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James Mayer  
Executive Director  
Little Hoover Commission

October 9, 2005

Dear Mr. Mayer:

Thank you for your note requesting that I testify at the Little Hoover Commission hearings regarding the CALFED Bay-Delta Program on October 27, 2005. I will be in attendance that day and am glad to answer any questions the commissioners may have. This letter is a summary of the main points that I will make in my testimony.

In your letter asking me to testify, you sought input on the status of California's levee system and how it relates to the CALFED governance structure. As a member of the CALFED Independent Science Board, a former member of the State Reclamation Board, and a university researcher whose work focuses on flooding and floodplains, I am intimately familiar with this issue. Based on my observations of CALFED during the past 10 years, I offer these general conclusions:

- Next to flow regulation from dams and diversions, the levees in the Delta and along the Sacramento and San Joaquin Rivers constitute the single greatest influence on the health of lowland and Delta aquatic and riparian ecosystems in the Central Valley. These levees also protect the economy of the Central Valley, reducing the frequency of, although not eliminating, damaging floods.
- All of CALFED's major programs are affected by levee integrity, particularly within the Delta. Levee failures directly impact water supply reliability, water quality, and ecosystem restoration. It is appropriate for CALFED to have direct involvement in levee integrity and configuration issues.
- Up until a year ago, all CALFED program planning, including the levee integrity program, was based upon the assumption that the configuration of the network of 1100 miles of levees that surround subsided islands in the Delta would remain fixed into the indefinite future. Analysis of the potential impacts of continued subsidence, sea level rise and seismicity demonstrated that the Delta levee network is at considerable risk, with a roughly 2-in-3 probability of substantial levee failures during the next 50 years (article attached). This issue had not been factored into any of the CALFED efforts.
- Although levee integrity or modification is integral to CALFED's efforts, the level of engagement between CALFED and various responsible agencies was erratic and muddled. For the most part, the Levee Integrity program in CALFED focused on improving wildlife and fish habitat through levee modification, reducing the impacts of boat wake erosion through bioengineering, and experimenting with methods to restore subsided island elevations to reduce the potential water quality impacts associated with levee failures.
- It is my impression that CALFED was not an aggressive participant in levee maintenance and upgrade issues. These efforts were ceded to the responsible agencies including the Department of Water Resources

(DWR), the State Reclamation Board, the Department of Fish and Game, the US Fish and Wildlife Service and the Army Corps of Engineers. The relationship between the various agencies is also muddled, with unclear jurisdictions. DWR is the primary agency responsible for levee integrity in the Delta and administers special projects and the state subventions funds. The US Army Corps of Engineers, with the Reclamation Board as its state partner, will conduct projects, such as levee upgrades and repairs. However, roughly 80% of the levees in the Delta are privately owned and maintained and do not meet basic federal standards.

- Following the floods of 1986, the State invested resources into improving levees in the Delta. This effort set basic hazard mitigation standards, below that of federal PL-84 levee standards, for Delta levees. These minimum standards are tied to 1986 hydrology and are therefore out of date. In addition, these standards do not address the potential for levee failure associated with earthquakes and the long-term effects of sea level rise and island subsidence. Due to tight budgets, state and federal support for levee improvement projects has been limited. According to DWR personnel, there is a backlog of \$1-2 billion in levee maintenance and upgrades in the Delta alone.
- The levee system outside of the Delta protects multiple urban and farm centers. Comprehensive assessments by DWR, the Reclamation Board and the Army Corps of Engineers indicate that the levee network is in need of substantial repair and upgrading. This flood management system, which includes dams, levees, channels, pumps and bypasses, is old, underfunded, and, even if repaired to original design standards, lacks the capacity to protect the rapid growth of urban areas in the Valley. Although CALFED funded research that examined the potential benefits of levee setbacks or levee breaches and bypasses for ecosystem restoration, it is my impression that CALFED specifically chose to not engage on the issue of flood control.
- It is my professional opinion that one of the most significant long-term threats to CALFED programs in the Delta is urban encroachment. Small towns within the Delta are seeking to grow; major urban centers, particularly on the east, south and southwestern margins of the Delta are planning tens thousands of new homes in the Delta. Many of these homes will be in subsided islands that lie below sea level. This encroachment will negatively impact regional flood control, water supply reliability, water quality and ecosystem restoration and eliminate flexibility in how we manage the Delta. Indeed once homes are in the Delta, the Delta must be managed for public safety first. All other issues become secondary. CALFED, along with all state and federal government agencies in CALFED, chose not to engage on this thorny local land use issue (note: the State Reclamation Board is not a CALFED member agency).
- Based on the analysis of future trends in the Delta landscape and ecosystems, coupled with projected long term changes in hydrology and water supply demand, it is my opinion that CALFED's goals and objectives, as laid out in the 2000 ROD cannot be achieved. The present mix of farming, water supply, wildlife habitat, recreation, shipping, transportation and, increasingly, urbanization cannot be sustained into the future on a business-as-usual basis. For this reason, as part of the reorganization of CALFED, it is appropriate to suggest that a mechanism be developed to 1) assess current trajectories of change in the Delta and their potential impacts on economic and cultural activity; 2) develop a method for evaluating or simulating the impacts of a range of potential policy changes; and 3) develop a legislative strategy to adaptively manage change in the Delta over the long term. Currently, DWR is conducting a Delta Risk Management Strategy study that focuses principally on how to manage current risks associated with levee failures in the Delta. This is only one component of future management of the Delta and needs to be incorporated into a larger, forward-looking planning effort. It is my belief that this effort should be, and should always have been, either within the purview of CALFED or run by a neutral, independent organization, such as a foundation.

**Independent Science Critical for a Credible Cal-Fed Program.** In addition to comments about the levies, I would like to make some general observations about the CALFED Science Program as it relates to governance. In particular, I would recommend that the Commission in its recommendations for revising the governance structure of CALFED pay close attention to ensuring a robust and independent science program. I want to direct you specifically to the comments of Johnnie Moore, former Lead Scientist, who has captured many of my concerns.

However, I do want to offer three comments about the CALFED Science Program that the Commission may want to consider in their review.

- I share the view of many outside of the CALFED scientific community who criticized the Science Program and the Ecosystem Restoration Board for not developing scientific efforts that would directly guide policy and remain tightly focused on CALFED goals and objectives. There was the mistaken belief during the early stages of development of CALFED that simply promoting the “best science” was going, over the course of many years, result in high quality science to support policy. This “build-it-and-they-will-come” strategy did not work, and will not work within the current political atmosphere of CALFED. Conversely, I also found the Bay-Delta Authority, with its cumbersome, consensus-based organization and commitment to process as a measure of progress, to be ill suited to adapt to new science that would help guide policy. The disconnection between science and policy was a two-way street and deserves close attention in any kind of reorganization.
- CALFED, regardless of the nature of its reorganization, must have a Science Program if it is going to remain credible, effective and accountable. Moreover, this program must be independent, with the ability to give good news, bad news, and unbiased evaluation of agency actions without pressure or reprisal from those agencies, stakeholders or the legislature. You need only look at other programs, like the efforts to restore the Everglades, to see the poisonous effects of the intrusion of politics into the science program. In my view, a lean, more focused Science Program should serve a watchdog function, evaluating and commenting on measures of success, effectiveness of agency efforts, identification of critical uncertainties, and, perhaps most importantly, spearheading the all-important role of translating science in a way that better informs policy decisions. Trying to embed the CALFED Science Program into an agency, like DWR, or an organization like the Interagency Ecological Program would be, in my view, a mistake. Agencies and organizations like IEP tend to warp priorities toward preserving their core functions and personnel and avoiding controversial actions. The Science Program should be independent, controversial, and should regularly challenge agency efforts and assumptions.
- Finally, there is the belief that somewhere, somehow, some other group must have gotten something like CALFED put together and gotten it right. Regrettably, I do not think that there is an effective analog that can be used. The challenges facing CALFED are unique and an order of magnitude more complex than our traditional comparisons with the Chesapeake, Everglades, Columbia River, and Glen Canyon. The CALFED Bay-Delta program will have to invent its own solutions, tailored to its own unique issues.

I look forward to testifying before your committee.

Sincerely,

Jeffrey Mount  
Professor and Director