

**State of California
Department of Fish and Wildlife**

M e m o r a n d u m

Date: July 16, 2025

To: Matt Johnson
Senior Environmental Scientist (Inland Anadromous Fisheries Supervisor)
Department of Fish and Wildlife

From: Michael Memeo 
Senior Environmental Scientist (Voluntary Agreement Specialist)
Department of Fish and Wildlife

Subject: **Observations of winter-run Chinook Salmon Spawning in the lower McCloud River on July 15, 2025**

On July 14, 2025, Jason Kash from The Nature Conservancy contacted the Department about possible adult Chinook Salmon (*Oncorhynchus tshawytscha*) spawning in the McCloud River just downstream of Ash Camp. In his notification he provided a video of the fish and a corresponding waypoint. He informed the Department that he had received this information from a local fishing guide named Aaron Grabiell of Harvest Wild. On Tuesday, July 15, 2025, Chris Townsend (Pacific States Marine Fisheries Commission) and I traveled to the location where the fish were observed to confirm that they were in fact adult Chinook Salmon. We arrived at the location provided (41.1138, -122.07382) (Figure 1) at approximately 11:15 am and observed three adult salmonids in the area matching that of the video. We observed an adult female salmonid displaying spawning behavior consistent with guarding and digging a redd. There were also multiple smaller males (jacks) competing for position near the redd. After about ten minutes of observing their behavior, Chris and I placed a GoPro Hero 10 attached to a metal plate on the substrate near where we had observed the female salmonid digging and allowed the camera to record for approximately 15 minutes. During that time, we collected water clarity information and temperature data. Visibility was limited to approximately 3-4 feet, and the temperature was 55.5 degrees Fahrenheit. We also surveyed the area downstream from the fish, looking for any completed redds. Completed redds were not observed in either the tail-out immediately downstream of the fish, nor in the run extending approximately 100 yards downstream. After reviewing the first recording,

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we decided to move the camera about 5-10 feet further out into the river and again left it to record, this time for approximately 30 minutes. During the end of the recording Chris and I surveyed the pool and the area adjacent to where the fish had been observed. Two adult Chinook Salmon were positively identified and potentially two redds were observed during this single pass cursory snorkel survey. Visibility was very limited, but it was clear that the area adjacent to where we had been watching the fish had an abundance of spawning gravel just out of sight from the bank. After reviewing the footage from our second effort, we decided to place the camera even further out into the river, closer to where we had observed much of the spawning gravel and the potential redds. It was during that effort that we collected imagery confirming what we had suspected; an unmarked female Chinook Salmon spawning in the McCloud River for the first time in 80 years (Figure 2). It is my professional opinion that this fish was a winter-run Chinook Salmon originating from the pilot McCloud winter-run Chinook reintroduction project initiated by the Department, National Marine Fisheries Service, and Winnemem Wintu Tribe beginning in 2022. This fish was incubated and released into the McCloud River at AhDiNa Campground and was not recaptured downstream but reached maturity in Lake Shasta and returned to the McCloud River to spawn. As stated previously, visibility was a limiting factor due to water turbidity but based on the redds observed we were confident that there were at least two females, and possibly 3 jacks.

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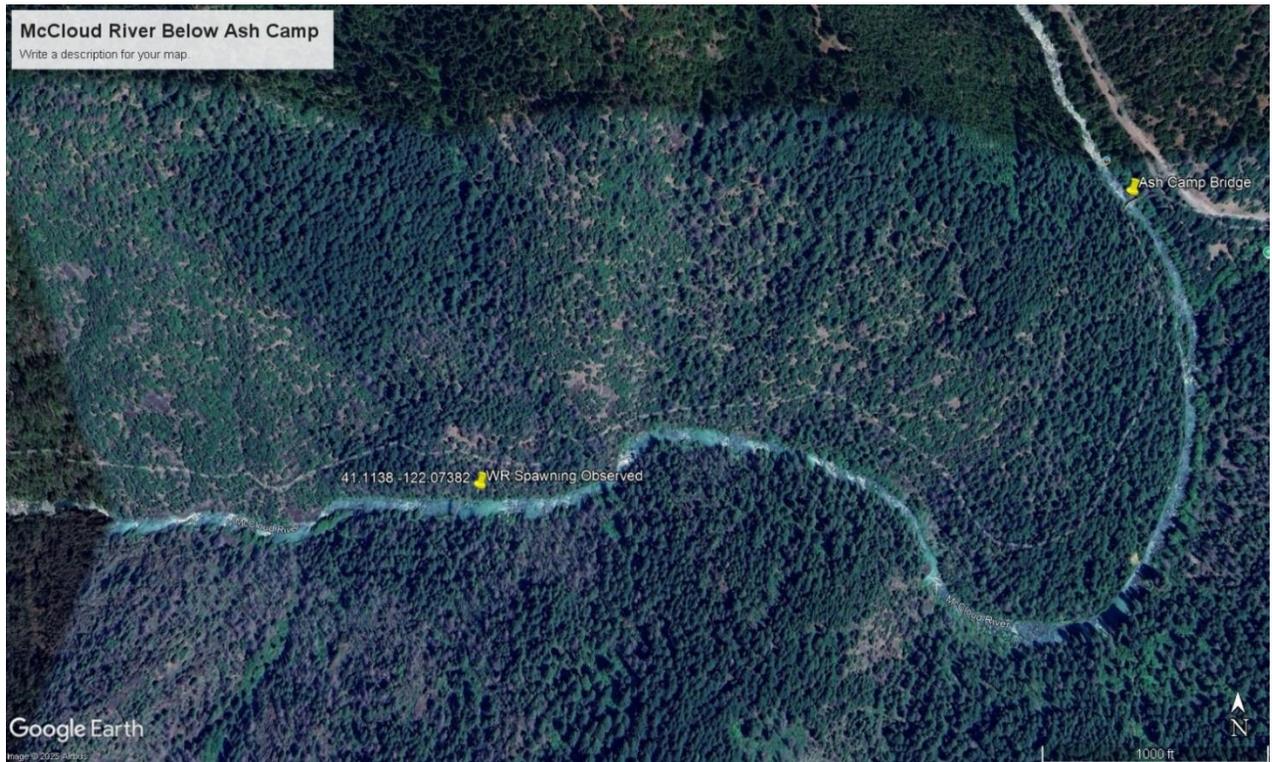


Figure 2. Google Earth image showing location of Chinook observation in relation to Ash Camp on the McCloud River.

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Figure 2. Underwater photo of adult female winter-run Chinook on a redd in the McCloud River. Photo credit: Chris Townsend and Mike Memeo.