# Meeting Summary

## RURAL LEVEE REPAIR CRITERIA WORKGROUP MEETING #2
## California Department of Water Resources, JOC Room 130
## 3310 El Camino Ave. Sacramento, CA
## May 23, 2013; 1:00pm to 4:30 pm

## Contents


Summary of Action Items ..... 1

DWR Welcome and Opening Remarks ..... 1

1st Meeting Notes Comments Discussion ..... 2

RLRC Problems and Repair Alternatives Matrix ..... 5

Alternative Templates ..... 7

Special Topics ..... 7

Summary of Next Steps ..... 8

Attendance ..... 8


## Summary of Action Items

1. DWR will prepare draft alternative templates to be shared with workgroup volunteers. (Due: June 13th)
2. DWR will revise the planning framework to reflect workgroup discussion (Due: June 13th)
3. DWR will revise the repair problems and repair alternatives matrix to reflect workgroup discussion. (Due: June 13th)
4. DWR will revise the Criteria definition to reflect workgroup discussion. (Due: June 13th)
5. Volunteer workgroup members will be review draft alternative template for their selected repair problem. (Due: June 20th)
6. CCP will send notes of today's meeting next week with information on the June 27th next meeting agenda and details. (Due: Week following May 23rd)

## DWR Welcome and Opening Remarks

Meeting Facilitator Adam Sutkus (Center for Collaborative Policy) welcomed members and interested parties to the meeting and led introductions around the room.

Dave Wheeldon (Department of Water Resources; lead of the work group) welcomed the workgroup participants. Mr. Wheeldon remarked that the first meeting went well and provided

important issues for consideration. Several members reviewed and commented on the first meeting notes, the problem area/alternative matrix, and draft templates. Mr. Wheeldon thanked Graham Bradner for reviewing the templates and Rune Storesund for reviewing the meeting notes and highlighting important issues related to scope of process. In this meeting, the comments and DWR's proposed responses will be discussed in efforts to reach conclusion on scope and content of the matrix.

Mr. Sutkus reiterated that the definition of scope and content of the matrix will be a focal point of the meeting. DWR responded to all comments and input from members' review with the intention of moving the process forward. In addition to discussing the matrix, there are other areas that may need to be included in the report and those will be discussed at the end of the meeting.

Earlier this week, Mr. Wheeldon updated the Coordination Committee on the RLRC workgroup progress. The committee requested a progress update at the July meeting of the Central Valley Flood Protection Board. Mr. Wheeldon will work with Joe Countryman and Ali Porbaha to identify what needs to be reported on to the Board and to ensure that it is added to the Board's meeting agenda.

# 1st Meeting Notes Comments Discussion

Mr. Wheeldon began the discussion on comments to the 1st meeting notes by agreeing that clarity is needed on language. Revised meeting notes were provided as an appendix to the 2nd meeting workbook. The discussion focused on clarification of the scope, the planning framework, and the criteria draft definition. The following is a summary of comments and suggested revisions for each component.

## Clarification on scope

In discussing the scope of the criteria, the workgroup members had diverse opinions. The opinions of the workgroup members are provided and followed with the workgroup decision on the scope definition.

Workgroup members' comments:

- The scope needs to express an intended level of repair: original design condition, original intent, condition at the time levee were turned over to be maintained, or original construction.
- The focus of the criteria should be on addressing known deficiencies. It is important to address the worse things first since original design often does not conform to current criteria.
- Deficiencies that are identified during inspection should be repaired so the levees could perform better in the next flood event.

- Based on the planning framework, the levees should be repaired to pre-damaged conditions.
- The repair should not refer to a target level of protection. Rather, the focus should be on addressing damage to distressed areas. Pre-damaged conditions cannot be identified or quantified and therefore the focus should be on reducing risk.
- It may not be beneficial to return to pre-damaged conditions since those conditions may have led to the problems exhibited by the levees.
- The goal should be to address weak links in the system. By repairing the weak links, the reliability of the basin, as a whole, will be increased.
- A local maintenance agency may choose to repair a levee to its original construction conditions, but may also make improvements to address underlying conditions with the intent of reducing risk rather than providing a certain level of protection.
- Bringing levees back to their original condition may not be desired if the levees had defects; the focus should be on addressing recurring problems.
- Repairs are not designed for any specific level of protection.
- The information gained through the levee evaluation program is important for consideration but not all identified fixes will be done.
- The intent of the RLRC falls somewhere between full levee repair and flood fighting.
- The scope should clarify whether the fix is for the symptom or cause, depending on the situation it may be a little of both. In generally, the repairs fix the symptoms not the causes.
- The scope should clarify the application of existing standards/existing conditions—any new information that could assist in the repair should be referenced.
- Although the criteria focus on safety, specific level of protection is not a consideration.

Recommended revisions:

- **At minimum, repairs should bring levees to their original conditions**.
- **Repairs should address defects to eliminate recurring problems at the site—in pursuit of reducing risk**.
- **Information from DWR's Levee Evaluations Program should be considered.**

## The Planning Framework

Following the discussion and clarification of the RLRC scope, the planning framework was further amended. The comments of the workgroup members are provided and followed by their recommendations.

Workgroup members' comments:

The workgroup considered the need to include a reference to the US Army Corps of Engineers (USACE) 408 permitting process in the planning framework.

- The criteria's scope and approach is to avoid actions that would require a major 408 permit.
- These repairs are geared at extraordinary maintenance, not routine maintenance. Routine O&M responsibilities are not part of these criteria.
- Rural levees are in such distress that routine O&M alone is not sufficient.
- The purpose of the template is to streamline the project implementation process and facilitate the approval of various state/USACE permits.
- Many of the repairs will likely require a USACE 408 minor permit.
- An important consideration of the USACE 408 permit process is that it is not limited to the type of alternative but it is also subject to scale. The scale of the project may result in the upgradeof a minor permit into a major permit. Changing a minor to a major permit is a case by case decision made by the USACE.
- Mr. Wheeldon reiterated that DWR and the RLRC workgroup will continue to seek insight from the USACE on the 408 permit process.
- Environmental considerations can be part of the templates as relevant to the alternative rather than explicitly referred to in the planning framework.
- Building on the water side will likely include environmental considerations.
- The RLRC deliverable tool will include both template guidance and a more general perspective for the criteria approach.
- Another bullet item was added to address the effects of fixing a weak link on the whole system. We have high risk areas and we are looking to reduce the risk at that point, we do not have to fix the whole system.

<u>Recommended revisions</u>:

- **The planning framework will not include a reference to the 408 permits. Relevant permit information will be included as part of the alternative templates.**
- **Revise Item #1.**
- **Revise item #2.**
- **Remove Item #3.**
- **Revise Item #4: 'streamline implementation' to be added. Do not use approval.**
- **Delete Item #5 since it relates to a planning process rather than a design criteria. It does not belong in this process.**
- **'Facilitate template for approval' is not added and will need to be explained in text.**
- **Item #6 as is.**
- **Item #7 as is.**
- **Add a new item to address the focus on repairing a weak link and the repair's impact on improving the whole system: "A goal of rural levee repair criteria is to reduce flood risk at prioritized critical locations. "**

### Definition of Criteria

A comment on the 1st meeting notes requested clarification on the reference to best practices vs. criteria. In response to this comment, DWR provided a draft definition for the Rural Levees Repair Criteria (provided in Meeting #2 workbook) as it applies to this process and to distinguish from the Urban Levee Design Criteria (ULDC). DWR will use the revised planning framework and comments from the workgroup to reword the criteria definition. Comments from members on draft definitions include:

- Delete the reference to "original condition"
- This criteria needs to be streamlined and more cost effective than the urban criteria.
- A suggestion was made for 2nd line wording to include: "RLRCproposed templates or guidelines for maintaining agencies to use to repair".
- The definition of rural is ambiguous and needs to be defined and included in a glossary.
- Although urban levees have clear specifications and small communities may have 100 yr. level of protection, other levees in rural areas do not have specified level of protection.
- The criteria will be comprised of templates and a narrative guidance.
- A suggested revision was "RLRC are proposed templates and narrative guidance for LMA stobe used for repair of damaged rural levees using cost effective methods beyond routine maintenance."

## RLRC Problems and Repair Alternatives Matrix

Mr. Sutkus thanked members for reviewing and commenting on the matrix. Specifically, the reviewers were asked to determine if problem areas and repair alternatives, as shown on the matrix, needed to be added, deleted, or modified. Based on comments from the workgroup members, DWR provided suggested responses to revising the matrix thatreflect the scope of the criteria.

### Repair Problems

The workgroup agreed that problems needed to be defined in general terms. The alternative templates will address the specific differences between similar types of problems. The following changes were agreed upon by the workgroup:

- Permitting was deleted and will be addressed in the specific alternative templates.
- Crest depression will replace crest settlement as a general reference to all settlement problems.
- Delta levees are considered rural levees and should be included in the criteria.

- There is a difference between regional and localize depressions that may require different actions to address. Repair approaches for depressions are site specific.
- Existing relief wells will be addressed with the under-seepage category.
- Keep animal damage category but distinguish between routine maintenance and repair.
- Vegetation should be addressed in the narrative guidance to explain its exclusion as a problem. Instead vegetation should be part of the alternative templates.
- Keep Erosion and specify in templates key differences in conditions.
- Keep Stability. It was recognized that waterside/landside stability issues require different alternatives which will be reflected in the templates.
- Keep Seepage.
- Keep penetrations. The USACE clarified that rural and urban standards for penetrations are the same. Penetration may need to be considered in the guidance component of the criteria.

## Repair Alternatives

The workgroup agreed to lump some of the alternatives into general categories. The following changes were agreed upon by the workgroup members:

- Lump all the cut off walls variations into one category.
- Consolidate berms into a stability berm. Future discussion will address the drain and undrained berm options.
- Keep waterside blanket.
- Take out the Levee raise option because it is a subset of other problems.
- Keep levee widening and remove adjacent levee as adjacent levee requires major 408.
- Remove set back levees because they trigger a major 408.
- Take out structural restoration and levee restoration. Need to clarify structural and levee restoration. Modification options may affect hydraulics by raising water elevation and therefore trigger a major 408 permit.
- Leave rock slope protection.
- Add Vegetation as a repair alternative.
- Set back levee was taken out since it is considered a new levee and therefore requires a design that is not part of these criteria. Set back levee affects hydraulics and therefore require a major 408 permit.
- It was recommended that the criteria will have a narrative section explaining the exclusion of the setback levee.

## Alternative Templates

Mr. Sutkus thanked Graham Bradner for reviewing the alternative templates that were created by DWR. The templates came from other DWR programs such as the Levee Evaluation Program and the Flood System Repair Project where some engagement with the USACE was already done. Mr. Sutkus asked Mr. Bradner to share his thoughts on the format and usefulness of the template as a criteria tool.

Mr. Bradner said that the templates looked familiar and that in his review he considered comments that he had received from USACE reviewers in the past. Mr. Bradner has used similar templates in the past for costing designs. In reviewing the templates he considered constructability.

A member suggested that references to specific problems addressed by repair alternatives be matched with the problems as defined in the matrix. Another member suggested that relative cost be included in the templates. Members recognized that it may be difficult to identify appropriate cost because there are many variables (such as hauling costs) that may affect costs.

Mr. Sutkus asked for other members to volunteer and work on draft alternative templates. A member suggested that members chose problem areas to work on rather than specific alternative repairs. DWR will provide draft alternatives for volunteers to review and comment on. Below are the problem areas and the workgroup members who volunteered to work on specific problem areas.

| Problem Area | Workgroup Volunteers |
|---|---|
| Erosion | Rune Storesund, Gary Albertson |
| Seepage | Ric Reinhardt, Les Harder, Kevin Tillis, Gary Albertson |
| Crest Depression | Dave Mraz, Gil Cosio |
| Encroachment | DWR |
| Penetrations | DWR |
| Structures | In guidance text (not template)-DWR |
| Vegetation | Stacy Cepello, Dave Mraz |
| Animal Damage | Rune Storesund, Dave Mraz |
| Stability | Graham Bradner, Kevin Tillis |

Mr. Sutkus thanked everyone for volunteering to help out in drafting and reviewing the alternative templates.

## Special topics

Mr. Wheeldon introduced three special topics to be considered as part of the criteria:

1. Environmental stewardship.

2. Special considerations including delta levees and nonproject levees.
3. Permitting including CVFPB, USACE, and Environmental review.

Specifically, Mr. Wheeldon asked for input from the workgroup on whether or not these topics should be included in the document.

Workgroup members concurred that these topics should be covered. Environmental consideration and permitting issues may be applied to each alternative template as appropriate. The consideration of delta levees and non-project levees should be discussed in the document but not specifically in the templates. The designation between project vs. non-project levees may not be important. Rather, the RLRC may want to follow the ULDC designations of frequently loaded vs. intermittently loaded levees since this designation may affect the repair approach. The criteria apply to both project and non-project levees and will provide references to permitting and streamline the implementation of projects.

Mr. Sutkus thanked all the meeting participants for attending the meeting and offering their input and support to the process and acknowledged the progress accomplished today by the work group.

## Summary of Next Steps

- DWR will prepare draft alternative templates to be reviewed by workgroup members.
- DWR will revise the criteria definition, the matrix, and planning framework based on the input received from the workgroup at the meeting.

**Next meeting (RLRC Meeting No. 3) will be on Thursday, June 27th from 1:00pm to 4:30pm.**

## RLRC Meeting No. 2 Attendance:

1. Gary Albertson, PMA Sacramento
2. Graham Bradner, GEI Consultants
3. Stacy Cepello , DWR-FESSRO
4. Joe Countryman , CVFPB, Board Member
5. Leslie Harder, Jr., HDR Engineering, Inc.
6. Reggie Hill, Lower San Joaquin Levee District
7. Ryan Larson, USACE
8. Dave Mraz, DWR-FESSRO
9. Mary Perlea, USACE
10. Ali Porbaha, CVFPB
11. Ric Reinhardt, MBK Engineering
16. Steven Sullivan, Mead & Hunt, Inc.
17. Kevin R. Tillis, Hultren-Tillis Engineers
18. Mary Pitto, Rural County Representatives of CA
19. Richard Millet, DWR Geo-Levee

**Project Team**

20. Dave Wheeldon, DWR-FMO
21. Syada Ara, DWR-FMO
22. Yung-Hsin Sun, MWH Americas, Inc.

12. Julie Rentner, River Partners / RD 2092
13. Max Sakato, RD 1500, by phone
14. Steven Stadler, Kings River Conservation District
15. Rune Storesund, Storesund Consulting
23. Mary Jimenez, MWH Americas, Inc.

**Facilitation Team**

24. Adam Sutkus, CCP
25. Orit Kalman, CCP