



Floodplains by Design

• REDUCING RISK, RESTORING RIVERS •

Newsletter

March 2026

Flood Preparedness and Resilience

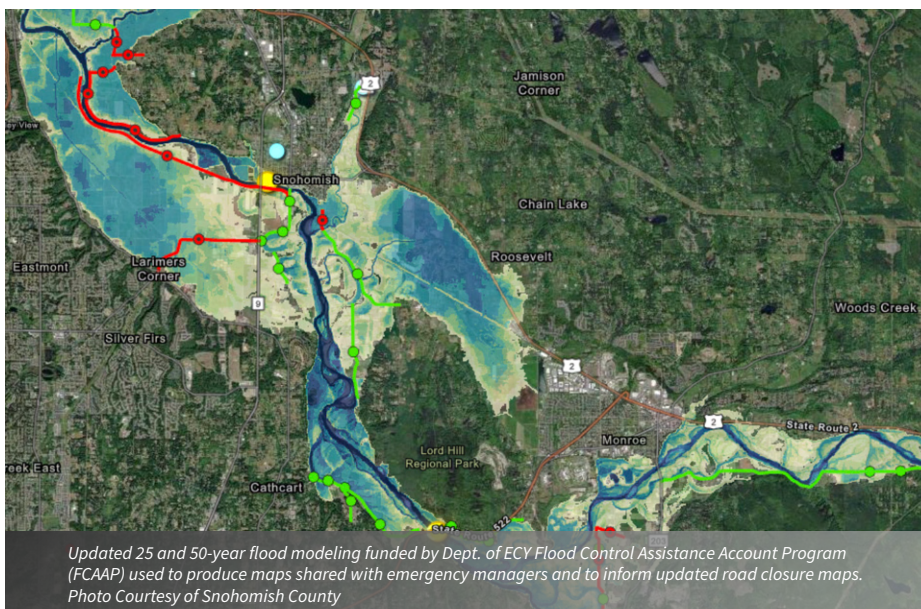
IN DECEMBER 2025, A SERIES OF ATMOSPHERIC RIVERS SWEEP ACROSS WASHINGTON, BRINGING FORTH FLOODING IMPACTS ON TRIBES AND COMMUNITIES STATEWIDE.

In December 2025, a series of atmospheric rivers swept across Washington, bringing prolonged rain, high river flows, and flooding impacts in communities statewide. Storms like this are a reminder that hazardous floods are not a question of if, but *when*. Across the state, integrated floodplain management projects were tested and partners reported immediate observations: water went where it was planned to go, damage was reduced or avoided entirely in some regions, and communities were safeguarded because of investments made years and decades earlier. The hard truth in this amongst these observations is that the scale of investment falls short of the scale and frequency of ongoing flood disasters. Too many communities remain exposed, and without sustained or expanded action, future storms will continue to outpace progress.

The observations compiled here reflect a shared commitment among Tribes, local governments, landowners, state agencies, nonprofits, and technical experts. Floodplains by Design is grateful to every partner who helped plan, design, construct, monitor, and steward these projects, and to those who responded during the storms to protect lives and property. Many project partners and the greater integrated floodplain management network shared inspiring examples of how long-term mitigation work showed up during the December 2025 floods.

IN THIS ISSUE:

- 1 Flood Preparedness and Resilience
- 4 Tracking What's Ready
- 5 Built for Flooding: L&L
- 6 Swan Creek Channel Restoration
- 8 WA Acts for Integrated Flood Resilience
- 10 Upcoming Events
- 11 Notes from Lichen
- 12 Opportunities & Resources



Updated 25 and 50-year flood modeling funded by Dept. of ECY Flood Control Assistance Account Program (FCAAP) used to produce maps shared with emergency managers and to inform updated road closure maps. Photo Courtesy of Snohomish County

KING COUNTY

Lower Russell Levee Setback City of Kent

The Lower Russell Levee Setback on the Green River performed exactly as designed. Floodwaters stayed fully contained within the setback levee and floodplain with room to spare. This project gave the river space to spread out and slow down while reducing pressure on downstream infrastructure.



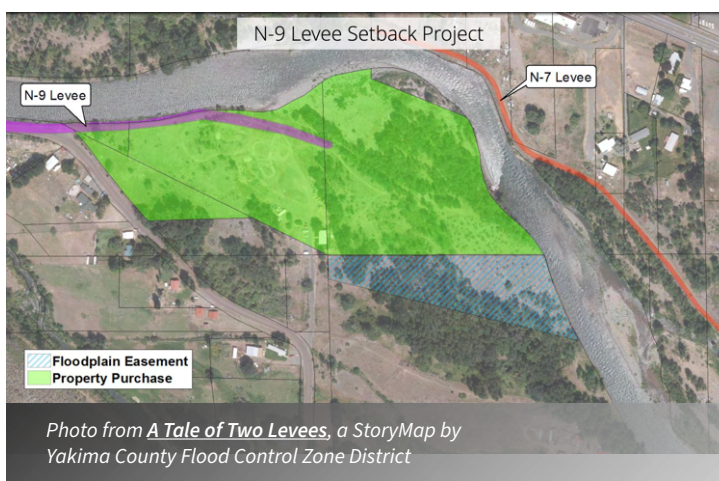
"Community members often go out of their way to tell me how much they love the project, including the relocated and improved Van Doren's Landing Park, trails, and natural areas (constructed habitat), and often thank me for my work on the project! Project partners are proud of the project and happy with the outcome, including the City of Kent (both Parks and Public Works), Muckleshoot Indian Tribe, and WRIA 9."

Kerry Baumann,
Senior Ecologist

YAKIMA COUNTY

Naches River N9 Setback

In Yakima County, the Naches River reached its third-highest recorded stage and stayed high for nearly two weeks. At the N9 Setback site, previously removed levees and newly connected floodplains absorbed the majority of the flow that otherwise would have attacked the opposite bank. Flood fighting across the opposite bank was not required, reducing stress on staff, emergency response needs, and public safety risks. As one local partner reflected afterward, the reduced need for overnight monitoring, emergency response hours, and flood anxiety made the value of integrated floodplain management unmistakably clear.



*It sure was nice only having to check a handful of spots in the middle of the night thanks to all of the integrated floodplain management work done in Yakima County. That hit me pretty hard. Just the reduced worrying and mental stress, and staff hour reduction, reduction in vehicle mileage and fuel. **It all adds up and really sank in last night.***

Troy Havens,
Water Resources Division Manager

CLALLAM COUNTY

Lower Dungeness River Floodplain Restoration Project

During the flood event, the river flowed into its historic floodplain, spreading out across more than 50 acres of restored wetland and side channel habitat. Water slowed and dispersed across the reconnected floodplain rather than remaining confined in a narrow corridor.

The restored “Schoolhouse Channel,” which reactivated during high flows, is now functioning as a primary side channel. ESA-listed Chinook, summer chum, and steelhead have been observed spawning there, along with pink and coho salmon. ESA-listed trumpeter swans have also been documented using the new floodplain habitat.

By reconnecting the river to its historic floodplain, the project increased flood storage capacity, buffered downstream impacts, and created long-term ecological benefits. The result is a system that absorbs flood energy more naturally while supporting fish, wildlife, and the surrounding community.

“I recently heard from residents that because of the flood water being contained and slowed down by the levee setback project that they didn’t observe flooding downstream as they had before the project.”

Rebecca Mahan,
Habitat Manager



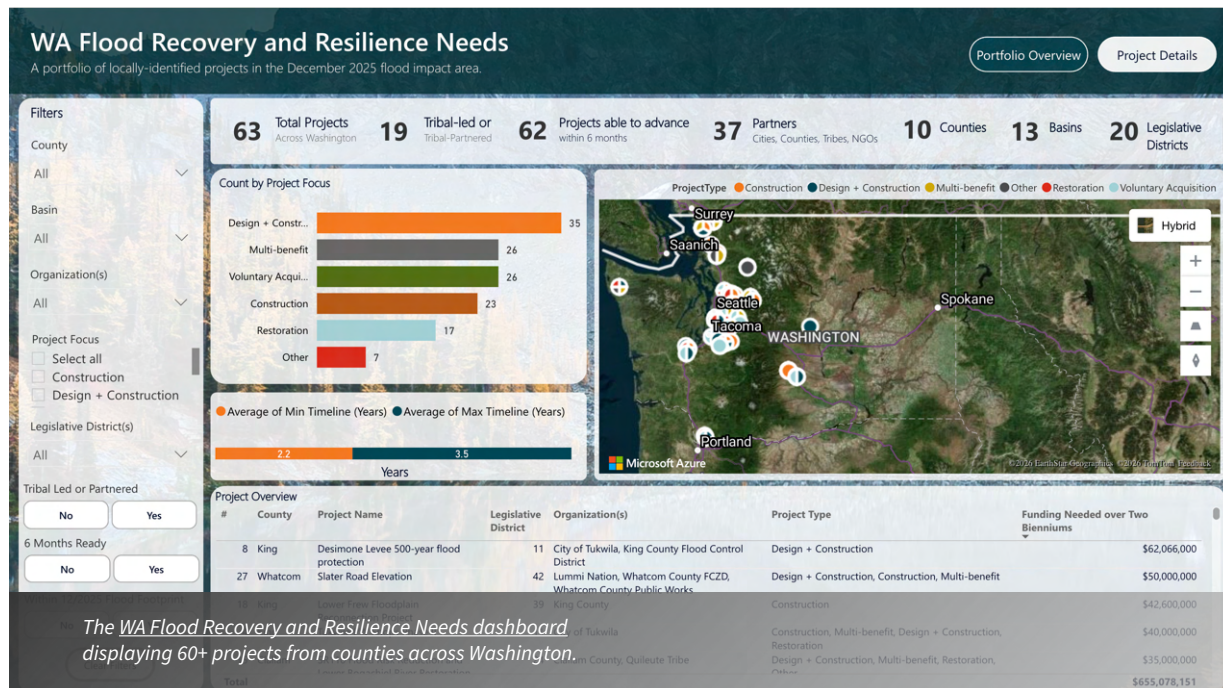
Lower Dungeness River Floodplain Restoration Project during the December 2025 floods.
Photo Courtesy of Clallam County

Performance to Preparedness

Floodplains by Design's **Lunch & Learn: Built for Flooding - Flood Resilience and Where Gaps Remain** showcases projects during flood conditions demonstrated a clear pattern: When we invest before disaster strikes, tribes and communities are safer. The [unfunded needs dashboard](#) builds on this by identifying the next set of projects poised to deliver flood resilience.

Tracking What's Ready

WHAT PROJECTS ARE READY TO MOVE RIGHT NOW TO RECOVER, REDUCE RISK AND RESTORE RIVERS?



Floodplains by Design has now compiled the WA Flood Recovery and Resilience Needs Dashboard to understand flood resilience needs in locations impacted by the December 2025 floods.

This dashboard outlines tribal and community-supported projects that could be ready for contracting within 6–12 months but lack the funding to do so.

The dashboard aggregates:

- Number of projects submitted by the integrated floodplain management (IFM) network
- Total estimated unfunded cost within the December 2025 flood footprint
- Minimum funding needed to advance a given project
- Geographic distribution by county and basin
- Project types (acquisitions, levee setbacks, floodplain reconnections, habitat restoration, infrastructure improvements)

The integrated floodplain management network is ready to mitigate floods from devastating lives, food systems, communities, and infrastructure. As the state looks to reduce risk in ways that prevent future harm, this tool provides a list of actionable investments for tribes and communities across Washington State to advance this goal and reduce flood impacts by:

- Reducing flood extent and flow velocities
- Protecting hundreds of homes, farmland, and infrastructure
- Removing people from harm's way
- Enabling safer emergency response
- Preventing costly damage



Built for Flooding: Flood Resilience and Where Gaps Remain (1:01:59)

On January 15, 2026, Floodplains by Design (FbD) hosted a Lunch & Learn to reflect on how FbD-supported projects performed during the December atmospheric rivers. Partners at *Pierce County (Kathleen Berger)*, *King County (Chris Ewing)*, and *Yakima County (Troy Havens)* shared on-the-ground perspectives from recent flood events. What worked, what was tested, and what lessons to carry forward.

Pierce County highlighted how decades of proactive floodplain acquisitions, levee setbacks, and reconnection projects helped prevent significant structural damage despite near-record river flows. Kathleen Berger emphasized both the technical successes of these investments and the human side of relocation, underscoring how long-term planning can reduce risk while supporting safer outcomes for vulnerable communities.

King County presented the Fall City Floodplain Restoration Project on the Snoqualmie River, which faced its first major flood after completion. Chris Ewing demonstrated how relocating infrastructure, removing levees, and reconnecting floodplain habitat reduced upstream flow levels, prevented roadway damage, and created critical refuge for salmon. A side-by-side comparison with the 2009 flood event showed that even a larger 2025 flood resulted in less damage.

Yakima County shared lessons from comparing the 2025 event with historic flooding in 1996. Troy Havens described how levee setbacks, pilot channels, and floodplain reconnection projects created space for rivers to move safely, significantly reducing impacts in areas that once experienced severe damage. Together, these presentations reflect a shared commitment among Tribes, local governments, landowners, state agencies, nonprofits, and technical experts.



Swan Creek Channel Restoration at Work

BY AUSTIN BERNALES



Swan Creek. Fresh sediment deposition.
Photo courtesy of Natural Systems Design

In Pierce County, the Swan Creek Channel Restoration Project is doing exactly what it was built to do: slowing fast water, reducing erosion, and helping the creek absorb flood flows rather than fight them.

As December 2025 flood events impacted river systems across the state, Swan Creek offers a clear example of how floodplain investments reduce long-term risks.

Flood resilience comes from restoring river processes and not just building stronger barriers. By giving water room to slow down and sediment a place to settle, this project helps protect downstream areas and supports healthier river function without the need for constant emergency repairs.

Overall, the log jams and the project performed well. Peak flows exceeded a 2-year recurrence interval event. However, what was unique was the duration those flows were sustained, approximately 1-week. We saw amazing sediment sequestration across the entire project reach. There were some points of lateral erosion along the banks at some of the wood structures in the upper reach...On a positive note, we were able to apply some design modifications to log jams that will be incorporated during the next phase. It was also great to see improvements in channel complexity and habitat structure through the sorting and deposition of sediment and wood, pools, channel braiding, refugia pockets. Existing infrastructure surrounding the project includes: park trail network, a pedestrian bridge, a main roadway arterial, and a sediment retention pond. **The project buffered impacts to all these systems.** No negative impacts were observed.

David Davis,
Project Manager

Swan Creek is an important tributary to the Puyallup River that runs through a semi-urban greenbelt and public park system. Decades of upstream development and altered hydrology left the creek deeply incised, unstable, and carrying excessive sediment downstream. Prior to construction, increasing flood events only accelerated the damage, threatening habitat, water quality, and nearby infrastructure.



8/12/2025



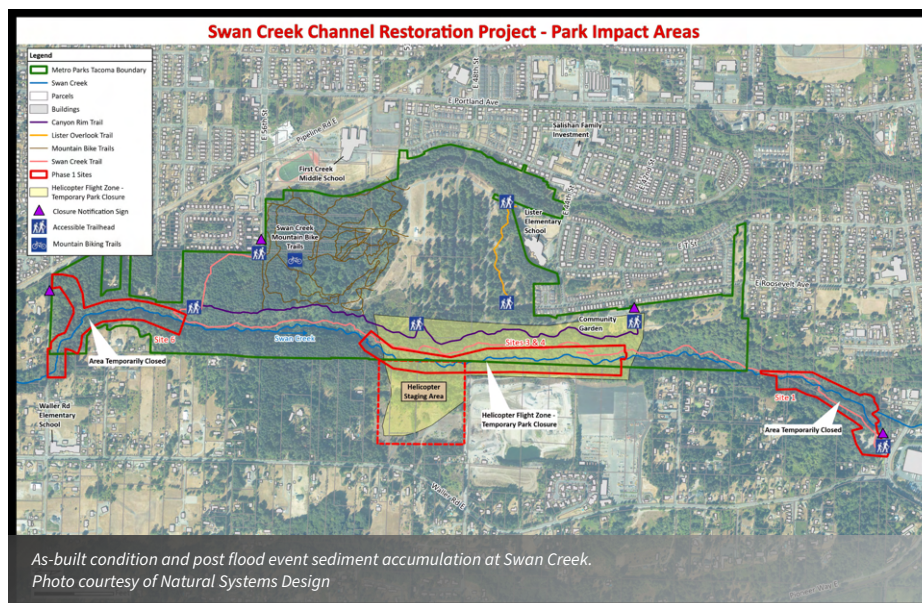
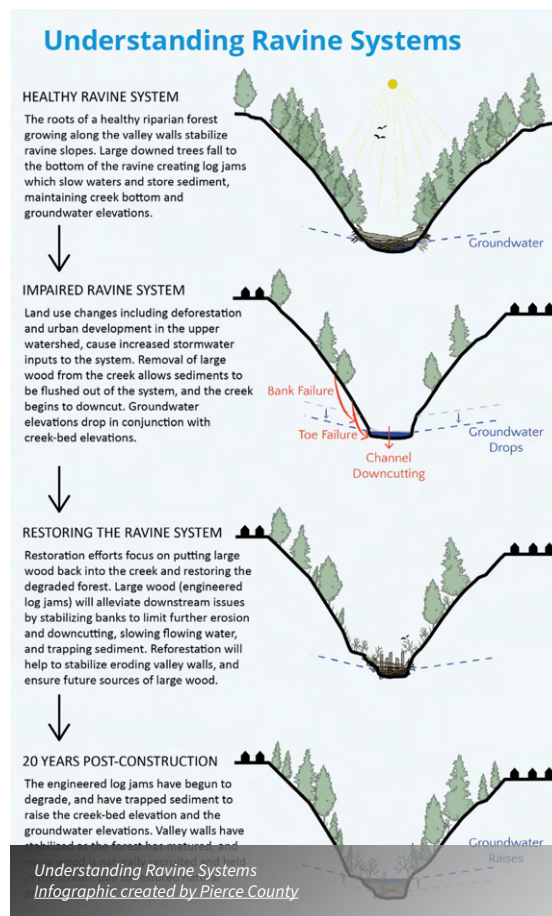
12/18/2025

As-built condition and post flood event sediment accumulation at Swan Creek.
Photo courtesy of Natural Systems Design

As much of the work occurred in a steep ravine within an urban park, helicopters were used to place large wood into remote sections of the creek. It was a complex, multi-year effort designed with one reality in mind: floods will keep coming. With support from Floodplains by Design, Pierce County partnered with the Puyallup Tribe of Indians, NOAA, park agencies, and Natural Systems Design to rethink how the creek functions during high flows. Instead of relying on hard infrastructure like culverts or levees, the project focuses on nature-based restoration.

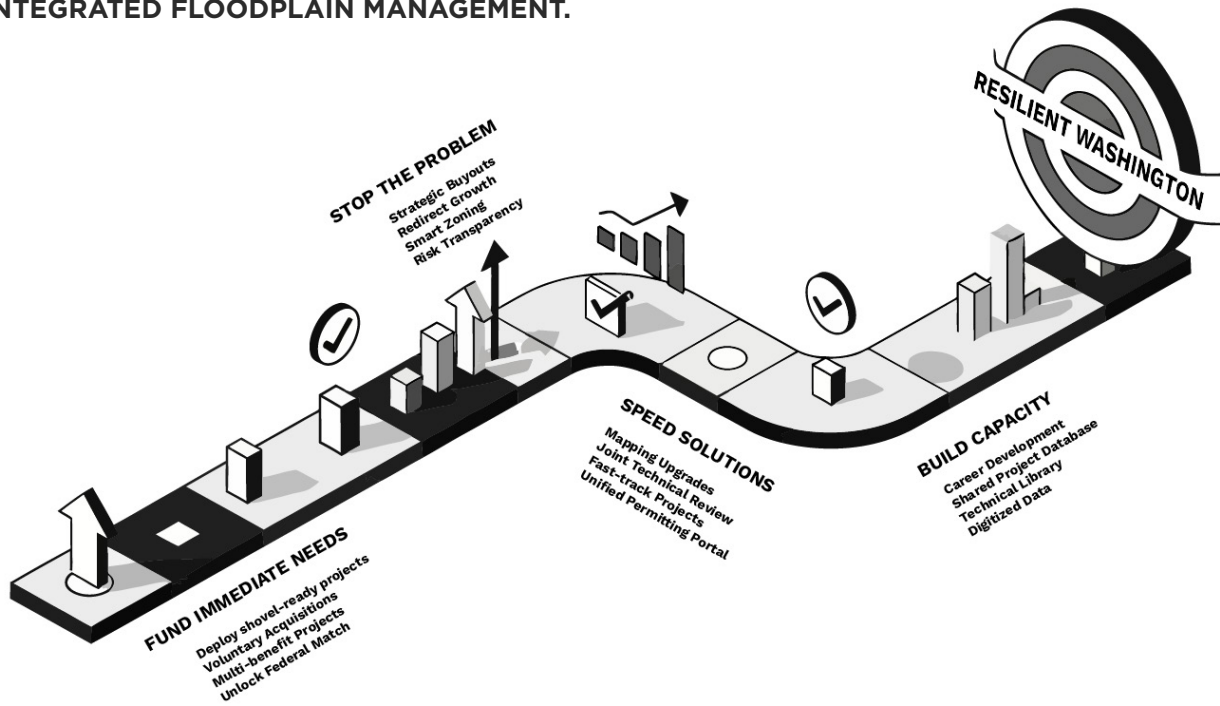
Over a two and a half mile reach, crews installed roughly 60 engineered log jams, using several design types tailored to different channel conditions that flex, shift, and interact with sediment. These structures act like large “catcher’s mitts,” slowing water during floods, capturing sediment, and helping the channel rebuild its natural grade over time. In steeper, erosion-prone reaches, logjams stabilize the channel. When looking downstream, they emphasize habitat benefits for salmon.

Construction of this project is divided into two implementation phases, with phase 1 of construction completed in sites 1, 3, 4, and 6. The project’s completion is slated for 2026-2027 after the second phase of construction is complete in sites 2 and 5.



Washington Acts for Integrated Flood Resilience

THIS IS MORE THAN A RECOVERY STRATEGY. IT IS A CALL TO MOVE WASHINGTON TOWARD LONG-TERM FLOOD RESILIENCE THROUGH INTEGRATED FLOODPLAIN MANAGEMENT.



Four connected strategies for integrated flood resilience:
1.) Fund Immediate Needs, 2.) Stop the Problem, 3.) Speed Solutions, 4.) Build Capacity.

The floods underscored what many communities already knew: piecemeal funding, snail-pace permitting systems, and continued development in high-risk areas leave people and infrastructure vulnerable. At the same time, our network is stronger and more prepared than ever.

Across the state, more than 60 community-supported flood recovery and resilience projects are ready to move. These projects reflect years of planning and design. They align with local flood hazard mitigation plans, flood resilience strategies, and species recovery goals. Many are prepared to begin scoping or contracting within the year.

The opportunity before us is to act at scale, addressing immediate recovery needs while also fixing the systemic barriers that keep us stuck in a cycle of damage and repair. This initiative centers on four connected strategies:

1. Fund Immediate Needs

- a. Communities have identified a strong pipeline of projects across King, Whatcom, Pierce, Snohomish, Yakima, Skagit, Clark, Clallam, and other regions.

2. Stop the Problem at Its Source

- a. Resilience is not only about responding to disasters. It is about preventing future losses.

3. Speed Solutions by Transforming Permitting

- a. Even well-designed, fully funded projects can stall in complex permitting systems.

4. Build Capacity Through Knowledge Infrastructure

- a. Flood resilience depends on people, data, and shared expertise.

1. Fund Immediate Needs

Communities have identified a strong pipeline of projects across King, Whatcom, Pierce, Snohomish, Yakima, Skagit, Clark, Clallam, and other regions. These include:

- Levee setbacks and improvements
- Floodplain reconnection and flood storage
- Habitat restoration with flood risk reduction benefits
- Voluntary buyouts and acquisitions to move people and infrastructure out of harm's way
- Critical infrastructure relocations

Many of these projects deliver multiple public-investment benefits: reducing flood risk, supporting salmon recovery, strengthening agriculture, and improving long-term community viability.

2. Stop the Problem at Its Source

Resilience is not only about responding to disasters. It is about preventing future losses. This strategy focuses on:

- Establishing a strategic, voluntary property acquisition approach to move people and infrastructure out of high-risk floodplains
- Redirecting growth to safer areas through smart zoning, incentives, and infrastructure alignment
- Expanding relocation support for manufactured and mobile homes
- Increasing transparency around flood risk for buyers, renters, and property owners
- Advancing tools like Transfer of Development Rights (TDR) and updated Channel Migration Zone (CMZ) mapping
- Exploring a state-led home elevation program

3. Speed Solutions by Transforming Permitting

Even well-designed, fully funded projects can stall in complex permitting systems. Delays increase costs, reduce project benefits, and erode public confidence. The initiative proposes practical steps to streamline delivery, including:

- Increasing state capacity to partner with FEMA on map revisions
- Investing in updated and expedited floodplain mapping
- Eliminating duplicative reviews through joint technical teams
- Expanding fast-track pathways for public-benefit flood resilience projects
- Aligning state and federal forms and processes
- Strengthening tribal co-management partnerships
- Creating a unified online portal for single-submission permit tracking and public transparency

4. Build Capacity Through Knowledge Infrastructure

Flood resilience depends on people, data, and shared expertise. Across the state, floodplain managers face high turnover and uneven capacity. The initiative calls for:

- Career development and mentoring support for floodplain professionals
- A shared project database to support peer learning
- A Pacific Northwest-specific technical library for design standards and modeling
- A stronger community of practice across jurisdictions and sectors
- Modernized, digitized data systems to inform planning and risk management
- Innovative project delivery tools that reduce administrative burden and improve outcomes

NOTE ON INTEGRATED FLOODPLAIN MANAGEMENT:

Integrated Floodplain Management (IFM) represents hundreds of professionals from Tribes, local governments, nonprofits, and the private sector. Unlike a decade ago, many watersheds now have system-scale, broadly supported visions for how to reduce risk while supporting habitat, agriculture, and local economies.

We are not starting from zero. IFM has plans. There are hundreds of projects and partnerships. Needed now is alignment and momentum.

As Floodplains by Design shares this vision across the integrated floodplain management network, our aim is to socialize a clear, coordinated path forward. One that addresses immediate resilience needs while reshaping how Washington manages flood risk.

UPCOMING EVENTS

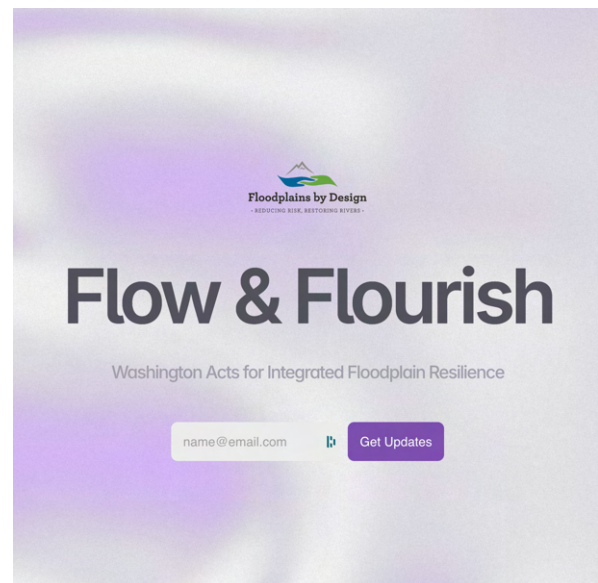
FUNDING & POLICY ACTION GROUP SPRING MEETING



MARCH 26, 2026
1 - 3:00PM PST

The Funding & Policy Action Group (FPAG) serves as the go-to convener for floodplain funding and policy efforts across the state and to leverage current momentum for integrated floodplain management into innovative approaches that can better position partners for funding, address barriers to implementation, and improve coordination across all levels of government.

FLOW & FLOURISH WASHINGTON ACTS FOR INTEGRATED FLOODPLAIN RESILIENCE



NOVEMBER 5-6, 2026
OLYMPIA, WASHINGTON

Connect and contribute at Flow & Flourish, a two-day, in-person convening where ambitious community and business leaders, tribal and local governments, agencies and policy makers work together to move beyond short-term fixes and toward long-term resilience.

STAY CONNECTED

@FLOODPLAINSBYDESIGN



NOTES FROM LICHEN

MUTUALISM AS A GUIDE



At Lichen, we have been working with our clients and partners to restore watersheds and build resilience for the future. The lichen is our guide because it is a real-life example of symbiosis. And we believe it represents a future where the relationships between communities and natural systems are also mutually supportive.

We are a small team of professionals trained in watershed science and engineering. Our core service is to provide technical solutions for planning and implementation of watershed resilience actions. But we also bring multi-disciplinary and system approaches to our work. And, as a result, we've been fortunate to push the boundaries in collaboration with our inspiring clients and partners.

How can we create a boldly positive future for our watersheds? We have been intrigued by the framework of "Abundance," which emerged in 2025 with a book by Derek Thompson and Ezra Klein. They put forth a way of imagining, and then building, a future we want as a society. They emphasize the designing of systems to advance big priorities, while removing bottlenecks to progress. In our work and projects, we have noted several trends that suggest watershed restoration and management could be on track for a similar approach.

Here are some themes that excite us:

- **Adaptive management as a system of learning:** We've helped design and implement adaptive management frameworks at scales ranging from individual restoration projects to watershed-scale plans to governance structures that coordinate investment across multiple organizations. What excites us is the growing appetite to systematize how we learn from our work, so that restoration can better match the pace and scale that our watersheds need.
- **Floodplains as a shared space:** Rivers need room to function; people need room to live, farm, and recreate. These needs aren't always in conflict, but reconciling them requires clear information about what's possible. We've been developing mapping tools to characterize floodplain connectivity and new methods for quantifying the room rivers need—helping communities find integrated strategies that work for ecosystems and people alike.
- **Headwaters as investments:** The Pacific Northwest has countless miles of headwater streams that regulate flow, water quality, and ecosystem function for downstream areas. Restoration here has high potential and open questions. Where are the most critical places to work? What scale of action actually moves the needle? We're working to address these questions by quantifying streamflow benefits, addressing sediment storage, and advancing strategies to buffer climate impacts. These actions benefit downstream communities. Realizing the full potential will require streamlined processes and work at scale.

We're optimistic about what's ahead—and energized by the partners and communities making this work possible.

Lichen Land and Water Inc. is a small consulting business based out of Portland, Oregon. We started in 2024 and currently have a team of four who work throughout the Pacific Northwest. We love the work we do, the folks we work with, and problems we get to solve. If you are interested in working together, please reach out to Nick Legg at Nick@LichenLandWater.com.



Opportunities & Resources



SAVE FAMILY FARMING: FARMING ON THE BRINK (DOCUMENTARY)

This new documentary pulls back the curtain on the rising labor costs that are pushing Washington farms to the edge and squeezing the very farmworker families these policies claim to protect.



WHATCOM FAMILY FARMERS: FRED TALKS: \$390 MILLION IN LOSSES

Washington farming just hit a devastating milestone: 50th in the nation for profitability in 2024, with nearly \$390 million in losses.



ASFPM ANNOUNCEMENT: INTRODUCING THE FLOODZONE

Association of State Floodplain Managers have launched The FloodZone, a new professional social community dedicated to floodplain management professionals.



WORK SESSION: HOUSE AGRICULTURE & NATURAL RESOURCES

December 2025 Flooding - Impacts to Agriculture. Featuring Robert Ezelle (Director, WA EMD), Lucia Schmit (Director, Snohomish County Dept. of Emergency Management), Kelly McClain (Assistant Director, Agricultural Environmental Services Division, Dept. of Agriculture), and Jay Gordon (Policy Director, Washington State Dairy Federation).



INSURANCE INFORMATION

- [Flood insurance](#)
- [Filing a FEMA assistance claim](#)
- [Insurance tips as flood recovery begins](#)
- [Kuderer issues emergency order to provide relief to consumers impacted by recent flooding](#)



PIERCE COUNTY WHITEPAPER : DREDGING IN THE PUYALLUP WATERSHED

The December 2025 flood led to the reemergence of an old question: Why does Pierce County not dredge the Puyallup, White and Carbon Rivers to reduce flood risk?



SUBSTANTIAL DAMAGE, GUIDANCE, FORMS, TOOLS

- [State of Washington Substantial Damage Guide](#)
- Chehalis Basin [Substantial Damage Response Plan](#) (relevant to the entire state)
- [FEMA Substantial Improvement/Substantial Damage Desk Reference](#)
- [FEMA Substantial Damage Quick Guide](#)
- [FEMA 213 Answers to Questions About Substantially Improved/Substantially Damaged Buildings](#)
- [FEMA's Substantial Damage Estimator Tool](#)
- [Sample documents from FEMA's Desk Reference: letters to property owners, SI/SD determination letters, guidelines for SD inspectors, guidance for contractor/community estimate of repairs](#)
- [NC's Guidance for Estimating Percent Damage for Residential Structures](#)
- [NC's Guidance for Estimating Percent Damage for Non-Residential Structures](#)



TRAININGS

- [After the Flood: An Emergency Manager's Quick Guide to Floodplain Management \(ASFPM/NEMA\)](#)
- [Applying for Building Code Administration and Enforcement Reimbursement through FEMA's Public Assistance Program](#)



MUTUAL AID

- [FEMA Mutual Aid for Building Departments: Region 10](#)
- [Association of State Floodplain Managers Mutual Aid for Floodplain Managers \(free, on-demand training\)](#)



NORTHWEST INDIAN FISHERIES COMMISSION: STATE OF OUR WATERSHEDS

The State of Our Watersheds Report documents changing environmental conditions to hold us accountable to take the urgent action needed to protect our region's salmon and their habitat.