

# The North Umpqua and Fire: Vulnerability and Recovery in Southern Oregon

Katie Michel - Conservation Analyst

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Pacific Rivers has worked in the Umpqua National Forest since 1987, bridging the gap between science and action, and culminating in the creation of the Frank and Jeannie Moore Wild Steelhead Sanctuary. Annual snorkel surveys in the Canton and Steamboat Creek watersheds have fostered restoration and connection, but shifts in climate variability threaten hard-earned conservation victories.

Roseburg, OR - Burning over 131,000 acres, the Archie Creek Fire weighs in as the fifth largest in a series of seventeen that burned simultaneously throughout the state. Many of our friends and supporters were directly impacted by this fire. As evacuation warnings are rescinded and air quality improves, attention is now placed on assessment and recovery. The value of the lost property and structures are determined with formulas that calculate replacement costs, influenced by inflation and market values. But the value and recovery status of the forests and watersheds surrounding the North Umpqua River are not as easily defined. Ecological hotspots are vulnerable to further degradation before they've had a chance to recover. With the coming La Nina, there is heightened risk of landslides and debris flows in the North Umpqua, creating risk to downstream communities, especially given the Winchester Dam is at risk of failure.

Rising temperatures, lengthening dry seasons, and decreasing rainfall are all expected to worsen in the next 100 years. But the 2020 fire season has shown that

these are not far-off realities. Within the next 60 years, water temperatures are expected to rise to unsafe levels in the North Umpqua, putting its keystone population of summer steelhead at risk of disease and death. Wildfires, although not unfamiliar to the Canton and Steamboat Creek watersheds, are increasing in frequency and severity, leaving little room for the adaptation and recovery of an already stressed ecosystem and a weakened steelhead population. A lifesaving source of cold water and spawning habitat, the Canton Creek watershed is estimated to have lost nearly 300 acres to the Archie Creek Fire, with the full extent of the damage unknown. The state of the watershed's rearing steelhead also remains unassessed; the probability of significant loss to intense water alkalization and ash-induced suffocation is high.

As global systems shift to new norms of heat and stress, conservation work is forced to adapt and seek climate shields for a future where wildfires may not be contained to a season at all. Pacific Rivers' Sanctuary campaign is searching for islands of thermal refuge for salmonid species, but even the best legislative protection cannot project a watershed against the realities of extreme climate events. Perhaps most critically, the world of conservation may need to evolve past its own goals in an attempt to be one step ahead of the ever-increasing, and devastating disasters we see emerging today.

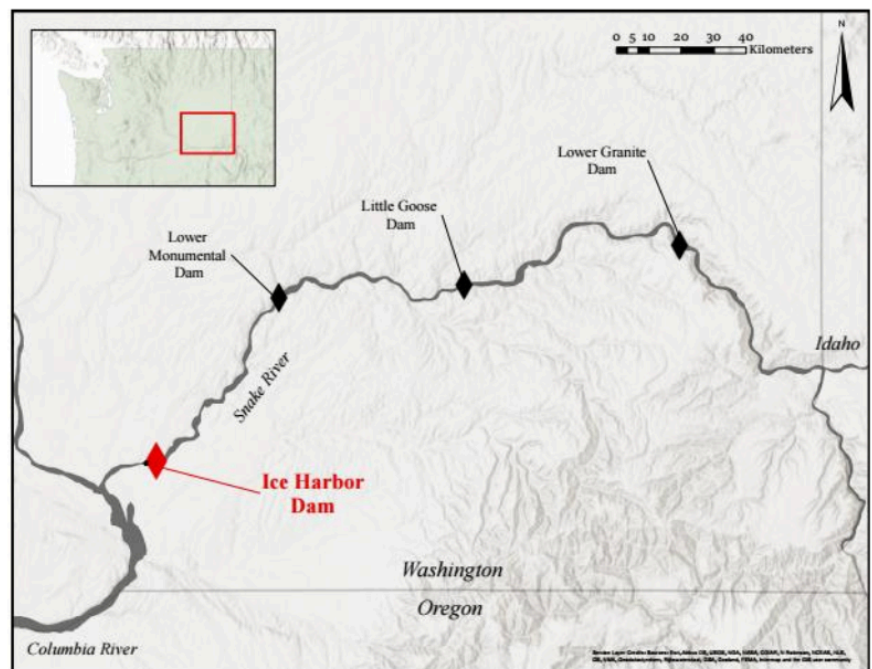
# Lower Snake River Spotlight - Ice Harbor Dam

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On the border of Washington State's Franklin and Walla Walla counties sits the 65-year-old Ice Harbor Dam, the first of four dams on the lower Snake River. While touted as a keystone of local agriculture through its supply of reliable irrigation water, Ice Harbor Dam only provides water for 35,000 acres, or 2.65%, of both counties' farmland. Is Ice Harbor's presence essential to the survival of these 35,000 acres? Or is the dam's necessity in the agricultural economy of southeast Washington due for a reevaluation, particularly as Snake River salmon runs are perilously close to extinction?

In 2017 the total crop producing acreage of Walla Walla and Franklin counties totaled approx. 1.32 million acres, generating \$206 million in profits from fruits, nuts and other consumable crops. Of those, roughly 35,000 acres (2.65%) of that land is irrigated by water diverted from the Ice Harbor Dam. What would happen if water from Ice Harbor was no longer available? Proponents of the dam's preservation claim that these particular 35,000 irrigated acres would fall into barren ruin without water from the Ice Harbor Dam. However, removal of the dam does not necessarily mean the end of irrigated agriculture for these farmers. Unirrigated acreage makes up a significant portion of both counties' croplands, and no studies have shown that these particular tracts of land would lose their value or profitability by producing unirrigated crops. There is no evidence that unirrigated crops would be less profitable on currently irrigated lands. If irrigation water is necessary to profitability, shifting infrastructure to support the storage and withdrawal of water from the Snake River could be the solution.

Considering the feasibility of changes in irrigation source, crop selection and land management, along with the distinct lack of reports delineating a lack of sustainable groundwater, it stands to reason that Ice Harbor's contributions to irrigation are less than necessary for sustaining a thriving agricultural economy in southeastern Washington, or for maintaining value for the lands currently being supplied irrigation water. Until there is further exploration of alternative methods of agricultural support without the Ice Harbor dam, it is impossible to create a complete assessment of Ice Harbor dam's dispensability in the preservation of this small portion of Washington's arable land.



Distribution of the lower Snake River dams within Lewis and Franklin Counties, SE Washington State.