



Central Valley Flood Protection Plan

Final Summary Management Actions Workshop

(Additional Floodplain and Reservoir Operations)

July 29, 2010, 9:00 a.m. – 12:30 p.m.

Center for Collaborative Policy

815 S Street, First Floor, Sacramento, CA 95811

Participants:

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Italic = Attended via webinar

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This summary only includes comments made during the workshop. Written comments submitted after the workshop will be available at <http://www.water.ca.gov/cvfmf>.

Process Comments

- Add a box in the Management Action worksheet to consider the effect of the Management Action on adjacent lands.
- This process should increase the level of evaluation of post-event recovery efforts.

Comments and Questions on Draft Initial Management Actions

MA-001: Enlarge existing transitory floodplain storage

Problem/Desired Outcome/Methodology

- Need to define transitory storage and floodplain process and functions.
 - DWR provided the following informal definition:

The term transitory floodplain storage means that the amount of storage varies with time and is not permanent. For example, water comes in the form of overflow from a river channel and percolates down into the ground, and then moves back to the stream channel or river channel. In addition to natural transitory storage, there is also planned transitory storage that occurs in detention basins. The purpose of transitory storage is to shave the peak water flow.
- The first sentence in the methodology section gives the impression that water flows back by gravity. This would not be true in a perched river.
- The problem statement seems too narrow. There are significant parts of the flood control system that are unregulated. The problem statement implies that only regulated streams can take advantage of regulated storage.
- The problem statement is more complicated than what is written. There are linear portions of the system, such as pipes, that have limited capacity and are difficult to expand. It would be difficult to adapt these parts of the system to things such as climate change induced changes in water flow. The problem statement should state that the linear system is fixed and there needs to be a way to deal with changes.
- See a conflict in methodology statement; the statement about transitory storage could also improve habitat.
 - DWR responded that transitory storage comes and goes, but could repeatedly occur in the same area. The ecosystem adapts to the hydrologic conditions. The water has to stand in place to trigger biological processes.
- Does transitory storage apply to the floodplain in the general sense?
 - DWR response: yes, transitory storage can occur in many types of structures.

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- Peaks can happen more than once during the same event, this occurred in 1997. Breaks occurred on both sides, and flowed back by gravity. Will send an email to DWR describing how things were resolved in 1997. Need to control return flow so that it doesn't coincide with subsequent peak flows in the system.
- Agencies needs advice from DWR on how to develop multi-use recreation and how to build, maintain and provide multiple uses. Should develop a design manual (Guideline for a methodology).

Advantages / Disadvantages

- The discussion of small streams creates a dilemma for local agencies. There is a lack of hydrologic data for small streams (disadvantage)
- Groundwater recharge text is concerning, much of the Sacramento River system groundwater basins are full. It is misleading to infer that groundwater recharge is always good.
 - DWR response: there are other areas in the system that could benefit from groundwater recharge.
 - Adding the phrase "where applicable" is an appropriate way to resolve this concern.
 - The San Joaquin basin is in a stage of critical overdraft so should be labeled "applicable" for recharge.
- Land acquisition must be uniform. All property owners within the transitory storage area must sell in order to proceed, this can severely hold up the process (disadvantage).
 - Need good communication between landowners and the DWR flood manager.
- There could be impacts to adjacent properties (disadvantage).
- Would get more groundwater recharged with several feet of water over land vs. only several inches.

Economic considerations

- Is there a cost range for high, med and low capital costs? Need a frame of reference to know what these terms mean.
 - MWH response: capital costs are relative in this situation. One way to think of it may be as cost per acre foot.
 - DWR response: look at capital costs per unit, but keep in mind that all of these are qualitative at this point in the process. There are still deficiencies in the evaluation that will be resolved soon.
- Effects on adjacent properties could be huge

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- The potential for cost sharing, which is a requirement for the local sponsor to provide lands, easements, rights-of-way, relocations, and dredged or excavated materials disposal areas (LERRD) exclusion should be noted.

Environmental Considerations

- There is a completely different ecosystem in many floodplains (ag) now compared to last time there was a major flood. There new riparian ecosystem will increase the flood impact.

Social Considerations

- The statement that there is no residual risk to public safety is not true. There could be residual risks if areas are not set up to be flooded correctly. There could also be additional recovery measures needed. There could also be erosion problems.
- The likelihood of implementation is all over the map. There are so many factors that influence implementation.
- Need to be careful to not transfer the risk from urban to rural; the beneficial pay principle should apply. There has to be some economic justice.
- Places where a lot of storage can be achieved should be leveed off.
- Should have to purchase a flood easement to compensate for impact.
- In urban settings compensations are developer funded and can take the form of small storage basins or related big scale projects.

Technical considerations

- When the flow in the river is divided, sediment drops out and may require maintenance later to restore conveyance in the river.
- Receiving sediment on land is a very significant impact.
 - DWR response: this issue needs to be reflected in the amount paid for the easement. If a larger amount is paid up front it would be reasonable for the farmer to clean up the sediment, conversely, if a smaller amount is paid, an endowment could be set up to pay for the cleanup.
 - There is a need for an annuity to support flow easement maintenance and help recondition the property afterwards.
- There can be transitory storage in urban areas as well.

MA-002: Construct new transitory floodplain storage

Problem/Desired Outcome/Methodology

- The methodology section mentions wildlife refuges, certain types of rural agricultural lands, and certain Delta islands; these are different distinct problems and should be looked at differently. Separate them out and give special considerations.
- • Description should include the fact that transitory storage is not used every year

Advantages / Disadvantages

- There are potential tax base implications (disadvantage).
- The initial design cost can discourage projects from going forward (disadvantage).
- Confused about why is this Management Action is different than expanding transitory storage. Could combine into one Management Action.
 - MWH response: our thought was that there may be a place that is protected by levees and is not currently intended for storage, but may be modified for that purpose.
- Better control of flood peaks (advantage), losing that protection (disadvantage).
- Constructing new storage is a very volatile prospect and makes certain people nervous.

Economic considerations

- Impression is that this Management Action has not been thought through.
- How you allocate costs (capital or annual) would affect things.
- There might be some ring levee costs.
- There could be costs to landowners (such as giving up the right to a weir) that would necessitate an annual easement.
 - DWR response: these areas would likely only flood every 20 or so years, so there would not be an annual cost.
- Need to have applicable assessments.
- Special equipment will need to be brought in if people are being relocated.
- Capital costs may be much higher than the planners think right now.
- When the storage is used, recovery costs could be substantial.

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- Payments for flood easements need to take into consideration all costs.

Environmental Considerations

- Could have issues related to pollution from floodwaters.

Social considerations

- Ag interests very concerned about the impacts to them if they are in the area to be turned into storage

Technical Considerations

- New transitory storage facilities could be sited in urban areas, which could also have parking lots etc. Is this excluding all urban areas?
- Generally going to see detention or storage related to local areas.
- Do not know if transitory storage should be separated on this scale.
 - DWR response: Will seek refinement as we move into round 2 of the workshops.
 - MWH response: The regional solution sets are where the detail will come out.

MA-003: Increase on-stream flood storage capacity by building new storage facilities

Problem/Desired Outcome/Methodology

- This is the first Management Action to reference a particular river; why is that?
 - DWR response: this is just an example. For the purposes of this discussion, it could be any river.
- The problem statement looks the same. The problem is the linear system has limited capacity and is hard to change. May be easier to add storage to reduce flood peaks.
- Add multi-purpose reservoirs.
- The way storage is being talked about is about the timing of release not the amount going out. Trying to control the rate it leaves the watershed. Unless we are trying to capture water for purposes other than flood management. This problem statement is not reducing the downstream release volume; it is reducing the timing of when the releases are made. In terms of the problem statement virtually all measures are talking about reservoirs, but there are other options. Should consider land restoration activities.
- The problem statement and desired outcomes should try to sort out if we're talking about single purpose or multipurpose.

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- Auburn Dam should be on the table.

Advantages / Disadvantages

- Second bullet: hydropower is very significant (advantage)
- There can be institutional impediments. Multi-purpose flood control facilities reduce frequency of high flows by design. There are obvious impacts on fisheries and floodplain functions (disadvantage).
- If the dam was not there we would not talk about managing cold water flows. There are a lot of advantages of having these dams (Advantage).

Economic considerations

- Some issues transcend areas where the flood plain is. For example impacts to salmon fishermen can have big impacts to coastal communities. The adverse impacts are not only limited to the geographic area. These are big things that CA is struggling with.
- Important to note that many suggested dams are on the only rivers left to salmon, the impact has been transfers. There are the physical placement issues, and the operational issues.
 - If it was above the dam wouldn't that reduce the impact?
- There is a cost /direct effect in the inundation area of a new reservoir area. The Management Action text says there is no direct effect. This is not true.
 - MWH response: comment meant downstream, will clarify.

Environmental Considerations

- Benefits to new storage. Find with new delta outflows sometimes there is not enough cold water for outflows.
- If constructed on undammed streams, this would affect the last habitat that is available.
- Could provide cold water as needed later in the year for Delta and river flows.

Social Considerations

- Concept of risk is that you build facility, and permit reclamation of the floodplain. But there is still a risk that there would be flow in excess of the design or failure. It is not true that construction of dam does not increase risk.
- Indication there are no downstream impacts on redirected waterways, but when you do that you end up with much different channel morphology.
- Residual risk is increased by new development in the floodplain

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- There is always residual risk, even for a dam.
- Tribal land issues when inundating upstream lands.

Technical Considerations

- Downstream erosion increased by removal of sediment by the dam.

MA-004: Update/modify existing flood storage facilities

Problem/Desired Outcome/Methodology

- Tone of first sentence is wrong, those storage facilities were replaced not because they were obsolete, but to create more water supply. Take out the word obsolete.
 - MWH response: Obsolete was meant to indicate that the dam not able to fulfill all the expected goals, even though not in original design.
- DWR: on this Management Action are we also capturing the potential to improve the flood systems that do not have a lot of flood storage. Does this Management Action capture those types of dams?
- DWR: There are older dams in the system that do not do a lot for flood protection but could do a lot for fish if removed.
- DWR: Whole purpose of the CVFPP is to improve flood protection. Not sure we would do something specific for the ecosystem unless it had flood protection elements.
- Trouble seeing the differences between Management Action 4, 6, and 8. If it is not important to keep them separate suggest combining them.
 - MWH response: before the title changed it made more sense, with new title, somewhere we want to capture that new dams are different than expansion. There is overlap.
- These major rim dams were constructed when the existing dam was fine. It is difficult to know where to bring up the issue. Regarding definition of what dams we are talking about, there may be flood control implications to a dam removal project on the Yuba. There is a dam that has the smallest section 7 reservoir in the state. To the extent that there is interest to this, there may be some interest/pressure to reduce the flood control space. You may need to touch some dams that are not section 7 dams.
- (Comment on original title) It is possible to have increased storage by having increased capacity downstream. If the capacity is greater you can hold more water in the reservoir. Is that an existing flood storage facility? Is this idea captured in this workshop?
 - MWH response: No, reservoir operations will be talked about in Management Action 16.

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- DWR: There is a cross linkage here between this action and another Management Action. Noted.
- The description here only talks about reservoirs and high dams, should revise text to also including other things like weirs. Want to update and modify existing facilities to be consistent with other systems. Want to optimize every dam within the context modernize, but not raise capacity just for capacity sake.
- Delete the word 'potential' in the sentence: The potential to reduce and degrade downstream floodplain habitat (under disadvantage).
- Advantages and disadvantages have not been applied consistently in all the Management Actions. What is the criterion?

MA-005: Create new storage in existing reservoirs via dredging activities

- Do not think we need to spend much time on dredging reservoirs. There is not enough information on dredging reservoirs or enough funding.

MA-006: Increase flood control allocation by expanding existing, on-stream reservoirs

Problem/Desired Outcome/Methodology

- DWR: there are a lot of Management Actions that DWR is already in the process of implementing because of legislative reasons.

Advantages / Disadvantages

- Anytime you say state you are going to modify a dam you need to put in that there are significant dam safety concerns. It's an additional cost that a lot of people do not account for (disadvantage).
- Complicated social impacts (disadvantage).
- Would increase cold water pools (advantage).

Economic considerations

- Anytime you say state you are going to modify a dam you need to put in that there are significant dam safety concerns. It's an additional cost that a lot of people do not account for.

Environmental Considerations

- The footprint of Environmental impact maybe smaller than other strategies but it is not 'none'.

Social Considerations

- Tribal land issues when inundating upstream areas

Tech considerations

- No comments

MA-007: Increase foothill and upper watershed storage

MA-008: Increase flood control allocation by using Spillway Surcharge

****Discussion for MA-007 and MA-008 was combined***

- Unless you change the methodology, these Management Actions are exactly the same.
- What is a spillway surcharge?
 - There are two definitions: one is adding flash boards to temporarily increase capacity. Another is design use of surcharge. If you have a design flood in the absence of Marysville dam, you can get 10-15 feet above the spillway. You control the release to the objective release to 150k. When hit the spillway you have to control part of the system. In the absence of the release, you eventually use the 15 feet of spillway space by running 150k acre-feet over the un-gated spillway, so you maintain for a longer period of time.
- Icehouse is not used as flood control. Should be Hellhole and Union Valley.
- The title is missing upper watershed management outside of the channel. There are meadow restoration, forest management etc, all of which could affect flood flows up to the 100 year event and flood flows. Focusing only on reservoirs is more narrowing than the title applies. Would like to expand to restoration in the watershed. (Comment on Management Action 7).

Advantages / Disadvantages

- First bullet: does not necessarily increase.
- Could reduce damage to spillway (advantage)
- Assumption was this would happen infrequently and would therefore not be significant (advantage).
- Management Action 7 needs to be modified and get away from the spillway surcharge. This would make it separate from 8.
- Not talking about same scale. Meadow restoration vs. spill water surcharge are not the same.
 - The rate of runoff from the land to channels and rate of water from a reservoir have the same capacity to alter things as a spillway.

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- Are we talking about undammed streams or dammed?
 - MWH response: originally talking about upstream of the rim dams.
- More massive for potential in wild land fires.

Back to Management Action #8

- Bullet #1 could apply to many of the Management Actions (advantage).

Economic considerations

- No comments

Environmental Considerations

- Could be substantial improvement in sediment impacts.

Social Considerations

- No comments

Technical Considerations

- No comments

MA-009: Increase flood control allocation at existing reservoirs by building new, off-stream storage

MA-010: Increase flood control allocation at existing reservoirs by expanding existing off-stream storage

****Discussion for MA-009 and MA-010 was combined***

- Could combine 9 & 10.

Problem/Desired Outcome/Methodology

- • Don't negate using Delta Islands for this storage if the transfers are done outside of flood operations.
- The action is limited; know of one project that will divert water during flood season: The More Water Project in San Joaquin County.
- It is not clear that the action involves both conveyance system and a reservoir system. Only talks about reservoir. Think some additional wording is needed in the methodology.
- It is a matter of the significance of the effect. Are we talking about the 1 acre foot project or the larger one? Is there a range for this?

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- MWH response: the CVFPP is focused on fixing the state plan of flood control. There may be things done in other watersheds but those projects are not the focus of this discussion.

Advantages / Disadvantages

- Having water within the reservoir would create benefits. Would need a lot of conveyance capacity to get the peak flow out of the river.
- Downstream impacts to aquatic and riparian habitat due to diminished instream flow (disadvantage).
- Take out word “potential” in disadvantages.

Economic considerations

- Suggest deleting high terrestrial cost. Add having downstream impacts due to diminish in stream flow.
- Focus on federal cost sharing, but there may be other sources.
- Under annual cost to operate: there are substantial pumping costs to fill the off-stream reservoirs.
- This MA said benefit of added jobs; why don't all the others that require large construction projects say the same?

Environmental Considerations

- If the storage in the on-stream dams are not recovered could have water temp impacts.
- Should mark the ecosystem functions box for both 9 and 10.

Social Considerations

- Could be recreation impacts to on-stream dams if they don't recover from drawdown.

Suggestions for New Management Actions

- Land restoration activities and linking storage to specific flood risks. Could have one kind of storage at a frequently inundated site and a different kind of storage at an infrequently inundated.
- Using irrigation channels for transitory storage
- A different Management Action to achieve additional storage could be to modify existing downstream conveyance such that the objective release from the reservoir could be increased. This is covered under another workshop for a different purpose

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but not covered here. It should come first before building new storage. It is a different type of action to produce storage.

- Watershed land restoration outside the channels.
- Address impacts on lands adjacent to transitory storage areas.
- Need to look at potential recovery actions after floods.