

Oroville Spillways Community Meetings Oroville, California on May 4, 2017, 5:30 pm Meeting Summary

The meeting in Oroville was the fourth of seven community meetings convened by the California Department of Water Resources (DWR) in April and May 2017, with the following focus:

- Response: What happened to the main and emergency Lake Oroville spillways (spillways) in February and March and what was the response?
- Recovery: What is happening today and in the future to repair the main and emergency spillways?
- Community Topics: What are likely community impacts of the recovery and how can they be addressed?

This document summarizes the presentation and opening remarks. The full presentation is available online at: http://www.water.ca.gov/oroville-spillway/pdf/2017/OER%20Community%20Meetings%20Presentation%2020170504_v8.pdf. A complete video of the meeting is available online at: <https://youtu.be/g7My-qRUpwU>

It also captures public comments and clarifying questions and DWR staff responses. It is not intended to serve as a detailed transcript of the meeting.¹

This document is organized into the following main sections:

1. Introduction
2. Special Presentation and Questions re: SBF Funds
3. Presentation
4. Questions and Comments
5. Action Items

Introduction

Mike Harty, facilitator with Kearns & West, opened the meeting, reviewed logistics, and discussed the meeting purpose and agenda.

Cindy Messer, Chief Deputy Director for DWR, introduced her staff and invited Oroville Mayor Linda Dahlmeier to make a special presentation (see below for details). Ms. Messer thanked the local officials for attending. Senator Nielsen made brief welcoming remarks.

Ms. Messer said on behalf of DWR, that [we are sorry for the impact the incident had on people lives](#), for the spillways failure and subsequent evacuation, and affirmed the Department's commitment to:

- Public Safety
- Timely repairs to stabilize the gated and emergency spillways by November 1
- Listening to the public's concerns and suggestions
- Transparency in communications related to the spillways recovery effort

¹ Where appropriate DWR has added a "NOTE" that reflects subsequent investigation to ensure factual accuracy.

- Minimizing impacts to roads, traffic, recreation, and the economy resulting from the recovery effort

Special Presentation and Questions re: SBF Funds

Mayor Dahlmeier acknowledged the challenges that the entire community has faced during the spillways crisis and recognized the hard work that DWR, State Parks and Recreation, Fish Hatchery, and County and City employees as well as First Responders have done to help mitigate its impacts. She noted that these employees have spearheaded the search for alternative recreation solutions; this engagement prompted high-level conversations between DWR and the State Water Contractors and ultimately, the decision to issue an early release of \$3 million from the Supplemental Benefit Fund (SBF). Negotiated as a settlement 11 years ago and in no way connected to the February spillways crisis, the SBF money will facilitate planned recreation projects that have been on hold until the dam's relicensing is complete. The Mayor thanked DWR and its partners for negotiating the early release of the funds.

- Q: What does that \$3 million get used for? When will it be used?
 - R: The SBF funds are part of a separate settlement agreement with over 50 signatories. Therefore, decisions are not solely under the purview of the city or parks. There is a body that makes decisions and has regular meetings. If a project fits the SBF criteria (available online), the body will consider it for funding. Up to this point, there was no money available, so there are not any projects in the pipeline to be announced.
- Q: 11 years is great, but the dam has been here much longer, and Oroville has not gotten its due right. Where is the money DWR promised the city in the 1960s? \$3 million is unacceptable.
 - R: This is a pre-release of the promised \$8 million and unconnected to the spillway crisis. Your question is not a SBF question. Once the money is accepted into the SBF, the body will make a decision about how it can be used into the future.
 - Q: This is a DWR question. Where is the money?
 - R: DWR is also waiting for the license, but FERC does not currently have a full board of commissioners to vote on the license. I agree that there is more history behind the ongoing delay, but I am not familiar with that history and need to research it.

Presentation

Jeanne Kuttel, DWR's Chief Engineer overseeing design and construction of the spillways, delivered a brief presentation on the Oroville Emergency Response and Recovery process and the current status of operations. She emphasized that the dam itself was not impacted by the spillways event and remains safe. She reviewed the structure of the spillways and the timeline over which the primary spillway failed in early and mid-February. Ms. Kuttel noted the unprecedented meteorological conditions that required the controlled but rapid release of water from the reservoir onto the damaged spillway. She reviewed the proposed approach to restoration which focuses on first repairing the upper chute of the spillway and installing a cutoff wall on the emergency spillway in 2017 to avoid any further erosion, and then on constructing a new lower chute of the main spillway and making additional improvements to the emergency spillway as quickly as possible. She then reviewed the oversight role of the Board of Consultants (BOC) and the role of the Forensics Team in investigating what went wrong. Erin Mellon, CA Natural Resource Agency, discussed the BOC documents available online and the reasons for redactions. Anticipated community impacts due to construction were also reviewed.

Public Comment and Question Session:

The summary below provides a detailed overview of the questions (Q) and comments (C) provided by meeting participants, as well as responses (R) provided by DWR staff. Specific items for follow up are identified in the “action items” section below.

- **C:** As a first responder and minister at an Evacuation Center, I am concerned about the lack of emergency notice, particularly in remote areas of the county. Please make sure the spillway has a horn to sound emergency alerts.
- **C:** (1) We take issue with keeping parts of the BOC reports redacted because this crisis was not caused by an Islamic terrorist but by malfeasance. (2) DWR has said they are designing the spillway for 270,000 cfs, but flows of that volume would destroy all these towns. While you said construction would be complete by November 1, the lower spillway will not. This causes a safety issue. Therefore, the lake should be drawn down by September and DWR should keep the lake under 800 ft until the spillways are entirely repaired. The entire crisis was caused by mismanagement of lake levels. (3) This incident has caused an economic crisis; Butte County should set up a class action fund. The riverbanks have been destroyed and the salmon have no spawning grounds. This is criminal and someone needs to be held accountable. (4) DWR never resolves issues; the community needs to fight back.
 - **R:** The guidelines for redacting Critical Energy Infrastructure Information (CEII) are determined by the Department of Homeland Security.
- **C:** This is all political. If the lake levels were kept lower, there would not be so much panic with the gates closed and snow levels high. Every time DWR opens and closes the spillway, it is an environmental nightmare. Fish and Game won't let us dredge the channels anymore. If DWR is about safety, they need to send the water south. Director Croyle said reservoirs are all full, so why is the water being held? People in the area have bought flood insurance, because they don't trust that the Lake will not overtop given how high it is being kept.
 - **R:** DWR is monitoring snow pack and weather. DWR will operate the spillways one more time in May to release snowmelt and then will close the gates to allow construction to start and complete the needed repairs by November 1st. DWR is very confident that the Hyatt Power House can manage lake levels safely until Fall; it has 13,000 cfs capacity from the turbines and additional capacity from the river valve outlets. DWR plans to bring levels below 830 ft. Also, before the failure of the gated spillway, there was 750,000 acre feet of flood storage; if the failure had not occurred, DWR would have been able to safely manage the lake levels; it was because of the spillway damage that DWR was not able to do that.
- **C:** DWR talks about transparency and trust, but the citizens do not believe there has been transparency in the past. Going forward, the community needs to play a greater role in spillway repairs if they are to believe that DWR is operating in good faith. I suggest a Citizens Spillways Oversight Committee, so we know what is really happening.
 - **R:** DWR has had a communication problem, which has been apparent over the past few months. DWR is committed to building out a robust communication effort going forward.
- **C:** We will listen to DWR, but we do not trust them. They need to stop operating behind closed doors. We want the public involved in video filming and assessment. Why will DWR not let us

edit the raw video? We want a viewing platform, topographic maps of flood zones on paper and online, and evacuation maps posted through town. The redactions need to stop, or in 50 years, we still won't know what's really going on.

- **R:** We are determining a safe location for the viewing platform. The Visitors' Center will soon have a screen with a live stream from a camera at the dam; that video will also be posted online. We are looking into getting multiple cameras to provide a variety of angles; a person cannot be allowed to do the filming due to safety issues. Kiewit Construction is going to post many cameras at the construction site, so we are coordinating with them to get those streamed into the Visitors' Center as well. There is a spillway YouTube channel. Inundation Maps have been made public and we can get those to you. **(ACTION ITEM #1)**. Evacuation Maps, which are the purview of the Sheriff, are also public.
- **R:** Evacuation maps are available on the Sheriff's website. At www.buttecounty.com/oem, you can plug your address in, and it will show you suggested evacuation routes, centers for your zone, and public assembly points if you don't have transit. The County now has a built in mechanism that will trigger warnings with 12 hours' notice, which will allow people to evacuate in an orderly way and reduce congestion on the roads.
- **Q:** I am upset about the lack of maintenance on the dam and the spillways. Where have our tax dollars gone?
 - **R:** Oroville Dam is a State Water Project facility. Therefore, taxpayer dollars do not fund maintenance or repairs. The 29 state water contractors fund all State Water Project maintenance and repairs. DWR is also exploring federal funding options through FEMA to help offset some of those costs.
- **Q:** (1) There are rumors online that DWR did not perform maintenance in 2005 or 2013. How much truth is there to that? (2) People's lives have been negatively impacted economically, physically, and psychologically as a result of the closures of River Bend Park. Are funds now readily available to rebuild and reopen the Park? What will the cost be? Have contracts been awarded? When will the rebuilding begin and when will trails be available for public use?
 - **R:** The annual budget for Oroville facility is \$20 million/year. The capital improvements budget for Oroville and surrounding dams is \$30 million/year. DWR made repairs to the main spillway in 2009 and 2013. In the 2000s, the gate seals were improved to reduce leakage when gates are closed. DWR does repairs regularly and does a gate opening test every October to ensure the gates are operational for the flood season. DWR reports all regular maintenance measures to DSOD and FERC in its annual reports.
 - **R:** River Bend Park is not a DWR facility. They have an insurance policy which will cover damage to the park. Mountain Design Group from Chico is currently designing plans. Permitting will take some time, but they plan to open parts of the facility for use this summer before all repairs are complete. In rebuilding, they will be hardening the facility to make it better able to withstand floods.
- **C:** (1) I've been in contact with Bob Via and Bob W Burke. Professor Burke put out an analysis on the capacity needed for the spillway in the *Engineering News Record*. He says you need two robust spillways, with the emergency spillway acting as a third spillway, never to be used. This is vital, especially given that global warming will increase flows. (2) I'm concerned about the evacuation plan. Does it go against land titles in the area, or does it create an easement? Are these flood maps real representations of risk of flood? If yes, lower the lake to 700 ft. If no, get

rid of them. If it is just in case of a 9/11 type scenario, let the insurance administrators know that. (3) Please don't consider the cost of repairs to be the issue. If DWR needs to come to the public for more money, so be it. This is about our lives.

- **R:** DWR will not let cost stand in the way of doing this right. The work we are doing is to get us through November 1st. There will be discussion of multiple spillways.
- **Q:** (1) Did you pass your inspections? Isn't the dam only licensed for interim use? (2) Reports cite existing cracks in the joints at the Hyatt Power Plant. What has been done to fix that? (3) Historical dam failures are from seepage and overtopping causing erosion. What is being done to fix these issues?
 - **R:** (1) We do inspections every year and facilities were always deemed safe (or appear to be safe) for use. (2) The river valves were operational prior to this event and were damaged because of water backing up during the incident but are now fully operational again. (3) The green spot on the dam is precipitation driven and will be bigger this year because of all the rain. We monitor it, but it is not an issue for concern.
 - **C:** Mike Harty suggested that someone from DWR would walk through the reports with her individually. **(ACTION ITEM #2)**
- **Q:** The Oroville Strong! campaign has over 50 members including most of the major companies in the area. We want the issues raised in the coalition's letter to Governor Brown to be addressed (letter was signed by all downstream governments). Is DWR considering supporting programs to help development in Oroville? Oroville's economic growth has been seriously set back by the spillway incident and the way the dam is operated. Programs that would make a difference include: relieving flow restrictions in area south of Oroville; providing electricity subsidies to Oroville like those received by Redding; improving Highway 70. We appreciate DWR's support of recreation facilities, but they are cheap and do not lead to prosperity, whereas we advocate more expensive programs that will make a real difference. If DWR cannot provide funds, it should advocate for us. Are you in the position to help us? How can you help? Is DWR in control of hydroelectric revenues?
 - **R:** Yes, we can help. **(ACTION ITEM #3)**
 - **R:** The electricity generated by the State Water Project only offsets two-thirds of the electricity it uses. It is not a for-profit. State Water Contractors payments only pay for operations and maintenance.
- **Q:** I recommend that (1) the Feather River Hatchery raises 2million more salmon and steelhead to restore the fish lost due to the spillway failure, (2) DWR restores the spawning gravel that was scoured due to high flows, and (3) DWR replants vegetation and riverbanks along the river to help sustain sport fishing and farmers. DWR has been waiting on getting relicensed for 10 years. Will we have to wait another 10 years to get help for the environment or is there funding for emergency repairs?
 - **R:** In December 2016, DWR got the final permits from the federal government needed to issue a new license. Now, they are waiting on FERC to have the quorum necessary to grant the license. Once the license is issued, it will trigger a host of new projects, implemented in partnership with Fish and Game and the National Marine Fisheries Service. Over the next 50 years, they will invest \$500 million in environmental improvements and \$500 million in recreation. Because of high flows, DWR has not yet been able to do assessment to evaluate the state of spawning gravel, etc. Feather River

Fish Hatchery (managed by Fish and Wildlife) has the ability to raise more fish, and DWR will discuss it with them **(ACTION ITEM #4)**.

- **C:** The draw down of river flows yesterday was too fast. It stranded many fish and is pulling the banks around the orchards away. The natural spawning fish were all scoured out in that high water event. We need mitigation for fish.
 - **R:** At the Feather River Fish Hatchery the Department of Fish and Wildlife raises 60% of fall run fish for the state, and we saved nearly all of them. We will put the last 500,000 steelhead trout in river on Saturday. There is no way to know how many died by stranding, but we did not find anything catastrophic.
 - **R:** The first time DWR made the decision to shut off the flow it was balancing numerous factors, including damage to the spillway, and they did it quickly without shoring up eroding areas. The next shut-offs were designed to minimize instantaneous dropping in the river. In response to criticism at the Gridley meeting, this last draw down provided 24-hour notification and was spread out of six days.
- **C:** On May 12, DWR is invited to join the river guides and local elected officials to tour the river and learn about stakeholder concerns. I also have a design for a terraced levee system to protect our banks to present to DWR. **(ACTION ITEM #5)**
- **Q:** Approximately 1/3 of spring run salmon transferred from Oroville Hatchery to the 99 River Hatchery during the emergency died. A facility built for 4 million was holding 6 million. Estimates are that 700,000 fall-run fish and 300,000 spring-run fish were lost. This was a catastrophic event for this river. I request that the hatchery raise 2 million fall-run Chinook and 500,000 spring-run fish. How can the community help DWR get relicensed in order to get restoration started?
 - **R:** DWR will take this request to Fish and Wildlife and NMFS. When the new license is issued, all of the programs we will be doing will be vetted through a public-process ecological committee. You are welcome to participate in that process. **(ACTION ITEM #6)**
- **Q:** Is there any money set aside for Oroville community members who will be negatively impacted by a shortened fishing season, etc.?
 - **R:** DWR is pursuing disaster relief funds through FEMA.
- **Q:** The public was given less than an hour to evacuate. DWR was not prepared for this emergency and inspections did no good. Why is construction starting at the end of the month if the Forensics team is still trying to figure out what went wrong?
 - **R:** The Forensics team is sharing their findings with DWR and FERC in parallel with initiating the construction process, because we cannot wait to start construction. The November 1 due date is a public safety issue, not a random date.
- **C:** As a long time core driller, I have some comments: in the past, concrete was poured more thinly. DWR patched rock pockets but did not put on an overlay, which is an issue with high levels of flow. DWR needs to check the underlying rotten rock every 5 years. The green spot could mean the water is coming through the rocks.
 - **R:** DWR has been doing core drilling since early March to get better information on the geology under the emergency spillway. There is concrete between 4-6 feet thick in some areas on the upper chute. Nothing is thinner than what was designed. DWR is looking at current standards to ensure a thicker spillway slab than was built/designed in the 1960s. There is NOT water leaking through the wall of the dam. The dam is safe.

- **Q:** Are you going to open up the Oro Dam road up to the spillway after you rebuild? What about Cherokee?
 - **R:** DWR is devising a plan with the contractor based on the required haul routes. Oro Dam road could be opened under a number of potential scenarios (e.g., perhaps with traffic control). Cherokee may also be part of the haul route. After the spillway is complete, the roads will be repaired and restored to their normal flow.
- **Q:** Why did DWR select Kiewit, and not a firm like Bechtel that builds dams and bridges around the world?
 - **R:** DWR had specific criteria for selecting a firm: (1) It needed to be able to bond for \$3 billion; and (2) it had to have successfully completed a similar size/scale project. DWR also invited Barnard, ASI, Granite, and Tiechert to bid. Kiewit was low bid of those that had the necessary qualifications. They are bringing crews that worked on the Folsom Dam, a similar project.
- **C:** For the public trust to be reestablished, transparency and accountability is necessary. We need to know that the people making the decisions and doing the work are experts in the field with sufficient experience.
 - **R:** The Board of Consultants have decades of experience working on dams around the world. There are over 100 people working on this from many consulting agencies— quality engineers, PhD's, and dam experts. FEMA offered resources to DWR, and DWR already had those best human resources working on this team.
- **Q:** Who will pay for all of these repairs? It seems unlikely that the federal government will step in.
 - **R:** The operations and maintenance and repairs will be paid for by the State Water Contractors, because this is a State Water Project facility. DWR will continue to pursue federal funds.
- **Q:** What about redacted materials? I want to know what is in there.
 - **R:** The information that is redacted today is unlikely to be redacted even in 50 years. It is a legitimate safety concern. After 9/11, we learned that infrastructure projects can be used to harm our communities. Therefore, DWR is working with the federal government to ensure that small bits of information that could be used for harm are not released. Redactions are minimal, and DWR is sharing the most information it can.
- **Q:** When will all the recreation facilities be fixed?
 - **R:** For the most part, the recreation facilities are open. The spillway boat ramp, diversion pool, and the parking lot are closed. The campgrounds and other ramps are open. We're doing our regular fish hatchery operations, including planting 100,000 Chinook salmon in Lake Oroville. The River will be open for recreation, though flows will be higher this season because of higher precipitation.
 - **C:** There is a lot of debris on the river.
- **C:** The dam incident damaged Oroville's image: we became known as a city with imminent dam danger. This damage has resulted in economic loss. Oroville Strong! wants to launch a national digital campaign to show the world who we are. What are you planning to do to restore the image we've lost?
 - **R:** We've started to weave the message that Oroville is safe and open to business into our local, state, and national press.
- **C:** I'm confident in you and trust you. The dam is safe. I am concerned about who you picked as a contractor to do this. Kiewit did a good job at Folsom but a bad job on the Bay Bridge, which started falling apart a year after it was built. They cut corners and used foreign materials and

workers. We have the opportunity to employ a lot of locals. Regarding the economy, I've had an increase of business of 34%. The houses in town are selling.

- **R:** I don't have familiarity with their work on the Bay Bridge, but we looked closely at them because of their success at Folsom. They are bringing in their top managers from the Western region to be onsite. They have a spillway website and email to make available jobs, catering opportunities, etc. DWR, DSOD, and FERC will all monitor their work to ensure a quality design as well as execution. With respect to the cameras. Kiewit will be putting up a Dam Cam with snapshots every 30 minutes that will be publically available.
- **C:** I've lived here all my life and have never felt unsafe. The river is a force to be reckoned with. The people who attend these meetings do not have the same education with respect to evacuation that I had growing up. If they complain, they should do so to the departments that allow them to build in the floodplain.
- **Q:** (1) Consider using a horn like they do for tornado warnings. (2) There are now different standards than there were in the 1960s when the dam was constructed. Why didn't DWR bring it up to standards?
 - **R:** We evaluate the need for retrofits based on current codes. Based on these codes, the spillway was considered a safe structure for continued use. If we were to re-do it, it would be to different standards, in part because the parts wouldn't even be available.
- **Q:** What were they doing at the bottom of Cherokee road at 1 AM at night?
 - **R:** We have 24-7 work happening, and you'll see more as of June 1. Cherokee Road is a key access point as it leads to a primary haul route. It will be used heavily for at least the next three months.
- **Q:** Will they be using Derek Road?
 - **R:** It's not part of DWR's haul route, but PG&E has a lot of projects up there.
- **C:** (1) On YouTube, Dr. Ralph B Peck describes the causes of our dam failure. Please make necessary changes. (2) The road in front of the hatchery is disappearing. (3) Why are there three gates blocking access?
 - **R:** We had an exchange with Professor Peck on his report findings. He agreed that his assessment looked at 'potential' causes for failure, not necessarily the actual ones. The Forensics team will be evaluating these potential causes to understand which one caused the problem.
 - **R:** DWR has completed a road assessment and identified the damages done during the response. We are developing a plan with the City and County to fix all the public roads that were damaged from the response as soon as we can, and to maintain those being used as haul routes going forward.
 - **R:** DWR recently re-opened a section of the Brad Freeman trail. The gates were installed to close a portion of that trail, while still allowing for a loop by the lower portion of the diversion pool. Above the gates is part of the construction zone. Once we have final haul routes established for construction traffic, we will know if we can open up the rest of the trail.
- **Q:** How far can you go up the old railroad grade?
 - **R:** You can go up the Lakewood trailhead (up Freeman Trail) during its regular hours approximately 1.5 miles.
- **Q:** How much time will they give us if the snow runoff is too much for the dam to hold?
 - **R:** The new evacuation plan builds in early warnings, providing 12 hours of warning before any crisis. You can visit www.buttecount.net/oem to see the entire evacuation

plan, and you can enter your address to identify your zone. We don't face the risks today that we faced on February 12. We learned a lot, which will allow us to provide an earlier warning and a more sophisticated evacuation plan. We will consider the need for sirens.

- **Q:** Why was the last evacuation warning so late?
 - **R:** The erosion moved much faster than what was anticipated, and it rapidly became apparent that the emergency spillway was compromised. Only then was it apparent that we had to issue a warning.
- **Q:** Thank you for making the call, Sheriff. What specifically did you hear that day that made you make that decision?
 - **R:** Butte County Sheriff Honea described the events leading up to the evacuation warning and subsequent management of flows and flood fight operation in detail. His remarks included the following: At this point I understood that thousands of lives were in jeopardy, and only about 30 feet of buffer remained. It was scary. I then said we had to evacuate and checked if anyone disagreed, which no one did. I never wish to ever be in this situation again, and we have since worked tirelessly to design a well-zoned, well-routed, and early warning evacuation plan. There was divine intervention, and many things went our way after that order was given. I credit God, and then our community. I am so proud of this community, because we came together in crisis. My pride in this community continues to grow as you show continued investment in this process. I'm also proud of the first responders. I'm grateful for the acts of heroism behind the scenes on the part of DWR through which water was released to prevent catastrophic flooding and to prevent the loss of the Hyatt Power House, which could have also induced a different catastrophe. I understand the history of mistrust, but these folks are not part of that past. These DWR folks are good-hearted people who have wholly supported me. Despite communication missteps, there has been an effort to improve communication and transparency. Director Croyle also helped me do my job and helped save potential lives. Director Croyle only had the job six weeks when this incident occurred, and Cindy took the job the day after the incident. There are a lot of positive things that can come from this.

Closing

Deputy Director Messer thanked the Sheriff, thanked the community for their ongoing involvement, expressed commitment to moving forward with the community, and thanked participants for coming.

Action Items

The following action items were recorded:

1. Provide inundation maps to interested constituents. Post to website.
2. Offer to sit down with interested constituent to discuss inspection reports in detail.
3. DWR will attend the next Oroville Strong! meeting.
4. DWR will discuss increasing the number of fish hatchlings coming from Feather River Fish Hatchery with the Department of Fish and Game.
5. Contact constituent to discuss his design for a terraced levee system.
6. Invite interested constituent to participate in public ecological committee to vet new restoration programs/projects after the dam is relicensed.