

DOCKETED	
Docket Number:	21-AFC-02
Project Title:	Willow Rock Energy Storage Center
TN #:	262156
Document Title:	Follow-Up Email from Division of Safety of Dams (DSOD) – Info Regarding Submittal and Notes on DSOD Jurisdiction
Description:	Email received from Department of Water Resources Division of Safety of Dams (DSOD) on January 13, 2025 following a coordination meeting between DSOD and CEC, providing 1) information on what DSOD would require for a new construction project and would be needed for DSOD to complete a review and 2) notes on status of jurisdictional determination.
Filer:	Kaycee Chang
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	3/11/2025 10:57:46 PM
Docketed Date:	3/12/2025

RE: Coordination meeting between DWR DSOD and CEC

From Malvick, Erik@DWR <Erik.Malvick@water.ca.gov>

Date Mon 1/13/2025 12:43 PM

To Knight, Eric@Energy <Eric.Knight@energy.ca.gov>; Abulaban, Abdel-Karim@Energy <Abdel-Karim.Abulaban@energy.ca.gov>; Giorgi, Erika@Energy <Erika.Giorgi@Energy.ca.gov>; Ackerman, James@Energy <james.ackerman@energy.ca.gov>; DeLano, Kevin@Energy <Kevin.DeLano@energy.ca.gov>; Chang, Kaycee@Energy <kaycee.chang@energy.ca.gov>

Cc Muteff, Kyle@DWR <Kyle.Muteff@water.ca.gov>; Mangney, Andy@DWR <Andy.Mangney@water.ca.gov>; Thyberg, Peter@DWR (he/him) <Peter.Thyberg@water.ca.gov>; Jones, Shawn@DWR <Shawn.Jones@water.ca.gov>

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

All,

Following up on our earlier meeting, I wanted to provide further information on what DSOD would require for a new construction project and would be needed for us to complete a review. The list below is typical for a new dam and could vary depending on the project, its components, and features.

Additionally, I'm attaching some notes on the jurisdiction of the structure as they weren't quite what I was remembering. That dam is a bit taller than I recalled.

This should help you all out if DWR/DSOD is unable to make a meeting work on our calendar on short notice.

Submittals

1. Application for Construction of a Dam
2. Associated Application Filing Fee (Water Code section 6300)
3. Exploration Information (Geology and Geotechnical)
 - a. Prior information and data reports
 - b. Note that DSOD would likely require further exploration (and would review anything planned) if it identifies data gaps or concerns with what has already been completed.
4. Design Criteria and Guidelines (for dam, spillway, and emergency outlet)
 - a. Generally, the engineer develops site specific criteria that we may work with the consultant on iteratively to reach concurrence based on the design concept. This mostly focuses on design hazards (ground motions, design inflows and spillway requirements, emergency release requirements, etc.)
5. Design Report
6. 30% Design plans and concept
7. 60% Design plans and specifications
8. 90% Design plans and specifications
9. 100% Design plans and specifications
10. Draft Inundation Map

At the conclusion of Step 10 assuming everything meets our approval and other water code provisions have been demonstrated, we would be able to approve the application.

During construction DSOD would review and approve the Inundation Map with an expectation that the map is approved and a draft EAP is submitted to CalOES prior to the reservoir being certified.

DSOD would have concerns at this location with respect to seismic loading and foundation conditions for an embankment and its appurtenances. The level of concern will depend on the consequences of embankment failure.

Notes on Jurisdiction

DSOD had not completed its jurisdictional determination as we provide dam owners an opportunity to adjust their concepts before completing our review and reaching a conclusion. Instead, this information can facilitate any discussion between CEC and the owners.

The dam is further from being non-jurisdictional than I noted earlier. Based on the information we received in September 2024, we noted the following:

1. Berm Crest is at El. 2570
2. No spillway is apparent in the design, but they show maximum operation at El. 2566
 - a. Without a spillway the El. 2566 cannot be used by DSOD for jurisdiction assessments, and it doesn't look like the engineers did
3. There is a fill pad that is approximately 11 feet thick at the dam slope.
 - a. Thickness varies away from the dam
 - b. The intersection of this fill with the downstream slope of the berm is at El. 2564 (this is likely where the 6-feet comes from with respect to the berm crest.
4. The intersection of the downstream slope of the berm and the native ground is at El. 2553 (11 feet below the fill surface and 17-feet below the crest of the berm).
5. I don't think we have a storage number to El. 2570, but at El. 2566, the berm would store 189-AF above El. 253.

There are numerous ways this facility could get out of jurisdiction, but perhaps foremost they would likely want to install a spillway to at least get our jurisdiction determination based on an elevation below the top of the berm.

Beyond that, we are happy to continue to work with the owner on discussing concepts they may consider with respect to Water Code sections 6002 and 6003.

Erik J. Malvick, Ph.D., P.E., G.E.
Branch Manager
Design Engineering Branch
Division of Safety of Dams
erik.malvick@water.ca.gov

2720 Gateway Oaks Drive, Suite 300
Sacramento, CA 95833

916-820-7820