maintaining the wind barrier along Miner Slough levee for the project life

would be included in operation and maintenance requirements for the project. DWR and the U.S. Fish and Wildlife Service (FWS) are drafting a cooperative management agreement for long-term maintenance for the project which would be executed before project construction begins.

Predator Species Intrusion. With respect to the issue of potential impacts of predator species intrusion as a result of the proposed project, although all species of fish are predatory in nature, the project is designed to encourage habitat for California native species over introduced species. The project design provides a deep channel running north to south in the interior of Prospect Island. This would bring the tidal influences into the interior of the island. With increased circulation due to tidal influence, internal water temperatures would be cooler than they are currently in the flooded condition. A monitoring plan was developed whereby DWR and the State Department of Fish and Game scientists would regularly sample the fish in the interior of Prospect Island to determine if Prospect Island is being used primarily by native or exotic fish. If primarily exotic fish are found in the interior of Prospect Island, the monitoring team would recommend changes in the project design.

Water Quality. We expect water quality to be improved with the project because no additional agricultural chemicals would be applied to Prospect Island that could be washed into surface waters during flooding. The Central Valley Regional Water Quality Control Board was consulted for a more definitive analysis of the effect of the project on water quality. The Board found that the project would benefit water quality in the area and would not have adverse effects. The monitoring program designed by DWR would include a water quality monitoring element. Water quality in the interior of Prospect Island would be regularly evaluated, and if problems arise, the monitoring team would recommend changes in the program design.

4. You requested that the Corps consult with the FWS to determine if there would be any restrictions placed by them on the use of adjoining farmland when the Prospect Island area is named as a fisheries habitat. Specifically, you asked for a determination as to whether the FWS would require fish screens on irrigation pumps, or any other restrictions on the use of farm equipment in, at, near, or around the fisheries habitat.

Response: On March 5, 1998, representatives from the Corps and DWR discussed relationships of the project and the Delta smelt with Mr. Mike Thabault of the FWS's Endangered Species Office. He informed us that no new or additional restrictions would be placed on Ryer Island as a result of Prospect Island restoration. We also contacted Mr. Tom Harvey, also with FWS, who would be the future refuge manager for the proposed project, concerning possible restrictions on adjoining farmland. He also assured us that no new restrictions would be imposed by the refuge on traditional activities that are conducted by surrounding landowners. Furthermore, in the event that fish screens are required on neighboring diversions in the future, the refuge would consider cooperatively seeking grant funding opportunities for screen construction in partnership with neighboring landowners.

5. You asked for a complete list of reports and studies used in the development of the report and a list of all the personnel who contributed to the report.

Response: We have expanded the list of source information and added information on all of the preparers in the final Ecosystem Restoration Report (title changed from PMR) and EA/IS.

6. Based on the above, it is our determination that the proposed restoration project on Prospect Island would have no significant adverse environmental effects on environmental and cultural resources and that the Ecosystem Restoration Report and EA/FONSI are sufficient to meet the requirements of the National Environmental Policy Act.

7. If you have additional questions regarding this response, please contact Ms. Lena Hsia, Project Manager, at (916) 557-7117.

Sincerely,

Walter Yep
Chief, Planning Division

Encl

cc:
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Sac Riv Br
Env Rest. Br
ED
OC

Hsia
Oto
Clark
Murphy
Korman
Yep