

inconsistent results caused by the different mandatory cost allocation methods associated with various funding sources (federal, state, and local), and the challenges of implementing a beneficiary-pays approach given existing legal constraints. However, the archetypes also demonstrated that it is possible to quantify most of the significant benefits and use a portfolio of financial mechanisms to collect revenues from the various beneficiaries in proportion to their level of benefit.

RMS Issue 3: Inadequate Public and Policy-maker Awareness

The RMS stated that policy-makers and the public have varying levels of understanding about the risks and consequences of flooding. According to the RMS, lack of awareness and understanding can increase risks to people and property and make it difficult to achieve sustainable, long-term planning and investment that supports flood management.

Several projects are underway that will help educate the public and policy-makers about flood risk and needed investments in flood risk reduction. Concurrently with this study, the Delta Stewardship Council undertook the Delta Levee Investment Strategy (DLIS) to identify state investment priorities for the Delta.²⁷ The DLIS created a decision-support tool that uses a variety of risk measurements to identify tracts and islands that are most critical to state interests: protecting lives and property, ensuring a reliable water supply, protecting and enhancing the environment, and protecting the unique values of the Delta. In addition, the 2017 update of the *Central Valley Flood Protection Plan* is underway, which also describes flood risks and identifies priorities for investments in flood management. Discussions are underway among the staffs of the Delta Protection Commission, Delta Stewardship Council, and the Central Valley Flood Protection Board (CVFPB) to determine how to integrate their study results, determine next steps, and convey that information to the public and decision-makers in a coordinated fashion.

RMS Issue 4: Complex and Fragmented Governance Structure Impeding Agency Alignment and Systems Approach

According to the RMS, more than 1,300 agencies share the responsibility for flood management in California. Each of these agencies has “unique objectives, authorities, roles, responsibilities, and jurisdictions. The fragmentation of flood management responsibilities results in poor agency alignment, which in turn results in projects that are narrowly focused, missed opportunities for integration and funding maximization, and projects with unintended negative impacts on downstream or upstream communities and the ecosystem. Another consequence of improper agency alignment is inconsistent regulatory requirements, permitting processes, and enforcement practices.”²⁸ That observation aptly describes conditions in the Delta, with more than 80 reclamation and flood control districts, as well as several federal, state, and local agencies with interests in flood management.

²⁷ As directed by Water Code Section 85306.

²⁸ DWR, *California Water Plan Update 2013*, Vol. 3, Chapter 4, Flood Management, pp 4-30 to 4-31.

Although this Feasibility Study does not address Delta governance issues, any effort to move forward with developing new fees or funding strategies should include critical Delta stakeholders: the reclamation districts, flood districts, Delta water agencies, cities and counties, as well as state and federal agencies. Whether investigating a Delta water user fee or a flood prevention fee, the jurisdictional challenges will need to be examined in more detail. Any subsequent work on beneficiary-pays based funding for flood management will require strong coordination among regulatory, land use, flood management, financial, and other entities. Ultimately, one or more agencies will need to be authorized to develop and collect any new levies or charges, and to disburse those funds.

RECOMMENDATIONS

This study evaluated the feasibility of several financial mechanisms that would move towards a beneficiary-pays-based system for funding Delta levees. The next step should be to study the details of the candidate fees, and determine how they could be implemented. The implementation study should be conducted as a collaborative effort, which is further described below.



The implementation study should generate principles for integrating existing funding sources and new financial mechanisms, as well as detailed descriptions of how to implement a beneficiary-pays-based approach to financing levee work. These descriptions would be the basis for the third step—negotiations aimed at generating agreement on a set of policy and legislative changes necessary to authorize and implement the beneficiary-pays approach. These changes might include:

- A legislative statement of policy and intent, and adoption of a similar policy statement by the California Natural Resources Agency; and
- A strategy for resolving conflicts between transparent and equitable cost allocation approaches and the cost allocation required by constitutionally imposed limits on fees and assessments (legislation will likely be needed).

Throughout the implementation study, the results of current policy efforts (the Delta Levee Investment Strategy and the Central Valley Flood Protection Plan) should be incorporated into the beneficiary-pays framework. This will ensure that the development of financing mechanisms aligns with priorities for levee improvements.

The implementation study should follow these guidelines:

1. The four State agencies that have statutory flood management, land use, or regulatory authority in the Delta related to flood protection—DWR, Delta Protection Commission, Delta Stewardship Council, and the Central Valley Flood Protection Board—should establish a collaborative process to further develop the candidate financial mechanisms and move toward a “beneficiary-pays” based approach to paying for levee work. These agencies should be in agreement on the levee work needed, how it is prioritized, and how to pay for it (see discussion under “Additional Considerations,” below).
2. The study should include a core group of participants, with representatives of the following organizations or stakeholder groups:
 - California Natural Resources Agency;
 - Delta property owners;
 - Water exporters;
 - Reclamation Districts;
 - Owners of linear infrastructure (railroads, EBMUD aqueduct, etc.);
 - Caltrans;
 - Fish, wildlife, and habitat interests (public and private owners of habitat lands);
 - State and Federal fish and wildlife agencies; and
 - State Lands Commission.
3. The implementation study should be structured as a collaborative fact-finding process that explicitly identifies the benefits and beneficiaries of Delta levees, including property owners, water supply, habitat, infrastructure owners, and public benefits. The process should be built on explicit assumptions, jointly developed data sets and methods, and pooled expertise. The process should include a clear statement of the intended distribution of results and links to implementation.

Participants: Participants should bring relevant expertise to the process. They should demonstrate past experience in reaching agreements with diverse parties, and commit to a constructive approach to deliberation and mutual gains bargaining. The aim is to create broad based agreements that can provide the foundation for implementation.

Outputs: The study should spell out the operational details of the candidate financial mechanisms (user fee, lease fee, flood prevention fee) in more detail. Key questions to address include:

- What are the strategies to comply with legal requirements and constraints (i.e., information needed, nexus tests, benefit-cost analysis, cost allocation, voter and/or legislative approvals, etc.)?

- What entity or entities would establish and collect the fees, and distribute the funds?
- How would each fee be calculated and apportioned to beneficiaries? The study should include:
 1. Developing standard methods for calculating benefits, and articulate principles for such standards, such the type of data to be used; and
 2. Developing cost allocation methods for each mechanism and recommending how to reconcile conflicts with cost allocations required by existing law.
- 4. The implementation study should include periodic briefings to policy-makers and outreach and engagement with the broader public to share interim results and gauge political feasibility of implementation.

ADDITIONAL CONSIDERATIONS

Some observers may suggest that the development of a beneficiary-pays-based finance approach cannot reasonably precede a determination of the amount of money needed, the types of improvements, and the time frame.

In addition, some stakeholders have consistently mentioned the pressing need to address the effects of sea-level rise, continued subsidence, and seismic risk (the “3 S’s”)—all of which would bear on these key questions.

We recommend that before convening an implementation study, the proposed convening agencies—Delta Protection Commission, DWR, Delta Stewardship Council, and the Central Valley Flood Protection Board—should jointly deliberate and reach agreement as to how to address these questions and establish the scope of the implementation study.

Efforts are underway to develop credible estimates as to how much funding is needed. For example, as part of the *Central Valley Flood Protection Plan 2017 Update*, DWR and the CVFPB are investigating the total costs of improving *project levees*²⁹ within the *State Plan of Flood Control*³⁰ to state-preferred protection levels.³¹ Local maintaining agencies (LMAs) were

²⁹ Project levees are defined in Water Code Section 9110, as “any levee that is part of the facilities of the State Plan of Flood Control.” The State has committed to operating and maintaining these levees to federal standards; roughly one-third of Delta levees are project levees.

³⁰ Within the Resolution adopting the 2012 CVFPP, the CVFPB requested staff launch efforts to work with locals on Regional Flood Management Planning to estimate costs of improving levees and to study the maintenance, repair, and rehabilitation of existing flood management facilities, vs construction of new facilities. While some materials are available now, final reports will be posted in December 2016 at : <http://www.water.ca.gov/cvfmp/publications.cfm>

³¹ In 2016, the evaluation of total costs for O&M of *project levees* in the Central Valley was estimated based on regional variation. Surveys of the LMAs indicated that non-urban LMAs spend \$11,400 per mile in the Sacramento River, and \$5,000 per mile in the San Joaquin River region. After considering what should be spent to keep the

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extensively consulted during this investigation to ensure a comprehensive analysis of levee improvement needs. Many have provided five-year projections of expected work and funding requirements to DWR, but there is no comprehensive Delta-wide plan for levee improvements.

CONCLUSION

This Study found that the current suite of financial mechanisms is insufficient to reach the complete set of Delta beneficiaries, and that new mechanisms need to be created to do so. These new mechanisms would collect revenue from those beneficiaries of Delta levees who do not currently pay in proportion to their benefits. This is particularly important in light of the condition of some Delta levees and chronic underfunding of levee work.

This Study presents the mechanisms determined to be most feasible, based on a broad set of criteria. Figure 1 below shows the current financing approach with the existing mechanisms as they apply to the main categories of beneficiaries. Figure 2 shows how a new financing strategy would add one or more fees to the current financing approach. Under this new strategy, more beneficiaries would contribute to paying for levee work or other flood risk reduction measures, increasing the fairness and reliability of funding in comparison to the current financing approach. Further quantitative analysis and deliberation among stakeholders will be needed to determine the most appropriate portfolio of mechanisms and how they should be implemented.

levees maintained, DWR estimated that the Lower Sacramento River/Delta North should spend \$46,000/levee mile annually, while spending in the Lower San Joaquin River/Delta South should be \$33,000/levee mile. The questionnaires indicated that the levee districts were spending what they could collect rather than what they need. (Source: Final OMRRR Technical Memo http://www.water.ca.gov/cvfmp/docs/OMRRR_TM_May2016.pdf).

FIGURE 1

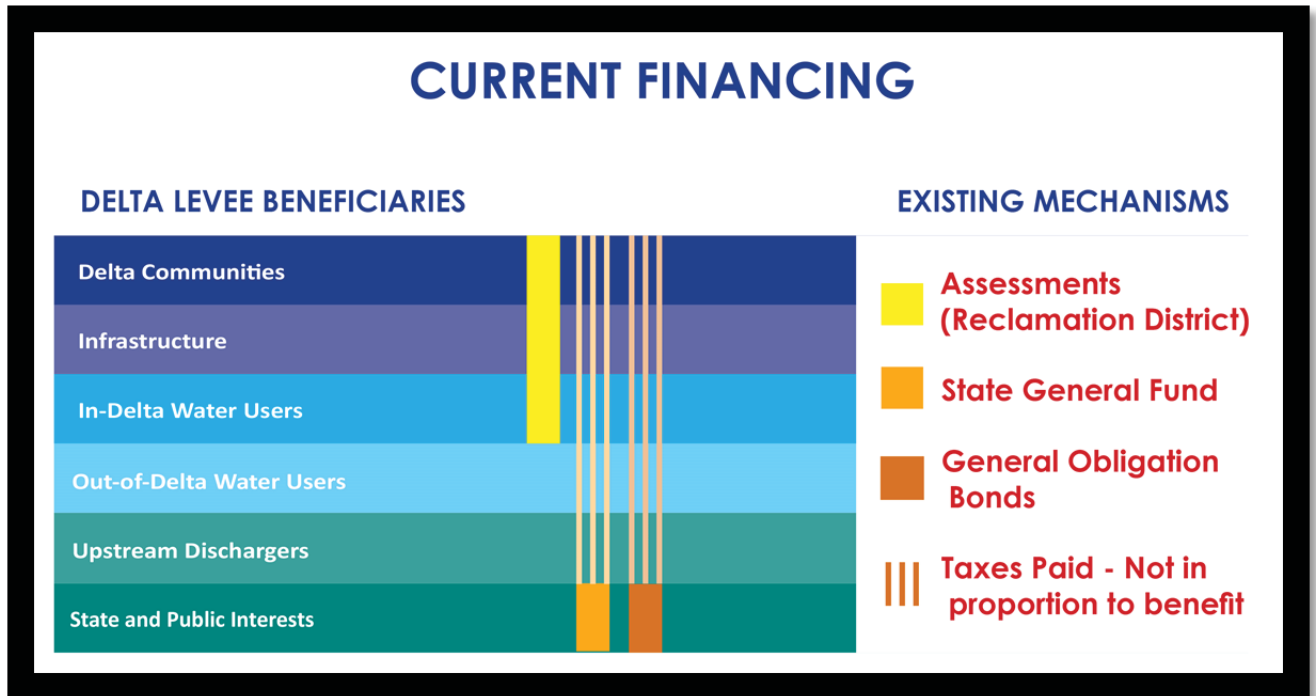


FIGURE 2

