

High extinction risk for Applegate coho

BY JAKOB SHOCKEY

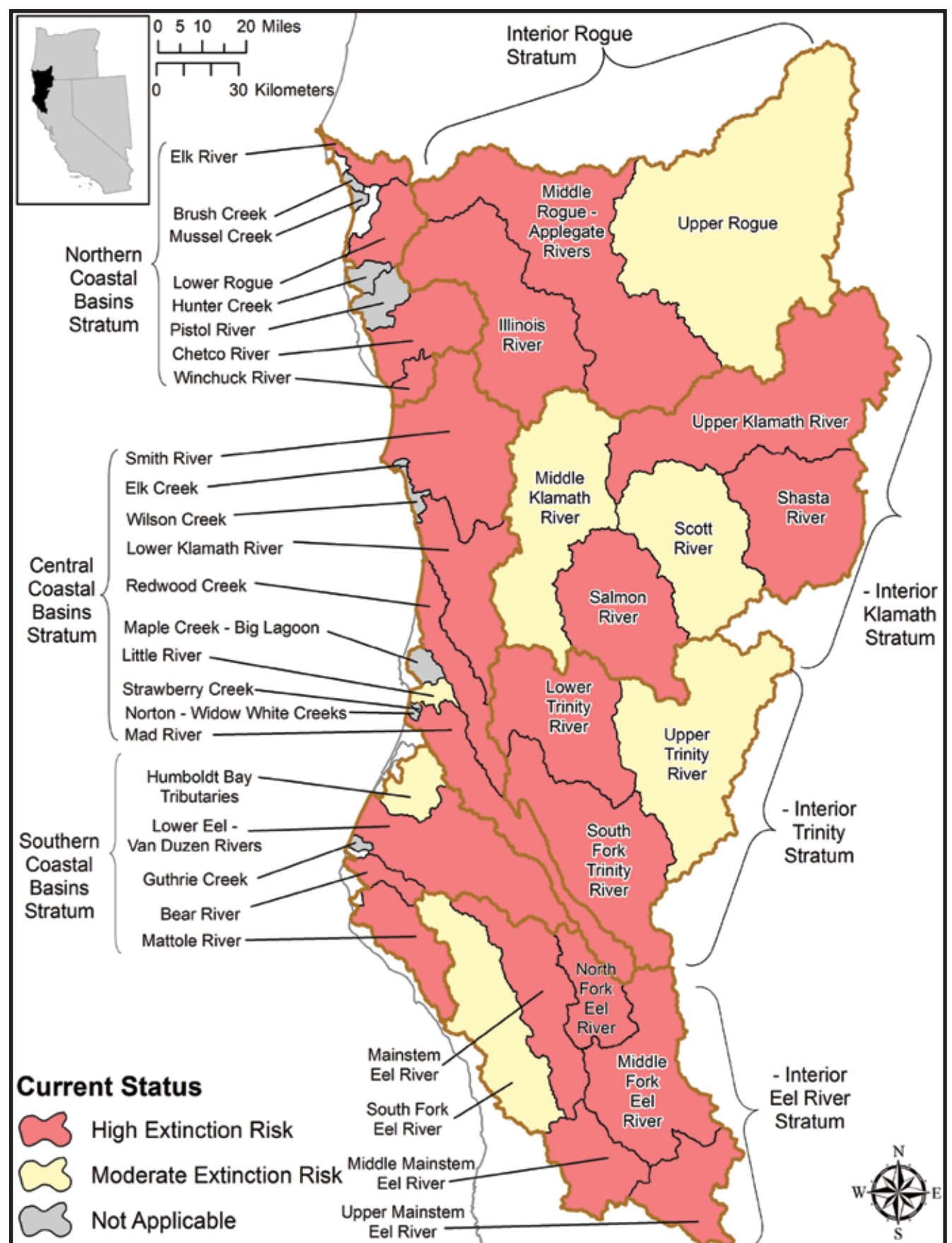
In November 2014, the National Marine Fisheries Service (NMFS) released their final recovery plan for our region's coho salmon. These southern Oregon and Northern California coastal coho, often referenced as the "SONCC Coho" to avoid top-heavy sentences, inhabit only the watersheds of our mythical State of Jefferson. The plan is heavy with nomenclature and population recovery modeling, and I've already had to use two acronyms in as many sentences just to introduce it. However, it is also the story of a survival struggle—within our watershed, on our properties, and by a neighbor whose family has lived in the area much longer than we have.

Talk to an old-timer or read historic field journals on the Rogue Basin, and you will hear the stories of salmon "so thick you could walk on their backs and fish with a pitchfork." As this Final SONCC Coho Recovery Plan states: "Not long ago, these watersheds provided conditions that supported robust and resilient populations of coho salmon that could persist under dynamic environmental conditions." However, both inadvertently and by design, we have changed the conditions of our region's watersheds over the past 150 years, and today these populations have reached a tipping point.

This point, labeled a *deposition threshold* in the NMFS plan, can also be called an *extinction spiral*. This is when a species goes from "limping along" to a dramatic decline, when the numbers of returning coho spawners are so few they can no longer find each other in our tributaries to mate. The deposition threshold for the Middle Rogue and Applegate Rivers is estimated at 734 spawners, while a healthy run would be at least 2,400. Two of the last four years surveyed have been well below that 734 spawners threshold, and there has been an 11 percent annual population decline for the past 12 years. These and other data led NMFS to classify the Middle Rogue/Applegate River population of SONCC coho as at "high risk for extinction." We are witnessing the tipping point for this region's native coho salmon.

What went wrong? Salmon, after all, are known for being tough, resilient, and independent. In this, they have come to signify the spirit of the Pacific Northwest. Yet salmon are dependent on a functioning riparian habitat, and therein lies the problem.

It's hard to visualize how much we've changed this habitat as we have settled into this watershed—



Current extinction risk of independent populations in the SONCC coho salmon ESU (Evolutionary Significant Unit). From the Final SONCC Coho Recovery Plan (http://www.nmfs.noaa.gov/pr/recovery/plans/cohosalmon_soncc.pdf).

how much our baseline for what a creek looks like has shifted over the generations of settlement. The native Takelma people once called the Applegate River valley "the beaver place." These beavers were trapped out and their ponds, once grouped along our streams like beads on a thread, disappeared.

Gold mining further altered the hydrology of our streams, and conifers were cut away from the creeks as the most accessible timber. With agriculture came levees to straighten and contain our river and streams, and dams to divert water.

Woody debris was cleaned out of the creeks to prevent logjams, while invasive species slowly crept into the riparian forests, choking out young trees and thus eventually increasing sunlight on the creek. The water heated up. Nitrogen runoff from fertilized fields, septic systems

and cattle increased algae blooms and decreased oxygen in the water. Clear-cutting in the 1970s and 1980s sent large plumes of sediment into the waterways, further degrading water quality. Finally, Applegate Dam was built with no passage for salmon, cutting off 96.12 miles of the highest intrinsic potential habitat for coho.

All of these physical, biological or chemical stresses are identified in the Final SONCC Coho Recovery Plan, and they have had the cumulative effect of weakening the Applegate's coho. We've pushed the coho to their limit, and without addressing these problems on a large, watershed-wide scale, we can expect these fish to disappear from our region. The good news is that these are on-the-ground issues that we can work to fix, and the majority of these issues are on private land. This means that the coho are reliant on us, not the government,

to fix up their creeks.

Many times, making small changes in your land management around the water can have big impacts for the wildlife that relies on it. If you own property along the Applegate River or any of its tributaries and want to consider what you can do to improve coho habitat, give me a call, and we can walk your stretch. The Applegate Partnership & Watershed Council is nonregulatory, nongovernmental, and nonprofit. Often, we can apply for grants to help fund habitat restoration work or connect you with a local contractor. If you live here because of this valley's beauty, consider doing what you can to protect it.

Jakob Shockey • 541-890-9989
Riparian Program Manager
Applegate Partnership &
Watershed Council
riparianprogram@apwc.info