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.