

## **Fish Passage Plan (FPP) Change Form**

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**Change Form # & Title:** 25AppA001 – Doble Testing Schedule  
**Date Submitted:** 13-DEC-2024  
**Project:** LSR Projects and DWR  
**Requester Name, Agency:** Chris Peery, USACE  
**Final Action:**

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### **FPP SECTION:**

Appendix A - sections 1.5-Doble Testing, 6.1-IHR, 7.1-LMN, 8.1-LGS, and 9.1-LWG.

### **JUSTIFICATION FOR CHANGE:**

Add 2025 schedule for Doble testing at the lower Snake River projects and Dworshak Dam.

**PROPOSED CHANGE:** *See following pages for edits to existing FPP text in “track changes”.*

### **COMMENTS:**

### **RECORD OF FINAL ACTION:**

## 1.5. Doble Testing<sup>1</sup>

The current year’s transformer outage schedule for Doble testing at lower Snake projects and Dworshak Dam is in **Table A-1**.

### 1.5.1. Lower Snake River Projects:

At the Lower Snake projects, Doble testing of transformers is required every three years to ensure they are functioning correctly and to identify issues that need repair. The testing must be conducted during warm, dry conditions (July–August) and requires an outage of the transformer and associated units. Testing is performed during already scheduled outages to the extent possible and timed to avoid or minimize impacts to fish. In years that Doble testing isn’t required, the project may still require an outage during the same timeframe to perform necessary transformer maintenance and repairs that were identified in previous Doble tests and inspections. For more information, see project-specific **sections 6-9** below.

### 1.5.2. Dworshak Dam:

At Dworshak Dam, required transformer maintenance and Doble testing occurs every two out of three years starting September 21. For more information on Dworshak maintenance and testing, see **Appendix I**.

**Table A-1. Doble Testing Schedule in 2025.<sup>a</sup>**

Project	Dates	Outage (Transformer & Units)	Notes <sup>b</sup>
IHR	July <a href="#">14-17</a>	<a href="#">TW1 &amp; TW2 (Units 1, 2) all hours</a>	Remaining available units ( <a href="#">3-6</a> ) operated per FPP priority order.
LMN	N/A		No Doble Testing in <a href="#">2025</a> . <a href="#">All units will be OOS August 18-28 for isophase work. See section 7.1 below for details.</a>
LGS	August <a href="#">4-9</a>	<a href="#">T2 (Units 5, 6) continuous</a> <a href="#">T1 (Units 1-4) First / last day</a>	All units OOS 0500-1700 first and last day <a href="#">with Unit 4 providing station service</a> . Units 5-6 will remain OOS during the continuous T2 outage with Units 1 – 4 operating per FPP priority order.
LWG	August <a href="#">11-19</a>	<a href="#">T2 (Units 5, 6) Continuous</a> <a href="#">T1 (Units 1-4) Daily 0530-1800</a>	<a href="#">Units 5-6 OOS continuous for T2 Doble and some transformer work. Units 1-4 OOS daily, RTS nightly 1800-0530.</a>
DWR	<a href="#">Sep 22-26</a>	<a href="#">T1 (Units 2, 3) all hours</a>	<a href="#">Unit 3 and T1 500kv line outage for Doble. Unit 2 also out of service because of T1 outage.</a>

**a.** The lower Columbia projects (BON, TDA, JDA, MCN) perform Doble testing concurrent with outages for maintenance and do not have specific outages for Doble tests.

**b.** OOS = Out of Service (unavailable to operate); RTS = Return to Service (available to operate).

<sup>1</sup> “Doble test” is a common term referring to a power factor test of transformers to measure performance of electrical insulation. Doble is the name of a manufacturer of the test equipment.

## **6. ICE HARBOR DAM**

### **6.1. IHR Special Operations**

#### **6.1.2. Doble Testing (see section 1.5 above for more information)**

- a) Dates: Summer (annually). In 2025, the outage is scheduled for July 14-17.
- b) Description: The outage in 2025 is required to perform Doble testing of TW1 and TW2, which will take Unit 2 out of service continuously during testing (Unit 1 will already be out of service for runner replacement). Remaining available units (3-6) will be operated per FPP priority order.
- c) Impacts to FPP Criteria: None. Since Ice Harbor has multiple transformer banks and transmission lines and redundant switching capability, remaining available units will be available and operated pursuant to FPP priority order.

## **7. LOWER MONUMENTAL DAM**

### **7.1. LMN Special Operations**

#### **7.1.3 Doble Testing (see section 1.5 above for more information)**

- a) Dates: N/A (no outage for Doble in 2025)
- b) Description: N/A
- c) Impacts to FPP Criteria: N/A

#### **7.1.4. T-1 Iso phase Work and Insulator Cleaning**

- a) Dates: August 18–28
- b) Description: During the outage, T-1 (Units 1–4) and T-2 (Units 5, 6) will be out of service from 0700 hours August 18 to 1700 hours August 28 to support the cleaning of the insulators and Iso Phase work on T-1. The Iso Phase work entails the removal of the insulated outer clamshell sections of the transformer to replace the gasket and insulating material. This work prevents water intrusion into the Iso Phase system and prevents circulating currents and excess voltage from damaging the equipment. Both transformers will need to be taken OOS due to human and equipment impacts.
- c) Impacts to FPP Criteria: All units will be OOS service during the work. Unit 5 will likely be used for station service (approximately 8 kcfs) and the rest of project outflow spilled.

## **8. LITTLE GOOSE DAM**

### **8.1. LGS Special Operations**

#### **8.1.1. Doble Testing (see section 1.5 above for more information)**

- a) Dates: Summer (annually). In 2025, the outage is scheduled for August 4–August 9.
- b) Description: The 2025 outage is required to perform T2 Doble testing. T2 (Units 5, 6) will be Doble tested and out of service continuously through the entire outage period. T1 (Units 1-4) will be out of service August 4 (first day) and August 9 (last day) from 0500–1700 for LGS 500 kv line isolation allowing prework disconnect and post work reconnect activities. During all other hours, Units 1–4 will be operated per FPP priority order with Unit 4 providing station service.
- c) Impacts to FPP Criteria: On August 4 and August 9, all units will be out of service from 0500-1700 and all project outflow spilled.

## **9. LOWER GRANITE DAM**

### **9.1. LWG Special Operations**

#### **9.1.1. Doble Testing (see section 1.5 above for more information)**

- a) Dates: Summer (annually). In 2025, the outage is scheduled for August 11-19.
- b) Description: The outage in 2025 is required to perform T2 Doble testing and routine maintenance. Some of the work needs to be done from the top of the transformer on T2, which will require the powerhouse line (all units) out of service daily from 0600-1800 August 11 through August 19. T2 (Units 5, 6) will remain OOS continuously through the entire outage period, and T1 (Units 1-4) will RTS nightly. Unit 5 will be operated for station service power (~8 kcfs) while the PH line is OOS (daily Aug 11-19).
- c) Impacts to FPP Criteria: All units will be out of service for up to 12 hours/day (0600-1800) daily from August 11 through August 19. During these hours, all project outflow will be spilled except approximately 8 kcfs through Unit 5 for station service power.