

Upper San Joaquin River Regional Flood Management Plan

Regional Flood Protection
Now and in the Future

Workshop 3:
Flood Emergency
Management and
Operations & Maintenance

Wednesday September 18th
Lower San Joaquin Levee District
11704 Henry Miller Ave
Dos Palos, CA 93620



Workshop Protocols

- Use common conversational courtesy
- Humor is welcome
- Be comfortable
- Spelling doesn't count
- Electronics courtesy
- Avoid editorials

Agenda

- Introduction
- Overview of Flood Management O & M
- Overview of Emergency Management Planning/Emergency Response
- O&M and Emergency Management/Response Findings
- RFMP Schedule and Updates

Operations and Maintenance



Overview of Operation and Maintenance

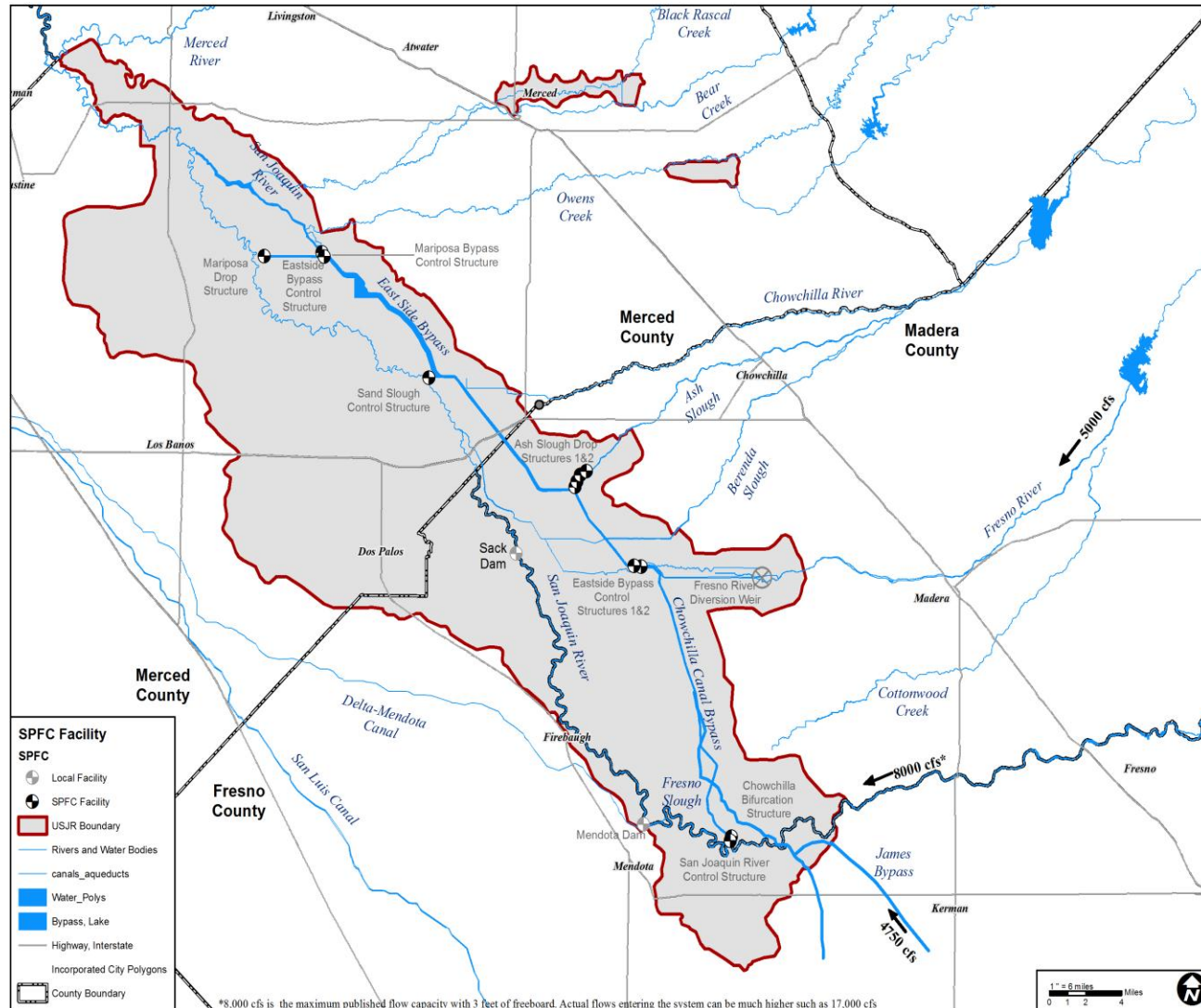
- Document agencies responsible within the planning area
- Summarize existing flood management facilities
- Summarize typical O&M activities
- Discuss challenges and enhancements to O&M

Local Agencies Responsible for O&M and Emergency Response

- Primary Responsible Agencies
 - Lower San Joaquin Levee District
 - Merced Streams Group
 - Madera County Flood Control and Water Conservation Agency
- Other Local Agencies
 - Fresno Slough Improvement Group
 - Kings River Conservation District
 - Chowchilla Water District
 - Madera Irrigation District

Flood Management Facilities

- Levees along rivers, creeks, and sloughs
- Bypass channels and levees
- Control structures
- Bridges
- Irrigation and drainage structures
- Sediment Basin
- Hydrologic facilities



Local Agency Maintenance Activities

- Facilities inspections
- Levee and structure repairs
- Channel stabilization
- Vegetation control & removal
- Sediment removal
- Rodent control
- Erosion prevention



Emergency Management



What is Flood Emergency Management?

- *Readiness*: preparing for floods before an event occurs
- *Response*: who will respond to a flood event and what will be done
- *Recovery*: actions taken to restore communities and flood infrastructure to pre-flood conditions

Why Is Emergency Management Planning Important?

- Addresses risk to life, property, agriculture, and economic loss
- Guides and assists agencies
- Addresses Residual Flood Risk
- Manages risk from aging/inadequate infrastructure (Dams, levee instability and breaching, subsidence)



Agencies Responsible for Emergency Management

- **Local Maintaining Agencies**
(Irrigation districts, water conservation agencies, levee districts, cities)
 - Lead agencies: LSJLD, MSG, MCFCWCA
- **Counties** (Office of Emergency Services [OES], Fire, Sheriff, Public Works)
- **State and Federal** (DWR, USACE, FEMA, CalEMA, National Weather Service, USGS)



Emergency Management Tools and Activities

- FEMA's National Incident Management System (NIMS)
- DWR's Standardized Emergency Management System (SEMS)
- Weather forecasting and stream gauge monitoring
- Emergency Notifications / Alert System
- Pre-flood inspections of facilities
- Disaster declaration
- Mutual aid agreements
- Flood Safety Plan / Flood Emergency Management Plan / Hazard Mitigation Plan

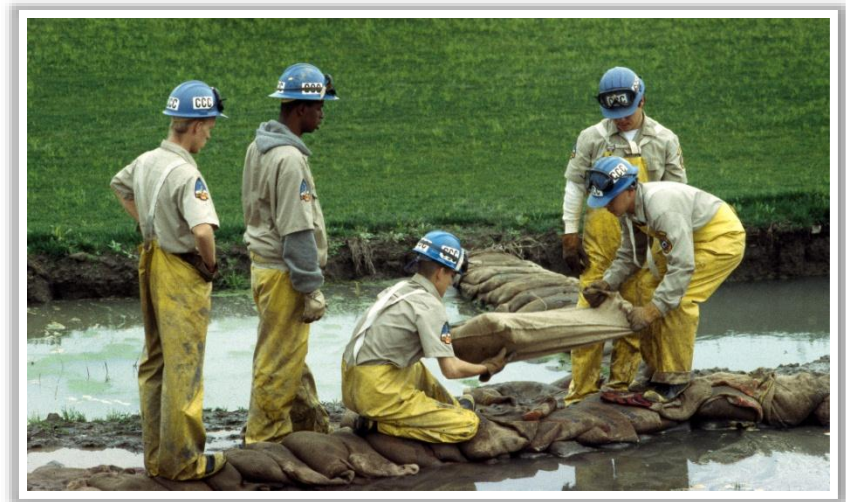


Standardized Emergency Management System (SEMS)

- Cornerstone of California's emergency response system
- Required by the California Emergency Services Act
- Manages multiagency and multijurisdictional responses to emergencies.
- Unifies all elements of California's emergency management
- State agencies are required to use SEMS
- Local governments must use to be eligible for disaster assistance programs

Local Agency Emergency Management Activities

- Stockpile and place sandbags
- Levee repairs
- Operate gate structures
- Mitigate to reduce or eliminate boils
- Erosion prevention
- Levee patrols
- Coordinates with DWR flood Operations Center



Break



Lower San Joaquin Levee District

Operations and
Maintenance
and
Emergency
Management



Lower San Joaquin Levee District Operation and Maintenance

- 191 miles of levees
- 4 Control structures
- Patrol maintenance roads & bridges
- Numerous irrigation & drainage structures
- Sediment basin management



Lower San Joaquin Levee District O&M Activities

- Facilities inspections
- Levee & flood infrastructure repairs
- Patrol road resurfacing
- Clearing and grubbing (debris and vegetation)
- Sediment removal & disposal
- Rodent control
- Verify electric gates are operable



Lower San Joaquin Levee District Operations and EM Activities

- Strategically stockpile flood fighting materials
 - Sandbags and other revetment materials
 - Supplements state provided supplies
- Inspect Irrigation and drainage structures for debris
- Coordinate with DWR Operations Center
- Coordinate with Upstream Dam Operators
- Operate control gates
- Remove wooden guard rails on private access bridges
- Patrols levees



Lower San Joaquin Levee District Resource Enhancements Needed

- Increase operating revenue
- Hire an aquatic herbicide consultant
- Obtain temporary easements for levee repairs
- Grout rig to repair rodent damage



Lower San Joaquin Levee District Facilities Enhancements

- Upgrade electric gate controls
- Bifurcation structures
 - Add 2 bays at head of Chowchilla Bypass
 - Repair wing wall settlement
- Modify Bear Creek diversion weir & add drainage inlets
- Add structures at levee breaches
- Raise levees not constructed to minimum freeboard specifications
- Mitigate land subsidence impacts



**Merced Streams Group
Operations and
Maintenance and
Emergency
Management**



Merced Streams Group

O&M and Emergency Response

- O&M Responsibilities
 - Detention dams
 - Channels and levees
 - Black Rascal Creek
 - Bear Creek
 - Mariposa Creek
 - Owens Creek
- Emergency Operations
 - Monitor flood forecasts & conditions
 - Patrols
 - Flood fighting & materials staging



Merced Streams Group Operations and Maintenance

- Facilities inspections
- Levee & structure repairs
- Vegetation control
- Vegetation & debris removal
- Sediment removal
- Rodent control



Merced Streams Group

O&M and Facilities Enhancements

- Reconcile environmental permitting with O&M obligations
- Detention reservoir on Black Rascal Creek to complete system
- Upgrade existing project from 50 yr to 200 yr flood protection
- Dry stockpile yard



**Madera County
FCWCA
O & M and Emergency
Management**



Madera County FCWCA Operations and Maintenance

- O&M Responsibilities

- Channels and levees

- Fresno River
- Berenda Slough
- Ash Slough
- Chowchilla River

- Emergency Operations

- Monitor flood forecasts & conditions
- Patrols
- Flood fighting & materials staging



Madera County FCWCA Maintenance

- Facilities inspections
- Levee repairs
- Vegetation control
- Vegetation & debris removal
- Sediment removal
- Rodent control

Madera County FCWCA O&M Enhancements

- Increase operating revenue
- Mowing equipment
- Hire a herbicide applicator
- Spray rig
- Grout rig to repair rodent damage
- Reconcile environmental permitting with O&M obligations

Fresno Slough Improvement Group



Fresno Slough Improvement Group

- Private levees - Fresno Slough south of Highway 180 & Mendota Pool
- Levees in poor condition
- Failures & breaches have occurred
- 8 agencies formed group to improve flood facilities
 - Kings River Conservation District
 - Kings River Water Association
 - Tranquility Irrigation District
 - Fresno Slough Water District
 - James Irrigation District
 - Reclamation District 1606
 - San Luis & Delta-Mendota Water Authority
 - San Joaquin River Exchange Contractors

Fresno Slough Improvements

- Sediment removal project - completed in 2011
- Future improvement projects identified:
 - Repairs and improvements to south levee
 - Remove channel sediment upstream and within Mendota Wildlife Refuge
 - Improve floodway capacity and reduce erosive flows on south levee by degrading interior levees
 - Identify or create a “sponsor” for levees and channels in this reach

Emergency Management and Response



Madera County OES

- **Readiness**

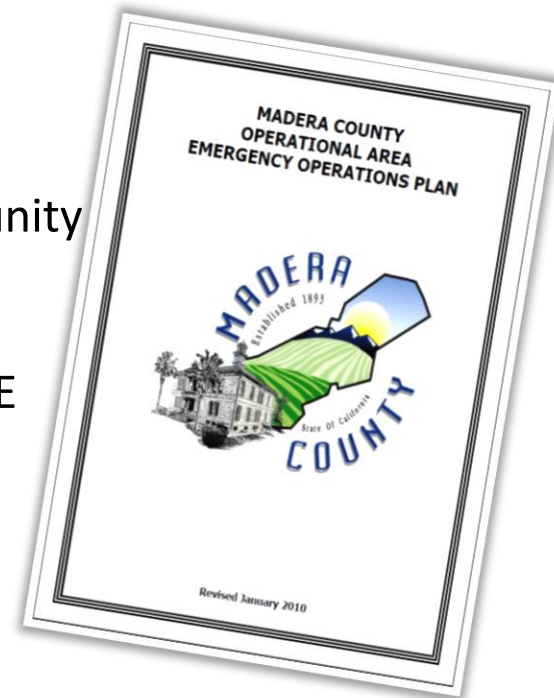
- Community outreach activities (pre-, post-flood)
- EOP/ERP development
- Store and distribute sandbags

- **Response**

- Communication with First Responders & the community (reverse 911/Emergency Alert System)
- Flood stage monitoring and communication with upstream flood management agencies such as USACE
- Declaring an emergency / Evacuation
- Flood fighting, Levee patrol, repairs

- **Recovery**

- Applications for recovering funds
- Post-Flood cleanup



Merced County OES

- **Readiness**

- Community outreach activities (pre-, post-flood)
- EOP/ERP development
- Store and distribute sandbags

- **Response**

- Communication with First Responders & the community (reverse 911/Emergency Alert System)
- Flood stage monitoring and communication with upstream flood management agencies such as USACE
- Declaring an emergency / Evacuation
- Flood fighting, Levee patrol, repairs

- **Recovery**

- Applications for recovering funds
- Post-Flood cleanup



Fresno County OES

- **Readiness**

- Community outreach activities (pre-, post-flood)
- EOP/ERP development
- Store and distribute sandbags

- **Response**

- Communication with First Responders & the community (Emergency Alert System)
- Flood stage monitoring and communication with upstream flood management agencies such as USACE
- Declaring an emergency / evacuation
- Flood fighting

- **Recovery**

- Applications for recovering funds
- Post-Flood cleanup



DWR

Emergency Response Planning

- **Readiness**
 - Community outreach activities (pre-, post-flood)
 - EOP/ERP development
 - Store and distribute sandbags
- **Response**
 - Communication with Counties
 - Flood stage monitoring
 - Communication with USACE, FEMA, CalEMA
 - Levee Inspections and Repairs
- **Recovery**
 - Applications for recovering funds
 - Post-Flood cleanup

O&M and EM Findings



Local Agency Operations and Maintenance Challenges

- Insufficient O&M Budgets
- Shrinking revenue base
- More stringent facilities standards
- New USACE Levee and culvert inspection requirements
- Right-of-way for repair work
- Sediment disposal
- Environmental permitting
- Staff shortages

Local Agency Flood Management O&M Enhancements

- Herbicide application & permitting
- Equipment upgrades
- Facilities enhancements
- Moving private facilities under authority of public agency, JPA or “sponsor”
- Levee improvements on private property pose a challenge
- Consistent regional mutual agreements with permitting agencies for levee and channel O&M

Flood Emergency Management Challenges and Improvements

- Local Flood Safety Plans are needed
- LMAs are under-resourced for flood management
- 3-fold increase to flood fighting stockpiles
- Increased resources to encourage mutual aid agreements
- No influence on flows entering region from upstream releases

Flood Emergency Management Challenges and Improvements

- Flood fighting supplies stored strategically
- MOUs between agencies to formalize emergency management responsibilities
- Grazing permits to ensure cattle are evacuated within 24 hours of notification
- Control structures in places where levee breaches historically occur
- Safe access for levee patrol and flood fighting

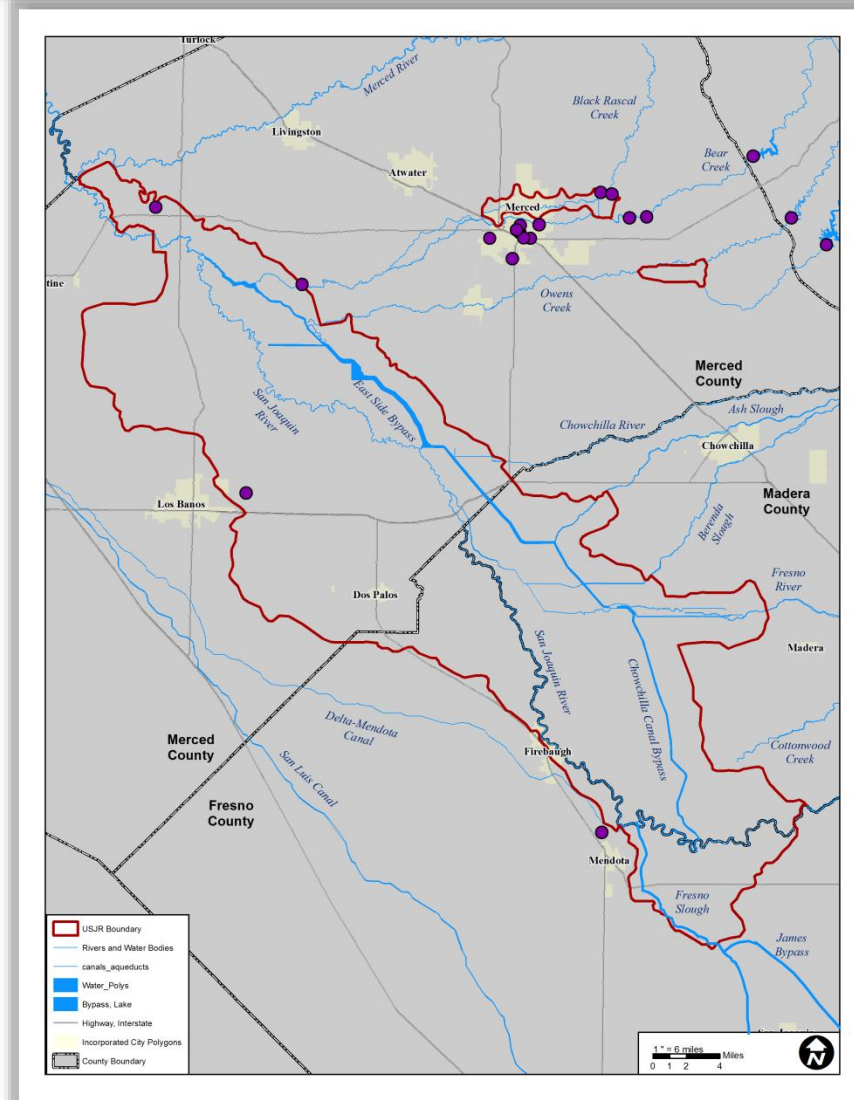
RFMP Updates



Deadlines and Updates

- Regional Settings: Comments Incorporated
- Environmental Setting and Land Use: Comment review period closes on: 9/25/13
- O&M and EM Section: Comments due: 10/9/13
- Workshop No. 4 – *Proposed Improvements*:
10/16/13
 - Proposed projects due: 9/25/13
 - Focus on Review of Identified Challenges and Proposed Improvements

Location of Proposed Improvements



**For more information please
contact: Reggie Hill (209) 387-4545**

website: <http://www.usjrflood.org>

