

PIERCE COUNTY
FLOOD CONTROL
ZONE DISTRICT

Annual Report
2017

Who We Are and What We Do

The Pierce County Council established the Pierce County Flood Control Zone District (Flood District) in 2012. Members of the Pierce County Council serve as the Supervisors for the Flood District. They authorize plans, budgets, project funding, and provide program and policy guidance to address flood risks county-wide. An Advisory Committee representing cities, unincorporated areas, the Port, tribes, business and Water Resource Inventory Areas (WRIAs) makes recommendations to the Flood District Board on capital projects.

The Board of Supervisors meets on the second Wednesday of January, April, July, and October and the Executive Committee meets the third Wednesday of each month. The Advisory Committee meets on the first Friday of February, April, June, August, and November. Meeting dates are posted on the Flood Control Zone District website: piercefloodcontrol.org.

2017 Board of Supervisors
Rick Talbert—Chair, Executive Committee
Dan Roach—Vice Chair, Executive Committee
Derek Young—Executive Committee
Connie Ladenburg
Jim McCune
Doug Richardson
Pam Roach

2017 Advisory Committee Members
Ryan Mello—Chair Councilmember, City of Tacoma
John Hopkins—Vice Chair, Mayor, City of Puyallup
Gary Brackett—Business Representative
Mike Brandstetter—WRIA 12, Councilmember, City of Lakewood
Mike Dahlem—Public Works Director, City of Sumner
Bruce Dammeier—Pierce County Executive
Russ Ladley—Natural Resources Director, Puyallup Tribe of Indians
Jeff Langhem—WRIA 15, Public Works Director, City of Gig Harbor
Dave Morell—Unincorporated Pierce County
Clare Petrich—Commissioner, Port of Tacoma
Steve Pruitt—WRIA 11
James Rackley—WRIA 10, Councilmember, City of Bonney Lake
Kim Roscoe—Mayor, City of Fife
Charles West—Unincorporated Pierce County
Ken Wolfe—Building Official, City of Orting



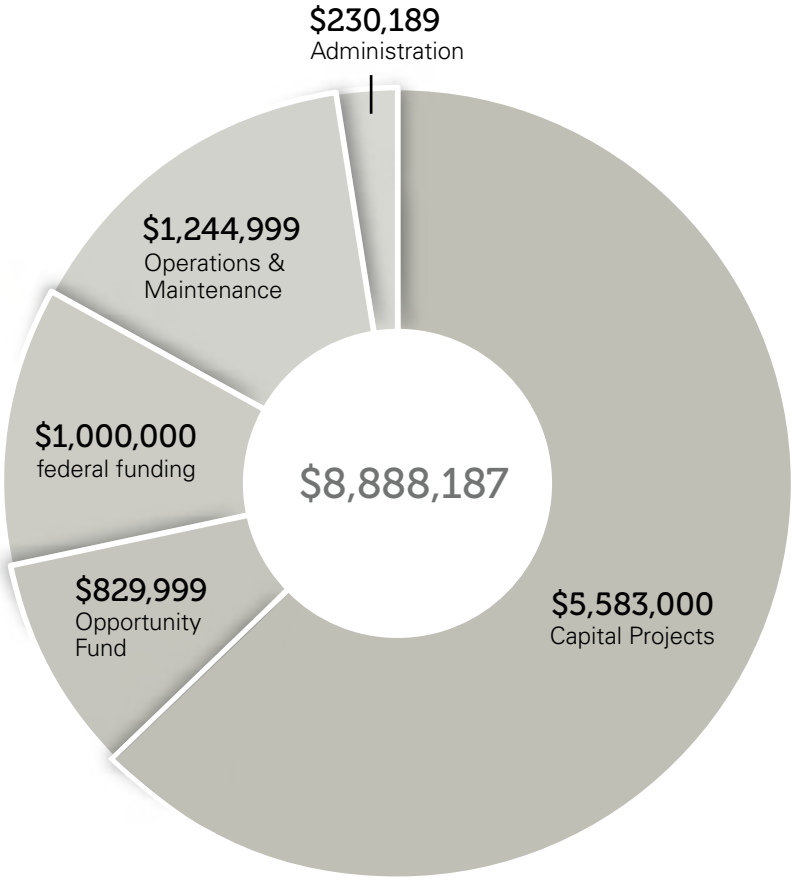
Cover—Orville Road Project construction. December, 2017
Right—Upper Nisqually Revetment Project site. December, 2017

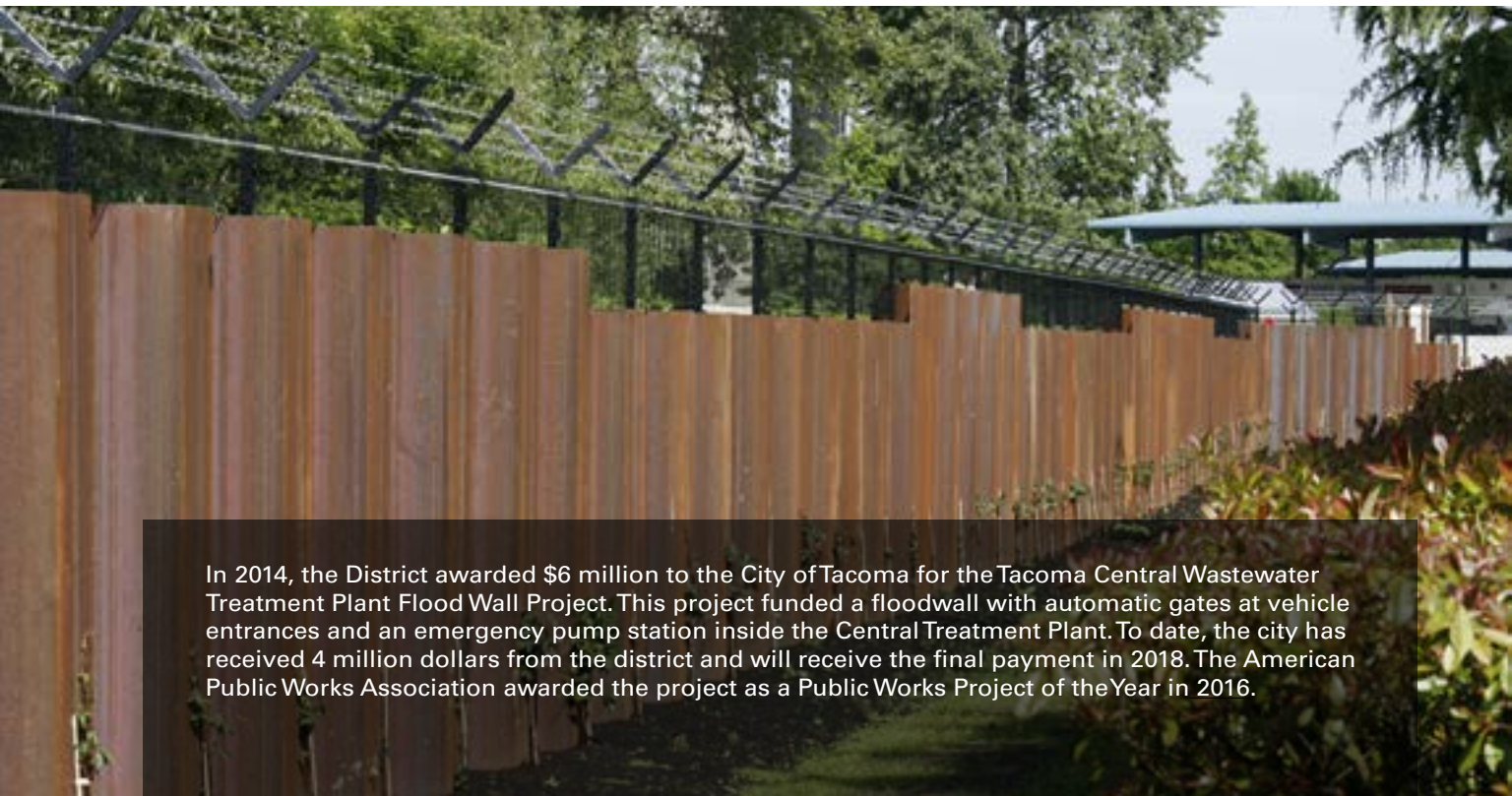


Pierce County has had fifteen presidentially declared flooding disasters since 1962. Our communities and infrastructure continue to be at risk. If we endure a significant flood in the next few years, we could end up with more than $725 million in damages and losses. Since 2012 when the Council created the Pierce County Flood Control Zone District, the District has provided an estimated $21 million in funding and leveraged an estimated $45 million to address these challenges.

2017 Budget

Each year the Board of Supervisors approves a budget for the District. In 2017, the District budgeted $8,888,187 for addressing flood risks. The District designated 15% of its budget, approximately $1.3 million for operations and maintenance of flood facilities, $5.6 million for capital projects countywide and $0.8 million 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 a U.S. Army Corps of Engineers' General Investigation Study of the Lower Puyallup River is complete. Less than 3% of the budget is for administration of the District.





In 2014, the District awarded $6 million to the City of Tacoma for the Tacoma Central Wastewater Treatment Plant Flood Wall Project. This project funded a floodwall with automatic gates at vehicle entrances and an emergency pump station inside the Central Treatment Plant. To date, the city has received 4 million dollars from the district and will receive the final payment in 2018. The American Public Works Association awarded the project as a Public Works Project of the Year in 2016.

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.

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 date, 20 cities have submitted an interlocal agreement with the district to use their share of these funds. To find out more about how your jurisdiction can apply for the funds and how much is available for your city, please visit pierce-floodcontrol.org and look for "District Funding."

Opportunity Fund Projects Expended To Date

- The City of Edgewood recently requested to use a portion of their Opportunity Funds for the Jovita Boulevard Box Culvert Maintenance Project. This project removed 20 cubic yards of sediment and outwash material that allows for minor culvert repairs. Completion of this project will assist with year-round positive drainage through an existing box culvert.





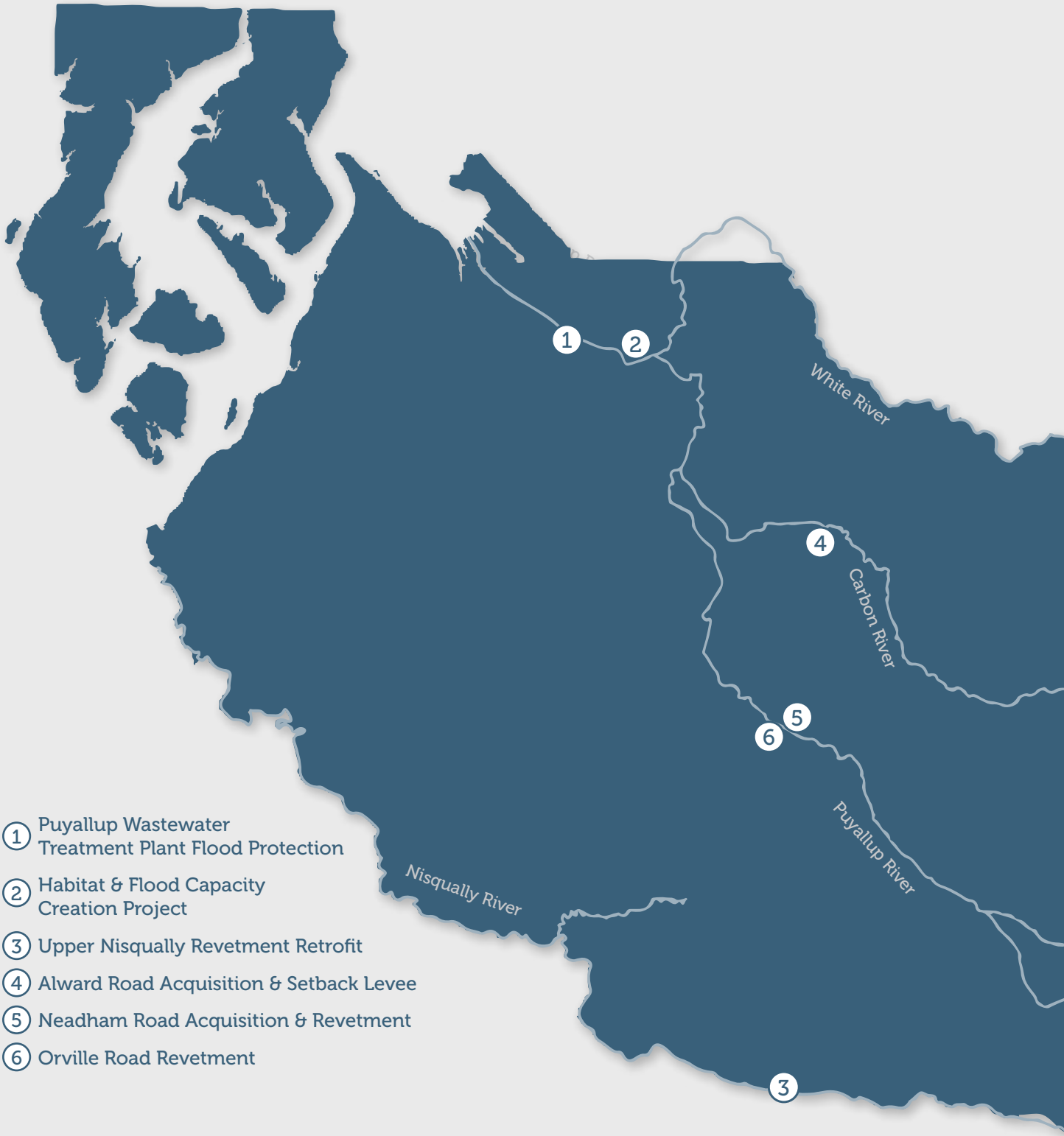
- In 2016, the City of Milton used a portion of their Opportunity Funds to assist with acquiring a flood prone property located at 603 5th Avenue within the city limits. Acquiring this property is a part of the City's vision and goals of connecting more areas along the Hylebos floodplain, protecting property, habitat and water quality conservation, and reducing flood risk.
- In 2015, the City of Puyallup used a portion of their Opportunity Funds to install pervious concrete sidewalks and roadways along 39th Avenue SW and 11th Street SW to 17th Street SW. The City also installed new lights and signals along this roadway and improved other necessary infrastructure in the area.

Pierce County Technical Assistance To The Cities

Pierce County Surface Water Management is offering technical assistance to interested jurisdictions to discuss project ideas, eligibility, and how to leverage other grant opportunities to maximize the Opportunity Funds available to your jurisdiction.

If you are interested in scheduling a meeting, please contact Brynne' Walker at 253-798-4671 or bwalke2@co.pierce.wa.us.

2017 FCZD Funded Projects



1. Puyallup Wastewater Treatment Plant Flood Protection
2. Habitat & Flood Capacity Creation Project
3. Upper Nisqually Revetment Retrofit
4. Alward Road Acquisition & Setback Levee
5. Neadham Road Acquisition & Revetment
6. Orville Road Revetment

Ford Levee—Upper Puyallup River. 2015

How Projects are Put Together

To be considered for inclusion in the District's capital budget, projects must be included within the District's *Comprehensive Plan of Development* (CPOD) and have received an initial project ranking number. When the CPOD was created in 2013, preliminary prioritization of capital projects was carried out by scoring the projects based on eight criteria as follows:

- Existing land use of affected area (consequences)
- Severity of potential flood or channel migration impact
- Spatial area of impact (consequences and severity)
- Frequency of flood or channel migration occurrence
- Project effectiveness
- Benefit-cost analysis of project
- Multiple project benefits
- Partnerships and opportunity

Each year the District Administrator prepares draft capital budget scenarios that follow the policy direction given by the District Board of Supervisors. The Administrator relies on CPOD project rankings and applies four additional criteria to recommend projects for the Capital Improvement Plan (CIP).

The criteria include:

- Ability to leverage other funds
- Readiness for construction
- Avoidance of ongoing maintenance costs or repairs
- Stakeholder support



Project Progress Report

1 Puyallup Wastewater Treatment Plant



Location: Puyallup River, Council District 2

The City of Puyallup's Water Pollution Control Plant (WPCP) is designed to protect the processes that take place at each individual building at the treatment plant from flood risks. This protection includes the conduit (process piping, electrical, controls, etc.) that service each building. Construction began the second week of October 2017 and is anticipated to be completed in October 2018. This project is expected to protect the WPCP's critical infrastructure and processes in a 100-year flood event.

2 Habitat & Flood Capacity Creation Project



Location: Puyallup River, Council District 5

The Habitat and Flood Capacity Creation Project (HFCCP) is a river restoration effort designed to result in significant aquatic habitat enhancement, with the added benefit of reduced risk from moderate-sized flooding events (up to the 25-year flood in this reach). The selected project site is along the Puyallup River, downstream and upstream of the confluence with the White River, at two sand and gravel bars: the "Confluence Bar", at approximate RM 10.1; and the "Upstream Bar", at approximate RM 10.5). This project was formally called the Sediment Management as a Risk Reduction Tool Project.

3 Upper Nisqually Revetment Retrofit



Location: Nisqually River, Council District 1

The purpose of this project is to provide roughness elements to the existing levee face that will reduce and divert erosive flows away from the levee structure. The levee protects SR-706 and the historic main entrance to Mount Rainier National Park, as well as the Nisqually Park subdivision. This project is currently in the final design and permitting stage. Construction is expected to take place in the Summer of 2019. When this project is completed, the project will reduce reoccurring damages to the levee, decrease the probability of serious damages to the levee, and lessen the impacts to river habitat due to reoccurring maintenance.

Property Acquisitions

Since 2013, the Flood Control Zone District has been the primary match source for 23 properties that Pierce County Surface Water Management has acquired for flood risk management projects. In 2017, the district contributed $1.9 million to assist with purchasing properties that are a part of the following capital improvement projects.



4 Alward Road Acquisition & Setback Levee

The Alward Road Acquisition and Setback Levee project is part of a larger effort to reduce flood risk and improve floodplain habitat on the Carbon River. This project involves acquiring all properties along the north side of Alward Road between River Mile (RM) 6.4 and RM 8.4. To date, 53 of the 81 properties have been purchased between the river and 177th Street East, also known as Alward Road. Once all the properties have been purchased the County will remove all structures in the floodplain in order to construct a setback levee, essentially removing the existing levee that constrains the main stem river. Once this has been accomplished, the river will then be allowed to naturally function within the additional 150-acres of floodplain which will provide essential and critical habitat for Chinook, Steelhead, and other salmonids.

5 Needham Road Acquisition & Revetment

This project will provide improvement of channel migration protection in the Neadham Road area along the upper Puyallup River near RM 26.5. Pierce County continues to acquire properties located at RM 5.5 south of Orting. When the acquisition phase is complete the existing levee will be removed along with Neadham Road and all utilities. This will allow the river to access its full historical right bank floodplain for the first time in a century. This project will provide 1.3 miles of uninterrupted floodplain and riparian habitat along the right bank of the Puyallup River. The expanded floodplain will also reduce downstream flood risks.

6 Orville Road Revetment

This project is proposing to dismantle 1,500 feet of existing levee and install a series of Engineered Logjams (ELJs) in the Upper Puyallup River Watershed. The existing levee hinders habitat forming processes, and exacerbates local flooding by restricting flow from returning to the main channel. The proposed ELJs are designed to split and defect flow to protect Orville Road East in a way that significantly reduces flood risk while simultaneously enhancing juvenile salmon habitat. This will also eliminate the need for the continued re-establishment of aging levees that no longer sufficiently protect Orville Road East. This project will result in 200 acres of reconnected historic floodplain and the restoration of approximately 1.5 miles of shoreline.

US Army Corps of Engineers General Investigation for the Puyallup River

Pierce County and the Flood District have been collaborating on the Lower Puyallup River General Investigation (GI). The GI is studying the flood facility investments needed to protect the Puyallup basin, including the economic assets of the Port of Tacoma. The study area includes 28 levee segments currently in the US Army Corps of Engineers National Levee Database (NLD). This includes 26 non-federal levees and two federally owned and operated levees.

The current cost estimate for proposed improvements exceeds $340 million. The potential federal funding share of construction is 65%. Work on the GI study began in 2010 and the USACE Chief's report is expected in 2018. Congressional action is needed to authorize additional funding for design and construction once the Chief's report is completed.

The Corps is the lead federal agency for this study. The non-federal, cost-sharing sponsor (sponsor) is Pierce County. As the non-federal sponsor, the County contributes 50 percent of the total feasibility study costs in the form of cash or in-kind contributions. The Corps and County executed a Feasibility Cost Sharing Agreement (FCSA) in September 2010 for a single-purpose, flood risk management feasibility study.

Several local stakeholders have executed an Inter-Local Agreement with Pierce County to financially support the County's non-federal sponsor cost share including: City of Tacoma, City of Sumner, City of Puyallup, City of Orting, City of Pacific, City of Fife, and the Puyallup Tribe of Indians. Additionally, other stakeholders are participating in the GI including federal, state and local agencies such as Washington Department of Transportation (WSDOT), Port of Tacoma, City of Auburn, other Federally recognized tribes, and the general public.

The Corps is currently scoping options to finalize the study, which has gone beyond the originally anticipated six year planning period. Stakeholder cost-sharing agreements for the local share have expired, so the source of the additional local match is currently uncertain.

The Flood District has been allocating $1 million per year from 2014–2017 to serve as a future local match for design and construction of flood facilities identified in the GI and prioritized by the District in its Comprehensive Plan of Development.

Maintenance & Operations

Pierce County operates and maintains over 69 miles of levees and revetments along four major rivers: Puyallup, White, Carbon, and Nisqually. The Pierce County Flood Control Zone District invests 15 percent of its annual budget in the operation and maintenance of Pierce County's flood risk reduction facilities. The District provided almost $1.3 million to Pierce County in 2017 to repair and improve river levees and revetments. Pierce County leveraged the District's contribution and completed 12 maintenance projects in 2017 at a total cost of $2.6 resulting in 3,100 lineal feet of repaired levees and revetments.

Crews install an engineered log jam along the Puyallup River in December 2017. The project protects Orville Road from severe erosion created by the river. Concrete dolos were placed on top of engineered logs to keep the logs in place.


PSM

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 insurance premiums.

For a free floodplain map of your property, contact Pierce County Planning & 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 floodwaters

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

Make an emergency plan for flooding at **co.pierce.wa.us/buildakit**

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

For more information: **piercecountywa.org/flood**

Contact Info

Pierce County Flood Control District website: **piercefloodcontrol.org**

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

PIERCE COUNTY
FLOOD CONTROL ZONE DISTRICT