



DELTA STEWARDSHIP COUNCIL

Delta Flood Management Investment Strategy Principles

Background presented at the July 23-24, 2015 Council meeting in support of the Principles

With lands near or below sea level at the outlet of two major river systems, the Delta is inherently flood-prone. Eleven hundred miles of levees were developed from the Delta's marshes and channels with some of the 19th century's best engineering. Constant effort is still required today to protect the region's residents, farms, businesses, and infrastructure from flooding.

Over the past four decades, Delta levees have been improved, principally paid for by the State and partially by reclamation districts. Subventions have helped improve levee maintenance on many islands. The record of declining flooding damage and testimony to the Council reflect these improvements. Additional strategies also need to be fully evaluated. The best science tells us that 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, restraining the population and property at risk of damage. Unfortunately, much of the Delta has been urbanized which contributes to the expensive challenge of flood protection.

Modern science and engineering cannot eliminate all risk from flooding in the Delta. This fact is essential to any reasonable State policy.

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 Reform Act of 2009 charges the Council 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 flood management are not sufficient to significantly raise the level of protection throughout the entire Delta 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. The State remains the chief source for funding flood protection.

An 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 and they should pay more towards levee improvements, because they can. Past practices of relying on fees from new development in flood-prone areas to pay flood protection costs need to be reexamined, because they put additional lives and property at risk and increase the demand on limited State and federal flood management funding. Small communities need help, but evacuation strategies or assistance with nonstructural measures that reduce risk may be more cost effective.

During the latter half of 2014 and the first half of 2015, the Council pursued information and insights from many sources in order to update the Delta Plan's provisions that address flood-related risks. Based on its consideration of this input, the Council endorsed these principles and the approaches to implementation as interim guidance to staff regarding development of the Delta Flood Management Investment Strategy.

The following principles were adopted at the July 23-24, 2015 Council meeting. Principle number 10 was revised as stated below, at the August 27-28, 2015 Council meeting.

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 the State's coequal goals for the Delta.
2. State funding should not assist further urbanization of flood-prone Delta land.
3. Expenditures should reduce risk. Reducing the probability of flood damage, for example, by improving levees or creating floodways, and lowering the consequences of flooding with actions like evacuation planning or flood-proofing are both important.
4. State flood management investment to protect urban areas is the first priority.
5. Water conveyance and diversion infrastructure is a high priority.
6. State funds must enhance the ecosystem even if projects cost more to the State and to reclamation districts. A programmatic approach that locates ecosystem enhancements where they provide high benefits is preferable.
7. Consider systemwide needs. Specific recommendations of the Delta Plan and the State Plan of Flood Control should be considered. These include the proposed Paradise Cut Bypass recommended in the Delta Plan, and other specified non-project levees.
8. Impacts to the Delta's unique values should be taken into account. These include the Delta's farmlands, historic communities, and natural and cultural resources.
9. 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 flood damage.
10. Reclamation districts seeking State funds for non-project levees have the burden to prove their contribution to the protection of people and/or property and the achievement of the coequal goals.

11. 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. Levee maintenance is primarily the responsibility of local reclamation districts and their property owners, not the State. The State should also take into account the ability to pay of local agencies.
12. The State should create a Delta Flood Risk Management Assessment District with the authority to charge all beneficiaries.

Approaches to Implementation of 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, limitations on urbanization, revised cost-sharing formulas, and individual self-help actions are needed, not simply additional state funds.
2. Work with others. Flood management responsibilities are shared by many State, local, and federal agencies. The Investment Strategy should present a well-coordinated program of flood management that considers these agencies' responsibilities, plans, and funding.
3. Measure risk reduction. Measurably reducing threats to levee integrity, such as those posed by flood flows, earthquakes, seepage, or sea level rise, should be an objective of the Investment Strategy's recommendations.
4. Assess benefits to regional infrastructure. Consideration should be given to how investments in levees and other flood management actions reduce risks to water and wastewater treatment systems, highways, railroads, electric transmission lines, petroleum pipelines, navigation facilities, and natural gas storage, production, and transmission facilities.
5. Prioritize multi-benefit projects. Multi-benefit proposals should rank higher than single purpose funding requests. Ecosystem 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 management.
6. Protect the Delta's unique values. Flood risks to farmland and legacy communities must be considered as investment priorities are developed. Public access for recreation should be considered in reviewing proposals for funding levee improvements.
7. Allocate costs. To the extent possible, the 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.
8. Consider post-flood recovery. The Investment Strategy should seek to clarify the effectiveness of post-flood responses by federal, State and local agencies. Federal emergency response and recovery programs need reasonable regulations that take Delta needs into account. Reclamation districts that accept State levee funding should be accountable for maintenance, inspections, and other actions that address federal program's eligibility standards. Property owners are responsible for insuring their property against flood damage.