



Meeting Summary

Delta Regional Management Actions Work Group Meeting 2

September 22, 2010, 1:00pm – 5:00pm
Location: City of Rio Vista Fire Station
350 Main Street
Rio Vista, CA 94571

Presentations and Materials Available Online at www.water.ca.gov/cvfm

MEETING ATTENDANCE:

Work Group Members Present:

Name	Organization
Daniel Burmester	California Department of Fish and Game
John Cain	American Rivers, California Flood Management
Bill Darsie	KSN, Inc.
Karen Medders	North Delta CARES
Sarah Puckett	Natural Heritage Institute
Brooke Schlenker	U.S. Army Corps of Engineers
Dave Shpak	City of West Sacramento/ West Sacramento Area Flood Control Agency
Chuck Spinks	American Society of Civil Engineers
Jan Vick	Mayor, City of Rio Vista
Jane Wagner Tyack	Restore the Delta / League of Women Voters
Tyler Willsey	U.S. Fish and Wildlife Service

Group Members Absent:

Name	Organization
Mitch Avalon	Delta 5 Counties Coalition
John Booth	Sacramento County
Steve Bradley	DWR
Marci Coglianesse	BDPAC and Delta Levees & Habitat
Robin Kulakow	Yolo Basin Foundation
Gilbert Labrie	Branan-Andrus Levee Maintenance District, RD 2067, 407, 317
Mike Machado	Delta Protection Commission
Chris Neudeck	KSN, Inc.
Jerry Robinson	San Joaquin Farm Bureau Federation
Leo Winternitz	The Nature Conservancy

Support Team Present:

Lori Clamurro-Chew	DWR
Sharif Ebrahim	Kearns & West (K&W) (Facilitation Team)
Mike Inamine	DWR

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Ibrahim Khadam	MWH
Ken Kirby	DWR Advisor
Eric Poncelet	Kearns & West (K&W) (Facilitation Team)
Merritt Rice	DWR
Janet Thomson	Kearns & West (K&W) (Facilitation Team)
Robert Yeadon	DWR
Josh Yang	MWH

Observers: Manny Bahia, DWR; Matilda Evoy-Mount, U.S. Army Corps of Engineers; Matt Mitchell, self

WORK GROUP ACTION ITEMS

	ITEM	OWNER	TIMEFRAME
1.	Provide information about the Valleywide Forum to Work Group partners	MWH	October 2010
2.	In the glossary, adjust the definition of non-project levees to read: "Non-Project levees are typically under the authority of a local levee district or reclamation district or are privately owned."	MWH	October 2010
3.	Send information about the regional objectives subcommittee to work group partners not in attendance to invite their participation on the subcommittee.	K&W	October 2010
4.	Follow up with DWR regarding specific constriction sites within the Delta.	Bill Darsie	October 2010

MEETING SUMMARY

MEETING GOALS

1. Review outcomes of Management Actions Workshops and process for revising Management Actions
2. Introduce the process and logic for building solution sets
3. Discuss regional applicability of Management Actions
4. Initiate discussion of "regional objectives," and organize subcommittee to continue development of regional objectives (to take place between meetings 2 and 3)

SUMMARY:

Welcome and Greetings

Eric Poncelet (K&W) opened the meeting, provided information about the new work group partners, including Mike Machado and Sheila Singleton (alternate) from the Delta Protection Commission, and Jennifer Hobbs and Tyler Willsey (alternate) from the U.S. Fish and Wildlife Service. Eric Poncelet asked meeting participants to introduce themselves. He reviewed the meeting agenda and provided an overview of the meeting materials.

Opening Remarks

Mike Inamine, DWR Executive Sponsor, welcomed the Work Group and provided an update on management actions development. Management actions are tools, or building blocks, that will be used to develop regional solution sets. The recent management action workshops were used to categorize, refine, and add management actions, and to determine their applicability to rural, small community, and urban areas, as well as integrated across those areas. At this point in Phase 2, participants are

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encouraged to consider the application of management actions regionally and begin pondering how the management actions might fit together in a systemwide manner.

Ken Kirby, DWR advisor, provided an update on the coordination of the Central Valley Flood Management Planning Program (CVFPP) with other Delta programs. One key focus has been to coordinate actions from the Bay Delta Conservation Plan (BDCP) with those being developed through the CVFPP. DWR is also coordinating with the Delta Stewardship Council (DSC) and is pursuing improved state-federal agency coordination. Additionally, DWR is compiling information about all the programs in the Delta and how they intersect. This information will eventually be made available to stakeholders and the public. Ken Kirby invited feedback on how effective these efforts at coordination have been. Participants responded that:

- Due to turnover within agencies and the expansion of some programs, there are a lot of new staff members lacking robust institutional knowledge of and experience in the Delta programs;
- BDCP efforts do not appear to be trying as hard to integrate with the CVFPP as the CVFPP is with BDCP; and
- Some CVFPP and BDCP meetings have been scheduled at the same time, which makes it difficult for people involved in both programs.

Ken Kirby clarified that BDCP is mainly focusing on water supply and ecosystem health, and FloodSAFE (including the CVFPP) is mainly focusing on improving flood management and public safety. DWR is working to better integrate both programs so that all those goals can be met simultaneously.

Outcomes of Phase 2 Management Actions Workshops and Roadmap for Phase 2

Merritt Rice, Central Valley Flood Planning Office (CVFPO) lead, provided an update from the recent Management Actions workshops and a look ahead toward the development of regional solution sets. The first round of 15 workshops focused on refinement of management actions based on a series of parameters, including whether they can meet program goals, what benefits might apply, and what challenges might be involved with their implementation. The second round of workshops focused on the applicability of the management actions for rural/agricultural, small community, and urban areas; an additional workshop was held to discuss management action applicability integrated across the system.

Participants in the workshops identified conditions affecting the successful application of management actions within specific communities and regions and described how different management actions might be linked to maximize their benefits. The refined and re-categorized management actions emerging from the workshops will be used to inform Phase 3 Work Group discussions, which will focus on the development of regional solution sets.

A draft Management Actions Report and draft Interim Progress Summary 2 (IPS2) will be released in early November, prior to the Regional Management Actions Work Group meeting 3. Another Central Valley Flood Management Planning Program Valleywide Forum will be held on December 9th in Sacramento. Additionally, the Flood Control System Status Report (FCSSR) and State Plan of Flood Control (SPFC) Descriptive Document are scheduled to be available for review later this year.

Process and Logic for Building Regional and Systemwide Solution Sets

Ibrahim Khadam, MWH Technical Lead, described the process of compiling regional and systemwide solution sets. Ibrahim clarified that in Phase 3 of CVFPP development, the work groups will be focused on developing regional solution sets using place-based management actions (i.e., not institutional management actions such as financial reforms, permitting reforms, or other types of changes that apply systemwide, which will be addressed separately). Through regional solution set development, work group partners will consider applications both region-wide and in specific locations (or sub-regions) to determine how management actions can best be applied.

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Solution sets will include various combinations of management actions to address identified deficiencies in facilities of the SPFC and represent a range of different flood management approaches contributing to CVFPP goals. The solution sets will be consistent with the initial planning principles developed during Phase 1 and will provide the state and local decision-makers with information about the costs, benefits, and tradeoffs associated with different courses of action.

The program team has developed four draft approaches to solution sets:

- 1) a restore SPFC design approach which focuses on restoring system infrastructure to its current authorized purpose based on deficiencies identified in the SPFC Descriptive Document and FCSSR;
- 2) a critical public safety approach which focuses on immediate fixes to benefit public safety;
- 3) a floodplain management approach which looks largely at non-structural actions to improvement floodplain management; and
- 4) a multi-benefit approach to incorporate additional benefits for recreation, the environment, water supply, and other interests.

Many of the same management actions might work for these four approaches, or themes; however, these approaches have been developed to illuminate what the tradeoffs might be in pursuing a focus on any single one of these themes. Ultimately, the CVFPP recommendations likely will combine common elements from all four approaches. Ibrahim provided a conceptual example of the relative cost, time to implement, and level of modification to the existing flood management system for each of the four approaches to illustrate tradeoffs.

Discussion:

- A work group partner noted that although stormwater may not be within the purview of the CVFPP, it can have a huge hydrologic impact on the system and should be considered during solution set development.
- Some work group partners expressed concern that focusing on site-specific or regional applicability of management actions might move the process farther away from considering systemwide perspectives. A systemwide perspective will consider incorporation of multiple jurisdictions or explore costs and benefits across regions. (DWR clarified that both regional and systemwide perspectives will be incorporated.)
- Work group partners indicated concern with the concept of the four approaches because the concept implies that one approach will be pursued instead of the other. Partners indicated that focusing on a prioritization of actions according to either financial investment or the goals met by the management actions might be a simpler way to approach the development of solution sets. However, work group partners understood the need to focus on a limited number of themes or solution sets for the 2012 CVFPP. DWR asked work group partners if they would support the proposed concept of analyzing a discrete number of solution sets based on pre-determined themes if the themes were renamed and defined to address their concerns. The work group partners acknowledged that it is important to analyze a discrete number of solution sets for the plan, and said they would possibly support the proposed concept if the themes were revised significantly to represent meaningful tradeoffs.
- Several work group partners expressed concern with the term “approach” to describe the different solution sets. They discussed alternative terms, such as “themes.”
- Work group partners were interested to know how and when studies will be conducted to allow further understanding, review, and prioritization of management actions and solutions sets. (DWR is working internally on its approach and will bring a proposal to the work groups to review.)

Discuss Regional Applicability of Management Actions

Ibrahim Khadam introduced the discussion of place-based management actions. For each category of management actions, work group partners focused on the extent to which a management action would apply in the Delta region while identifying constraints (why a management action would not apply or may

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be difficult to use) and compatibilities (why a management action would apply). They also explored sub-regional differences. Work group partners clarified that they would consider the applicability of management actions taking place in the Delta region AND management actions occurring upstream in the other CVFPP regions.

Work group partners found all of the management action categories to have at least some regional applicability. They provided the following additional feedback:

Additional Floodplain and Reservoir Storage: Floodplain Storage (transitory storage) (Management Actions 1, 2)

Constraints

- May not apply in the estuarine portions of the Delta

Compatibilities

- May be able to apply in riverine reaches: e.g., Yolo Bypass, and Vernalis to Mossdale on the Lower San Joaquin River
- The North Delta project and Paradise Cut could provide additional floodplain storage
- Additional floodplain storage upstream in the Merced and Sacramento Rivers would provide benefits for the Delta by reducing the peaks that come downriver

Additional Floodplain and Reservoir Storage: Reservoir Storage (Management Actions 3-9)

Constraints

- Additional reservoir storage actions cannot be implemented within the Delta.

Compatibilities

- Upstream storage (outside of the Delta) can provide benefits to the Delta.
- The work group noted that upstream dams will not solve all flood protection problems, but in certain locations would likely provide some benefit to the Delta. Also, flood waters in the San Joaquin and Tuolumne Rivers do not affect flood stage in the North Delta.
- The work group also noted that creating more natural storage areas, such as Tulare Lake Basin, would have a beneficial effect on flood protection efforts in the Delta.

Storage Operations (Management Actions 11-14, 67)

General comment: Work group participants saw similar applicability here to the above category of Reservoir Storage.

Compatibilities

- There may be an opportunity to operate the Clifton Court Forebay to pump part of peak flood flows.

Flood Protection System Modification: Reduce Physical Flow Constrictions (Management Action 16)

Constraints

- The work group noted that any changes contemplated to reduce physical flow constrictions must be considered in the context of how reducing a constriction in one part of the system could negatively impact another part of the system.

Compatibilities

- The work group pondered whether the funnel at the lower end of the Yolo Bypass would count as a constriction. Additional caveats include potential impacts of increased flows past Rio Vista and downstream of Rio Vista.
- In the North Delta at the south end of McCormack-Williamson, the vessels and structures within the marina can become loose in high waters and become trapped against a bridge, creating a constriction.
- Bill Darsie will follow up with DWR regarding specific constriction sites within the Delta.

Flood Protection System Modification: Bypasses (Management Action 17, 19)

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Constraints

- Paradise Cut sends a lot of water into the South Delta where levees need to be protected because the channels can only carry a certain amount of water. However, creating a large tidal marsh in the South Delta overflow area would make Paradise Cut more effective.

Compatibilities

- The Yolo Bypass applies here. See description in above item.
- The Staten Island Bypass, which is now owned by The Nature Conservancy, would have been an option.
- McCormack-Williamson functions as a bypass. The McCormack-Williamson/Staten Island complex up the Cosumnes and Mokelumne Rivers provides an opportunity for flood control.
- A ship channel bypass could be an option, either using the ship channel itself or building a new flood bypass on the east side of the existing ship channel bypass from Garcia Bend on the Sacramento River down to Prospect Island.
- Routing water from upstream of Stone Lakes through Stone Lakes Refuge and down into McCormack-Williamson might be an option, unless the development has encroached on that area too much.

Flood Protection System Modification: Existing Levees (raise, restore, or improve) (Management Actions 20, 21, 24, 87)

Constraints

- A key sub-regional difference in the Delta is between project and non-project levees. The work group noted that it is more difficult to raise local cost sharing for non-project levees than for project levees. They also described non-project levees as the weakest link.
- There are existing height restrictions imposed for some levees in the Delta, which could present a challenge for system redesign.

Compatibilities

- Levees should be improved to at least the minimum standard under the FEMA Hazard Mitigation Proposal (HMP). There has been insufficient funding to improve levees to HMP, even though this improvement is widely supported. (Note that HMP is largely applicable to non-project levees.)
- The Army Corps of Engineers' PL 84-99 standards are preferred targets.

Flood Protection System Modification: Setback Levees and New Levees (Management Actions 20, 22)

Constraints

- There are limitations on creating setback levees along the Sacramento River in the lower part of the system because infrastructure is close to the river on both sides.
- Setback levees are contingent on having an appropriate soil foundation; setback levees work best on mineral soils.

Compatibilities

- Rio Vista needs a new levee.
- Setback levees can be fundamental to establishing riparian habitat in the Delta; there is great compatibility with ecosystem restoration.

Flood Protection System Modification: Ring Levees (Management Action 23)

Compatibilities

- Within the Delta, this applies to many small communities, including parts of Walnut Grove, Clarksburg, Isleton, and others. Most of these towns are in the primary zone, so development is already limited.
- Ring levees may be useful upstream of the Delta to assist with flood planning. Dry levees can be built to intercept flood flows.
- The work group noted that ring levees do not have to be complete rings to assist with flood protection.

Operation and Maintenance: Dredging (Management Actions 30-32)

Constraints

- Water quality issues are a constraint in the Delta, especially with the new State Water Resources Control Board standards (for mercury in particular).
- Dredging will not work in tidally influenced parts of the Delta.

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Compatibilities

- Dredging could be highly useful in riverine portions of the Delta, although in some cases the channels will fill back up shortly after dredging. Dredging in appropriate places will require site-specific hydraulic modeling.
- Removing sunken ships and other debris in the channel could be useful in some instances to prevent dislodged debris catching somewhere in the channel and causing flow restrictions. Additional channel maintenance would be useful, especially in areas of the Upper Mokelumne River and elsewhere that sediment comes in and restricts flows from the sides.

The following comments on the O&M/Dredging Management Action Subcategory were provided by a Work Group member via email after the meeting September 22nd meeting.

The Delta formerly supported broad expanses of tule marshes, riparian forests, and shallow-water habitats, intersected by permanent open water channels and secondary sloughs. Today, intensive agricultural production on levee-bounded islands has replaced most of these habitats. Of the channels only the primary open water channels remain, which have been broadened and deepened by dredging and levee building. Delta islands are separated by steep-banked waterways, which provide few shallow-water areas where natural vegetation can take root. Natural vegetation is generally limited to midchannel islands and a narrow band along levee edges. In many areas, even this remaining band of vegetation has been displaced by bank protection. Midchannel islands and shoals have been shrinking or disappearing from progressive erosion. Loss of islands and shoals negatively affects fish and wildlife habitats, and foodweb productivity.

Midchannel islands are built up by sediment deposition and reduced by erosion. Reduction of flow or sediments reduces or halts the rate of midchannel island formation. Some waterways within the Delta lack sufficient sediment, while in other areas, erosion exceeds deposition. Lack of sediment supply to the Delta causes midchannel islands and shoals to erode, decreasing both the quality and quantity of island and shoal habitat. Dredging the shoals immediately adjacent to channel islands undermines the structural stability of the islands and subjects them to slumping and increased erosion.

Delta sediments contain numerous contaminants that originate from upstream and in-Delta sources which can be re-suspended during dredging operations and can also enter the food web via consumption by aquatic organisms. Dredging operations also increase turbidity and fine sediments causing adverse effects on fish behaviors including modified feeding patterns, foraging efficiency, habitat choice, and predator/prey relationships.

However in cases where dredge is unavoidable, the spoils can potential be used for wetland restoration, reversal of subsidence, creation of shallow water habitats, and other environmental benefits.

Operation and Maintenance: Vegetation Management (Management Action 33)

Constraints

- Conflicting state and federal regulations exist.
- A regulatory constraint includes the potential loss of PL 84-99 compliance if there is non-compliant vegetation on levees.
- For state funded levees (project and non-project), regulations require that any vegetation removal be mitigated.
- Elderberries are a problem.

Compatibilities

- Vegetation is necessary for habitat creation.
- It would be useful to have cradle-to-grave vegetation management plans that incorporated funding mechanisms, mitigation opportunities at the back end (mitigation banking), and better economies of scale.

Operation and Maintenance: Bank Stabilization (Management Action 37)

Constraints

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- Key differences exist in the Delta between bank stabilization in the estuarine vs. riverine sections, and between wet and dry levees.
- It is difficult to conduct water-side work in the estuarine portion of the Delta; much of the bank stabilization work must be done on the land side.
- Key tradeoffs exist between using rock vs. vegetation for bank stabilization.

Compatibilities

- This is highly necessary in the Delta, where a lot of levees are wet all the time. Maintaining those levees is critical, especially for the levees that do not have additional protection.
- If climate change-related sea level rise causes tidal elevation increases in the Delta, bank stabilization will be even more necessary.

Floodplain Management: Floodproofing (Management Action 95)

Constraints

- In many cases, it is politically difficult to do floodproofing on existing structures.
- Applicability will be site-specific. It applies less to the waterfront communities in Rio Vista due to political opposition. It applies better to cases of rebuilding.

Compatibilities

- Wet and dry proofing are both potentially good options in the Delta and will have to be evaluated and applied on a site-specific basis.

Ecosystem Restoration (Management Actions 39, 42-47, 91-93)

Constraints

- Encouraging natural physical geomorphic processes including channel migration and sediment transport (management action 92) is not applicable in the estuarine part of the Delta. This management action might work in some areas of the Delta.
- De-channelization (management action 91) is not likely to be applicable in the Delta unless there are specific sites where levees will be taken down.

Compatibilities

- Deliberate channel migration activities (management action 92), such as providing re-vegetation or increasing sediment capture and deposition in certain areas, might be applicable in some areas. However, this might be considered more pertinent to management action 93, improving the quality, quantity, and connectivity of riparian and other native habitat communities.
- Developing sediment traps might help solve other problems such as the migration of methylized mercury.

Developing “Regional Objectives” and Subcommittee Meeting Approach

Ibrahim Khadam introduced the concept of “regional objectives” which serve as top-level guidance for each region to aid in the development of solution sets. Each region will form a subcommittee to develop regional objectives, focusing on activities that can be measured, to improve flood risk management; draft regional objectives developed by the subcommittees will be reviewed at Regional Management Actions Work Group meeting 3.

Recruitment of Subcommittee Members

Four work group partners volunteered to be involved with the subcommittee including: John Cain, Bill Darsie or Chris Neudeck, Dave Shpak, and Karen Medders. The program team will send information about the subcommittee to work group partners not in attendance at the meeting to invite their participation on the subcommittee.

Next Meetings, Action Item Review, Meeting Recap

Eric Poncelet thanked Work Group partners for their attendance. The next meeting for the Delta Regional Management Actions Work Group will be held on November 9th in West Sacramento.

Adjourn