WESTERN WASHINGTON AG REPORT

NOVEMBER/DECEMBER 2022

Western Washington Agricultural Association

MORE THAN LAND AND SOIL

WWAA PREPARES FOR 2023 LEGISLATIVE SESSION AMIDST NEW STATE REVENUE FORECAST AND LEGISLATIVE MAKEUP

As the 2022 comes to an end, WWAA has been working to educate as many legislators, community leaders, and farm neighbors as possible about the benefits of a thriving agricultural industry in northwest Washington. "We're more than caretakers of the land and soil," explained WWAA president Jenn Smith. "We are caretakers of the entire rural ecosystem. We end up managing everything that runs through our lands, whether it's geese, deer, people, or streams and canals. We produce the local food that Seattle and Bellingham eat, and we support all of the rural communities in the region." And that's the message WWAA hopes state leaders understand as they begin the new legislative session in Olympia in January.

With a state revenue projection for 2021–23 increased by $762 million and the 2023–25 forecast increased by $681 million, state leaders and agencies will have an abundant stash of resources to fund new projects. This will allow new agency funding for projects that could affect farm country throughout the state.

This is an important session for our farmers. With the influx of revenue, legislators and the Governor's office will be able to spend more on projects that can both help and harm our farmers. We will be working closely with our farm group partners to monitor topics such as buffers, salmon counts, and voluntary stewardship.

Earlier this fall, WWAA worked with multiple farm groups throughout the state to host a legislative tour of the Skagit Valley and its farming region. The focus was on mandatory buffer education and other local food impacts. Many legislators and agency staff who attended did not realize how large a 235-foot buffer impact would be on local food production. The tour hosted roughly 40 state legislators and agency personnel. This was an opportunity to show people how removing any acreage from farming in this region affects the local food supply in Seattle, Tacoma, Bellingham and across the state. WWAA's Pink Flag project did its job, and many participants were surprised at the size of potential mandatory buffers. Many local farmers installed pink

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WWAA MISSION

TO REPRESENT AGRICULTURE BY PROVIDING SERVICES TO THE ENTIRE AGRICULTURAL COMMUNITY

WWAA COMMITMENTS

ENGAGE IN INTERNAL AND EXTERNAL (ECONOMIC, ENVIRONMENTAL, REGULATORY) PRESSURES ON AGRICULTURE

INTERACT WITH COUNTY, STATE, AND FEDERAL LEGISLATORS AND REGULATORS

PEST AND NUTRIENT MANAGEMENT CONTROL

NETWORK WITH AND SUPPORT OF THE AGRICULTURAL RESEARCH COMMUNITY

SEEK OUT AND DEVELOP OPPORTUNITIES AND TECHNOLOGIES FOR AGRICULTURE

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flags and Burma-Shave style signs along local roadways. This educational campaign is still underway as local residents and those visiting the area for the holiday season will learn from the signage.

With the election now certified, leaders throughout the agricultural community are looking to legislative committee members for insight and support. Leaders sitting on committees such as energy, environment, and agriculture will be important for WWAA to continue building relationships. Northwest Washington has a few local leaders serving on important committees. Sen. Liz Lovelett of the 40th District serves as the vice chair of the Senat Environment and Energy committee, and Sen. Jesse Salomon of the 32nd District serves on the Senate Agriculture, Water, and Natural Resources committee. On the House side, Representatives Ramel and Lekanoff will serve on the environment and agriculture committees

WWAA is also waiting to see what ends up in the Governor's budget, which is scheduled to come out the end of December. Once WWAA understands his team's priorities we can better predict what will be beneficial to our communities and what will have a negative impact.

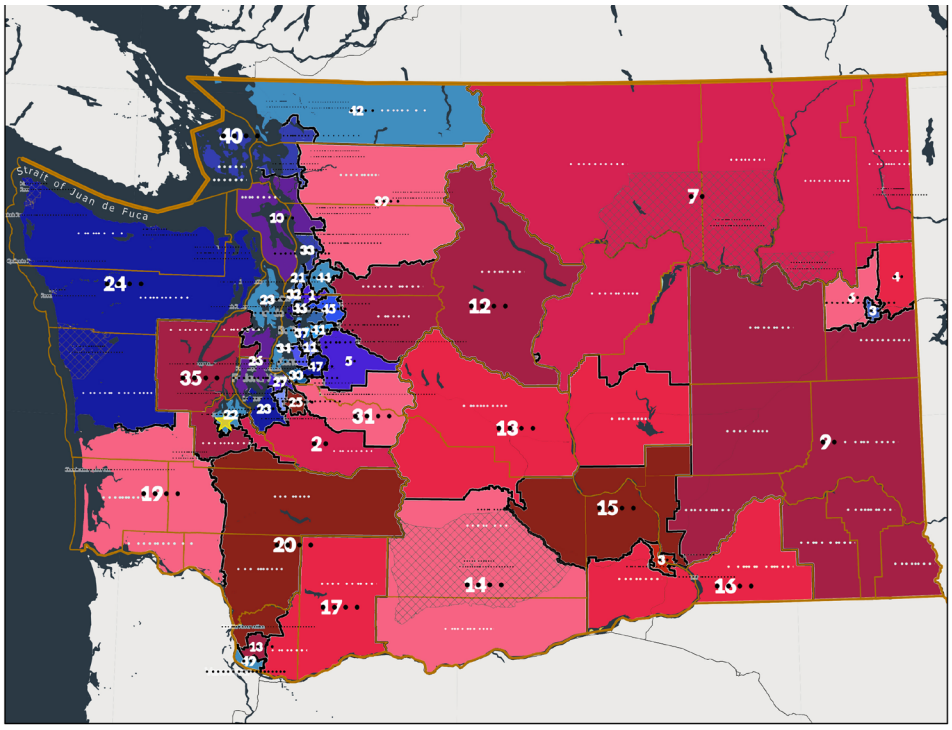
Legislators and agency personnel attended the recent Food and Farm Tour in Skagit County visited the Hughes Farm and learned about local potato production among other important agriculture topics.

LOCAL DISTRICTS FLIP

Policy and election nerds are still studying the outcomes of the 2022 general election in Washington state. Prior to the election, many thought this was a year for the Republican party to pick up a couple extra seats. Similar to the national scene, however, the opposite happened and Democrats gained seats in both chambers. This outcome was thanks, in part, to the northwest corner of the state.

Whatcom's 42nd District flipped to complete Democratic control. For years this district has been a purple, or swing district, with a mix of Democrats and Republicans representing local values. Just four years ago, Republicans held both the Senate position and one House position. Now Democrats hold all three offices after Rep. Sharon Shewmake narrowly defeated Republican Sen. Simon Sefzik for the Senate seat.

While the 10th District remains purple, Democrats gained a House seat



After the 2022 general election, the makeup of the state's legislative representation changed slightly. As indicated above, District 42 flipped to complete Democratic representation and District 35 flipped to Republican dominance. Only Districts 10 and 26 remain as "purple" or swing districts.

with Clyde Shavers narrowly beating Republican Rep. Greg Gilday. Washington now has only two swing districts: the 10th and the 26th (Gig Harbor).

There will also be a gang of new faces leading their districts, as voters selected more than 20 freshmen legislators. WWAA will be working to educate these new leaders about the uniqueness of farming in northwest Washington.

WHAT'S BEHIND CHINOOK AND CHUM SALMON DECLINES IN ALASKA?

With the continuous attention directed at Washington's farming communities and infrastructure for salmon-saving efforts, it is important to understand that other areas throughout the Pacific region are facing Chinook salmon decline. The following is an excerpt from NOAA Fisheries and how their science is providing insights on poor salmon runs on Yukon and Kuskokwim rivers in 2020 and 2021.

The decline in salmon runs in the Yukon and Kuskokwim river systems over the past few years has caused a tremendous hardship for commercial and recreational fisheries and subsistence communities. Chinook and chum salmon harvests are part of the cultural fabric of subsistence communities and serve as a critical food source. We are working with communities and state and federal partners to provide needed science and management to respond to this complex challenge.

WHAT WE KNOW

Our science indicates that several factors working in combination due to warm water temperatures likely contributed to poor Yukon and Kuskokwim River returns in the past 2 years.

Poor Diet and Changes in Metabolism in Young Salmon

Our collaborative marine ecosystem surveys with the Alaska Department of Fish and Game and supporting laboratory studies help us gain critical insights on:

- What salmon and other fish are eating
- Changes in fish metabolism and growth rates (in warm conditions fish typically grow faster and they need more food to survive the winter)
- Changes in maturity (some fish mature at an earlier age, which means they produce fewer eggs)

In the northern Bering Sea, we have been conducting a survey of juvenile Chinook and chum salmon (1–3 years old) for more than two decades. We have observed a steady decline in abundance of Chinook salmon juveniles, but the abundance of juvenile chum has increased in recent years.

For Chinook there is a pretty good relationship between the number of juveniles we see in our survey and the number of adults that return to spawn to the Yukon River in future years.

For chum the story is a little more complicated. Just because we have been seeing higher numbers of juveniles in our recent survey doesn't necessarily mean we will see more adults in the rivers in the next few years. Environmental conditions in the different places that chum go to feed in the ocean may have something to do with this. We also suspect this is the key reason that 2020 and 2021 adult chum returns to the Yukon River were so low.

To understand what happened to returning adult chum in 2020 and 2021, looking at conditions that young fish experienced in the ocean during the warm years of 2016 and 2019 provides some insight.

In the warm years of 2016 and 2019, we observed thinner, less fit young chum salmon in our survey. We suspect this was due to a combination of increased metabolic rates, reduced prey, and poor prey quality. At the same time, there were also mass seabird die offs, and a gray whale unusual mortality event. Poor prey availability was identified as a potential factor in both of these situations.

By compiling juvenile abundance estimates over the years, we learned that much of the year-to-year variability in sur-

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vival of Yukon River Chinook salmon occurs during the first few years of life (freshwater and initial marine stages). However, the recent decline in Yukon River chum salmon has occurred during their later marine stages.

These young chum salmon migrate into the Gulf of Alaska in the winter to feed. Scientists suspect that during the warm years, the chum experienced a double whammy. First, there was reduced prey availability and lower quality prey in their Bering Sea feeding grounds. Then they encountered a similar situation when they entered the Gulf of Alaska as older fish. This likely contributed to the lower salmon returns in recent years to the Yukon River.

Surveys like the 2020 and 2021 International Year of the Salmon may provide important insights on conditions in the Gulf of Alaska winter feeding grounds for chum. This may help us better predict adult chum returns so that subsistence communities and fishermen can better prepare.

Immune Function and Disease

NOAA Fisheries and Alaska Department of Fish and Game scientists are also looking at thiamine deficiency in Chinook salmon. Vitamin B1 (thiamine) is an essential molecule in cell function. Thiamine deficiency is often linked to diet and has been identified as a potential factor in Chinook salmon population declines. Thiamine deficiencies have been linked to:

- Early mortality (i.e., death in salmon egg, alevin and fry stages of development)
- Neurological and immune impairment
- Poor swimming behavior
- Inability to avoid predators

Juvenile Chinook salmon. Credit: Katrina Mueller

The Alaska Department of Fish and Game has also seen an increase in Ichthyophonus infection (a parasite) in salmon returning to the lower Yukon, predominantly in Chinook. In 2021, Chinook returning to the Yukon to spawn were smaller than average—44 percent of the fish sampled were infected with Ichthyophonus. This was significantly higher than previous years of sampling.

For the full story, visit www.fisheries.noaa.gov