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Science
Board

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Dear Members of the Delta Visioning and Planning Community:

Without endorsing any conclusions, recommendations, or particular lines of argument of *Envisioning Futures for the Sacramento – San Joaquin Delta*, initiated and recently published by the Public Policy Institute of California, the CALFED Independent Science Board (ISB) commends the broad process undertaken by its authors and wishes to make a few important comments about both the strengths and the weaknesses of the analysis.

Envisioning Futures undoubtedly will and appropriately should play an important role, among other analyses yet to come, in how we think about the Delta over the coming year and beyond. It is an important document precisely because it was undertaken by scientists from multiple disciplines who stepped back and took a fresh look at what we know about the Delta and what this implies for its possible futures. The breadth of possible futures considered is exemplary. We have not seen an analysis of comparable breadth, depth, and clarity of a key aspect of California's future for many years. It provides a very good first stepping-stone into the turbulent, turbid stream we need to cross. At the same time, we want to emphasize that it does not provide an adequate basis from which to leap to the far side.

First, one of the strongest aspects of *Envisioning Futures* is the emphasis on change in the second (The Legacies of Delta History) and third (Drivers of Change within the Delta) chapters. The recognition of a landscape vision for the Delta that accommodates natural processes to the extent feasible and minimizes unsustainable conditions is key. It is absolutely critical that our understanding of the Delta's past and future be dynamic. Yet the presentation and analysis of alternatives was static. The study neither addressed the paths to any of the alternatives nor addressed the vulnerability of the alternatives to the on-going drivers or an earthquake event. "Getting there" is exactly what has proven so difficult to date. Several members of the ISB were concerned that ignoring steps that can be taken, and in many cases will have to be taken, over the next fifteen or so years before a "hard solution" such as a peripheral canal is in place biases the analysis in this study toward the "hard" alternative. The process and uncertainties for getting from where the Delta is now to each future alternative should be considered in the evaluation process, not after an alternative has been selected. Furthermore, not discussing vulnerability to

driving forces, long-term risks, and new developments in our understanding of the Delta after an alternative is in place also favors “hard” alternatives.

Second, *Envisioning Futures* is also a strong analysis because it draws heavily on recent developments in our knowledge of hydrologic, levee, and biological dynamics and vulnerability. ISB members were especially impressed with how cogently the authors described the significance of shifting from thinking of the entire Delta as “naturally” a freshwater system to thinking of the Delta as an estuarine system where salinity varies both spatially and temporally. We need to be open to taking a variegated landscape view to more fully achieve multiple public objectives. At the same time, several members of the ISB were concerned that the argument that fluctuating salinity levels would favor native species was not rigorously examined or incorporated into any models of future conditions. Other members expressed concern that, given climate change, the whole concept of native species may change to include species that are native to already warmer climates.

Third, *Envisioning Futures* is concise and readable, but this is partly because critical complicating issues such as the quality of water for both human uses and for protection of ecosystems are not adequately addressed in the analysis of alternatives. Even the economic analysis of the agricultural implications and the qualitative evaluation of environmental changes are first-cut efforts. In short, while the range of alternatives considered is broad, we encourage a fuller portrayal and richer approach to the evaluation of alternatives in future studies.

Envisioning Futures provides a good start to thinking about the future of the Delta. The Independent Science Board will be reviewing a number of key documents over the coming year and is taking an active role in seeing that the CALFED *State of Science* report, to be released near the end of the year, also constructively contributes to our understanding of the Delta.

Sincerely yours,

Judith L. Meyer, Vice Chair
On behalf of the Independent Science Board

cc: Blue Ribbon Task Force Members
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California Bay-Delta Authority Members
Bay-Delta Public Advisory Committee
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