MBK ENGINEERS

Water Resources ◆ Flood Control ◆ Water Rights

GILBERT COSIO, JR., P.E.
MARC VAN CAMP, P.E.
WALTER BOUREZ, III, P.E.
RIC REINHARDT, P.E.
GARY KIENLEN, P.E.
DON TRIEU, P.E.
DARREN CORDOVA, P.E.
NATHAN HERSHEY, P.E., P.L.S.
LEE G. BERGFELD, P.E.
BEN TUSTISON, P.E.

ANGUS NORMAN MURRAY
1913-1985

CONSULTANTS:
JOSEPH I. BURNS, P.E.
DONALD E. KIENLEN, P.E.

June 15, 2015

Via Email: dustin.jones@deltacouncil.ca.gov

Mr. Dustin Jones
Delta Stewardship Council
980 Ninth Street, Suite 1500
Sacramento, CA 95814

Subject: Comments on "Delta Flood Management Investment Strategy Principles," May 28, 2015

Dear Mr. Jones:

Thank you for the opportunity to comment on the above-noted document. As you know, our clients are reclamation districts and landowners in the Delta. In many cases, these clients go back several generations in the Delta. They understand the value of preserving the "Delta as place" and as such have spent millions of dollars rehabilitating and maintaining the levees that provide their livelihood and protect their property. In addition, they understand the levees provide protection to many other beneficiaries and the environment. They also appreciate that State funding has been available through the Delta Levees Program.

We are sharing our comments with our Delta clients. For those who have not reviewed the above-noted document, it is enclosed as Attachment A.

Our comments are summarized below. In general, we have found that the strategy principles do not clearly reflect an understanding of the current state of the Delta levees, and the future conditions following final expenditure of Proposition 1E (2006) funding. We believe this point to be critical for understanding the future maintenance and rehabilitation needs of the Delta levees under the Delta Stewardship Council (DSC) and its Delta Plan.

Following are our comments separated by the sections described in your document.

Delta Flood Management Investment Strategy Principles

The introductory paragraphs attempt to describe the current situation regarding Delta levees, with particular emphasis of the effect of the Delta Levees Program. However, there are a number of mischaracterizations of the Subventions Program and little discussion regarding the Special Projects

Program. This section should be expanded to summarize the status of the Delta levees following expenditure of existing Propositions 1E and 84 (2006) bond funding.

The second paragraph suggests that Subventions expenditures (State and local funds combined) have improved levee maintenance on many islands. However, up until 2008, Subventions was essentially the only funding for non-project Delta levees not included as one of the eight western islands; because of this, Subventions was used to perform major rehabilitation of most of the Delta's non-project levees for 20 years after SB34 (1988) increased funding. Based on levee surveys of the late 1980's, the high water events of 1995, 1997, 1998, and 2006 would have overtopped, and potentially failed, levees had it not been for the levee rehabilitation performed under the Subventions Program. Following expenditure of currently allocated bond funds, most of the major rehabilitation will be complete and the Subventions will be used for maintenance and minor improvements.

This paragraph that describes flood damage reduction as a result of Subventions also indicates that Subventions could not alleviate the risks that left Liberty and Mildred Islands flooded and not reclaimed. However, neither of these islands ever participated in the post-SB34 Subventions Program. In fact, Liberty Island is part of the Yolo Bypass, and therefore designed to overtop and flood. In both of these cases, the failure to reclaim the islands was due to decisions made by the landowners.

Similarly, this paragraph describes levee failures in the 1980's, 1990's, and one in 2004 as indicative of a Subventions Program shortcoming. However, levee failures in the 1980's were pre-SB34, and levee failures during floods of the 1990's did not occur on Subventions-eligible levees. In fact, since 1986, only two Subventions-eligible flood control levees have failed, and neither of these was due to high water. Little Mandeville had participated very little in the Subventions Program prior to its failure in 1994. In fact, this island was in the process of being sold to the State when failure occurred. The 2004 failure of Upper Jones Tract appears to have been caused by a beaver den.

We would suggest that this section be modified and data updated to better describe the current state of the Delta levee system.

An Improved State Strategy for Flood Management Investments in the Delta

This section appears to make unsubstantiated statements. For instance, the last paragraph at the bottom of page 1 states that funds available for Delta flood management are not sufficient to "significantly raise the level of protection" throughout the estuary. It also indicates that available State money is "about ten percent of current estimates of what is needed to significantly improve protection everywhere to the levees called for by local agencies and prior State plans." The next paragraph also describes how available funding can only provide funding "thinly throughout the Delta." Please provide data to substantiate these assertions. In addition, in the absence of a "beneficiary pays" study, it is unknown what other funding sources are available and what funding would be available from these sources. Again, we would suggest that the DSC evaluate the condition of the Delta levee system following expenditure of current Proposition 1E funding.

Comments on Principles

Principle 2 – Reclamation Districts do not make land decisions, so it is unusual that they are identified in this principle. In addition, the Delta Protection Commission has this authority in certain parts of the Delta and possibly should be included in this principle.

Principle 3 – This principle suggests that maintenance does not reduce risk, and that maintenance should not be funded by the State. Due to the nature of flood control structures like levees, and in particular Delta levees, probability of failure increases if levees are not maintained. In addition, the State has found that maintenance of levees, and maintaining the Delta in its current state is of importance to the State. Water Code sections 12980, et seq., describe the Delta Levees Program. The statewide significance of the levee system is more specifically described in Section 12981 (Attachment B).

Principle 4 – We have no general objections to this principle. However, it should be noted that we are still several years away from a beneficiary-pays program being accepted and in place.

Principle 5 – We have no objection to this statement. However, since urbanization only exists on the very outer fringe of the Delta, and if it is the only priority due to funding limitations, the goals of habitat enhancement, water supply and Delta as place are completely ignored.

Principle 7 – We understand ecosystem enhancement is a coequal goal, so we have no general objection to this principle. However, we do not believe the State has developed plans and incentives needed to develop habitat in conjunction with levee projects. In addition, not all levee projects are in areas where conditions are conducive to habitat development. Therefore, we urge the DSC to consider programmatic habitat improvements as a principle.

Principle 8 – We have no objections to this principle. However, we would encourage development of other regional projects that would combine flood control, water supply, and ecosystem improvements.

Principle 9 – We agree with this principle; however, other principles, guidance, and observations included in this DSC paper seem to indicate that levee maintenance and maintaining the existing configuration of levees are not important to protecting these unique values. We would argue that the current levee system is the most important component of the unique Delta values and the notion of "Delta as place."

Principle 10 – We do not agree with this principle. Again, we would direct your attention to Water Code section 12981 (Attachment B).

Principle 11 – We are currently in the early stages of determining whether an overarching flood district would be beneficial. However, we agree that there are beneficiaries of Delta levees who do not currently fund their fair share of levee improvements.

Further Guidance for Developing a State Strategy for Flood Management Investments in the Delta

<u>Guidance Point 2 – Measure Risk Reduction</u>

In theory this appears to be an appropriate tool to consider. However, at this time, not enough levee data exists to adequately measure risk reduction. As a result, generalizations would have to be made, which are difficult due to the varying conditions of Delta levees. The amount of work to acquire adequate levee data would be extremely expensive and therefore, up to this point, has only been performed on levees protecting urban populations.

Guidance Point 3 – Prioritize Multi-benefit Projects

As explained above, we would suggest a programmatic approach.

Guidance Point 4 – Protect the Delta's Unique Values

We agree with this point; however, it appears to contradict Principle 10.

Thank you for the opportunity to submit these comments. Over the years we have seen Delta levees improve greatly to the benefit of Delta landowners, and all the other beneficiaries. In addition, we have seen enhancement of the Delta ecosystem. We are looking forward to working with the Council in the future to assure protection of life, property, water supply and the environment.

Sincerely,
MBK ENGINEERS

Gilbert Cosio, Jr.

GC/jp/jw
2525/DUSTIN JONES 2015-06-15

Attachments

cc (via email):
Melinda Terry, CCVFCA
Dante Nomellini, Sr., CDWA
Tom Zuckerman, CDWA
John Herrick, SDWA
Erik Vink, DPC
Osha Meserve, LAND
Chris Neudeck, KSN
Gil Labrie, DCC Engineering
Mike Hardesty, CCVFCA
26 Reclamation Districts represented by MBK who participate in the Delta Levee Subventions Program

Delta Flood Management Investment Strategy Principles

Let us start with the most fundamental fact available: with lands near or below sea level at the outlet of two major river systems, the Delta is inherently flood-prone. Our forbearers wrestled these lands from the Delta's marshes and channels, constructing 1,100 miles of levees with some of the 19th century's best engineering. Constant effort is still required today to protect the region's residents, farms, and businesses from flooding.

Over the past four decades, Delta levees have been improved, at considerable cost to area landowners and the State. Subventions have helped improve levee maintenance on many islands. The record of declining flooding damage and testimony to the Council reflect these improvements. But other alternatives to reduce flood risk have not been fully evaluated. Flooded areas, such as Liberty and Mildred Islands, and levee failures in the 1980s and 90s and in 2004 remind us that our efforts are not always sufficient. The best science tells us the challenge of managing flooding in the Delta will only grow more difficult in the future due to land subsidence, erratic climate patterns, the possibility of earthquakes, and rising sea levels.

The Delta's primarily rural character assists in flood management, reducing the population and property at risk of damage. Unfortunately, too much of the Delta has been urbanized which contributes to the expensive challenge of flood protection.

Modern science and engineering know of no way to eliminate all risk from flooding in the Delta. This fact is essential to any reasonable State policy. Reducing risks is often possible, and usually desirable. But eliminating all flooding risks in the Delta is impossible.

An improved State strategy for flood management investments in the Delta

A meaningful State policy seeks to reduce flood risk in the Delta in ways that are achievable and cost effective. Simultaneously a rational flood protection policy must also serve the two coequal goals of California law: …a more reliable water supply for California and protecting, restoring and enhancing the Delta ecosystem", achieved in a manner that protects and enhances the "unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place" (Public Resources Code section 29702).

The Delta Plan is required to attempt to reduce risks to people, property, and State interests in the Delta (Water Code section 85305) by promoting:

- Effective emergency preparedness,
- Appropriate land use, and
- Strategic levee investments.

The Council is required to recommend in the Delta Plan priorities for investments in levee operation, maintenance, and improvements in the Delta, in consultation with the Central Valley Flood Protection Board (Water Code section 85306).

The funds available for Delta flood management are not sufficient to significantly raise the level of protection throughout the estuary. Currently available State money is about ten percent of

current estimates of what is needed to significantly improve protection everywhere to the levels called for by local agencies and prior State plans. Federal funding for flood protection and relief is the most restricted. Local flood agencies have an uneven ability to finance improvements.

A levees investment strategy in which "all priorities are important" and "everyone is equally entitled" is unaffordable and unlikely to promote effective flood protection. Spreading inadequate funding thinly throughout the Delta cannot address the serious flood risks to people, property, and State interests in the Delta. Therefore, the State must set priorities for its spending. Large urban centers must be protected, because so many lives and so much property are at risk. They should pay more towards levee improvements, because they can. Small communities need help, but evacuation strategies or assistance with nonstructural measures that reduce risk may be more cost effective.

For the past year, the Council has pursued information and insights from many sources in order to update the Delta Plan provisions that address flood-related risks. Based on its consideration of this input, it endorses these principles to guide the development of its Delta Flood Management Investment Strategy. Further guidance is also provided to the Council's staff and consultants about the application of these principles as they further develop the investment strategy.

Principles to Guide State Flood Management Investments in the Delta:

1. The goals of State law and the Delta Plan—and, therefore, the Delta Levee Investment Strategy—are to better protect life, property, and State interests in the Delta.
2. Stop urbanizing flood-prone land. Local governments and reclamation districts must stop urbanizing the Delta or invite rejection of Delta subvention requests from the State.
3. Expenditures should reduce risk. Going forward, State investments should emphasize rehabilitation of levees to improve safety, rather than subsidizing routine maintenance that is landowners' responsibility.
4. The Delta Levee Investment Strategy should be based on the Delta Plan principle that beneficiaries pay. The State share of levee improvements should reflect the State interests at stake.
5. State flood management investments to protect major urban development remain the first priority.
6. Water conveyance channels and the levees that protect water quality for water users need protection. Water contractors and other water users who benefit should pay for these levees' improvement.
7. State funds must enhance the ecosystem even if projects cost more to the State and to reclamation districts. The channels and riversides affected by levees are too important to the Delta ecosystem to ignore these needs. And the practical fact is that a reliable supply of water is only possible when the Delta ecosystem is significantly improved.
8. System-wide needs require consideration. These include the bypasses and project levees of the State Plan of Flood Control, the proposed Paradise Cut Bypass recommended in the Delta Plan, and other non-project levees whose contributions to State interests are demonstrated.

9. Impacts to the Delta's unique values matter.
10. Non-project levee proposals seeking state funding must prove they protect many people and/or assets or help achieve the co-equal goals. Landowners have no entitlement to State funding of repair, improvement, or maintenance of non-project levees.
11. The Delta needs a Flood District and it must charge all beneficiaries, including railroads, electrical and telecommunication utilities, gas and oil infrastructure, commercial shippers, and the numerous water conveyance systems that cross the Delta.
12. State investments in the Delta's flood management system must consider post-flood recovery responses by local, state, and federal agencies and the efficacy and likelihood of financial assistance after major flood damage.

Further guidance for developing a State strategy for flood management investments in the Delta

1. Evaluate alternative approaches. A State Investment Strategy that achieves the desired goals and is cost-effective must start by evaluating all flood protection alternatives, and how they might help achieve the Coequal Goals. It cannot start and end with an evaluation of levees only. As noted, required limitations on urbanization, revised cost-sharing formulas, and individual self-help actions are needed, not simply additional state funds.
2. Measure risk reduction. Measurably reducing threats to the levees' integrity, such as those posed by flood flows, earthquakes, seepage, or sea level rise, should be the objective of the Delta Levee Investment Strategy's recommendations.
3. Prioritize multi-benefit projects. Multi-benefit proposals should rank higher than single purpose funding requests. Eco-system improvements, for instance, should be a principal reason for the state to fund a project. Currently, habitat effects are often viewed as a burdensome issue of mitigation for flood control.
4. Protect the Delta's unique values. Flood risks to farmland and legacy communities must be considered as investment priorities are developed. Public access for fishing and recreation should be considered in reviewing proposals for funding levee improvements.
13. Allocate costs. The Delta Levee Investment Strategy should recommend allocations of levee maintenance and improvement costs to beneficiaries in proportion to their benefits. The cost allocations should also provide a basis for actions by the Public Utilities Commission to require regulated utilities that benefit from Delta levees to invest in these levees' improvement, as recommended in the Delta Plan.
5. Consider post-flood recovery. The Delta Levee Investment Strategy should seek to clarify the effectiveness of post-flood responses by federal, State and local agencies. The strategy should also reflect cost effective opportunities to maintain and broaden eligibility for federal post-disaster recovery assistance. Property owners are responsible for insuring their property against flood damage.

California Water Code Section 12981

12981. (a) The Legislature finds and declares that the delta is endowed with many invaluable and unique resources and that these resources are of major statewide significance. (b) The Legislature further finds and declares that the delta's uniqueness is particularly characterized by its hundreds of miles of meandering waterways and the many islands adjacent thereto; that, in order to preserve the delta's invaluable resources, which include highly productive agriculture, recreational assets, fisheries, and wildlife environment, the physical characteristics of the delta should be preserved essentially in their present form; and that the key to preserving the delta's physical characteristics is the system of levees defining the waterways and producing the adjacent islands. However, the Legislature recognizes that it may not be economically justifiable to maintain all delta islands. (c) The Legislature further finds and declares that funds necessary to maintain and improve the delta's levees to protect the delta's physical characteristics should be used to fund levee work that would promote agricultural and habitat uses in the delta consistent with the purpose of preserving the delta's invaluable resources.