

## **Improve Flood Management**

Improving Flood Management involves the application of structural and non-structural methods including land use practices and disaster preparedness and recovery measures to reduce the risks to lives and property from flood events. These strategies also have the potential to provide other water resource benefits including water supply reliability, water quality enhancements, and ecosystem restoration.

### **Included in this strategy is:**

#### **1. Flood Risk Management**

##### **Flood Risk Management**

Flood Risk Management is a strategy specifically intended to enhance flood protection. It includes projects and programs that assist individuals and communities to manage floodflows and to prepare for, respond to, and recover from a flood. This strategy is a key element of integrated flood management, a process that promotes a comprehensive approach that considers land and water resources at a watershed scale within the context of integrated regional water management and aims to maximize the benefits of floodplains, minimize the loss of life and damage to property from flooding, and recognize the benefits to ecosystems from periodic flood events.

##### **Funding/Incentives: Flood Management**

- The Department of Water Resources should develop incentives and provide support for the creation and maintenance of IRWM plans that address regional flood management issues by January 1, 2012.
- DWR and local flood jurisdictions should establish long-term buyback programs to acquire properties immediately adjacent to levees and other structural facilities to facilitate the eventual removal of these structures, thereby enhancing the potential for setback levees and flood plain restoration where feasible.

- For routine maintenance of structural facilities, DWR should develop recommendations for streamlined environmental review and permitting that result in time and cost savings, while protecting and enhancing sensitive environmental resources.
- The State should explore additional funding options for local government preparation of revised General Plans and land use regulations that address flood risks, and for flood plain function restoration projects. State funding for flood plain function restoration projects should be prioritized based on the magnitude of flood risks that would be avoided, and the magnitude of ecosystem and water resources benefits that would be created.

### **Research/Data Development: Flood Management**

- DWR should develop a comprehensive statewide database on flood management, and make it accessible to flood management agencies and local governments. The database should include natural flood plain resources, land use and watershed boundaries, and updated flood hazard areas.
- DWR should map 200-year flood plains throughout the state, make this information available to flood management agencies and local governments, and evaluate the costs and benefits of establishing the 200-year flood as the minimum planning standard for urban and urbanizing areas statewide (Currently the 200-year standard is required only for the Central Valley.)
- The Department of Water Resources should utilize the comments and recommendations in the Flood Risk Management Strategy to inform: 1) the statewide report on opportunities and needs to improve integrated flood management; 2) the Central Valley Flood Protection Plan; and 3) Integrated Regional Water Management planning groups on regional flood management.

## **Governance- Policy and Law: Flood Management**

- The Legislature should enact legislation which clarifies the liability for structural flood management facilities and defines what constitutes “reasonable” impacts on downstream drainage and property.
- To facilitate cross-jurisdictional projects and programs, the Governor’s Office of Planning and Research should develop guidelines and model legal agreements (e.g., MOU or Joint Powers Authority) that clearly delineate responsibilities for construction, operation, and maintenance of flood management facilities and programs and address liability issues.
- The Department of Water Resources should take the lead in developing guidance and recommending improved, organized approaches for post-flood recovery, at the state, regional, and local levels. Creation of a statewide California Recovery Authority should be considered.
- Local land-use agencies should not allow new critical public facilities (such as fire stations, emergency shelters, hospitals or schools) to be constructed within the 200-year floodplain. Existing critical facilities located in flood-prone areas should be noted in the Emergency Plans prepared by local agencies, with evacuation and egress routes clearly identified.
- Local flood management jurisdictions should promote the preservation of existing flood plains and restoration of natural flood plain functions where feasible and carefully analyze the interface between natural and naturalized flood plains and structural flood management systems, to ensure that erosion and debris deposition from these natural areas do not create undue hazards to downstream facilities and property.

## **Education/Outreach: Flood Management**

- The Department of Water Resources should continue to work with the Federal Emergency Management Agency to expedite the review and update of flood insurance rate maps and expand ongoing efforts to enhance public understanding of potential flood risks.
- The Department of Water Resources should work closely with the Governor's Office of Emergency Services and California Department of Health Services to ensure a consistent approach to disaster preparedness plans and procedures.
- DWR (as required by Water Code Section 9130) and local agencies should analyze potential flood risks, including residual flood risks to property within levee protection zones, and make this information publicly available, including residual flood risks. The public, businesses, tribal governments, and public agencies should be provided with sufficient information about potential flood risks to make informed decisions that can reduce potential impacts of flooding.

## **Planning: Flood Management**

- Consistent with the governor's Executive Order S-13-08, the Ocean Protection Council, the Resources Agency, the Department of Water Resources, and the Governor's Office of Planning and Research, should (1) initiate a statewide climate change adaptation strategy, (2) request the National Academy of Science establish an expert panel to report on sea level rise impacts; (3) issue interim guidance to State agencies for how to plan on sea level rise in designated coastal and flood plain areas; and (4) initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise.
- The Department of Water Resources should, with extensive stakeholder input, describe the current status of the flood

management systems in the Sacramento and San Joaquin watersheds and recommend changes throughout the system for those areas currently receiving protection from the State-federal system by January 1, 2012, consistent with the California Water Code (commencing with §9600).

- The Department of Water Resources should, with extensive stakeholder input, prepare a report that identifies the current status of flood protection infrastructure and flood risks statewide and identifies opportunities and needs to improve integrated flood management statewide by January 1, 2012.

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- The Department of Water Resources should develop a financing strategy to address statewide flood management needs identified in the statewide report on flood management risks by January 1, 2012. The strategy should address both capital costs and operation and maintenance costs.
- Planning for structural projects should be integrated into a comprehensive Integrated Flood Management approach that takes a watershed perspective.
- Local governments should prepare revised general plans and regulations that respond to statutory mandates to address flood risks, and are updated frequently, as hydrologic projections change. As required by Water Code Section 65302, the land use element must identify and annually review floodprone areas identified by FEMA or DWR. The revised General Plans and regulations should reflect an Integrated Flood Management approach and consider future development on tribal lands. DWR and OPR should provide technical assistance to local governments to revise their General Plans and land use regulations.

- CEQA reviews of development projects in flood plains should use the latest flood plain mapping data available, implement General Plan flood management policies, and ensure that flood risks associated with development projects are fully understood and properly mitigated. The potential impacts of “floodproofing” individual development projects to the risk of upstream and downstream flooding should be evaluated and mitigated if significant.
- The Department of Water Resources should lead research into the potential effects of global climate change on precipitation and runoff patterns, and disseminate revised flood projections needed to plan for flood events. Flood management agencies and local governments should incorporate the potential effects of climate change into planning for future flood events.