CENTRAL VALLEY FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

Central Valley Flood Protection Plan

Summary
Community Applications Workshop
Rural & Agricultural Areas

August 31, 2010, 1:00 p.m. – 5:00 p.m.
MWH
3321 Power Inn Road Suite 300, Sacramento, CA

Participants: 44

Name	Organization
Ray Anderson	Retired farmer
Jeremy Arrich*	Department of Water Resources (DWR)
Lewis Bair	Reclamation District 108, Sacramento River Westside Levee District
Leo Capuchino	City of Mendota
Denise Carter	Colusa County Board of Supervisors (member)
Lori Clamurro-Chew*	DWR
Ken Cumming	National Marine Fisheries Service
Dan Dolan	Western States Title Services
Bill Edgar	Sutter-Butte Flood Control Agency
Tom Ellis	Sacramento River West Side Levee District
Jim Eto*	DWR
Diana Fales	Reclamation District 1001
Justin Frederickson	California Farm Bureau Federation
James Gallagher	Sutter County Board of Supervisors
Mary Ann Hadden*	DWR
Jennifer Hobbs	USFWS
Nekane Hollister	DWR
Robert Irwin	Sacramento River Conservation Area Forum
Ken Kirby*	DWR advisor
Noel Lerner*	DWR
Stefan Lorenzato	Yolo County Flood Control & Water Conservation District
Carolyn Lott	Center for Collaborative Policy
Craig Moyle*	MWH
Michele Ng*	DWR
Michael Perrone*	DWR
Roger Putty*	MWH
Mary Randall*	DWR
Merritt Rice*	DWR
Scott Rice*	DWR consultant
Max Sakato	Reclamation District 1500
Holly Savage	Deer Creek Watershed Conservancy
Kari Shively*	MWH
Ron Stork	Friends of the River
Yung-Hsin Sun*	MWH
Keith Swanson*	DWR
Mohsen Tavana	U.S. Army Corps of Engineers
Janet Thomson*	Kearns & West
Scott Tucker	Reclamation District 1500
Doug Weinrich	U.S. Fish and Wildlife Service
Gregg Werner	The Nature Conservancy
Laura Whitney	USACE
Scott Woodland*	DWR

David Wright*	DWR
Jon Wrysinski	Colusa County Department of Public Works

*Workshop team

This summary only includes comments made during the workshop. For more information on the workshop or to view written comments submitted after the workshop, please visit http://www.water.ca.gov/cvfmp.

Opening Comments and Summary Explanation

Rural and Agricultural Areas Management Application Workshop participants met to discuss categories and subcategories of Management Actions (MAs) for the Central Valley Flood Protection Plan (CVFPP) as they apply to rural and agricultural areas throughout the Sacramento and San Joaquin Valleys. The following summary outlines comments on each category/subcategory and divides each into five sections: compatibilities, conditions within rural and agricultural areas that support a given category, implementation challenges associated with that category, ways to alleviate those challenges, and general comments. If a particular section does not appear for a category, participants did not provide specific input in this area.

Comments on the Applicability of MA Categories and Subcategories to Rural and Agricultural Areas

Additional Floodplain & Reservoir Storage – Floodplain Storage (transitory storage)

Floodplain Storage Compatibilities

- The worksheet says that that floodplain storage could augment local water supplies through groundwater recharge. This is not true in areas like the Sutter Colusa basin where the water table is very high. This has to be considered on a site-specific basis. Additionally, in many parts of the San Joaquin Valley water consumption is so high that there may not be additional water available for storage.
- The worksheet says that transitory storage could increase the security and stability and improve the well being of the rural and agricultural setting. Often transitory storage on floodplains would actually hurt the social, political, and financial well being of these areas. Typically the improvement is for urban areas and not rural areas.
- The worksheet says that transitory storage could increase the level of flood protection for adjacent rural/agricultural areas, but that is not typically the case – usually rural areas flood for the benefit of urban areas. The benefits should be qualified; there may be some downstream benefits for some areas.

Conditions Supporting Floodplain Storage

- The worksheet states that large areas connected to historic floodways without rural/agricultural development support implementation. What does “large” mean? There may not be many functional spots for this management action.

Floodplain Storage Implementation Challenges

- It is not easy to cordon off specific areas for transitory flooding. You may have to create berms around the areas that should not be flooded, which adds additional expense. It may be more cost-effective to improve existing levees.
- There will need to be landowner assurances for adjacent landowners who will be affected.

Ways to Alleviate Those Challenges

- Consider opportunities for partnerships, such as having transitory storage on U.S. Fish and Wildlife Service refuges.
- The worksheet says that planting crops suitable for temporary flooding, such as alfalfa, wheat, and grapes, may help to alleviate challenges. This may be true for a handful of crops, but it could preclude the production of many other crops. The crops described do not use temporary flooding and would in fact be destroyed by it. (DWR clarified that the intent was that these crops might be more easily compensated than others, in the event that they were destroyed due to flooding.)
- Landowners will want to be protected from transitory flooding.
- There may be opportunities for improved conveyance in the system downstream to complement the potential through-conveyance that a setback would provide.

General Comments about Floodplain Storage

- This needs to be tied to the flood objective for a specific area. The storage may vary depending on whether you are trying to protect from a 50-year flood or a 10-year flood, for example.
- Some of the most productive agricultural lands are in places that might be suitable for transitory storage. Consider the tradeoffs between agricultural production, ecological benefits, and flood risk.

Additional Floodplain & Reservoir Storage – Reservoir Storage

Conditions Supporting Reservoir Storage

- In the future, reservoir storage may provide a climate change mitigation benefit (water supply, protection of species, etc.).

Reservoir Storage Implementation Challenges

- Affordability.
- Water and power beneficiaries of Corps projects have to pay all the costs associated with the water and power features of that project up front, which creates an affordability challenge. For Bureau of Reclamation projects, water and power beneficiaries have to repay the costs fully with interest.
- Identifying the beneficiaries and finding state and federal cost shares will be challenging.
- There are so many constraints on how reservoir water is used and how flows are allocated.

Ways to Alleviate Those Challenges

- Look for statewide public benefits, including ecosystem benefits, to improve cost sharing options.

- Reservoir storage projects may become affordable if it is understood that urban areas will likely be the beneficiaries of water supply, while rural areas will benefit from flood protection. If costs are allocated so that urban beneficiaries pay for the water supply increases and rural areas pay some amount for flood protection benefits, this might be financially feasible.
- Consider multi-benefit projects.

General Comments about Reservoir Storage

- The political climate may prohibit additional water storage.
- Make sure you are looking system-wide when planning for flood protection, so that you get the best benefit for both rural and urban areas.
- There is a tradeoff between water supply and flood control in reservoir management. Increasing reservoir storage does not necessarily mean adding more capacity – it could mean dedicating more of the existing system to flood protection, which would directly impact water supply storage. (If the intent of this management action is to add new storage, it should be stated.) We need to be able to assess how we want to manage flood reserve versus water supply reserve in the system overall and determine the downstream implications to both rural areas and urban areas.
- Note that the water supply we are talking about is not just for agriculture use but also for southern California municipal and industrial areas.
- Reservoir management must be considered in the context of ecology and geomorphology, including the goals and objectives of the areas.

Storage Operations – Objective Releases and Flood Storage Allocation

Objective Releases & Flood Storage Allocation Compatibilities

- Objective releases can support climate change adaptation by helping with water supply that might be lost to climate change.
- Consider that the objective release definition in the glossary indicates that objective release is just setting a management control point (regardless of whether it is an increase or decrease). The compatibility column on the worksheet seems to have a different assumption. Clarify whether the assumption is increased flow.
- Increasing maximum flows might result in an increase in agricultural land flooding, which is the opposite of the second bullet on the worksheet that states that objective releases (if these are increases in flow) will provide increased flood protection.
- Greater flexibility in releases provides greater flexibility for water storage.

Objective Releases and Flood Storage Allocation Implementation Challenges

- Changes in releases can often impact seepage along the channels in rural areas; this is a challenge with increased flow.
- Without careful planning, late season storms can cause uncontrollable flows out of a system if too much water is in the reservoirs.
- Increasing objective releases may require an expansion of the floodway.

Ways to Alleviate Those Challenges

- Plan carefully for appropriate releases to avoid winding up with too much water remaining in a reservoir, potentially resulting in uncontrollable flows in the event of a late season storm.

Flood Protection System Modification – Bypasses, Setback Levees, Levees, and Ring Levees

Bypasses, Setback Levees, Levees, and Ring Levees Compatibilities

- Strengthening levees may reduce operations and maintenance costs, but if decommissioned levees are strengthened you may increase costs.
- Modify "each type of system modification would provide increased level of protection to rural/agricultural areas" to add "outside of the levees." Within the levees you may have reduced protection (except in the case of a ring levee).
- Setback levees can reduce long-term operations and maintenance associated with erosion and other river processes near that levee, but not necessarily across the whole floodway.
- It may be very difficult to actually improve levees within their existing footprint. This bullet probably only applies to urban areas because the costs of moving outside the existing footprint would be too great.
- Setback levees could provide room for habitat.
- Setback levees could improve reservoir storage and management options.

Bypasses, Setback Levees, Levees, and Ring Levees Implementation Challenges

- The cost/ratio requirements established by the Corps are a challenge.
- The rigidity of the condemnation process is challenging because it does not provide the flexibility to make the business case to pay someone more for their property rather than entering the legal process.
- Setting up a ring levee may create a burden for small communities who are left to pay the operations and maintenance costs.
- The topography may not be appropriate in the Sacramento Valley to have setback levees and bypasses because of different gradients and other issues.

Ways to Alleviate Those Challenges

- Urban financial support for system-wide benefits would be useful. Consider having all beneficiaries pay, not just those within local areas.
- Developing a rural levee modification process containing different standards than those for urban areas would be useful. Planners should consider what is appropriate flood protection given what is being protected.
- Take advantages of partnerships, whether environmental or urban.
- Take advantage of state and federal cost sharing opportunities.
- Pay for flood easements annually rather than in a lump sum.

General Comments about Bypasses, Setback Levees, Levees, and Ring Levees

- Ring levees are not the only way to protect small communities, but they tend to be used as a default. In some cases where there is a small community town that serves as the central point of an agricultural basin it may make sense to use a ring

levee to protect that central area. In other basins those communities are on higher ground and may only need to buttress a portion of the levee.
- Ring levees for major facilities, such as rice processing facilities, might be useful.

Floodplain Management – Acquisitions and Buyouts

Conditions Supporting Acquisitions and Buyouts
- Buyouts would need to occur where discrete areas of land are cordoned off effectively to make them useful from a flood control system perspective.

Acquisition and Buyouts Implementation Challenges
- Buyouts need to take into account not just market value but also the public value of the land (e.g. the agricultural benefit of the land and other values).
- Some of the agricultural and rural areas include small communities that are very dependent on the local agricultural economy. Buyouts can dramatically impact the economy for some of those communities.

Ways to Alleviate Those Challenges
- Easements are easier to implement and less costly.
- Consider continuing agricultural land uses on easements, since agriculture is often the best use of land in floodplains.

General Comments about Acquisitions and Buyouts
- It is preferable to acquire flood easements rather than fee title easements in order to preserve tax revenues and land ownership within families.
- Taking more agricultural land out of production is a troubling concept since some areas of the Central Valley are already net importers of food.
- Using conservation easements is another way to eliminate housing or industrial development on agricultural land.
- Easements should be arranged in the form of annual payments at an agreed-upon cost and adjusted for inflation. If you consider those costs over a period of years, these easements may not be as cheap as they seem. Planners should consider this when planning.
- Acquisitions and buyouts provide an economic opportunity for some landowners.

Floodplain Management- Wet and Dry Floodproofing

Floodproofing Implementation Challenges
- Individual landowners/homeowners carry a lot more cost to floodproof.
- There is a possibility of impacting neighbors by implementing floodproofing on certain properties.
- Floodproofing may not be practical to implement with regard to FEMA and other regulations. DWR may want to recommend regulatory changes to FEMA if FEMA's regulations are inconsistent with the state. California is unique and the purpose of floodproofing here (to be able to continue appropriate economic activities in the floodplain) may require different regulations.
- A specific concern is the ability to permit and build a structure in the floodplain. This creates obstacles to using floodplain land for agriculture, and many of us

agree that agriculture is probably the best use of some of the Central Valley floodplains. If you cannot build barns or have processing equipment near the farm then you will not be able to continue farming and will have to turn the land over to developers, which further increases the flood risk.

Ways to Alleviate those Challenges

- Use state and federal assistance programs to construct floodproofing.

General Comments about Floodproofing

- A participant asked whether it would be possible for an agricultural business owner to get a loan for and insure a structure in a floodplain, because it seems like you would need insurance to get a loan, and a loan to get insurance. Others responded that the owner could build the structure on elevated land, or construct floodproofing to decrease the insurance rates.

Floodplain Management- Risk Awareness/Mapping and Insurance Modifications

Conditions Supporting Risk Awareness/Mapping and Insurance Modifications

- There are some small communities that may provide a greater cost/benefit ratio to insure than urban areas. For example, the entire community of Grimes could be insured at lower cost and greater benefit than many major urban centers.

Risk Awareness/Mapping and Insurance Modification Implementation Challenges

- It is challenging to get levees certified, recover post-flood, and get crops insured.

Ways to Alleviate those Challenges

- There should be compatibility between rural and urban areas regarding requirements to purchase flood insurance. Everyone should pay into the program; perhaps areas with better flood protection should pay a different rate to make costs more equitable.

Disaster Preparedness and Flood Warning

Disaster Preparedness and Flood Warning Implementation Challenges

- It can be difficult to coordinate plans locally.
- It is difficult to get warnings to widely dispersed areas.
- There is a general lack of knowledge about local emergency response plans.
- The geography and topography of the landscape need to be closely understood to plan emergency evacuations well.

Ways to Alleviate those Challenges

- There should be a way to get correct information out on radio broadcasts rather than having DWR and the media be the sources of information.
- There should be financial support via CVFPP or other mechanisms for planning, infrastructure, emergency response, and recovery.
- There should be broader outreach about emergency plans and improved accessibility of flood control emergency plans.
- We need technological improvements for notification (e.g. reverse 911).

- There should be a planning template or guidance document for rural areas to assist them with disaster preparedness and flood warning.

Flood Fighting, Emergency Response, and Flood Recovery

Conditions Supporting Flood Fighting, Emergency Response, and Flood Recovery

- Simplified financial assistance programs.
- Relaxation of permitting for flood fight and post-recovery rebuilding.
- Relaxation of state, local, and federal permits.
- Streamlining of state and federal permitting mechanisms.

Flood Fighting, Emergency Response, and Flood Recovery Implementation Challenges

- We need to ensure that there is an understanding of pre-anticipated events (e.g. gradual failures) and not-anticipated events (e.g. sudden failures) and how that can affect planning and response.

Ways to Alleviate those Challenges

- Dewatering as quickly as possible, making sure that equipment is available locally.

Ecosystem Restoration

Compatibilities with Ecosystem Restoration

- Ecosystem restoration can be an economic driver by bringing new people into the community.
- There is good potential for integration of multiple CVFPP goals with ecosystem restoration, including public safety and environmental stewardship.
- Ecosystem projects may be able to improve overall flood risk reduction or increase management options in the reservoir system or elsewhere, especially if strategically placed.

Conditions Supporting Ecosystem Restoration

- Carefully placed restoration projects might integrate ecosystem restoration, risk reduction, increased financial stability, and increased reliability of infrastructure. If de-listing species becomes associated with restoration sites that might improve the likelihood of implementing additional restoration.

Ecosystem Restoration Implementation Challenges

- Accumulation of vegetation in certain areas, particularly on or near levees, can cause additional problems in the Sacramento Valley – particularly in wildlife areas that are not well maintained.
- Removing vegetation may cause mitigation challenges.
- If restoration lands come into public ownership there may be a loss of funding from the decrease in the tax base.
- Ecosystem improvements can make operations and maintenance more difficult without written agreements protecting safe harbor.
- There may be displacement of agriculture due to ecosystem restoration.
- There may be confusion due to varying regulations regarding who will participate in and maintain ecosystem restoration projects.

Ways to Alleviate those Challenges

- We should link water security with ecosystem restoration.
- We need long-term funding to support vegetation management.
- We should focus more on corridor management. We should have a unified vision on how to manage the system that involves both the waterway and species' habitats. More broadly, we should focus on multi-species management plans rather than single species management plans.
- We should consider integrating habitat improvement with duck club activities.
- There may be a need to provide assurances to landowners where restoration occurs, to address impacts to those landowners. Assurances could include having buffers inside restoration property or not increasing the footprint of restoration areas.
- Safe harbor is too limiting, but adding compensation for other impacts beyond those from Endangered Species Act mitigation might be useful.
- It would be useful to integrate existing agricultural land/practices into restoration efforts.

General Comments about Ecosystem Restoration

- We need to work toward a paradigm shift. Growers are environmental stewards and they do not get recognized for it. They are habitat managers and thereby serve as maintainers of the flood control system.

Policy and Regulations

Policy and Regulation Implementation Challenges

- The inflexibility of the Clean Water Act and Endangered Species Act are problematic because they are more designed to control development than to be used as management tools. We need more tools that allow us to manage the system.

Operations and Maintenance- Vegetation Management, Dredging/Clearing, Administration of Encroachments, and Inspections

Operations and Maintenance Compatibilities

- We should design operations and maintenance practices with an eye towards the river. Compatibility with floodplain processes would help to reduce the demand of operations and maintenance and improve its efficiency.
- Dredging will be a site-specific issue.

Conditions Supporting Operations and Maintenance

- There may be some benefits to snag removal in specific areas. Snag removals could be just a navigability issue, but could also accumulate sediment and become a flood issue.

Operations and Maintenance Implementation Challenges

- The Corps policy prohibiting vegetation on levees is problematic for implementation.

- There is confusion about system maintenance vs. system obsolescence. There are certain areas where there are design life/legacy issues that should be clearly identified. Maintaining aspects of the system to their original design may no longer be adequate and we should clarify the risks of maintaining the system to that state.
- There are operations and maintenance challenges associated with compliance with Clean Water Act regulations relative to heavy metals. Mercury, copper, and other metals need to be dealt with realistically.
- There are new Clean Water Act Section 401 requirements dealing with disturbance related to development projects (not within the levee system) that may influence operations and maintenance activities.
- Sediment transport and deposition can be challenges to operations and maintenance, depending on whether flows are designed to convey sediment or not. There is a disconnect between sediment transport and water transport.
- Loss of habitat is a challenge.
- Levee vegetation is an impediment to doing better operations and maintenance.
- There are no clear local objectives for operations and maintenance.
- Funding sources for maintaining levees and challenges are unstable. This is already listed on the worksheet but should be highlighted because it is a huge problem. This should be one of the first problems we work to resolve.
- Dredging causes you to lose some critical fish habitat that may not be replaceable elsewhere.

<u>Ways to Alleviate those Challenges</u>

- We should clarify the responsibilities for action. On the San Joaquin River we should clarify who is responsible for channel maintenance; on the Sacramento River we should clarify who is responsible for erosion.
- We should provide operations and maintenance support with 2D modeling and design. Operations and maintenance should be tailored to the circumstances at hand, not just off-the-shelf practices.
- We should promote floodplain compatible levee vegetation.
- We should do good modeling to know where design flows can be passed.
- We should keep up with maintenance, because if we do not keep up with maintenance activities and therefore lose funding for them, we get stuck with mitigation. If we keep up the maintenance then we won't have to mitigate in the future for removal of vegetation

<u>General Comments on Operations and Maintenance</u>

- Channel maintenance is a big issue because if channels are maintained properly they put less pressure on levees.