

Pierce County
Flood Control Zone District
2016

PIERCE COUNTY
FLOOD CONTROL
ZONE DISTRICT

Who We Are and What We Do

The Pierce County Flood Control District is a special purpose district governed by a Board of Supervisors and an Executive Committee. The Board of Supervisors meets quarterly on the second Wednesday of January, April, July, and October and the Executive Committee meets the third Wednesday of each month. They authorize plans, budgets, project funding, and program and policy guidance. All meetings are held in the Pierce County Council Chambers at the Pierce County Courthouse and are open to the public. Agendas are posted at piercefloodcontrol.org.

Members of the Pierce County Council serve as the Supervisors for the Flood Control Zone District. In 2016, the members included:

Rick Talbert, Chair
Joyce McDonald, Vice Chair
Dan Roach, Third Member of Executive Committee
Connie Ladenburg
Jim McCune
Doug Richardson
Derek Young

The Pierce County Flood District Advisory Committee makes recommendations to the Board on capital projects. Their meeting dates are posted on the Flood Control Zone District website: piercefloodcontrol.org. Their meetings are also open to the public.

2016 Advisory Committee Members:

Ryan Mello—Chair
Councilmember, Tacoma

John Hopkins—Vice Chair
Councilmember, Puyallup

Gary Brackett
Business Representative

Mike Brandstetter—WRIA 12
Councilmember, Lakewood

Mike Dahlem
Public Works Director, Sumner

Russ Ladley
Natural Resources Director
Puyallup Tribe of Indians

Jeff Langhelm—WRIA 15
Public Works Director, Gig Harbor

Winston Marsh
Mayor, Fife

Pat McCarthy
Pierce County Executive

Dave Morell
Unincorporated Pierce County
President, National Grouting Systems

Clare Petrich
Commissioner, Port of Tacoma

Steve Pruitt—WRIA 11

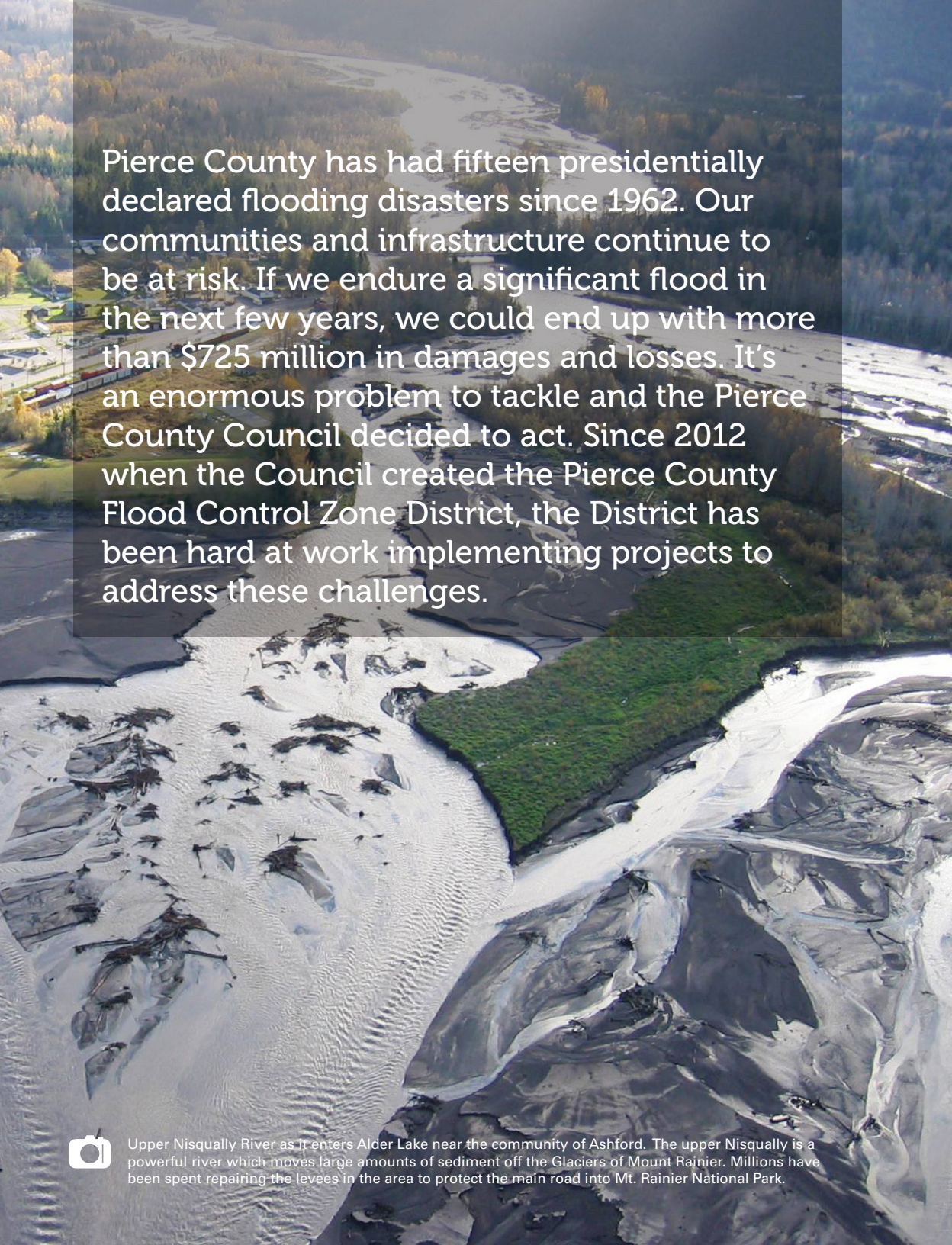
James Rackley—WRIA 10
Councilmember
Bonney Lake

Charles West
Unincorporated Pierce County
Battalion Chief,
Key Peninsula Fire Dept

Ken Wolf
Public Works Director, Orting



Pierce County has had fifteen presidentially declared flooding disasters since 1962. Our communities and infrastructure continue to be at risk. If we endure a significant flood in the next few years, we could end up with more than $725 million in damages and losses. It's an enormous problem to tackle and the Pierce County Council decided to act. Since 2012 when the Council created the Pierce County Flood Control Zone District, the District has been hard at work implementing projects to address these challenges.

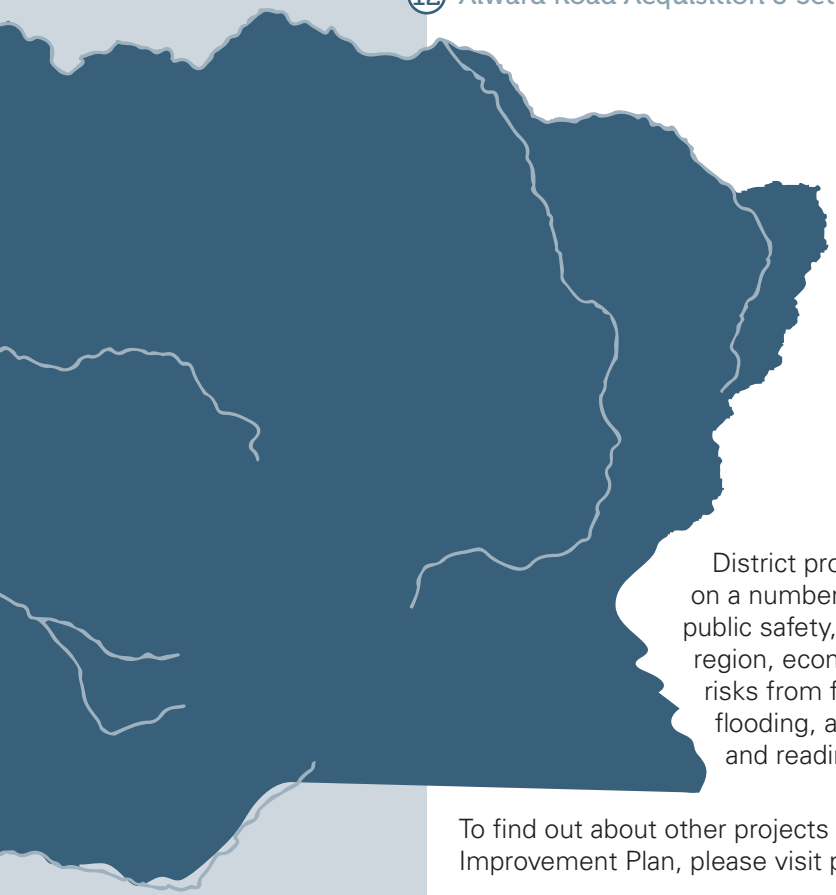


Upper Nisqually River as it enters Alder Lake near the community of Ashford. The upper Nisqually is a powerful river which moves large amounts of sediment off the Glaciers of Mount Rainier. Millions have been spent repairing the levees in the area to protect the main road into Mt. Rainier National Park.

FCZD Funded Projects



1. Puyallup Wastewater Treatment Plant Flood Protection
2. Clear Creek Acquisition & Levee
3. Neadham Road Acquisition & Revetment
4. Orville Road Revetment (Phase 2)
5. Carbon River Bank Stabilization
6. Calistoga Setback Levee
7. North Levee Road Setback Levee
8. Orville Road Revetment (Kapowsin Creek)
9. Sediment Management as a Risk Reduction Tool
10. Tacoma Wastewater Treatment Plant Flood Wall
11. Upper Nisqually Revetment Retrofit
12. Alward Road Acquisition & Setback Levee



District projects are selected based on a number of criteria including public safety, the level of benefit to the region, economic and environmental risks from flooding, frequency of flooding, ability to leverage funds, and readiness to construct.

To find out about other projects in the District's Capital Improvement Plan, please visit piercefloodcontrol.org.

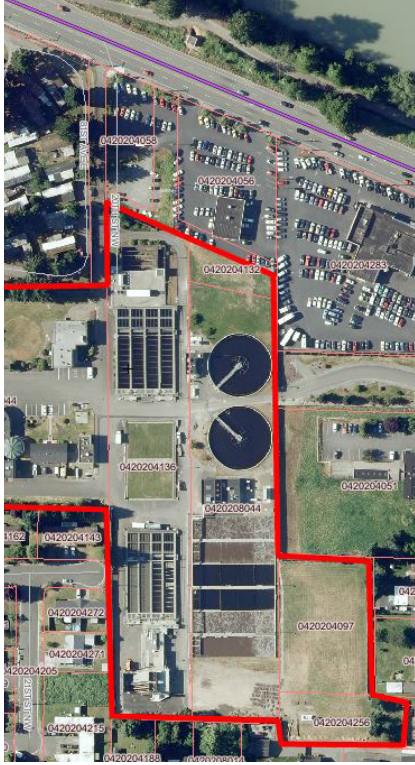
Project Progress Report

1 Puyallup Wastewater Treatment Plant Flood Protection

Location: Puyallup River, Council District 2

Schedule: Construction in 2017

The Puyallup Wastewater treatment plant is vulnerable to potential flooding from the Puyallup River if the existing levee were to be breached or overtopped. The project will improve facilities and equipment to allow for plant operation during a flood and prevent flood damage. The overall project will include a new access road, relocating and raising equipment, floodwalls and floodproofing.



2 Clear Creek Acquisition & Levee

Location: Puyallup River, Council District 5

Schedule: Currently purchasing properties from willing sellers; long-term project dependent upon receiving funding from grant sources.

Properties within the Clear Creek area have experienced repeated flooding. The value of properties impacted by flooding in this area is estimated to be in excess of $42 million. The project will acquire property and remove structures, construct a new levee along Clear Creek and remove flood gates on the Puyallup River. The project goals are to reduce flood risk; move people out of harm's way; preserve and promote agriculture; and restore tidally influenced habitat.



3 Neadham Road Acquisition & Revetment

Location: Puyallup River, Council District 1

Schedule: Final acquisition of properties in 2016-2017; construction in 2020 or sooner if funds become available.

The Upper Puyallup is highly active. The river has been actively migrating in the area and has repeatedly damaged existing levees. Pierce County has been working to purchase remaining properties in the area, remove Neadham Road and the residential structures and let the river occupy the area. Installation of engineered log jams and a revetment along Brooks Road will allow for continued access to upland properties.



4 Orville Road Revetment Phase 2

Location: Puyallup River, Council District 1

Schedule: Construction of the revetment and engineered log jams outside the ordinary high water mark will begin in 2017.

In the past three years the Upper Puyallup has been actively migrating towards Orville Road, one of the main life safety routes out of the Orting Valley. While the long term solution is to relocate Orville Road out of the floodplain and channel migration zone, the short term solution is construction of a revetment and engineered log jams. Phase I of the project was completed. Phase 2 continues the work and acquires two remaining properties.

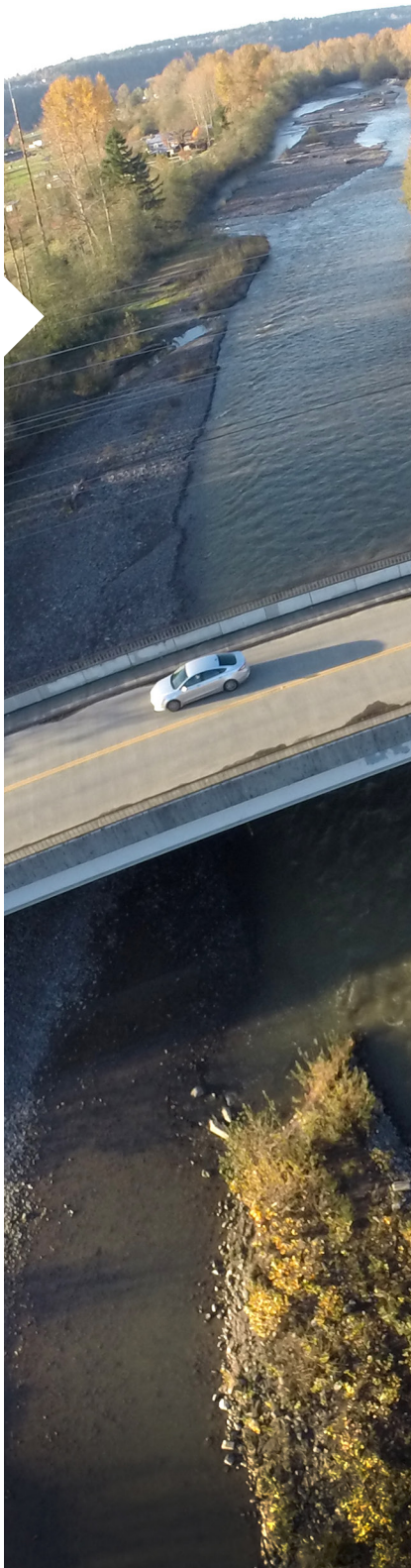


Completed Projects

Two major projects funded in part by the District are completed—the Calistoga Setback Levee and the Tacoma Wastewater Treatment Plant Floodwall.

The **Calistoga Setback Levee** is a 1.5 mile setback levee on the Puyallup River in the City of Orting. The City of Orting also partnered with The Nature Conservancy, WA State Department of Ecology, and Salmon Recovery Funding Board to reduce the financial burden on the district. The total project cost was $19 million. The completed levee successfully protected the City of Orting in a series of winter storms in 2015/2016. This led floodplain managers to reduce the flood warning level in the area for minor flooding, from 10,000 cubic feet per second (cfs) to 4,500 cfs, a warning level similar to what it was 25 years ago. The Calistoga Levee project received the 2016 Engineering Excellence Award from the American Council of Engineering Companies and the City of Orting received the Municipal Excellence Award from the Association of Washington Cities for this project.

The City of Tacoma's **Central Wastewater Treatment (CTP) Plant Floodwall** project is located on the west bank of the Puyallup River in the Tacoma tideflats floodplain. The CTP is protected by a series of levees but due to risk of overtopping of the levee system, the CTP required sandbagging to keep the plant in operation during severe wet weather conditions. To mitigate this risk, the City of Tacoma designed a floodwall with automatic gates at vehicle entrances and an emergency pump station inside the CTP. The Flood District helped to fund the new floodwall which is 2,500 feet in length. The project earned the American Public Works Association 2016 Public Works Project of the Year Award.





Opportunity Fund

Cities, towns and unincorporated Pierce County are eligible to apply for "opportunity fund" dollars from the District to use toward flood control and storm water related projects. Cities, towns and unincorporated Pierce County receive ten percent of the funds property owners in their jurisdiction contribute to the flood district levy for these projects

Most jurisdictions are "banking" their annual share to fund larger projects. To date, the cities of Puyallup and Milton have used their funds for a Low Impact Development (LID) project on the South Hill area and to purchase floodplain property near Hylebos Creek. Unincorporated Pierce County has also used funds for a culvert replacement project to reduce flooding on Golden Givens Road and to purchase property for a stormwater pond on Woodland Creek.

According to state law, cities can use opportunity funds for flood control, storm water control and cooperative watershed management projects, and for studies and monitoring programs that support these projects.

Potential eligible projects include:

- Developing green infrastructure such as rain gardens and stream flow controls
- Building compensatory storage for flood relief
- Maintenance and operations projects
- Acquisition of vactor equipment

To receive opportunity funds, cities must enter into an Interlocal Agreement (ILA) with the District and submit a Notice of Intent for how the funds will be used. To find out more about how your jurisdiction can apply for the funds and how much is available for your city, please visit piercefloodcontrol.org and look for "District Funding."



Roadways constructed of pervious concrete allow water to be treated in place, improve the envrionment and reduce localized flooding.



City of Puyallup
39th Ave SW 11th Street SW to 17th Street SW

Total Estimated Project Cost: $3.3 million
Total Opportunity Fund Contribution in 2015: $127,000

The city applied for Opportunity Fund monies in late 2015. The project falls within the Clarks Creek Basin. The project retrofits the roadway and sidewalk with pervious concrete, creating 100% on-site storm water management for this section of roadway. The work includes installation of pervious concrete sidewalks and roadways, new lights and signals and improves other necessary infrastructure in the area. While experiencing some unexpected challenges, it is on track for completion in early 2017.

Maintenance & Operations

Pierce County operates and maintains over 69 miles of levees and revetments along four major rivers: Puyallup, White, Carbon and Nisqually. Maintaining a consistent level of flood protection requires an annual program of repairs, rehabilitation, vegetation control and access maintenance. Providing consistent and reliable maintenance is vital to an effective system of flood risk reduction facilities and remaining eligible for federal assistance.

In 2016, over $1.2 million was provided to Pierce County to repair and improve levees and revetments along rivers. The balance of maintenance and operation expenditures is funded by stormwater fees paid by property owners in unincorporated Pierce County.

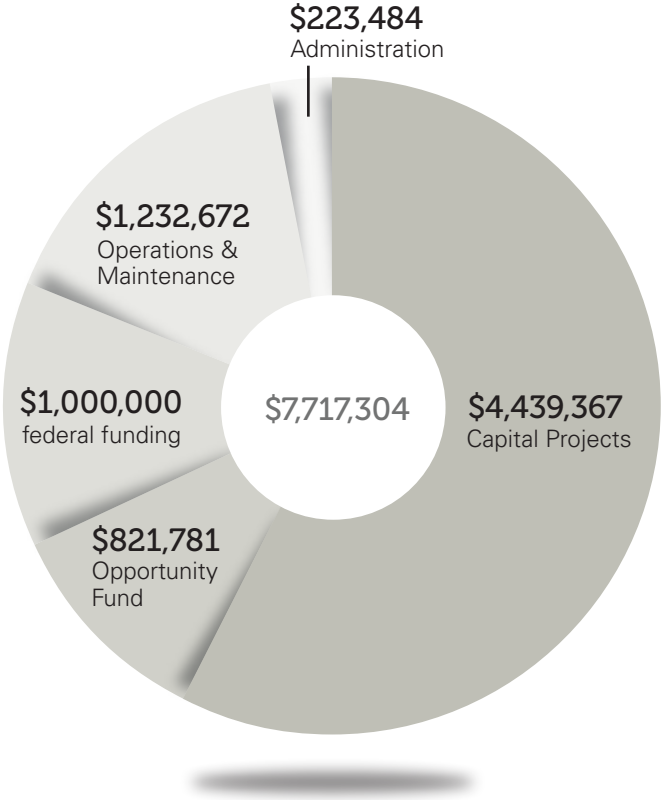
The annual cost of maintaining these flood risk reduction facilities is based on preventative maintenance and in response to damage from weather events. The annual costs can be as low as $3.2 million or as high as $5.25 million, with an average expenditure being approximately $3 million. In 2016, the Pierce County river levee maintenance and operations budget was anticipated to be $4.6 million. The projected costs for 2016 is more than $3.2 million. In addition, Pierce County is working on a System Wide Improvement Framework Plan (SWIF). The plan will guide maintenance practices and action plans on specific Pierce County levees over the next 20 years. For more information on the SWIF, visit piercecountywa.org/swif.

General Investigative Study

The United States Army Corps of Engineers General Investigative Study is entering its sixth year. A draft EIS and Tentatively Selected Plan were released in early 2015. The Corps and its partners continue to work towards a Locally Preferred Plan. It is anticipated that the Chief's Report which is the next milestone will be released in 2017, clearing the way for the design and construction of projects. This phase will begin when funds are authorized by congress. It is anticipated that the first project could be constructed within ten years of authorization.



2016 Budget



Each year the Board of Supervisors approves a budget for the District. In 2016, the District approved a budget totalling $7,717,304.

The 2016 budget included $4,439,367 for capital projects countywide and $821,781 for the "Opportunity Fund" for cities, towns, and unincorporated Pierce County to use on local projects. The District also set aside $1 million for projects that will qualify for federal funding after the U.S. Army Corps of Engineers' General Investigation Study is complete.

$1,232,672 went to Operations and Maintenance of existing flood management infrastructure and $223,484 was budgeted for Administration costs for the District.

Know Your Home's Flood Risk

Pierce County provides free services related to flooding including flood maps, copies of existing elevation certificates, and ways to mitigate flood risk and lower premiums.

For a free floodplain map of your property, contact Pierce County Public Works at (253) 798–2725 or go to piercecountywa.org/floodmap.

Be Prepared for Flooding

Purchase flood insurance; it's available to everyone in Pierce County.

Do not walk or drive through flood waters.

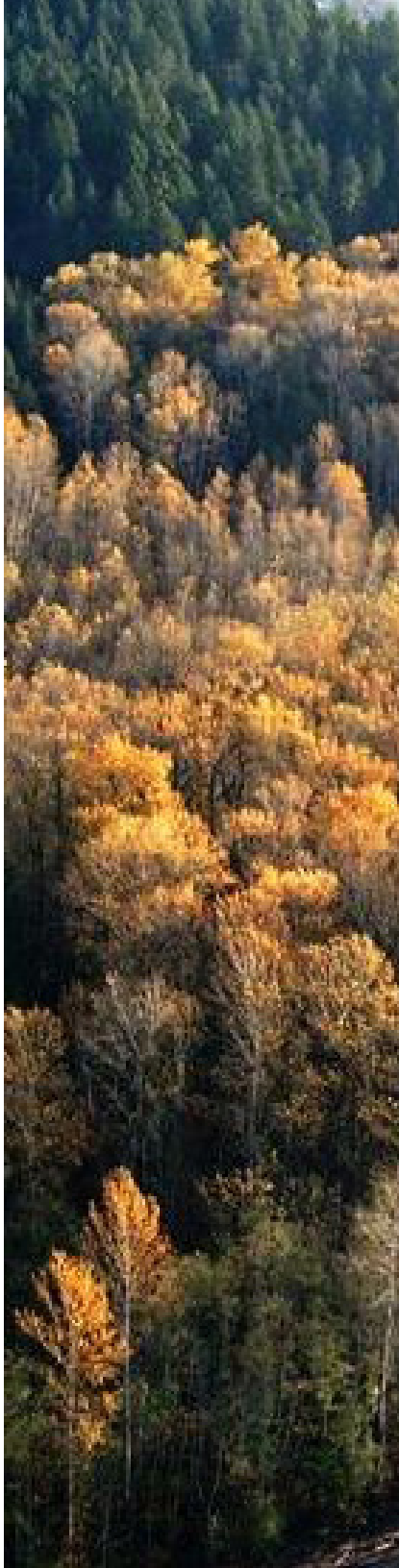
Monitor local media and your mobile devices for the latest weather updates and emergency instructions.

Make an emergency plan for flooding.

Sign up to receive emergency alerts via text, email or phone at piercecountywa.org/alert.

For more information: piercecountywa.org/flood

This page: Upper Puyallup River upstream of the City of Orting.
Cover: Upper Nisqually River at entrance to Mt. Rainier National Park.





Contact Info

Pierce County Flood Control District website:
piercefloodcontrol.org

Kjristine Lund, Executive Director, (206) 612-8138

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