

**163 FERC ¶ 62,092**

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Sacramento Municipal Utility District

P-2101-105

ORDER APPROVING REPORT AND ESTABLISHING PULSE FLOWS IN GERLE  
CREEK BELOW LOON LAKE RESERVOIR DAM UNDER  
CONDITIONS 2.B and 28 IN WET YEARS

(Issued May 14, 2018)

1. Sacramento Municipal Utility District, licensee for the Upper American River Hydroelectric Project No. 2101, filed on September 30, 2016, and supplemented on March 16, 2018, a final report on the Gerle Creek sensitive site investigation and mitigation monitoring plan, required by ordering paragraph (B) of the Order Modifying and Approving Sensitive Site Investigation and Mitigation Monitoring Plan Pursuant to Article 401(a), issued on June 18, 2015.<sup>1</sup>
2. The project is located in the watersheds of the Rubicon River, Silver Creek, and South Fork American River in El Dorado and Sacramento Counties, in central California. The project occupies federal land within the Eldorado National Forest managed by the U.S. Forest Service (Forest Service), and federal land administered by the U.S. Department of Interior, Bureau of Land Management (BLM).

**Background**

3. The final report is also required by Article 401(b) of the license, as well as the project's California State Water Resources Control Board (California SWRCB) Water Quality Certification (WQC), Condition No. 2.B and the Forest Service's 4(e) Condition No. 28, which were included in the license<sup>2</sup> via Appendices A and B, respectively. These mandatory conditions further stipulate the release of certain pulse flows, in cubic feet per second (cfs), as measured at the U.S. Geological Survey (USGS) gage 11429500, located approximately 0.3 miles downstream from Loon Lake Reservoir Dam. As stipulated in

---

<sup>1</sup> *Sacramento Municipal Utility District*, 151 ¶ 62,197 (2015).

<sup>2</sup> *Sacramento Municipal Utility District*, 148 FERC ¶ 62,070 (2014).

WQC Condition 2.B and 4(e) Condition 28, the required pulse flows for this reach are as follows:

<b>Gerle Creek Below Loon Lake Reservoir Dam Pulse Flows (cfs)</b>			
	Below Normal	Above Normal	Wet
Day 1	125	200	600
Day 2	125	200	600
Day 3	180	250	740*
Day 4	125	200	600
Day 5	125	200	600

\*Or maximum capacity of outlets works,<sup>3</sup> whichever is less.

4. The primary intent of the Gerle Creek sensitive site investigation and mitigation monitoring plan is to perform an assessment of channel conditions in the Loon Lake dam reach of Gerle Creek to allow the California SWRCB and the Forest Service to make a determination of the appropriate magnitude of pulse flows in this reach.

### **Final Report**

5. The September 30, 2016 report documents that pre-test pulse flow testing occurred at various sites in the Loon Lake dam reach on June 2-3, 2016, with the Forest Service and affected private landowners present.

6. For pre-testing, flows were increased to approximately 395 cfs on June 2, fluctuating between 384 and 401 cfs. No adverse flooding impacts were observed. However, by early morning on June 3, when flows were measured at about 390 cfs, flooding impacts were observed on private property. The landowner requested that testing be terminated. However, the licensee had already increased flows to 500 cfs due to the testing and explained to the landowner that flows would continue to increase until the 500 cfs release passed through the reach. Additional erosion of a gravel road approaching a bridge abutment was observed, covering approximately 50 square feet, and the licensee determined the potential for continued erosion to be high. The El Dorado County Road that enters the Forest Service's campground at Wentworth Springs was also inundated to a depth of approximately 1.3 feet. The licensee decreased flows on June 3 until minimum flow releases were restored at about 6 pm on June 3.

7. Based on these pre-test results, the parties agreed the peak test flow for the 5-day pulse flow test should be 375 cfs, with 300 cfs released on the other 4 days.<sup>4</sup> This pulse

---

<sup>3</sup> Based on the September 30, 2016 report, the maximum capacity of the outlet works at Loon Lake Dam, with a full reservoir, is 630 cfs.

flow test was planned for June 22-27, 2016, again with the landowners present. In the early afternoon of June 23 with flows slightly in excess of 300 cfs, a county road to a Forest Service campground was inundated to a depth of about 0.5 feet. On the morning of June 24<sup>th</sup>, a private landowner observed some flooding of trails on private property with flows just above 300 cfs.

8. On the morning of June 25, after flows had increased to 375 cfs around noon on June 24, the licensee identified additional flooding along the county road into the Forest Service campground. More sections of the road were inundated and flooding depths increased to about 0.8 feet. A group camping site on private property was also flooded, and additional erosion in the vicinity of a bridge abutment was observed. Flows were reduced to 310 cfs around noon on June 25. On June 26, inundation levels were similar to that observed during the first two days of testing.

9. Immediately after release of the test flows, the licensee conducted the geomorphic and riparian vegetation monitoring and erosion and flooding impact monitoring, as required by the approved plan. The results are summarized in the September 30 report.

### **Consultation**

10. A draft of the final report was submitted to the California SWRCB and the Forest Service on July 22, 2016, and a meeting was held on September 6, 2016 to discuss the findings. Additionally, another meeting was held between the Forest Service and private landowners on September 14, 2016. Based on the notes from the September 14 meeting, included with the final report filed with the Commission, the property owners request that pulse flows be limited to 300-380 cfs, rather than the 600-740 cfs currently required in the license. During the September 14 meeting, the Forest Service indicated its desire to have higher pulse flows, and suggested a one day peak flow of 500 cfs. In subsequent letters from the landowners to the Forest Service, dated September 18 and 19, 2016, the property owners requested that maximum pulse flows be limited to 380 cfs.

11. On November 2, 2017, a meeting was held among staff from the Commission, Forest Service, California SWRCB, and the licensee, to discuss the study results, flooding impacts, and establishing alternative pulse flows in wet years based on the results of the study. In this meeting, the parties agreed that the outstanding issue relates to pulse flows in wet years and that pulse flows in below-normal and above-normal years are sufficient. The licensee proposed the following pulse flows and indicates that these flows represent a balance between maximizing resource objectives and minimizing adverse impacts to private landowners and roads in the reach below Loon Lake dam during wet years. No changes are proposed for pulse flows in below-normal and above-normal years:

---

<sup>4</sup> Actual flows during the test releases were slightly higher than the target flows to ensure that the target flows were achieved.

<b>Gerle Creek Below Loon Lake Reservoir Dam Pulse Flows (cfs)</b>			
	<b>Below Normal</b>	<b>Above Normal</b>	<b>Wet</b>
<b>Day 1</b>	125	200	300
<b>Day 2</b>	125	200	300
<b>Day 3</b>	180	250	375
<b>Day 4</b>	125	200	300
<b>Day 5</b>	125	200	300

12. The Forest Service and the California SWRCB concurred with the proposed pulse flows in wet years in letters dated January 18, 2018, and March 13, 2018, respectively. In the March 13, 2018 letter, the California SWRCB also recommends that in the event new information indicates pulse flows are not achieving the objectives detailed in the WQC, the California SWRCB reserves the right to modify the pulse flow requirements. In the event this is necessary, the California SWRCB would consult with the licensee and other resource agencies prior to modifying the pulse flow requirements.

### **Discussion**

13. We have reviewed the September 30, 2016 report and the proposed pulse flows included in the March 13, 2018 supplemental filing. The September 30 report documents that unacceptable impacts due to flooding would occur on private property at flows above 375 cfs during wet years. Based on the information included with the report, we conclude that the proposed pulse flows should adequately meet the intent of Condition 2.B and 28 of the license, while at the same time minimize impacts due to flooding in this reach.

14. The proposed pulse flows have the support of the Forest Service and the California SWRCB, and for the reasons discussed here, should be approved.

The Director orders:

(A) The Sacramento Municipal Utility District's Gerle Creek Sensitive Site Investigation and Mitigation Monitoring Plan Final Report, filed on September 30, 2016, and supplemented on March 16, 2018, for the Upper American River Project No. 2101, pursuant to Article 401(b), and as required by ordering paragraph (B) of the Order Modifying and Approving Sensitive Site Investigation and Mitigation Monitoring Plan Pursuant to Article 401(a), issued on June 18, 2015, is approved.

(B) The California State Water Resources Control Board's Condition 2.B and the U.S. Forest Service's Condition 28 with respect to pulse flows (in cubic feet per second, cfs) in Gerle Creek below Loon Lake Reservoir Dam is modified according to the table below:

<b>Gerle Creek Below Loon Lake Reservoir Dam Pulse Flows (cfs)</b>			
	Below Normal	Above Normal	Wet
Day 1	125	200	300
Day 2	125	200	300
Day 3	180	250	375
Day 4	125	200	300
Day 5	125	200	300

(C) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in section 313(a) of the Federal Power Act, 16 U.S.C. § 825l (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2017). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Steve Hocking, Chief  
 Environmental and Project Review Branch  
 Division of Hydropower Administration  
 and Compliance

Document Content(s)

P-2101-105 Order.DOCX.....1-5