



Delta Independent Science Board

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February 11, 2019

Delta Plan Interagency Implementation Committee
Attention: Susan Tatayon, Chair
980 Ninth Street
Sacramento, California 95814

Sent via e-mail to Susan.Tatayon@deltacouncil.ca.gov

Subject: Urgency & Opportunities for Improving Delta Interagency Science & Technical Integration

Dear Delta Plan Interagency Implementation Committee Members,

In reviewing the first five-year update to the *Delta Science Plan* and the Delta Stewardship Council's draft *Delta Science Funding Resiliency Strategy*, it became clear to us that the State's overall portfolio of science and technical activities for the Delta is substantial and useful. Yet the scientific enterprise must become better organized and accelerate efforts to address the rapidly growing and interlinked challenges for science-based policy and management decisions for the Delta, including science to support adaptive management and negotiated environmental agreements under trying circumstances.

Environmental conditions are changing at an increasing rate and demand comprehensive scientific advances that take advantage of rapidly evolving technology to meet policy goals and support management strategies for the Delta's future. Climate change, new invasive species, the end of groundwater overdraft, less water from the Colorado River, increasing demand for water exports, and declines in native species fundamentally challenge ecological sustainability in the Sacramento-San Joaquin Delta and water management throughout California. Most scientists acknowledge this. However, without a fundamental shift to more forward-looking science and accompanying policy discussions, it is likely that we will fundamentally mismanage the Delta. When things are moving fast, looking farther ahead is necessary to reduce mishaps.

The State of California's Delta Plan Interagency Implementation Committee, working with local governments and other non-governmental and university expertise, needs to initiate and lead a bolder, forward-looking, and better integrated science and management program that provides policy-makers and managers with better scientific information and management options for the Delta.

Interagency science efforts for the Delta have certainly improved in recent years, but remain insufficient to support the kinds of science-driven policies and solutions needed to address the Delta's diverse, interacting, and rapidly changing management challenges, which routinely span the mandates of multiple agencies.

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Moreover, climate change will bring higher sea levels, temperatures, and evapotranspiration, together with shifts in land use, alterations in inflows, and introductions of new species that will fundamentally change the composition of Delta ecosystems and pose unforeseen challenges for managing water supply and water quality.

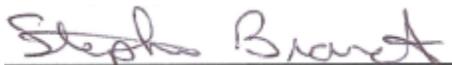
Moving forward will require scientific leadership and vision, identification of major scientific priorities, and organizational and funding structures to greatly enhance interagency science integration. This can be accomplished in various ways. The major state, federal, and local agencies and users involved in science for the Delta, along with major non-agency Delta and estuary specialists, should develop a comprehensive scientific needs assessment based on fundamental system-wide scientific and management challenges facing the Delta.¹ This could be accomplished with the commission of a task force of leading scientists from inside and outside the Delta system to identify 1) future Delta conditions and fundamental driving forces, and 2) science needs to forecast/predict how the Delta might change under these conditions. Stakeholder engagement also must be an important component of this effort. The Delta Independent Science Board can help to organize and implement the framework for the scientific needs assessment.

In parallel with a scientific needs assessment, specific planning for substantially more aggressive multi-agency organization is necessary to provide leadership and an effective structure for creative scientific and technical integration. Potential organizational structures for promoting scientific and technical integration should include establishing a Joint Powers Authority (e.g., the Southern California Coastal Water Research Project and the San Francisco Estuary Institute/Aquatic Science Center) and/or a system of problem-focused joint science centers that involve experts from a variety of agencies, universities, and NGOs.

Without an urgent and fundamentally more effective approach to organizing science and technical information for the Delta, we can expect a deterioration of the ability of science to support decision-making and solutions for the Delta's problems. This is counter to what is frequently advocated by policy-makers.

History may view this and coming decades as the time when critical decisions about the Delta ecosystem and water management throughout the state should have been made. The time for action is now. We look forward to working with you to address this major issue.

Sincerely,



Stephen Brandt, Ph.D.
Chair, Delta Independent Science Board
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¹ Climate change might be valuable as an initial unifying theme for integrating the State's technical and scientific work on the Delta because it is affecting all Delta problems and will create new problems.