

# **Pump Station Flow Reduction in the Chelan River Habitat Channel**

August 11, 2014

## **Preliminary Draft**

Pursuant to the Chelan River Fishery Forum Pump Station Flow Reduction in the Chelan River Habitat Channel Investigation, Chelan PUD implemented 4 pump, versus 5 pump, operation for the October 15 through November 30, 2013 Chinook salmon spawning period. The following Chinook salmon redd maps show the location of redds surveyed during the 2012 spawning period under 5 pump operation compared to the location of redds surveyed during the 2013 spawning period under 4 pump operation from representative sections of the Chelan River Habitat Channel.



Figure 1. 2012 Chinook salmon redd locations in the Chelan River Habitat Channel, Section 2.

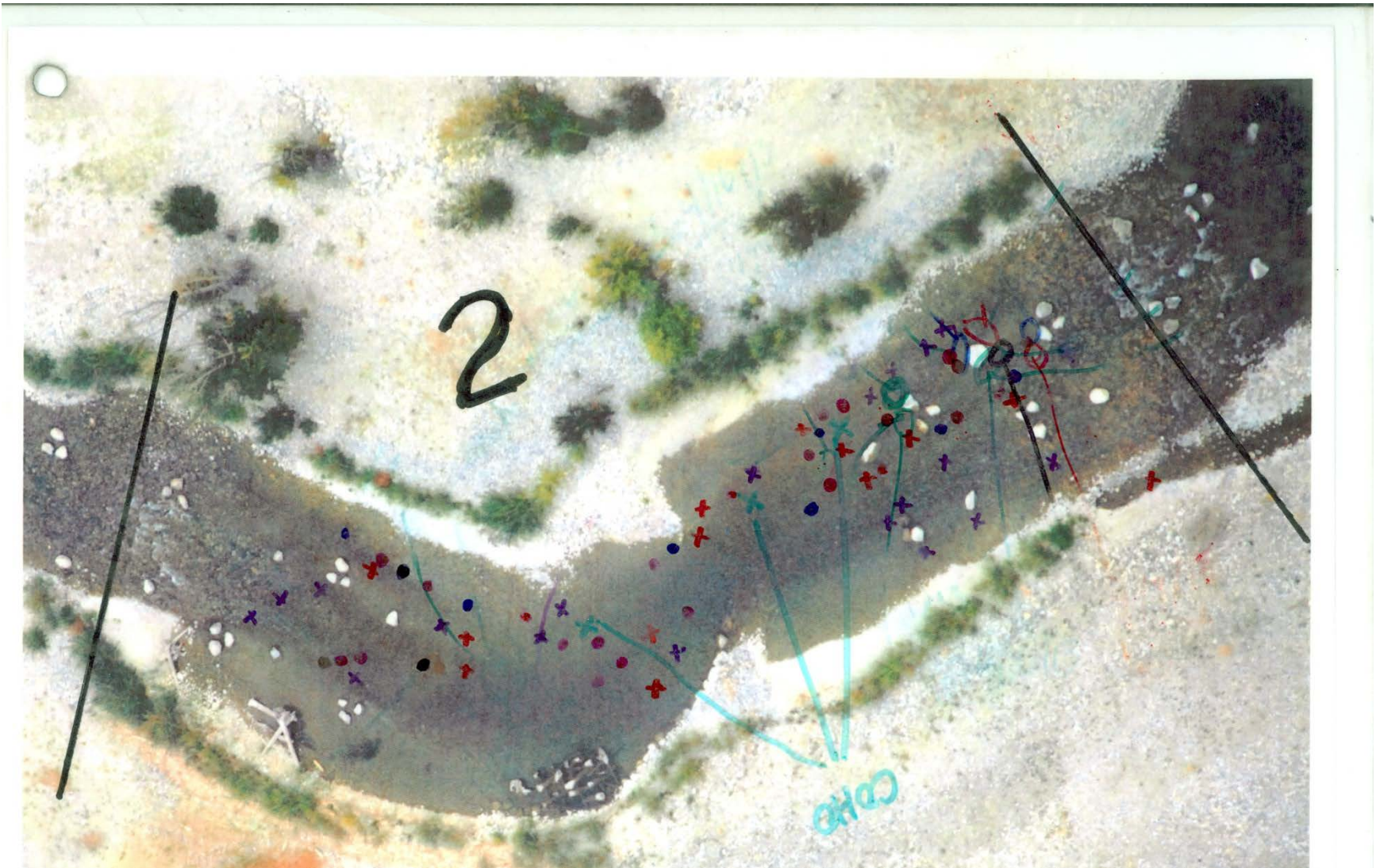


Figure 2. 2013 Chinook salmon redd locations in the Chelan River Habitat Channel, Section 2.



Figure 3. 2012 Chinook salmon redd locations in the Chelan River Habitat Channel, Section 4

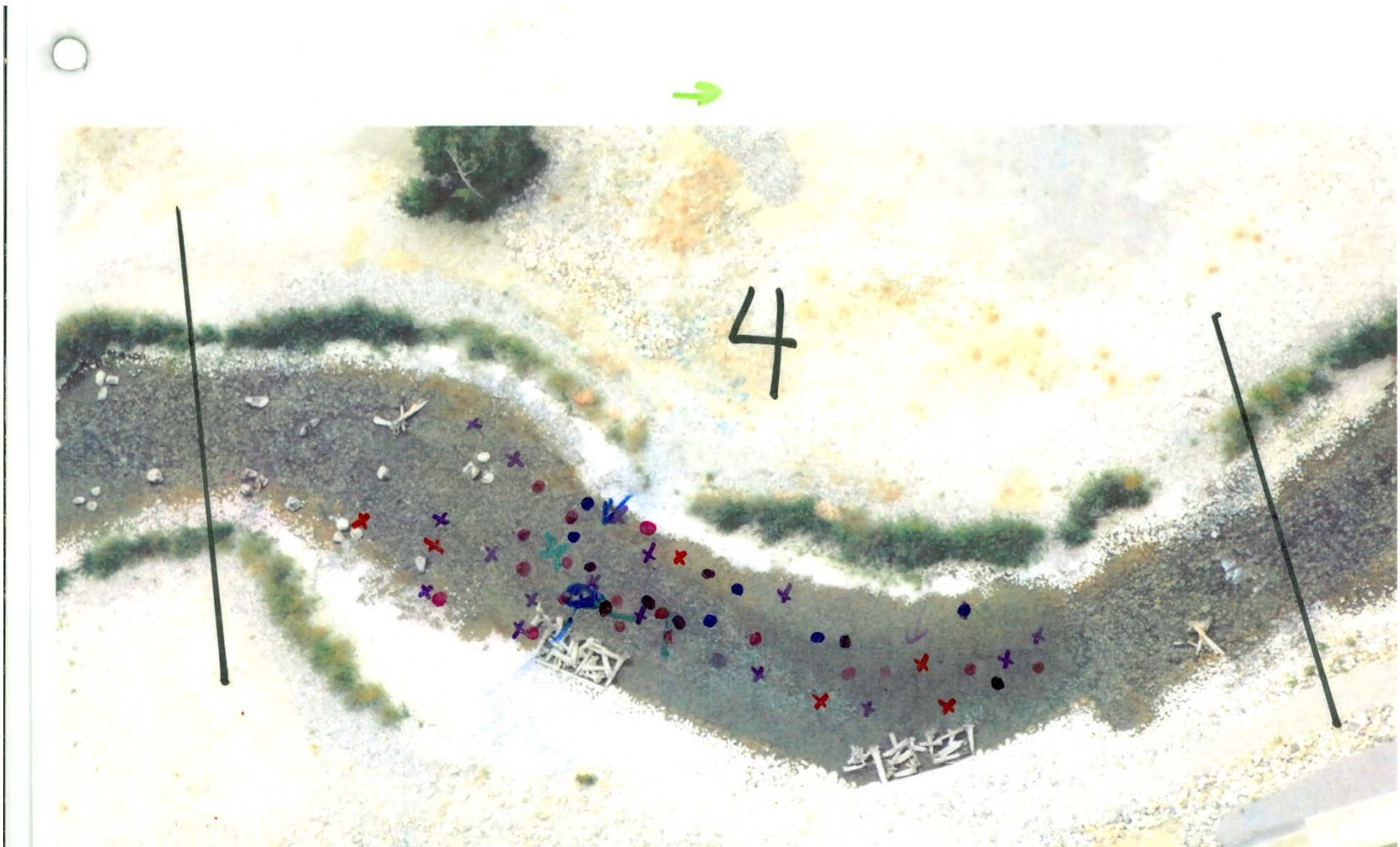


Figure 4. 2013 Chinook salmon redd locations in the Chelan River Habitat Channel, Section 4.

## **Conclusion**

Based on Chinook salmon redd locations documented in 2013, under 4 pump operation, compared to Chinook salmon redd locations documented in 2012, under 5 pump operation, Chinook salmon constructed redds in the same locations within the Habitat Channel in both years. Clearly, the larger run size in 2013 resulted in many more redds constructed in the Habitat Channel. The key component is that Chinook salmon used the same locations in the Habitat Channel under the lower pumped flow in 2013. The data demonstrate that the 4 pump operation appears to be acceptable to maintain good spawning conditions for Chinook salmon in the Habitat Channel.