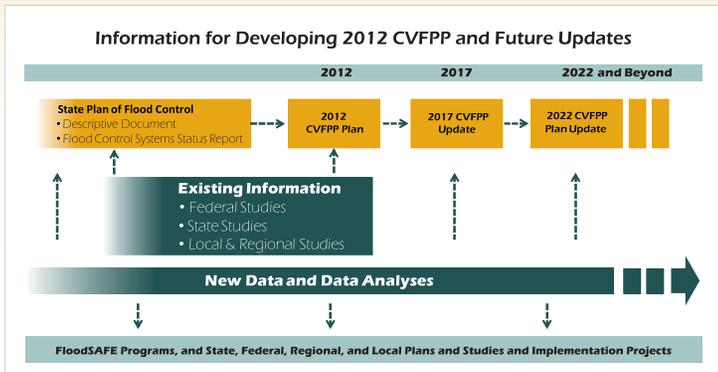


# Building on Existing Information & Developing New Data



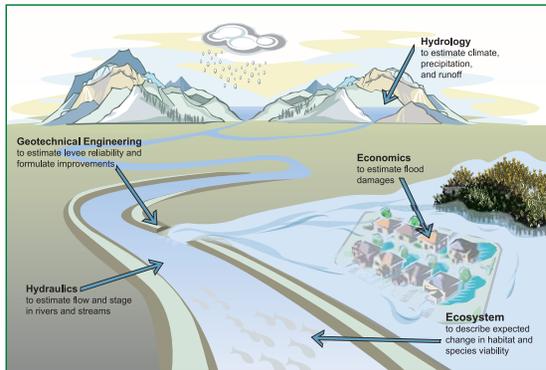
Geotechnical Exploration



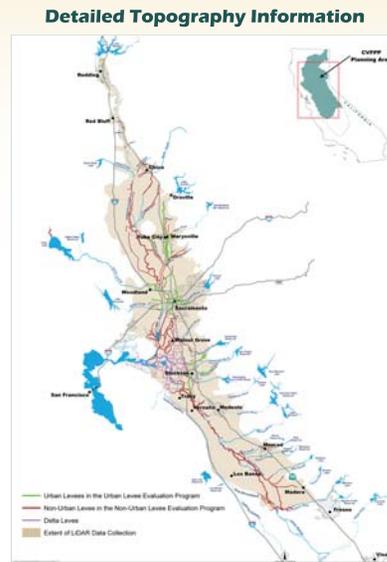
Delta Islands depend on levees year-round

**Central Valley Flood Planning Hydrology Update**

- DWR is partnering with the U.S. Army Corps of Engineers to develop flood-flow frequency information for 150 locations in the Central Valley
- The new information will include 10-year, 50-year, 100-year, 200-year, and 500-year hydrographs for multiple storm centerings in the Central Valley



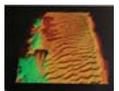
Key factors to understand flood risk



**Building on Existing Information**



1,600 miles of project levees



Bathymetric Survey



Aerial LIDAR

**Levee Evaluation Programs**

Urban and Non-urban Levee Evaluations Programs assess the performance of levees using a wide range of data collection and analysis tools:

**Performance History**  
 Interview local and flood control experts to understand past performance of levees during flood events

**Aerial LIDAR Surveys**  
 Collect topographic data to create an accurate profile of the levees

**Airborne Electromagnetic Surveys**  
 Identify different materials within and beneath levees and create maps

**Bathymetric Surveys**  
 Collects underwater topographic profile of levees and streambeds

**Geomorphic Assessments**  
 Use historical maps and surveys to create a geologic map of the project areas prior to levee construction

**Geotechnical Evaluations**  
 Conduct exploration, testing, and analyses of levees and foundations

**Remedial Recommendations**  
 Prepare alternatives and cost estimates for identified deficiencies

**Seismic Vulnerability Assessment**  
 Assess the risk posed by earthquakes to urban levees

**Delta Risk Management Strategy**

DWR is evaluating levee failure risks in the Delta and the Suisun Marsh:

- Phase 1 – analyze levee risks and consequences of levee failure
- Phase 2 – identify and evaluate measures to reduce risks and consequences of levee failure

**California Levee Database**

- Compile location information for more than 10,000 miles of levees and flood management structures throughout California
- Develop inventory of California levees to better manage levees and understand levee reliability risk factors

**Central Valley Floodplain Evaluation and Delineation (CVFED)**

CVFED is improving the quality and accuracy of flood hazard data and mapping available to local communities:

- Develop Levee Flood Protection Zones maps for areas protected by the State-Federal flood management system
- Update floodplain maps for the Central Valley
- Update and develop new hydrologic and hydraulic models
- Collect detailed aerial photographs, topographic and bathymetric data, surveys, and profiles of bridges and structures

**Ecosystem**

- The study and scope are under development

**Economics**

- The study and scope are under development