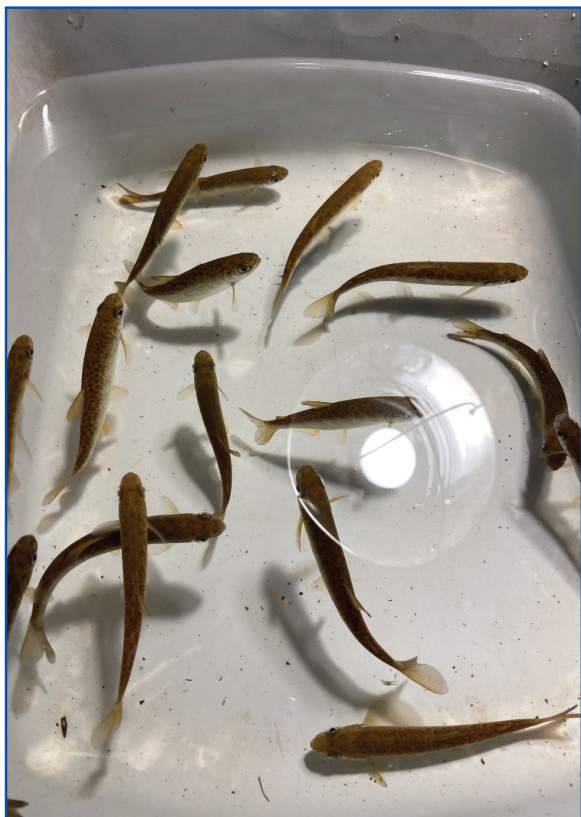




Juvenile Chinook collected to be tagged with a Passive Integrated Transponder. This tag allows the fish to be tracked throughout their lifecycle.

(Photo: Shannon Powers)

As I slowly (or quickly, something like ripping off a Band-Aid) get into the frigid water, it steals my breath. My face and lips are jealous of my co-worker/husband's beard insulating his face as I look over at him entering the water nearby. Even with the discomforts of the snorkel suit and the insanely cold water, the beauty and uniqueness take over, and soon all the pain floats away. I immediately start searching the water column for juvenile Chinook salmon as floating ice chunks bump into my face. Occasionally, it is so cold (e.g., -20°F) that I sometimes push newly forming sheet ice with my face as I swim around searching. Upon seeing a parr-marked, silvery fish with big eyes and a deeply forked tail, we know we have located an inquisitive juvenile Chinook salmon. On the other hand, if we observe a quickly swimming, parr-marked, silvery fish with smaller eyes and suspicious behavior, then we know it is a rainbow trout that hopefully will someday return as a steelhead.

On clear nights, as my eyes look up, it is difficult to ignore the endless twinkles in the sky. I look down at the river, watching the

moon's reflection float across the ripples on the water. On stormy nights, the snow falling silently into the river while the wind howls through the trees can be hypnotic. It feels so remote and special. I imagine what we must look like from a bird's-eye view: a river with snorkelers and their dive lights strewn up and down the river. The Chinook salmon seem to be more agreeable at night, almost willing to participate, while the rainbow trout are still suspicious of us. We hand-net one Chinook salmon at a time until we reach our tagging goal or until we find ourselves painfully cold. We then emerge from the water, wiggle, tug, pull, and curse to achieve "unsuited and unbooted" status.

After we have warmed ourselves in the trucks, we cram into a small heated tagging trailer. We prepare the trailer and the electronics for tagging the fish. Typically, we divide our tasks among the team members. The tasks include tagging fish and taking measurements, maintaining tag equipment, entering data on the laptop, and taking care of fish health and management. The tag we implant in each fish is called a Passive Integrated Transponder (PIT) tag and is about the size of a grain of rice. PIT tags allow the ODFW and our co-managers to track tagged fish throughout their lifecycles. Our objective is to tag approximately 150 fish every night, so this process can be lengthy, sometimes requiring several hours.

After the fish have recovered from tagging, we return the fish to their original locations. While half of the crew releases fish, the other half packs up our equipment with an end-of-shift eagerness. Driving back to the office, I cannot help but remember that most of northeastern Oregon's citizens are sleeping warmly in their beds, and I am jealous. However, I am lucky to share a work truck with my husband, and he does not mind driving while I stare out the windows looking for any signs of nocturnal wildlife, such as elk or possibly cougars, or maybe even a wolf. Once back at the office, well after midnight but before dawn, we unload our piles of wet and frozen waders, snorkel suits, boots, hoods, nets, gloves, and anything else that may have frozen. Finally, we discuss plans for tomorrow's snorkeling objectives, although we mostly all know because it has been the same plan for nearly 25 years. The routine engraved in our minds this time of year is to

drive, break ice, warm in the trucks, struggle into the dry suit and boots, catch all the juvenile Chinook salmon possible, tag them, release them, and drive back.

Since the mid-1900s, Chinook salmon adult returns have been steadily declining. Typically, we are able to achieve our winter goals of tagging 600 fish on Catherine Creek, Lostine River, and the Grande Ronde River; however, this winter, we only were able to find and tag 97 Chinook salmon parr from the upper Grande Ronde River. The upper Grande Ronde River parr we were able to locate and tag were the progeny of a little more than 100 adults that returned to the upper Grande Ronde River during the summer of 2018. During the mid-1900s, the upper Grande Ronde River hosted 500 to nearly 1,000 adult spawners annually. The few parr we were able to tag this winter will embark on an approximately 600-mile journey downstream this spring through eight Snake and Columbia River hydrosystem dams to the vast Pacific Ocean to mature into adults. Each ODFW employee and our co-managers

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Two LCM crew members suited up and armed with nets, buckets, and bubblers prepare for their underwater adventure.

(Photo: Shannon Powers)