Statement of Tricia Hill, Farmer
On Behalf of Klamath Water Users Association
Before the
Natural Resources Committee
Subcommittee on Water, Wildlife and Fisheries
U.S. House of Representatives
on
"Why We Need to Store More Water, and What's Stopping Us"

March 28, 2023

Chairman Bentz, Ranking Member Huffman, and Members of the Subcommittee, thank you for this important hearing and for allowing me the honor of testifying before this Subcommittee.

My name is Tricia Hill. I am a farmer, and work in partnership with my parents, my uncle, my brother, and my sister.

I am appearing on behalf of Klamath Water Users Association (KWUA), where I am a board member and past President of the Board of Directors. KWUA is a nonprofit corporation, formed in 1953, whose members are irrigation districts who are contractors of the United States Bureau of Reclamation's (Reclamation) Klamath Project. Our members use water from the Klamath River and Upper Klamath Lake.

I would like to bring the Subcommittee's attention to Reclamation's management of Upper Klamath Lake, the Klamath Project's main storage reservoir, and the Klamath River, and the impact of this management on farms and ranches, and the communities in the Upper Klamath Basin and specifically the Klamath Project area. For producers in the Klamath Project, the issue is less a matter of developing more stored water, and more a matter of being stopped from using stored water. In fact, we are prevented from using water that inundated our lands thousands of years ago. That land, which includes farms and critical national wildlife refuges, is being dried up by today's federal water policy.

The Klamath Project

As you consider issues of the Klamath Basin, I urge that you not think of the Klamath Project as an irrigation project that grew out of drying up rivers. Although in many places Reclamation has "made the desert bloom," this is not so for the Klamath Project.

Two hundred years ago, two thousand years ago, and two million years ago, much of the area we now farm was under water. It was lakebed and marsh, fed by flow from the Klamath and Lost Rivers that spilled into these lakebeds. The idea behind the Klamath Project was to use the very same water that was normally on the lands; that water would be stored in other places (reservoirs) and then applied for irrigation during the spring and summer.

This vision greatly contributed to why the Klamath Project was one of the first federal water projects authorized after the passage of the Reclamation Act. In addition, the area has extremely

fertile soils, natural topography to facilitate the efficient movement of water, and lakes that could be used as natural storage reservoirs.

This view was expressed by Charles Walcott, Director of the U.S. Geological Survey, testifying that "the feasibility of this project from an engineering standpoint is beyond question and it is also one of the cheapest projects" that Reclamation had investigated up until that time.[1] The reason for Walcott's optimism was in part due to the fact that Upper Klamath Lake "could be utilized as a storage reservoir for the irrigation of a large body of land, approximating 300,000 acres lying almost equally in Oregon and California."[2]

Congress agreed with the potential benefits of the Klamath Project, passing the legislation necessary for its construction. The first deliveries through the Project began in 1907. Shortly after, a dam was constructed at the outlet of Upper Klamath Lake, providing controlled storage of water to ensure adequate irrigation supplies for the Project.

Even though those who designed the Klamath Project did not have our technologies, their planning was remarkable. Evaporation and evapotranspiration from the then-present areas of open water and marsh was a greater amount of water than what our crops consume today. In plain terms, under current conditions, even when every acre is irrigated, less water is consumed on the land than was consumed historically in the natural or "pre-Project" condition of the region.

For several generations, the water supply for the Klamath Project was considered more than adequate for multiple uses. Communities were built; first, by early European settlers, whose vision and energy continue to be sources of amazement. Later, veterans of World War I and World War II were awarded homesteads in thanks for their service. In the latter half of the twentieth century, Hispanic families joined these immigrants, and are valued, prominent members of our communities.

Two highly valued federal wildlife refuges were also reserved when the Klamath Project was constructed. They are: Lower Klamath and Tule Lake National Wildlife Refuges (NWR), managed by the U.S. Fish and Wildlife Service. It is fitting that Project facilities are the sole means for delivery of water to these refuges, as the waterfowl and other wildlife that grace the Project landscape do not distinguish between the public and private lands they call home.

As time passed, local irrigation districts eventually took over operation and maintenance of most Klamath Project facilities. The size and role of the local office of Reclamation steadily diminished to the point, in the early 1980s, when Reclamation seriously contemplated transferring responsibility for the remaining facilities to the districts and effectively closing shop.

Storage in Upper Klamath Lake in Relation to Food

Before addressing what has transpired to the Klamath Project over the last three decades, I want to explain briefly some details of the Project's primary water source. Upper Klamath Lake is the largest body of fresh water in Oregon and constitutes one of the greatest natural reservoirs in the world. Only a small dam was required to beneficially store the water in this reservoir rather than

[1] H.R. Rpt. No. 3764, 58th Cong., 3rd Sess. (Jan. 20, 1905).
[2] *Id*.

having it flood Tule Lake and Lower Klamath in the late winter and spring. As envisioned by engineers in 1905, that stored water is returned to these lands over the growing season.

The total capacity of Upper Klamath Lake is more than 650,000 acre-feet, of which approximately 500,000 acre-feet is stored in a 6-foot operating window, sometimes known as "active" storage. That is, within each foot of water stored in Upper Klamath Lake there is approximately 80,000 acre-feet of water. That amount of water can irrigate 40,000 acres of farmland in the Klamath Project for a full year.

To break that down further, *an inch of stored water in Upper Klamath Lake can fully irrigate well over 3,300 acres for a full year*.

For further context, *a single acre of irrigated land in the Klamath Project can produce 55,000 pounds of potatoes, 7,000 loaves of bread, or 20,000 bags of peppermint tea*.

Applying simple multiplication, an inch of water in Upper Klamath Lake equals 23 million loaves of bread. And, assuming the average American consumes about 50 loaves of bread in a year, then an inch of water feeds over 460,000 Americans.

We could perform a similar exercise with pounds of potatoes or cheese, heads of garlic, jars of onion powder, and on and on. Food grown in the Klamath Project can be found in every grocery store and restaurant in America. This is all thanks to the vision of Reclamation engineers, the infrastructure paid for by Klamath Project water users, and the work we all proudly do.

Events Since the 1990s

For nearly 100 years, the Klamath Project received full water deliveries—all that was needed or at least very close to that—every single year. Farms and waterfowl thrived. This was the Project of my childhood. Fields thick with golden heads of wheat. Skies filed horizon to horizon with vees of migrating geese. My fingernails caked with earth after helping my dad "check spuds." My sister's laugh when we stalked the ditches for turtles and frogs. However, in the last 20 years, that has changed as a direct result of actions taken under the federal Endangered Species Act (ESA).

In 1988, Lost River and shortnose suckers were listed as endangered under the ESA. In response, Reclamation began managing water levels in Upper Klamath Lake for the purported needs of these fish to survive, thereby limiting water deliveries to the Klamath Project.

A decade later, a segment of coho salmon, the population that spawn in tributaries in Oregon and California, were listed as threatened under the ESA. In response, Reclamation added more pressure to the Upper Klamath Basin and began managing flows from Upper Klamath Lake into the Klamath River—40 miles downstream of the Klamath Project—for the purported needs of these additional species of fish.

What occurred since that time could (and should) fill volumes, but undeniably one fact is true—interests advocating on behalf of the river and the lake have effectively negotiated for all the water they have demanded. This is so even though the demands do not correspond with the historic reality of our basin.

For the Klamath Project, the initial shock was 2001, when irrigation supplies were cut off for the first time ever. No water was delivered until late July, at which time the damage was already done. Any crops that had been planted withered and fields quite literally blew away. Family farms were bankrupted, and communities were devastated.

Following 2001, the National Academy of Sciences was asked to weigh in on the federal agencies' decisions with respect to water management and whether or not they were justified. In a series of thorough reports, a blue-ribbon panel of scientists found that the decision to shut off water to the Klamath Project was *not* justified, that best available science did not support the lake levels and river flows that had been required, and that federal agencies in effect needed to look elsewhere—beyond the Klamath Project—to find solutions for ESA-listed fish.

American taxpayers have now spent hundreds of millions of federal dollars on researching suckers and salmon and the reasons for their decline. Even more money has been spent for the sake of "restoring" their habitat. But the sad fact is even though the dollars are gone and countless biological opinions have been written by the fishery agencies, and irrigation and refuge supplies have been severely curtailed, no one can say "we have addressed the factors that are actually limiting fish populations."

Dikes have been breached and thousands of acres of farmland flooded. Dams that existed for almost a century have been ripped out (with more potentially to come). Thousands of productive acres of world class farmland have gone out of production in the name of restoration, with negligible results.

There were attempts made by many—led primarily by farmers and tribes—to come up with a durable solution. A settlement agreement was signed in 2010, which ultimately expired in 2015 due to lack of congressional authorization.

The fish agencies' inability to truly identify what is hurting fish means they only have one knob to turn. So, they have fundamentally changed the operation of the Klamath Project, and all of the people and wildlife that live here suffer from those changes.

As a farmer, I understand there are things I can control and things that I cannot control. I cannot change the weather, so I tweak my tillage or fertilizer plan to adapt. The difference is that as a farmer I pay the cost of those actions. The fish agencies cannot control ocean temperatures or invasive species preying on juvenile suckers, so they reduce Klamath Project water deliveries in an attempt to compensate. It does not matter so much if redirecting irrigation water will or will not help the fish in the river or the lake, it only matters that they can control "something" that could affect fish. As a result, we have a decades-long history of decimating the Klamath Project and refuges to increase water supplies for ESA-listed species, and no record of success in helping those species.

Our air quality, our wildlife, our drinking water, and our economies are all sacrificed on the altar of the need "to do something" regardless of how effective that something is. Our reality is that if there is a problem, the go-to solution is regulating the Klamath Project, because that is something that can be done. It is not fair, but more importantly, it is not effective.

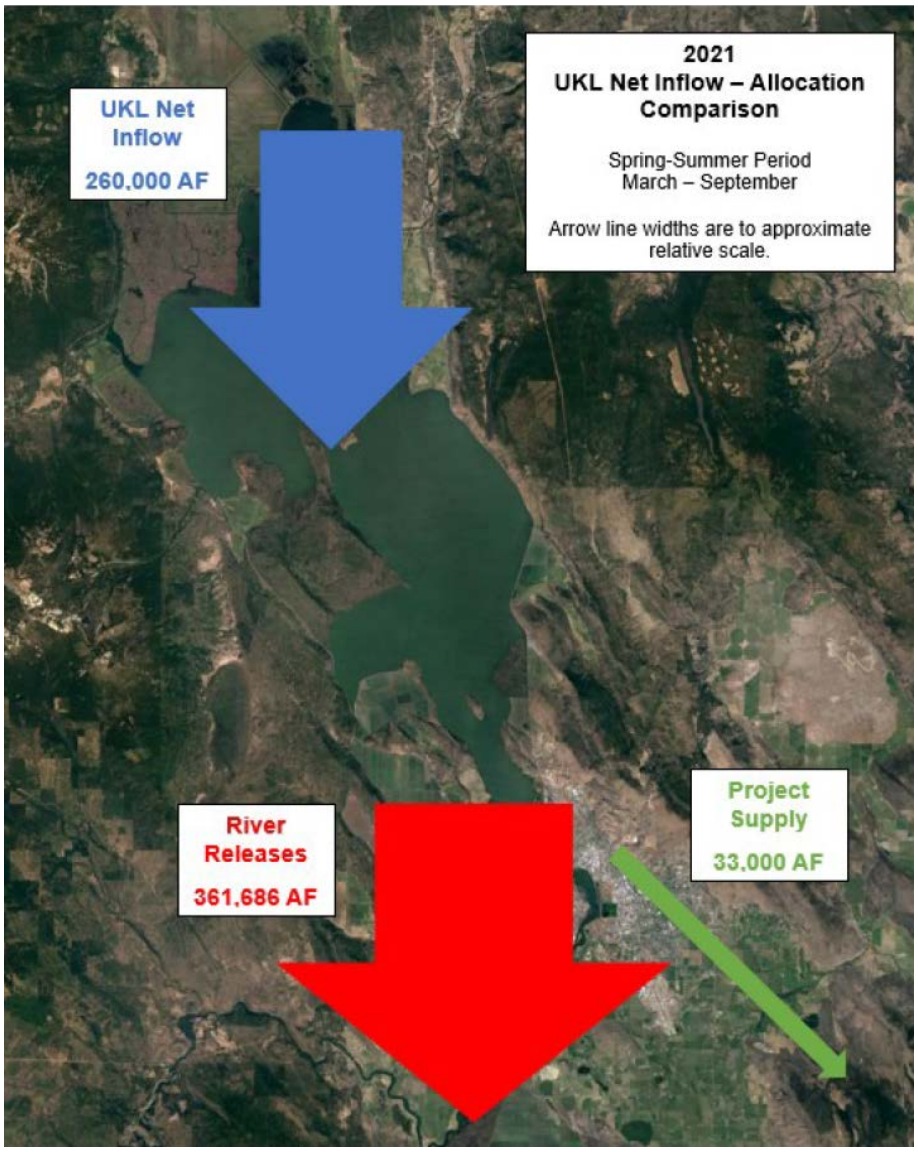
Meanwhile the species have apparently continued to decline, notwithstanding the water already being set aside for them. The response, rather than reconsidering the agencies' approach, has been to instead simply allocate more and more water to the fishes' purported needs.

The dysfunctional operations plan controlling the Klamath Project is a dramatic example of the problem. In my reality, every drop of water that enters Upper Klamath Lake is allotted to one of three "buckets"—lake, river, or Project. The Project's "bucket" basically only gets water that spills over or out of the other two. In effect, the Project gets the scraps. This system completely contradicts the historic reality of water in the Upper Klamath Basin and ignores that the water that ends up "down river" is only available because of the infrastructure that was built for an irrigation system and paid for by Klamath Project farmers and ranchers.

Instead of recognizing the needs of people and wildlife up and down the Klamath, the federal government micromanages every single drop of water in the Upper Klamath Basin based on dates on a calendar providing zero flexibility. The whole process of consulting on the effects of the Klamath Project and its obligations under the ESA is now a competition over who can get more water—at the expense of another party. Victories are now measured in acre-feet allotted, not fish or habitat recovered.

The last three years in particular have shown this disconnect. During the time period 2020 through 2022 combined, there was roughly 2.1 million acre-feet of inflow to Upper Klamath Lake, of which 1.7 million—or 80 percent—was released for river flows. Comparatively, less than 300,000 acre-feet—or 15 percent—was available for farms and refuges within the Klamath Project.

Breaking those figures down further shows how storage operations in Upper Klamath Lake have been completely turned upside down. During each of the last irrigation seasons, Reclamation has released more water from Upper Klamath Lake to provide flows in the Klamath River than has flowed into Upper Klamath Lake during the same time period. The year 2021 provides a vivid example.



From a regulatory perspective, Reclamation is required to ensure that the effects of its actions not result in jeopardy to coho salmon in the Klamath River. We cannot understand why Reclamation must release more water than nature provides in order to make sure that it is not *causing* jeopardy by the operation of the Klamath Project. The regulatory problem here is that the ESA has devolved into a competition for water rather than a process that addresses Reclamation's impacts.

In other words, purporting to be acting under the ESA the fish agencies are taking water that for the past century was used to grow food for tens of thousands of families across America and provided important habitat for migrating birds and wildlife on the Pacific Flyway and re-allocating it for no apparent benefit to listed fish.

<u>At What Cost</u>?

For me, the definition of cost depends on which hat I am wearing.

As a child of the Klamath Basin, the cost that makes my heart hurt is that the pair of sandhill cranes in my valley are gone. The frogs and water snakes that populated my yard near the irrigation canal are nowhere to be seen. Due to the agencies focusing solely on a few species, hundreds of other species in the basin have literally been left in the dust.

As a mother, the cost is that I constantly fret about the dust from dried up fields and wildlife refuges and the effect that has on my daughter's asthma. I warn my girls about the length of their showers and running the washing machine because I know our well—dependent on recharge from irrigation water—is going dry. Reallocating water that historically would have resulted in lakes and marshes to the river is destroying our air quality and the water table that my community relies on for home use.

As an employer, the cost that keeps me awake at night is the impact to my employees. Like all the farmers in the Upper Basin, my employees are my family. Although I am grateful for the efforts of federal and state agencies and members of Congress advocating for financial assistance in the Klamath Basin, that is not enough to do more than cover the mortgage. I do not want to let my employees go, but without water there are no jobs for me to give them. By forgetting the needs of our Upper Basin communities, the current system is driving good people out of the basin who deserve a home and a future.

As a business owner, the cost that is the ultimate reality is the economics. Historically, a normal water supply for the Klamath Project from Upper Klamath Lake was between approximately 350,000 and 500,000 acre-feet. In other words, beyond the food production value, an acre-foot of water has historically generated between $1,000 and $1,400 for the economy of the Klamath Basin.

Klamath Project irrigators have repaid their respective allocated shares of the costs incurred by the federal government in constructing the Project. Since then, farmers have funded and taken over the operation and maintenance of most Project facilities. We also pay money to the United States government to cover its share of the costs—in advance—of the facilities that Reclamation still maintains. Over the years, we have paid hundreds of millions of dollars for the upkeep of Project facilities so that we can continue to serve their intended purpose, which is helping grow food for this nation and provide for healthy habitat in the wildlife refuges in the basin.

As a result of requirements of the ESA, the Project supply for farms and refuges of the Klamath Project has been insufficient in eight of the last ten years, idling tens of thousands of productive agricultural acres each year and costing the economy more than two hundred million dollars annually. Hundreds of businesses have been lost; families have been put into hardship; and generations of farmers and our employees are hurting.

These impacts are felt and shown throughout our communities. County revenues to pay for police, fire, and other essential services are diminished. Schools close. Grocery stores and restaurants close. Movie theaters close. Community pools are emptied, and parks go unwatered, leaving trees and open space to dry up and die. People and families begin to move away.

Had these sacrifices somehow improved the situation for the fish, helping them recover, perhaps I could explain to my neighbors why we hurt. Sadly, I have no explanation, other than that the political environment is not sensitive to producers or agricultural communities.

Suckers in Upper Klamath Lake continue to fail to recruit new adults to the population, meaning in effect that no juveniles are surviving to an age where they could reproduce. Hundreds of millions of larvae are born and can be found around the lake each spring and early summer but they are effectively gone by fall. There has been three decades of research on this problem, and we still do not have a good explanation of why. Yet the Klamath Project and its people and wildlife continue to suffer.

For salmon, since the institution of specified flows in the Klamath River, disease conditions have flourished. Disruption of the historical flow regime and loss of peak flows to maintain year-round minimum flows has caused an explosion of the annelid worms that cause *C. Shasta*, a parasite that can be lethal to juvenile salmon.

We hope federal decision-makers may finally (even if reluctantly) coming to grasp that more water in the lake or the river does not equal more fish. I am reminded of a passage in one of the NRC's reports that states:

> Whereas professional judgment is essential for successful ESA implementation where site-specific information is absent, its use is more problematic when initial judgments fail empirical tests. Reversal of an initial judgment may seem to be an abandonment of duty or a principle, but it is unrealistic to expect that all initial judgments will be proved scientifically sound.[3]

The fish, the federal agencies that manage them, the people that harvest these fish—they do not pay these costs. They do not help maintain and fix Klamath Project facilities. They do not even pay for any of the costs to maintain and operate Link River Dam, which in the last 20 years has been operated almost exclusively for the purported benefit of the fisheries.

Conclusion

Please visit my farm and my community. I work hard to make it a place that both people and wildlife want to be. Come to my home and you will see sustainable farming practices, employees treated with respect and dignity, snow-capped mountains, and fertile soils. Other countries, and other regions in America, cannot compare to the conditions we have to grow food.

You will also see two of our country's first wildlife refuges, which former Interior Secretary Stuart Udall once described as our nation's most important areas for waterfowl and shorebird conservation—85,000 acres in the heart of the Pacific Flyway.

Those resources are being jeopardized and ultimately deserted. Farms in some cases have gone without water for more than three years. The refuges, the remnants of an ancient Pliocene lake,

[3] National Research Council. 2004. Endangered and Threatened Fishes in the Klamath River Basin: Causes of Decline and Strategies for Recovery. Washington, DC: The National Academies Press. (p. xvi.) https://doi.org/10.17226/10838.

are dry for the first time in *millions* of years. Birds are disappearing, as is other wildlife. And the food that this basin used to grow is being lost. Food prices are not just going up; grocery store shelves are literally going bare. We built the Klamath Project's water storage decades ago, but that investment is now being squandered for no good scientific reason.

KWUA urges this Subcommittee to take a hard look at how water is being managed in the Klamath Basin. The details and the decisions being made that I could not go into detail in my testimony would, quite literally, shock you. Fish science has gone out the window as apportionment of Klamath Basin water has become a tool of politics, not wildlife and fisheries management. The backbone of this nation's food supply and food security—irrigated agriculture in the West—is being broken for no good reason.

Despite these grave concerns, there can be a better future. We are mindful that we are not the only communities, and we are latecomers compared to our Native American neighbors. We want their fish, and their communities to flourish. Our issue, however, is that destroying my community and our wildlife will not recover the important fisheries in peril. It is my hope, and KWUA's goal, to engage in collaborative dialogue and problem-solving that honestly addresses all the important interests in the basin. We have stood ready to do so since the expiration of our prior settlement efforts in 2016. Unfortunately, we do not perceive that other parties have the same objectives, and the overall atmosphere in the basin is toxic. We welcome any assistance of the Subcommittee in turning this situation around.

On behalf of the farmers and ranchers in the Klamath Project, thank you for the opportunity to testify before you today, and I am happy to answer any questions you may have.