

**Meeting of the Central Valley Flood Protection Board  
December 2, 2011**

**Staff Report**

**Approval of Resolution 11-29 - Schedule of Mapping Activities for the Central Valley  
Floodplain Evaluation and Delineation Program**

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Subject

Consider adopting Resolution 11-29, the updated schedule for mapping areas at risk of flooding in the Sacramento-San Joaquin Valley stream systems as part of the Central Valley Floodplain Evaluation and Delineation Program (CVFED), as prepared by the Department of Water Resources (Department).

Background

California Water Code Section 8612 states the following:

*8612(a) On or before December 31, 2008, the department shall prepare, and the Board shall adopt, a schedule for mapping areas at risk of flooding in the Sacramento River and San Joaquin River drainage.*

*(b) The department shall update the schedule annually and shall present the updated schedule to the Board for adoption on or before December 31 of each year. The update shall include the status of mapping in progress and an estimated time of completion. The schedule shall be based on the present and expected future risk of flooding and associated consequences.*

At the December 19, 2008 meeting of the Central Valley Flood Protection Board (Board) the Department presented a mapping schedule that was adopted by the board as Resolution 08-28. At the January 29, 2010 Board meeting, the Department presented an overview of CVFED (Informal Briefing), and presented the mapping schedule at the following February 26, 2010 Board meeting, where the Board approved the schedule through Resolution 10-06. At the January 28, 2011 Board Meeting, the Department presented the current schedule of the CVFED Program as a Consent Item, which was adopted as resolution 11-02. This mapping effort supports the FloodSAFE California Initiative (FloodSAFE) and is being accomplished through CVFED.

CVFED Mapping Status and Schedule

The principal objectives for the CVFED Program are to assist risk identification and notification for the Central Valley Flood Protection Plan and associated feasibility studies by providing hydrology and hydraulics support, evaluating and delineating potential floodplains to aid land use planning, and providing necessary information to support project design. The CVFED program consists of three major projects (described below), which culminate in the creation of floodplain maps identifying flood risk for all areas protected by the State Plan of Flood Control.

The CVFED Program consists of three (3) interrelated projects:

1. Central Valley Topography Acquisition Project

CVFED Project 1 acquires detailed topographic data to support the development of new hydraulic models. This data consists of Digital Aerial Photograph (DAP) (9,000 square miles), Initial Post-Processed Light Detection And Ranging (LiDAR) (7,800 square miles) and Final Post-Processed LiDAR (5,700 square miles) and bathymetric and field surveys (5,500 cross sections).

Project 1 is currently finalizing post processing of the LiDAR and survey data for the entire study area, with a planned completion date of January 2012. DWR continues to release the DAP and Initial Post-Processed LiDAR to local, state and federal agencies, and will make the Final Post-Processed LiDAR and survey data available when complete.

2. Central Valley Hydraulic Evaluation Project

CVFED Project 2 will develop new base hydraulic models (i.e., HEC-RAS and FLO-2D) for use in understanding how flood events can be expected to migrate through the Central Valley (1,800 miles of streams).

The bulk of the CVFED program consists of this development of the hydraulic models, from which the mapping of areas at risk of flooding in the Sacramento-San Joaquin Valley stream systems will be created. Currently underway, Project 2 is anticipated to be completed by June 2012.

3. Central Valley Floodplain Delineation Project

CVFED Project 3 will Delineate floodplains for the 100-, 200-, and 500-year flood events (both location and frequency) supporting the analysis of the existing SPFC and proposed future studies by DWR and others. This is the development of the final mapping for the CVFED Program.

Scoping activities have begun for Project 3, with the majority of the effort contingent on the modeling efforts from Project 2. Project 3 is anticipated to be completed in December 2012.

The CVFED mapping effort has experienced some schedule delays as a result of several factors including bond and contractor payment issues, mandated furlough schedules, changes in internal Task Order processing requirements, accommodation of parallel program deliverables, some isolated data collection failures, and unanticipated increases in deliverable reviews. The proposed schedules are compatible with products to be delivered by other Department programs.

### Staff Recommendation

Staff recommends that the Board approve Resolution 11-29 and adopt the updated CVFED mapping schedule.



## **Agenda Item No. 8-G**

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

## **Mapping Schedule**

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California Department of Water Resources**



**December 2, 2011**

## **Legislative Mandate**

Water Code Section 8612.

- a) On or before December 31, 2008, the department shall prepare, and the board shall adopt, a schedule for mapping areas at risk of flooding in the Sacramento River and San Joaquin River drainage.
  
- b) The department shall update the schedule annually and shall present the updated schedule to the board for adoption on or before December 31 of each year. The update shall include the status of mapping in progress and an estimated time of completion. The schedule shall be based on the present and expected future risk of flooding and associated consequences.

# CVFED Schedule History

Key CVFED Milestones	2008				2009				2010				2011				2012			
	J-M	A-J	J-S	O-D																
CVFED Topography Acquisition	█				█				█				█				█			
CVFED Hydraulic Evaluation					█				█				█				█			
CVFED Floodplain Delineation													█				█			

█ Schedule presented to the CVFPB in January 2011

█ Current projected schedule (December 2011)

# CVFED Deliverables and Milestones

<i>Project / Deliverable</i>	<i>Milestone</i>
<b>Central Valley Topography Acquisition</b>	
Detailed aerial LiDAR and aerial photography data for the CVFED Study Area	January 2012
Bathymetric surveys of major rivers and tributaries in the CVFED Study Area	Completed May 2011
Supplemental field surveys of structures, stream gages, and channel cross-sections for major rivers and tributaries in the CVFED Study Area	Completed May 2011
<b>Central Valley Hydraulic Evaluation</b>	
New hydraulic models for major rivers and tributaries in the CVFED Study Area	June 2012
Combined riverine and overland flow hydraulic models associated with the SPFC (does not include flood frequency information)	June 2012
<b>Central Valley Floodplain Delineation</b>	
New maps delineating LFPZs for areas receiving protection from the SPFC in the Central Valley	Completed in December 2008
New baseline system hydraulic models (riverine and overland) for the portion of the Sacramento and San Joaquin River basins in the CVFED Study Area	December 2012
Water surface profiles for the 10-, 50-, 100-, 200-year, and 500-year flood events in the Central Valley associated with the SPFC	December 2012
New maps delineating the 100-, 200-, and 500-year floodplains for areas receiving protection from the SPFC in the Central Valley	December 2012

## **Reasons for Schedule Adjustments**

- Accommodation of related program deliverables
- Unforeseen data processing issues
- Increased amount of QA/QC reviews
- Some isolated data collection failures
- Bond funding issues
- Contractor payment issues
- Furlough schedules
- Increase in Task Order processing requirements

# CVFED

## Updated Mapping Schedule

### Board Resolution No. 11-29

<u>Activity</u>	<u>Completion</u>
<i>Topography Acquisition</i>	<i>Jan 2012</i>
<i>Riverine &amp; Floodplain Hydraulic Model Development</i>	<i>June 2012</i>
<i>Floodplain Delineation</i>	<i>Dec 2012</i>

# Questions and Comments

