

Summer 2024 Dworshak Water Supply Outlook

USACE NWW- Water Management
Current as of 23 July, 2024

Overview

The water supply outlook for the rest of the summer is low, but spill operations are changing on August 1st to RSW only, allowing us to use less water from DWR during the first few weeks of August. This will be extremely helpful for temperatures in the LWG tailwater.

Current Conditions

Due to the extensive heatwave endured through July, we have been using above average amounts of water up to this point. Current outflow at DWR is at full powerhouse. A few days of lower temperatures are expected this week, which should help reduce the pace of water that we have needed to release during the first part of this month.

Outlook

We need an estimated 9 kcfs release with the current spill pattern through the end of August to maintain LWG tailwater temperatures. Going forward, there are two reasons we would need to release more water than 9kcfs: 1) a change in spill pattern (which will occur with Doble Testing) or 2) a heatwave with highs above 100°F for three days or longer.

After reviewing the spill patterns and taking a deeper dive into our current thermocline in the forebay, we have determined that there are approximately three days of spill remaining. As it currently stands, we will need to plan to use these three days of spill during Doble Testing. This will leave us with the risk that any heatwave that occurs in August or early September could cause temperatures to be above 68°F in the tailwater and for the trap temperatures to be elevated.

Alternative Operations

Alternative 0

- Maintain current requirements of maintaining water temperatures at or below 68°F
- Reserve the currently remaining 3 days of spill for Doble testing
- Potential days above 68°F: any heatwave of 100° or higher in Aug./Sept.
- Risk to stratification: low
- Extra water provided: 0 days

Alternative 1

- Allow higher temperature criterion of 69.5°F in the tailwater of LWG during Doble testing, alleviating the need for DWR to release extra water during this time
- Potential days above 68°F: During Doble testing (August 12th – 16th)
- Risk to stratification: low
- Extra water provided: 2.5 days of spill

Alternative 2

- Target a higher temperature criterion of 69.5°F in the LWG tailwater between August 1st and August 9th
- This would allow DWR to reduce outflow below 9 kcfs, conserving water for a potential heatwave in the last 2 weeks of August
- Spill will still be possible through Doble testing with this option
- Potential days above 68°F: August 1st – August 9th
- Risk to stratification: moderate
- Extra water provided: 2 days

Alt 2a.) Save as much water as possible during Aug 1-9 by targeting 69 degrees during that full timeframe.

Alt 2b.) Target 69 degrees until two days of additional spill have been saved during real time conditions. Ex: may only take through the 7th or 8th and then could return to a 68-degree target before the 9th.