

Jon Wainwright: Hello, and welcome to another edition of CAP·impact's California Lawmaking in Depth. I'm Jon Wainwright and today we'll be discussing the Oroville Dam crisis. To help us learn more about that we have the man who represents the Assembly District that was most impacted by it, Assembly Member James Gallagher. Thank you so much for joining us.

Asm. James Gallagher: Thank you. Glad to be here with you.

JW: So, let's just lead off here. From what you've seen, what were some of the biggest factors that led up to the crisis?

JG: Well, one of the things that I think was not the issue that had been often cited - at least early on by DWR - was that this was the wettest year on record. I believe that's a red herring. Yes, it was the wettest year on record, but that's not something that is unique in California.

In fact, that's really the reason we have the flood control outlet spillway, is for high water years.

JW: Yeah.

JG: Which we've had in '86 for example, and 1997. Just by way of comparison, in '86 we had 270,000 CFS was the peak flow coming in to Lake Oroville.

JW: Okay.

JG: In '97 it was 320,000 CFS. In this last crisis, the peak flow was 190,000. So we've seen much higher peak flows that had to be handled. To me, it wasn't the fact that we had a lot of water.

The real factors there was, I kind of put them into a couple different categories. One is Department of Water Resources and the groupthink and insularity that was going on there. I think this has been highlighted in the forensic report.

Another category would be, I would say, not adequate maintenance and maybe upgrades that should have been applied over time.

The last factor, I would say, is just a lack of adequate oversight by the bodies that were tasked with doing the oversight of the dam itself.

JW: Gotcha. Yeah, it seems like there was kind of, not to use a bad weather analogy, but kind of a perfect storm of everything coming together and leading to a spillway that was under maintained - the main outlet being under maintained. And then all of that leading together to a huge crisis there.

JG: Right.

JW: What have been some of the biggest hurdles to getting more information, or more clarity about what led to the crisis?

JG: Well, look, I think we've been pretty aggressive - certainly my office has been pretty aggressive - at getting background information. We've held oversight hearings in the Legislature. I think ultimately we've been able to get a lot of the information. And certainly this forensic report that recently came out was pretty robust and got into a lot of the detail of what caused the actual event.

If there were hurdles, I think it's, I would say, especially initially and still somewhat now, the hesitancy on behalf of DWR to release certain information. For instance, when we were first having the Board of Consultants memos coming out - and this was a group that was overseeing the reconstruction effort.

JW: Okay.

JG: This Board of Consultants memos were being released, but they were being released in highly redacted form.

JW: Gotcha.

JG: So one of the things we were seeing was, look, just be transparent about what's going on up there. And yes, there might be certain things that you don't want the broader public to know. Maybe from a homeland security standpoint, concern that people might know where our weak points are. Something like that.

JW: Yeah.

JG: But it can't be the whole... You can't have whole pages of the document redacted out. It can't be that much. We need to know what's going on up there. What are people seeing as issues, and how are you resolving it - most particularly.

JW: And I can see, especially for legislators like yourself, it's important to know that information to be able to figure out what do we need to do going forward to address these problems and make sure something like this doesn't happen again.

JG: Right. And some of that is led by, I think, they know that lawsuits are coming - they have come now. Lawsuits have come. And they knew lawsuits were coming, and I think there was a concern about liability.

You have attorneys, government attorneys who are probably saying, "Oh, don't give out this information. Don't put this out there." who might be advising behind the scenes about what should be redacted.

It's sort of a, I think, overly defensive posture. The facts are going to come out one way or the other. And so, to me, you might as well be transparent, talk about all the different things that went into decision making up there, what's been going on over the past several years. So that, ultimately, we can all move forward in a proactive way and we learn from the mistakes of the past.

And there were mistakes, and that's another thing we really need to highlight.

JW: We mentioned the big forensic report that came out not too long ago. Was there any indication in that of a likelihood of this happening again?

JG: I don't know about it saying that there was likelihood of this happening again, but it really detailed out how we got here.

You know, hindsight is always 20/20, and I come into that saying, "Look, we can always look back and say this is what went wrong."

But what the forensic report really showed is that there were some really clear signals that people should have known about. If they didn't know about them they should have, and there should have been some proactive measures taken. Let me just give a couple of examples.

One is we know that there was geology report done before they constructed the dam that showed that there were faulty weathered rock in parts of where the spillway was constructed and on the emergency spillway. Those reports were, from what we learned in the forensic report, essentially put on the shelf and instead what was replaced was this sort of group think at DWR that, "No, this thing was built by the best of the best. It was built on solid foundation rock. Very stable rock."

Which was totally contrary to what the geology report had shown them. But because this group think that was maintained throughout the last 50 years, people continued to maintain that. Even when oversight folks like FERC came in and asked the question, "Hey, what if this failed?"

They actually asked the question in 2014. They said, "What if this spillway failed? What would you do?" That was part of their failure mode analysis.

And, the response back was, "No, this is built on solid rock."

And even an attachment was put to it showing some of the geologic sampling that was taken along the emergency spillway weir. If you were to look at those samples, it would've shown you there were areas down in the emergency spillway that had faulty rock.

Now this is a problem for FERC - they should have probably seen that themselves. But just by looking at the background data, they should've know this. But they were

maintaining - because it was something that everybody thought - something that wasn't accurate.

So that's the geology part. Right? The other part is the faulty design. Everybody that's looked at this in retrospect, looked at the original design of the spillway, has highlighted that embedding the drains in the spillway itself was not a good design, especially considered the weathered rock condition.

When you embed those drains, basically you have about six inches of concrete above those drains. And what do they see in the aftermath or construction? Cracking along the drains.

And this report details how DWR, that should've been a signal to them that there was a more fundamental problem. But they actually normalized crack repairs as this is just something that happens. And they continued to patch those cracks over and over again.

Well, finally, this thing broke. Essentially where we knew there was weathered rock and where there had been several years of patching cracks along the drain, drain areas, you know. And eventually what was described was that there was water gain underneath the spillway and it led to a pressurized situation where it actually uplifted the slab and broke it.

To me, that's years of things that you probably should've known about and that you probably should've taken some proactive measures to have done something about it.

JW: Yeah. Some red flags that were ignored along the way.

JG: Right.

JW: I feel like, when you talk about the group think, I feel like there's a parallel to the Titanic situation. You've got this thing; everyone's saying this thing is unsinkable. We don't have to worry about not having enough lifeboats on the ship, it's unsinkable

JG: Right!

JW: And then something goes sideways and suddenly you're in a much worse situation than you could've been in.

JG: I think that's exactly, that's a very good parallel.

JW: So moving forward, I know you've talked about wanting to move forward in more proactive ways. You've also said before that there's still a lot of things to address here, and that you want to see changes in operations, maintenance, culture. What are some of the specific changes that you're looking for?

JG: There's several different things. From an operations standpoint, we need to change how we manage water at Oroville Dam. And specifically, I think the biggest thing is, and this is something that's been felt by the downstream community for a long time, is that when you get a really large snowpack up above Oroville, in the case of last year, 180% snowpack. We're all going to have enough water for the year, and I think your listeners probably know, but Oroville is the centerpiece of the State Water Project. It provides water throughout the state.

But when we have 180% snowpack, where there's going to be plenty of water for the year, let's manage that lake to a lower level in the winter time so we have at least some kind of buffer. Because what happens is, it happened in '86, happened in '97, and it happened this time, is we get a warm storm on that snow and all the sudden a ton of water has come into the system and we have to use the floor control spillway to a very maximum extent and we get in some really hairy situations.

We need to improve the water management there. We probably need to improve the infrastructure up there. The emergency spillway, I think, was very clearly shown to not be sufficient. And it's really only there in an emergency situation, like when the lake gets to 900 feet, when it gets to its peak. Well how about having something that can help get water out in a more mid-level area of the lake?

Folsom Dam for example has actually put in a new auxiliary spillway to help them better manage water. Oroville probably should've done the same thing a while back, now I think it's pretty clear something like that needs to be put in place.

And then I think, just the culture. The culture at DWR has been one where they're insular. They don't really take to outside information, or at least they haven't.

JW: You've mentioned group think a couple of times too.

JG: So we need to implement, and a lot of agencies have done this, Army Corps of Engineers is one of them - they've adopted better risk management techniques. And that goes into all their decision making and how they're organized, how they communicate up and down the chain. DWR is going to have to do that. Especially in how they manage the dams that they're responsible for.

JW: Gotcha. You mentioned early on in that last response there the downstream community. We've seen reports, there's local winemakers who've said we've taken \$165,000 in damages, they've had to move where they store their wine to above water level. There's the lawsuits recently where we're looking at the extra impacts to infrastructure, roads in the area where the evacuations were ordered. What have been the economic impacts on the district because of the crisis?

JG: At an initial level, you definitely had farmers downstream who actually have physically lost land that was swept off into the river as a result of having to turn that spillway on and off very fast in the aftermath of the incident.

You had seepage issues that affected a lot of orchards and other farmland. And there was significant damage to folks downstream.

There's also people that during the evacuation that, you know we have a lot of people that are low income or are living paycheck to paycheck. And when you have to expend sums for a hotel room or remove stuff from your house to evacuate, basically on a minute's notice, there's some smaller claims there that have been a real impact to the people there.

There's manufacturers who had a stigma associated with their business in the aftermath of Oroville. People saying, "Hey, can I really rely on you to get me orders for your products?" So there was some of that.

So there was definitely some real economic impacts. And then you talk about municipalities. The cities who had to do evacuation response, who had impacts to their roads and other things. So that's a very real economic impact.

I think you could also say that in the aftermath, the construction effort and people going up there and then coming into Oroville that actually had some positive impact on the economy in that you had workers up there working 24/7 who were buying goods and eating at local establishments. There was some positive effect there as well.

But there was definitely some initial big impact. And that's where you've seen the lawsuits that have been brought up recently where people are asking for compensation for those damages.

JW: And understandably so. So then getting back to some of these proactive responses, what are some of the things going on right now to mitigate the risk or, if not just flat out try to prevent something like this happening again?

JG: The initial, you know, emergency and what they call the recovery response is basically just trying to get that spillway into a condition that it should've always been. Where it's very solid and stable. That we remove weathered rock and get down to bedrock. All that is happening, right, as we speak. And I anticipate will be done effectively.

What we need to do in the long term is look at the whole facility, and I think DWR needs to look at this in all of the dams and other facilities that they operate is: are there other things we either need to rehabilitate, repair that are not in the best condition?

Let's look at original design and as built and say, "Is this how we'd build it today?" And if the answer is, and I venture to say that's going to happen a lot, "Well, it's not how we'd build it today." But are there things we can do right now to upgrade that to make it better? To make it more stable. That needs to happen.

Better risk management procedures and organization. That needs to come in to play. At this point in time, I can't really say that that's happening. I have introduced legislation that is pending right now, it's in the Senate, and I anticipate that it will pass, that is going to require them to do those kinds of things. To have more robust reviews of their infrastructure and to do inspections that really get into some of the more meat of what's going on at these structures. I'm hoping that will help.

We're having discussions with them, about things that we want to see them do long term, including infrastructure improvements at Oroville. So all of those things are things that I really think need to be done. There's a whole plethora of things that I think really need to be done to ensure that we don't ever get back into this place again.

JW: Yeah.

JG: Because it might not be the spillway next time. Maybe it's something else that's part of the facility that causes us to get in a dire situation. You need to look at the whole thing.

JW: Yeah. So, aside from the bill that you have pending in the Senate right now, has there been any other legislation related to Oroville, or just other dams where there's the potential for this to happen?

JG: Well there are going to be other legislative vehicles. I'm aware of one that will probably look at the Division of Dam Safety and how that's sort of been embedded within the Department of Water Resources. And maybe the Division, which is responsible for oversight should be in another place where there's not the conflict, potentially, between the two.

There's an effort by Senator Nielsen, who is my counterpart in the Senate, to provide for a local oversight board for Oroville, in particular. But maybe this is a model for other places is well where there's greater transparency as to what's going on in terms of maintenance and repair up at these dams and how are they proposing to address those. And that's communicated very clearly to local people, right?

And it allows the local people to have input on those safety and other issues that are of concern to the communities that are affected by it. We have these great projects that are definitely a benefit to the entire state, but they pose the greatest risk to certain areas, right? And those people need to be heard and those people need to have input into how those facilities are operated.

JW: Gotcha. One last question here, I feel like, kind of, in going forward in making these repairs - the maintenance side of things. How much are certain regulations, I think CEQA comes to mind for me, how much are these things throwing a wrench in the process of trying to make sure that we're efficiently and quickly making the repairs that need to be made at Oroville?

JG: In the case of Oroville, we had a Governor's Emergency Declaration that came into effect, as well as some portions of the code that were basically streamlined or exempted to do the emergency work. And so, in an emergency you can often get around some of the requirements of CEQA, right? And that was the case that allowed us to get in there quickly and do this kind of stuff.

But what you see longer term... the problem is why do we always have time in an emergency right?

JW: Why can't it be done...?

JG: Why can't we do this when we're trying to act preventatively and where there is a great need and a great risk? And I think people, I think people in CEQA specifically, I think a lot people see that that legislation, that law has changed from what it was originally intended, which was, analyze the impacts and mitigate for them but otherwise move the project forward. To now, it's used to just stop projects, that are good projects, that everybody agrees are things that need to be done.

We really need to be able to act preventatively. One instance is we have a huge sediment buildup because of this last event. And it has been an ongoing issue too. But sediment buildup in our river channel of the Feather River that could have future concerns in terms of pressure on levee banks, certainly it's a safety issue for boaters in those waterways that we have these huge sediment buildups, access to the river which can be public safety issues. Why can't we move forward proactively to remove this sediment?

One of the reasons is, oh no, you got to go through a full blown CEQA process and you got to analyze all these different things, that make it very difficult to do something that really is a vital public safety need.

JW: Yeah.

JG: So yeah, I think that is a problem. We're doing it in the emergency context. We probably need to start doing it in the preventative context.

JW: It would make sense to make some of these same reforms, to be able to streamline things, to do these preventative projects.

JG: Right. And one other example, this was legislation I had last year. It would've provided some CEQA streamlining for levees, when we're doing repairs to critical levees. We have thousands of miles of levees up and down the state that protect people from devastating flood. If you didn't have them, we would have really bad floods.

JW: They protect the whole Natomas region in Sacramento from being a giant lake.

JG: Right, exactly. Natomas being the closest to home, man. And so we have issues every year where we have damage to those levies and we need to critically go in there and repair those. There should be streamlining to do that. That's a preventative measure.

But it got over to the Senate Environmental Quality Committee, and it was killed in that committee because attacking CEQA is like a sacred cow, and even when it makes reasonable sense to provide some kind of streamlining, it's very difficult to do so in this current Legislature.

JW: Alright. Well this has been incredibly insightful. Thank you so much for taking the time to talk with us today.

JG: No problem, and thank you guys for having me.