

2013 Puget Sound
Coordinated Investment Projects

2014 Statewide Floodplain Management and Control
Grant Awards



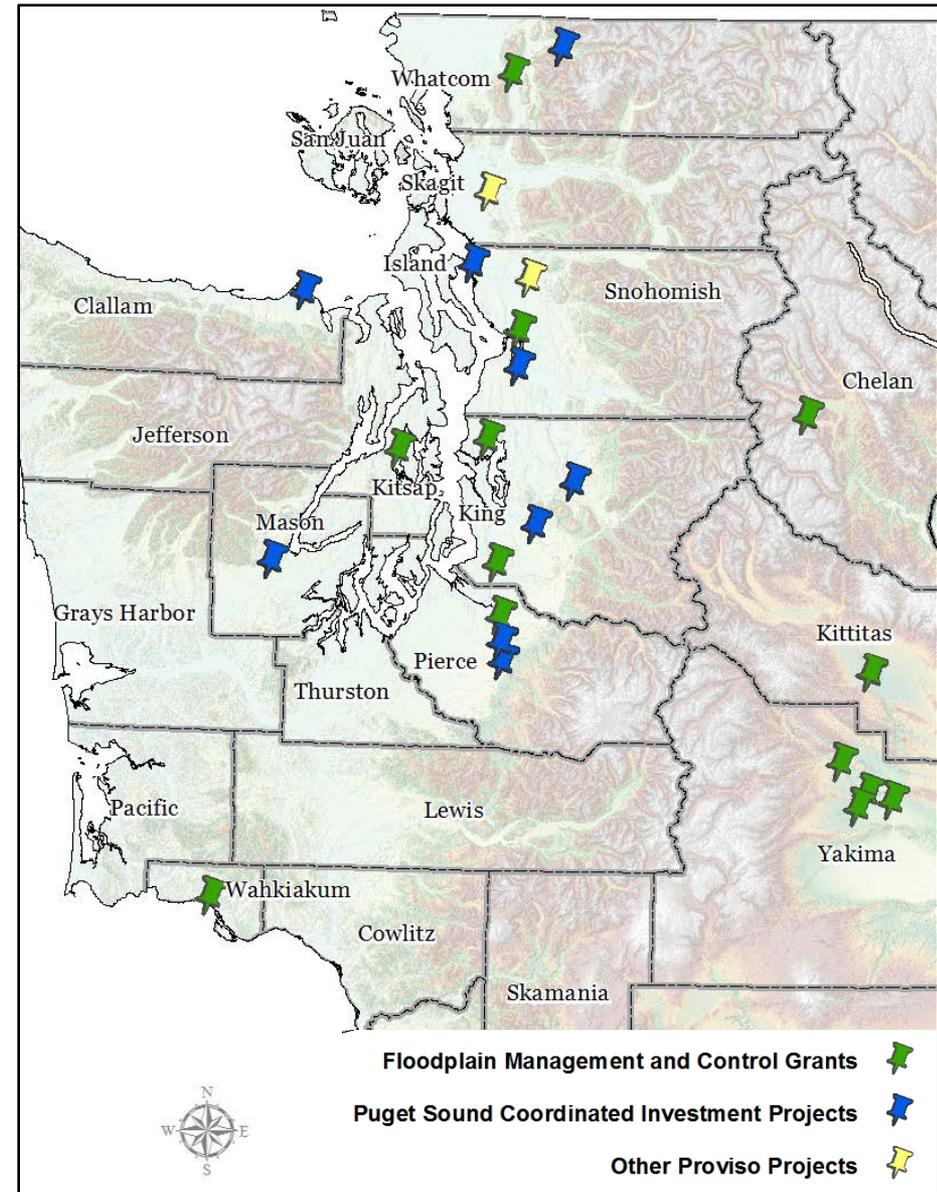
DEPARTMENT OF
ECOLOGY
State of Washington

OVERVIEW

The 2013 Washington state legislature provided Ecology with \$50 million in grant funds for floodplain management projects. Ecology awarded \$11.25 million in grant funds towards thirteen flood hazard reduction projects through a competitive process that will also improve natural resource management, such as habitat restoration and water quality protection. \$33 million of that fund was provided directly to nine specified multi-benefit floodplain projects in the Puget Sound basin that were early examples of the Floodplains by Design concept. An additional \$5.75 million was awarded to two separate projects.

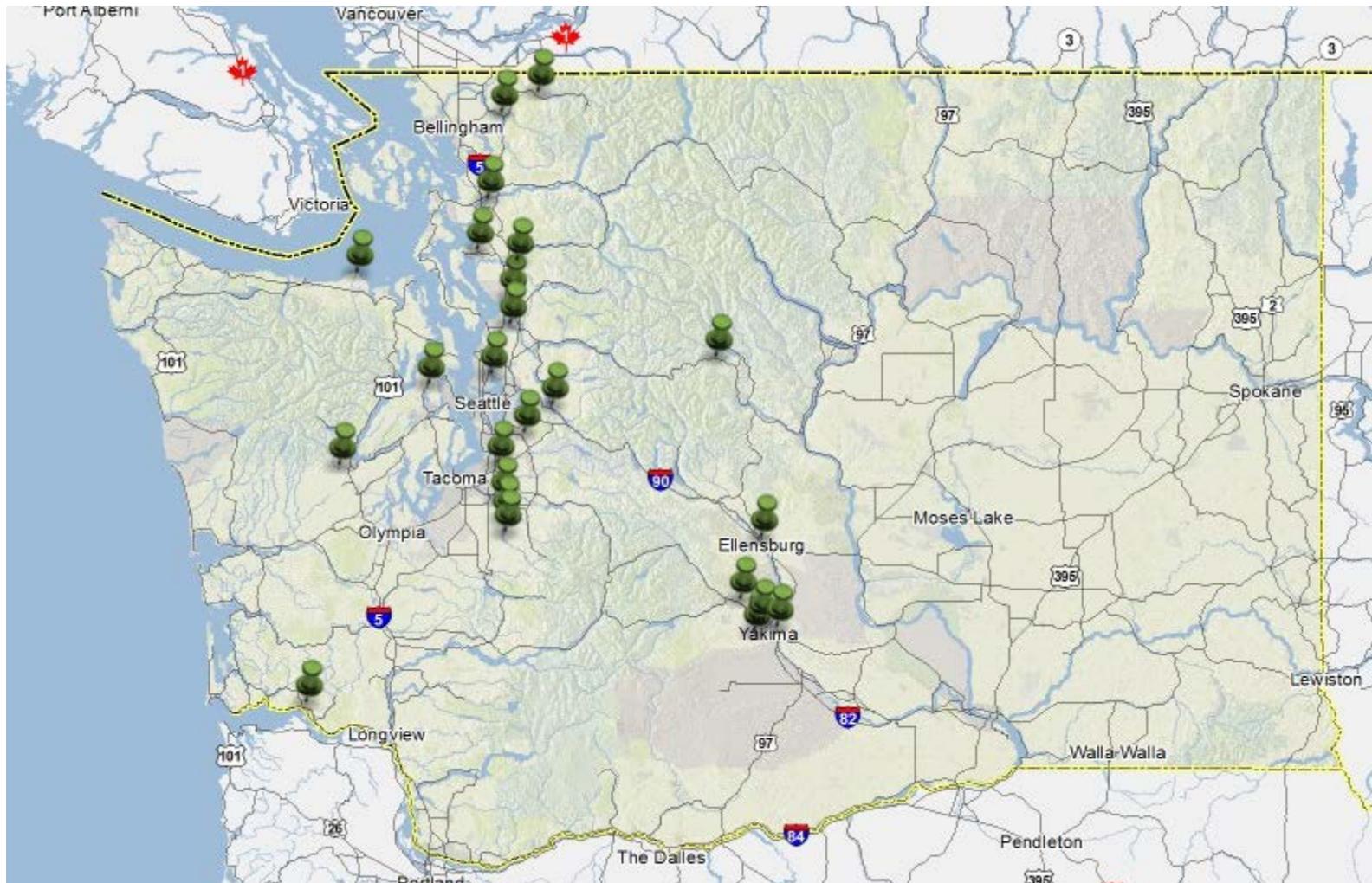
The top thirteen projects, selected from forty-five applications, clearly demonstrated cost-effective flood hazard reduction to people, property, critical facilities and/or transportation corridors. Those projects were also designed to achieve ecosystem benefits such as salmon recovery actions, water quality improvements, habitat restoration, and channel migration zone protections.

This innovative \$50 million funding program supports a multi-benefit approach to floodplain management. The objective is to address both the need to reduce flood risk to people and property, and the need to improve the natural function of our river systems. The nine Puget Sound floodplain projects included in the budget proviso exemplify this multi-benefit management approach, which is now termed “Floodplains by Design.”



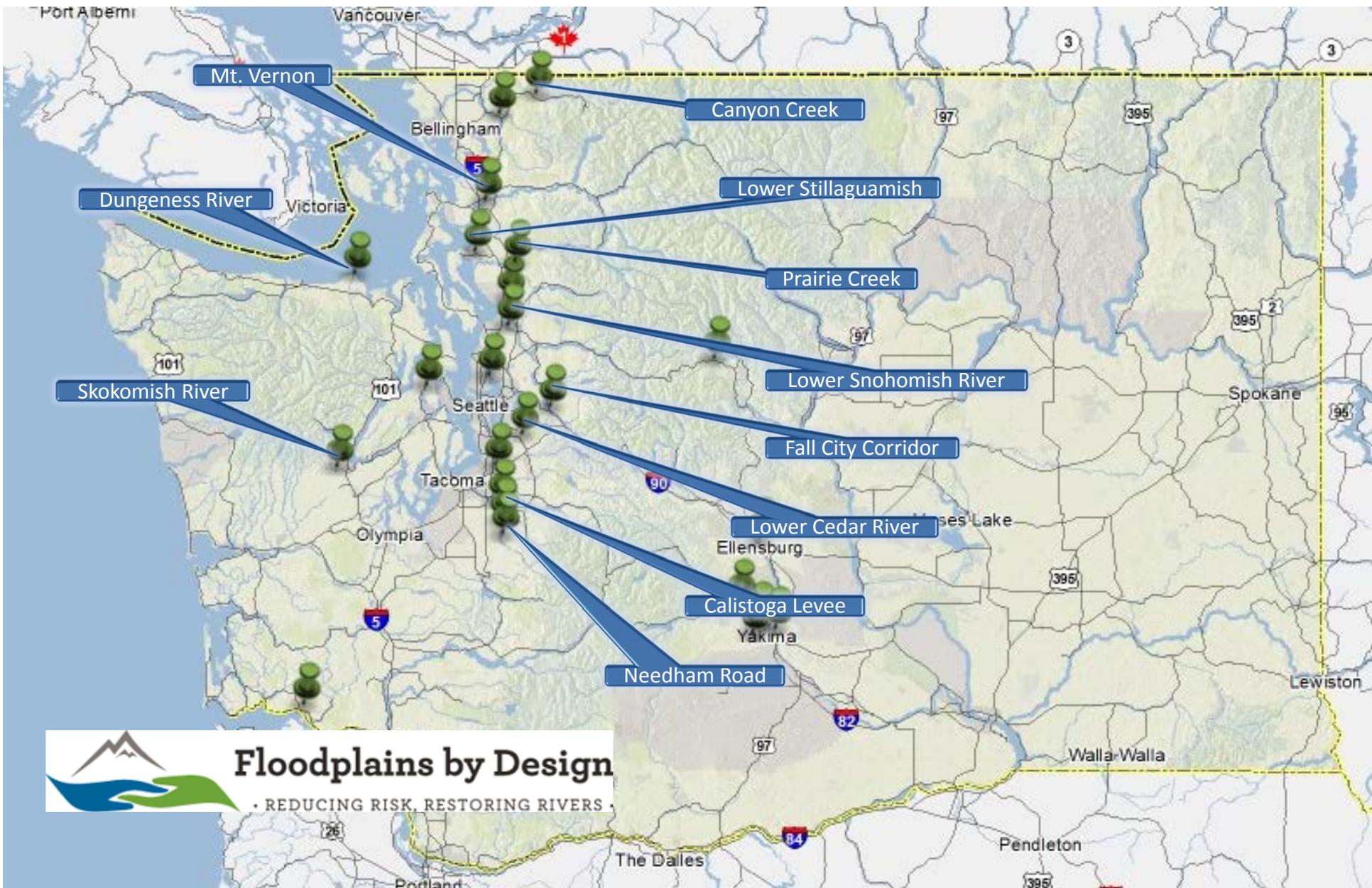
2013 and 2014 Floodplain Management Projects of both types

1. Below is a map of all twenty-four 2013 and 2014 flood projects
2. To view the projects online, use this link...<http://bit.ly/1I7Ee6m> or continue with this presentation
3. On the website, click on a push-pin to view the pop-up information box for project descriptions.
In locations with multiple push-pins, click the arrow to view the next listing



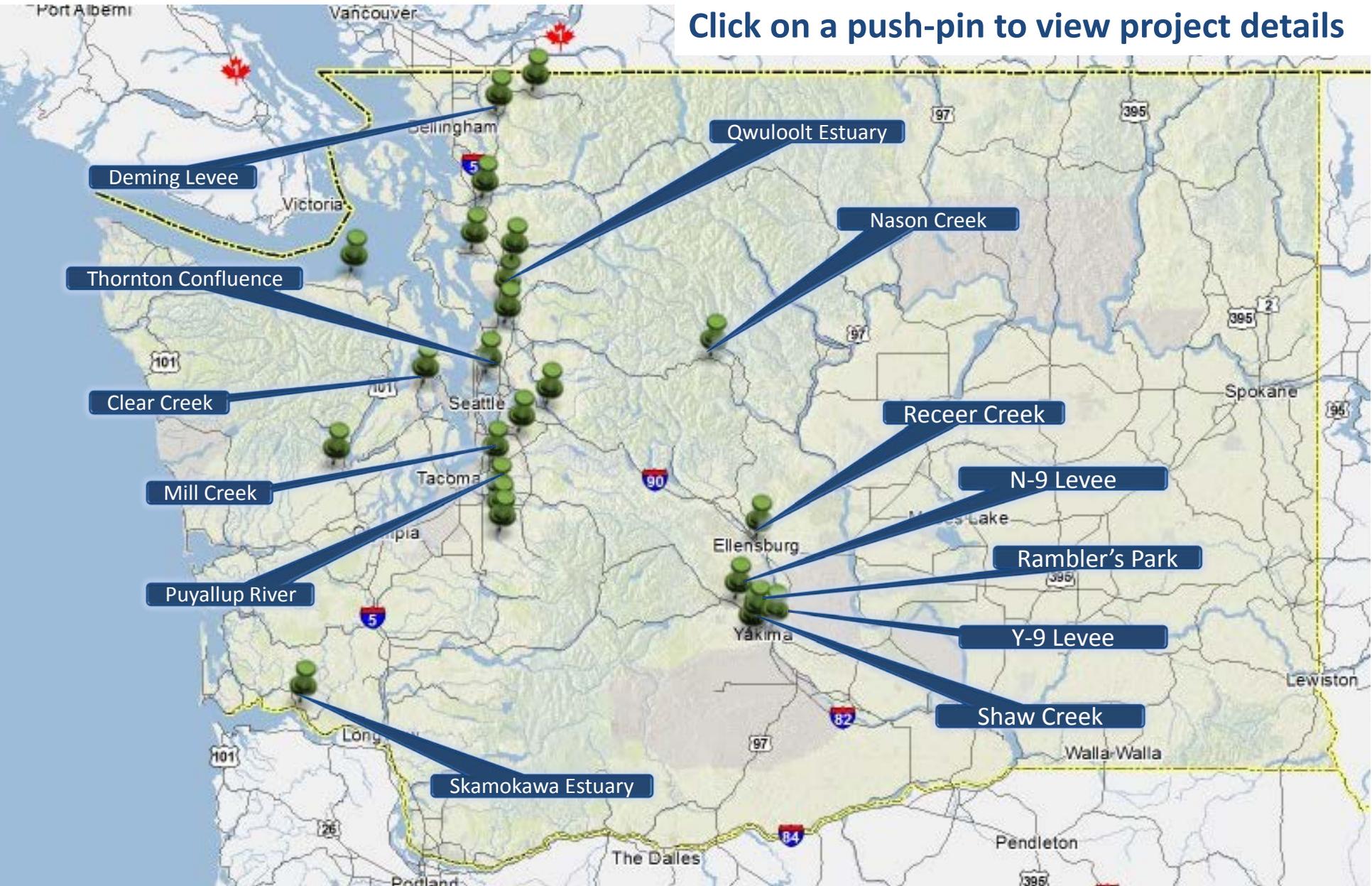
2013 Puget Sound Coordinated Investment Projects

Click on the 'Floodplains by Design' logo for project details



2014 Floodplain Management and Control Grants

Click on a push-pin to view project details



The City of Ellensburg will use state funding of \$1,300,000 to complete a \$1,625,000 project. This project will directly reduce the magnitude and frequency of flood damage to structures and infrastructure within West Ellensburg. This is a developed area that lies within what was historically the floodplain of the Yakima River and its tributaries. This project will restore more natural floodplain conditions, construct a new more natural Currier Creek channel parallel to Receer Creek, provide new in-stream spawning and rearing habitat for fish, replant riparian and floodplain areas with native vegetation, and construct a set-back levee to protect over 100 homes and businesses within the City.



Project Officer is Michelle Gilbert, Michelle.Gilbert@ecy.wa.gov , (509) 457-7139.

Nason Creek – Chelan County

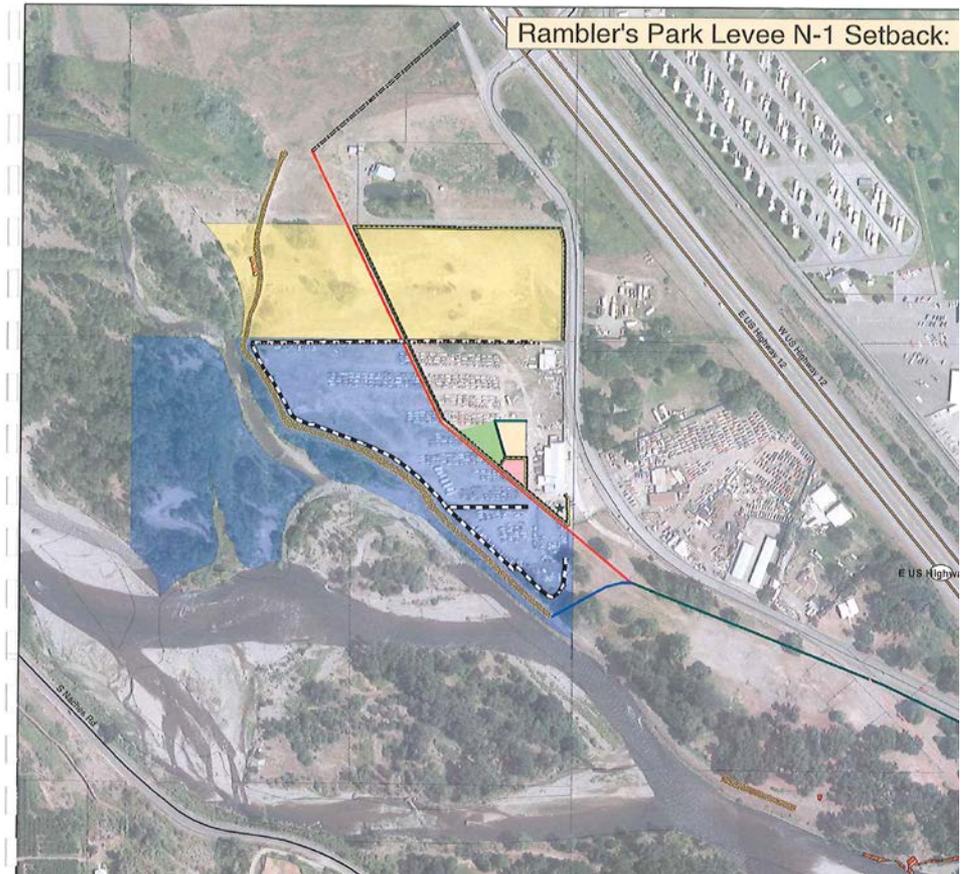
Chelan County will use \$780,616 in state funding to complete a \$4,000,000 project. This project will restore floodplain and channel dynamics and restore aquatic habitat within a 0.5 mile long segment of Nason Creek through levee removal, powerline relocation and habitat restoration. Nason Creek is critical habitat for spring Chinook salmon, steelhead, and bull trout. Increased access to the floodplain area will increase off-channel habitat for rearing, flood, and thermal refugia.



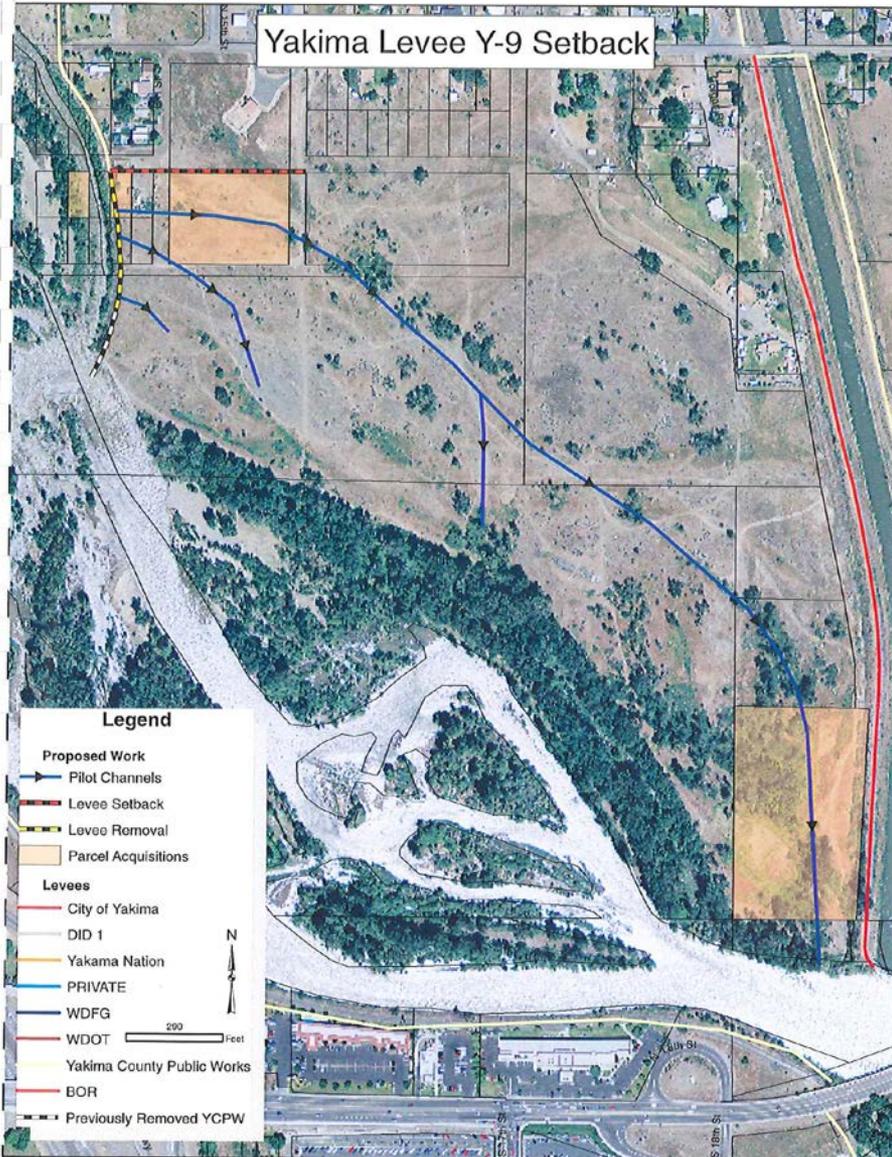
Project Officer is Michelle Gilbert, Michelle.Gilbert@ecy.wa.gov , (509) 457-7139.

Rambler's Park – Naches River Yakima County

Yakima County will use \$1,392,112 in state funding to complete a \$1,740,141 project. This project will purchase floodplain and floodway properties, reconfigure and relocate an existing auto wrecking yard, set back an existing 2100-foot levee segment to a reduced 1800-foot segment to allow floodplain access to an additional 9 acres, remove a Power Road 200-foot embankment to allow access to 2 acres at the Nelson Dam approach, and create pilot channels in the long-term floodplain deposits. This will act to reduce flood hazard and improve riverine and floodplain habitats over a large reach of the main stem river, while maintaining or improving current fish passage issues and the ability to divert irrigation water.



Project Officer is Michelle Gilbert,
Michelle.Gilbert@ecy.wa.gov , (509) 457-7139.

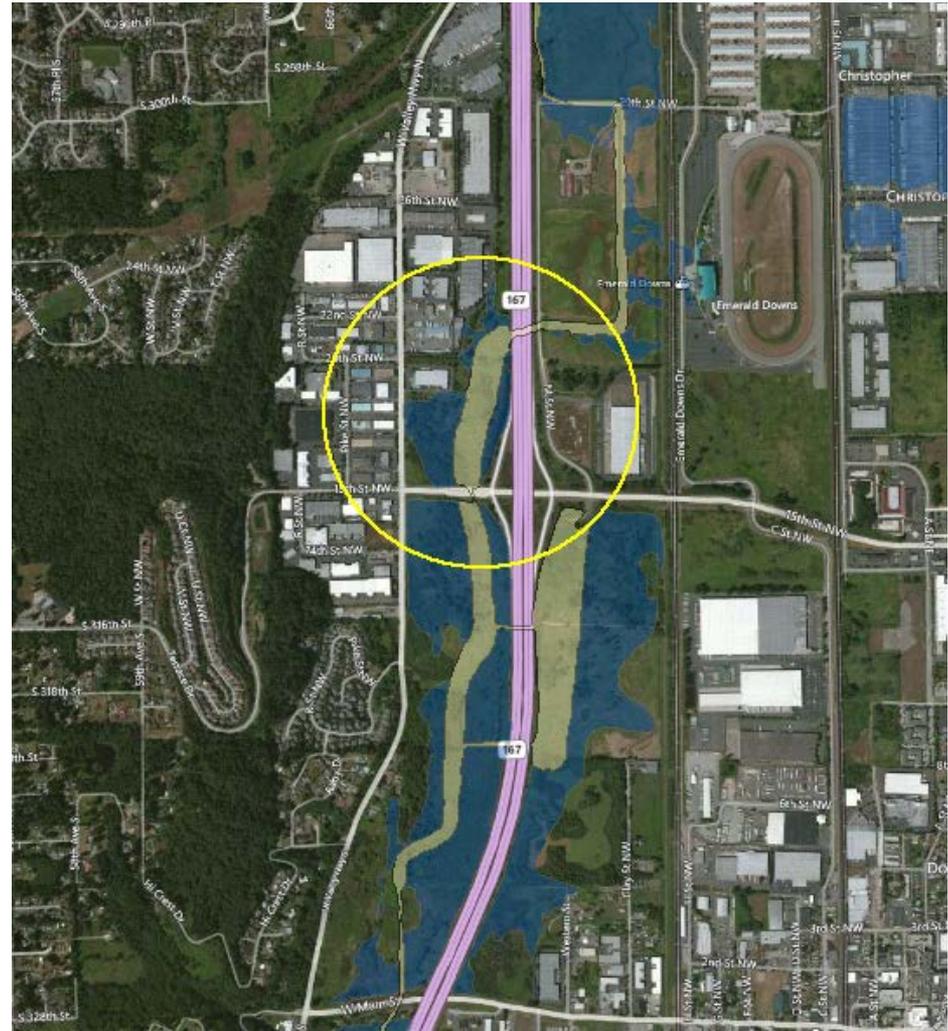


Yakima County will use \$574,800 in state funding to complete a \$718,500 project. This project will remove 600 feet of the Yakima River Y-9 levee, set back a 200 foot length to allow flows and river channels to reoccupy the unoccupied public lands, purchase an upstream property enabling the levee setback, and purchase a downstream property where channels will be constructed to allow continued main channel reentry of the floodplain. 2000 feet of side channel length will be added, producing vegetationally diverse sections of floodplain with improved habitat.

Project Officer is Michelle Gilbert,
Michelle.Gilbert@ecy.wa.gov , (509) 457-7139.

Mill Creek – City of Auburn

The City of Auburn will leverage \$532,000 in state funding in this \$5,087,000 project. Mill Creek was historically an active floodplain surrounded by a broad shrub scrub wetland community. As the area developed, Mill Creek has been straightened and the land cleared first for agricultural purposes and then urban and industrial development. In the Project reach, Mill Creek has been channelized to facilitate agricultural activities that ceased by the early 1990s. Currently, invasive plant species have overrun the channel and floodplain, interrupting natural riparian processes and significantly degrading habitat function within the Creek. This project will focus on improving floodplain connectivity, providing refuge habitat from high-flow events, and creating conditions to re-establish riparian cover over the Creek to reduce water temperatures and improve water quality for fish rearing.



Project Officer is Jessica Hamill,
Jessica.Hamill@ecy.wa.gov, (425) 649-7049

Main MAP

Shaw Creek – City of Yakima

The City of Yakima will leverage \$200,000 in state funding in this \$800,000 project. As part of Yakima County's Shaw Creek Flood Mitigation Project, this project will increase flood conveyance under two bridges crossing Wide Hollow Creek. The increase in conveyance is necessary to allow implementation of a major flood hazard reduction and habitat improvement project to occur on the tributary to Wide Hollow Creek known as Shaw Creek. The project will reduce predicted flood damage in an area that has been rapidly urbanizing on the west side of the City of Yakima. It will improve ecological function of Shaw Creek and Wide Hollow Creek and improve the water quality of both creeks vis-à-vis fecal coliform bacteria, nutrient loading, temperature and habitat degradation.



Project Officer is Michelle Gilbert,
Michelle.Gilbert@ecy.wa.gov , (509) 457-7139.

Main MAP

Clear Creek – Kitsap County

Kitsap County will use state funding of \$2,000,000 to complete a \$3,961,879 project. This project will reconnect Clear Creek with its historical floodplain and restore over 30 acres of floodplain, off-channel wetland, and riparian habitat in Silverdale. It will reduce flooding impacts to downstream infrastructure (including cutting off access to a Fire District substation), while improving salmon habitat and reducing the negative impacts of storm flows on coho, chum, steelhead, cutthroat and rainbow trout. There has been frequent significant flooding downstream of Silverdale Way and the Silverdale commercial area which will be ameliorated by this project.

The Clear Creek Project

Clear Creek is a major stream flowing into Dyes Inlet. It was historically a productive salmon stream prior to being ditched and channelized by early farmers. Although these historical activities and urbanization of the watershed have degraded Clear Creek, there is still great potential to restore ecological function to the system.

Protecting and restoring floodplains is one of the most important things we can do to recover salmon populations and reduce our risk of floods.

This restoration project provides an opportunity to re-engage the West and East forks with their historical floodplain. Removing fish barrier culverts, enhancing habitat, and improving floodplain connectivity will be a significant step in the overall Clear Creek restoration effort.

Construct new trails and footbridges along the restored portion of the creek and linking to the Clear Creek Trail network.

Remove 1,500 ft. of road

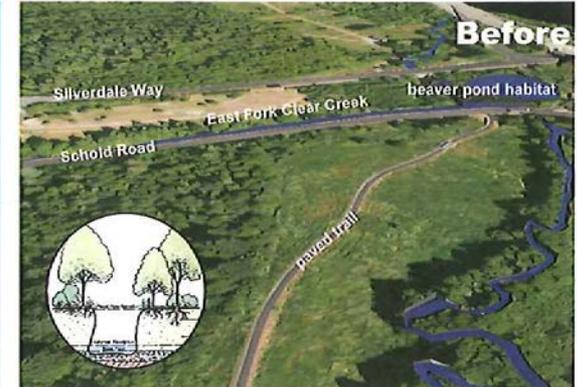
Remove over 20 acres of invasive vegetation and replace with natives.

Install over 300 in-stream log structures

Install eight new engineered log jams.

Remove two undersized culverts to enhance fish passage

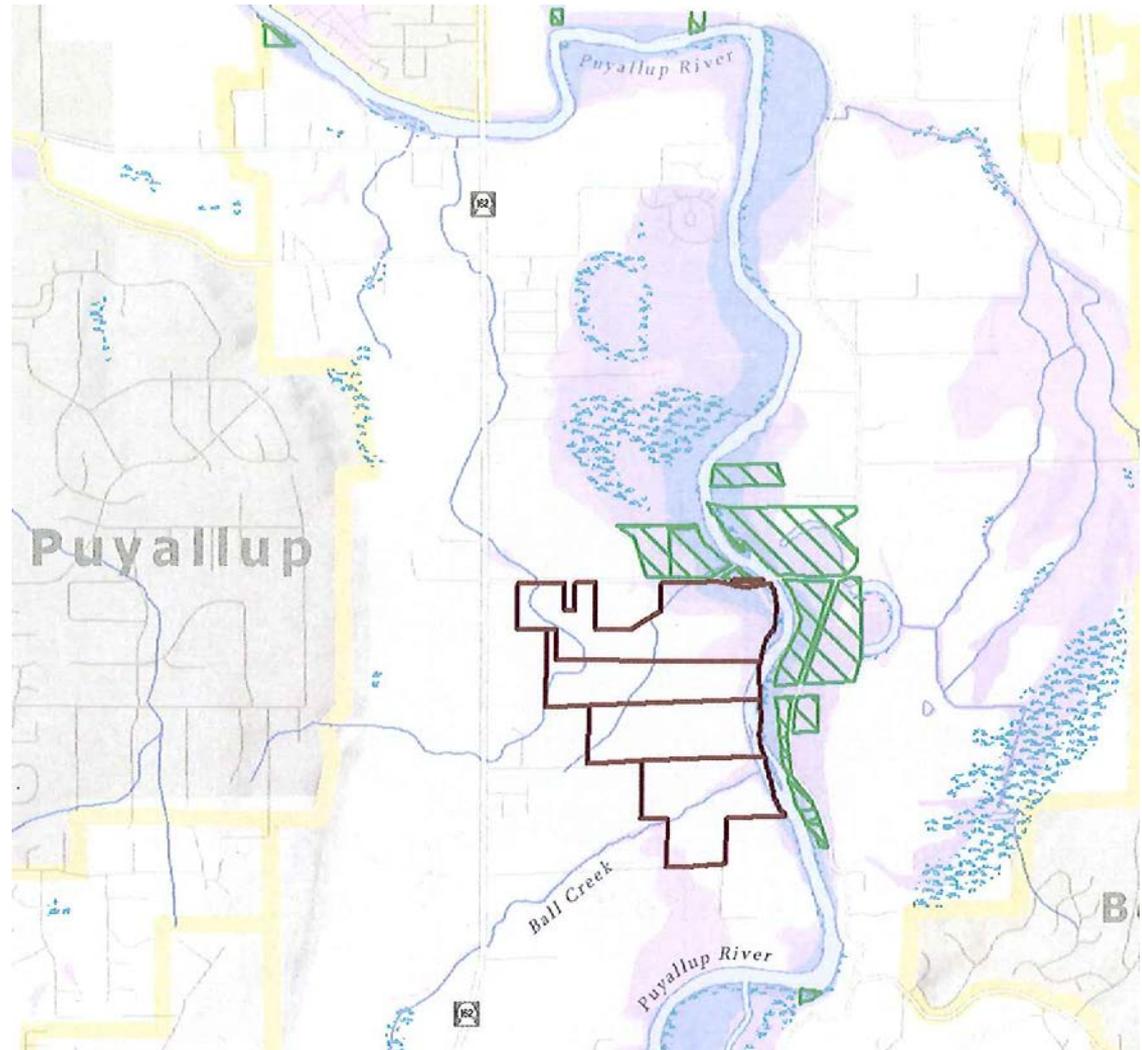
Restore seven acres of off-channel wetland areas.



Project Officer is Jessica Hamill, Jessica.Hamill@ecy.wa.gov, (425) 649-7049.

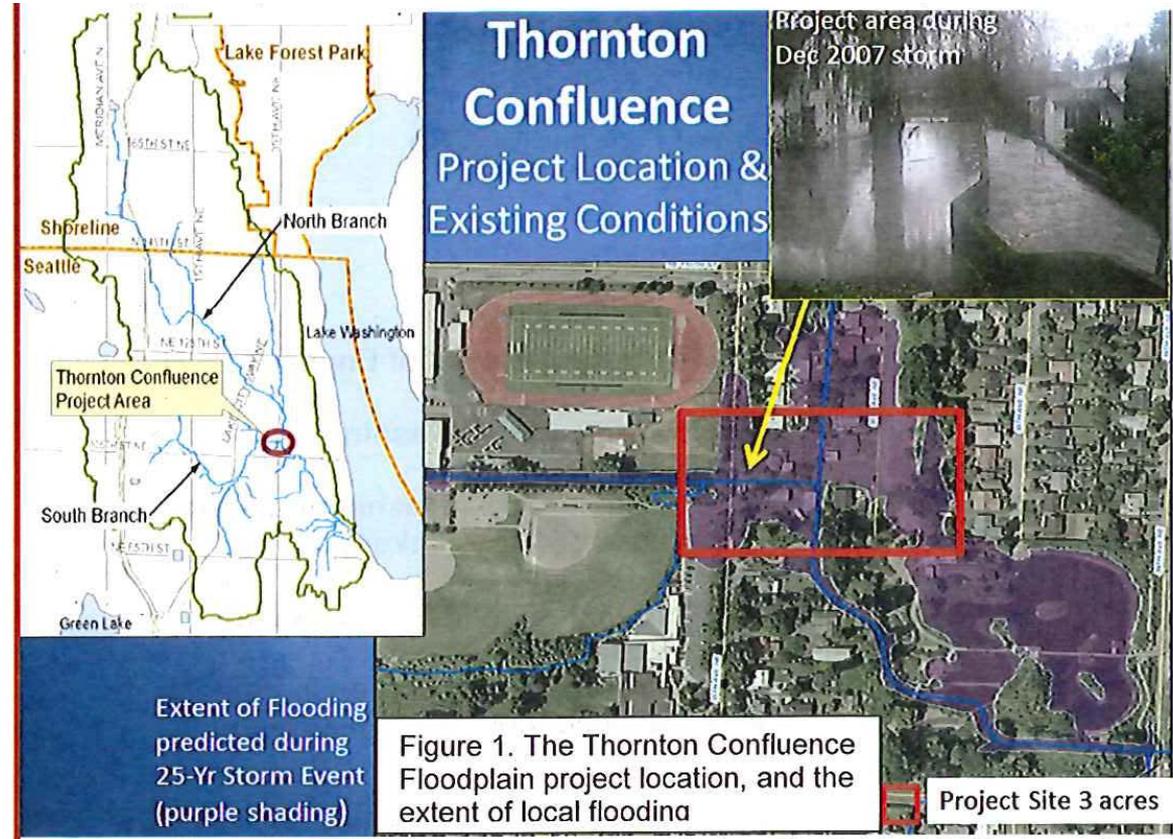
Puyallup River – Pierce County

Pierce County will use state funding of \$525,000 to complete a \$3,155,000 project. Pierce County will acquire 29 acres in fee and a 125-acre conservation easement on farmland that has been approved for residential development. The County will conduct restoration activities on the property that will reduce flood risk and improve salmon habitat. Acquisition of this property will allow future restoration activities, including adding creek channel width and reconnection of Ball Creek to the Puyallup River floodplain, more than doubling Ball Creek's conveyance capacity.



Project Officer is Adam Sant,
Adam.Sant@ecy.wa.gov , (360) 407-7675.

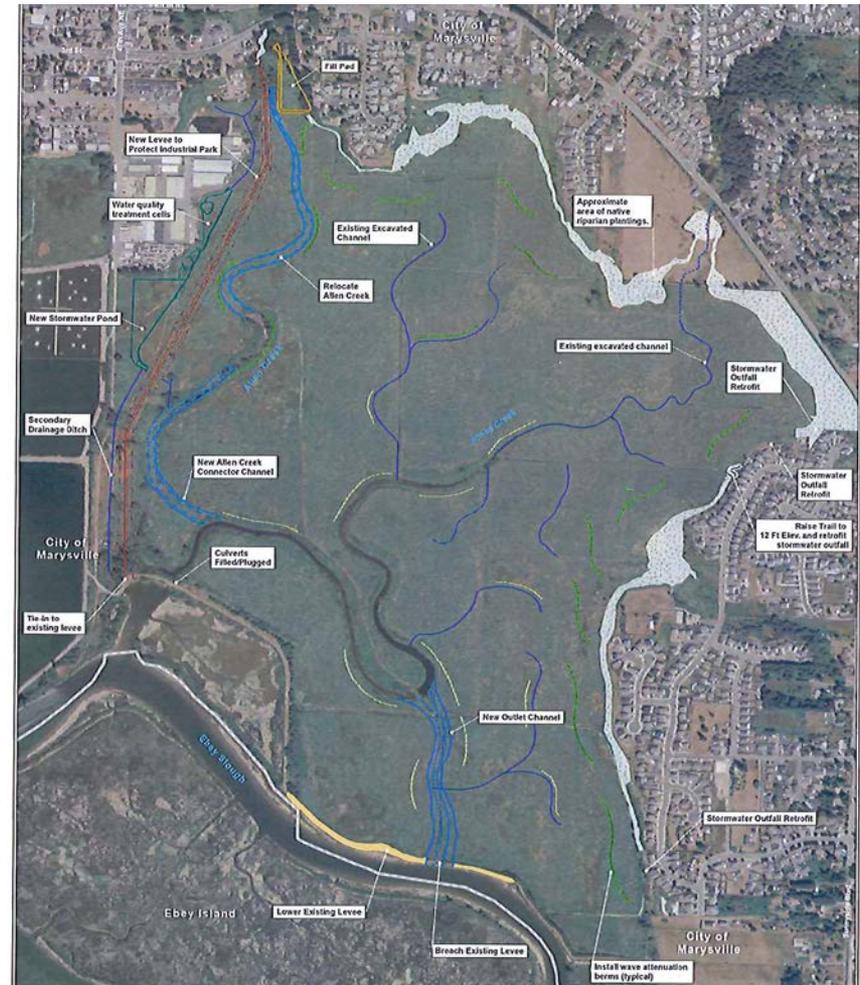
Seattle will use state funding of \$1,200,000 to complete a \$7,320,000 project. This project will provide two acres of floodplain storage to help relieve urban flooding in northeast Seattle at the location of the City's largest confluence. An undersized culvert is causing the creek to overtop and flood a major arterial road which requires traffic to be diverted several times a year and backs up and floods a high school and a community center. Replacing this culvert with a bridge will reconnect Thornton Creek to its historical floodplain, remove about 700 feet of bank armoring, excavate 2 acres of fill material, re-align 730 feet of stream to a more natural configuration, and re-vegetate 2.5 acres of floodplain and riparian areas.



Project Officer is Jessica Hamill, Jessica.Hamill@ecy.wa.gov, (425) 649-7049.

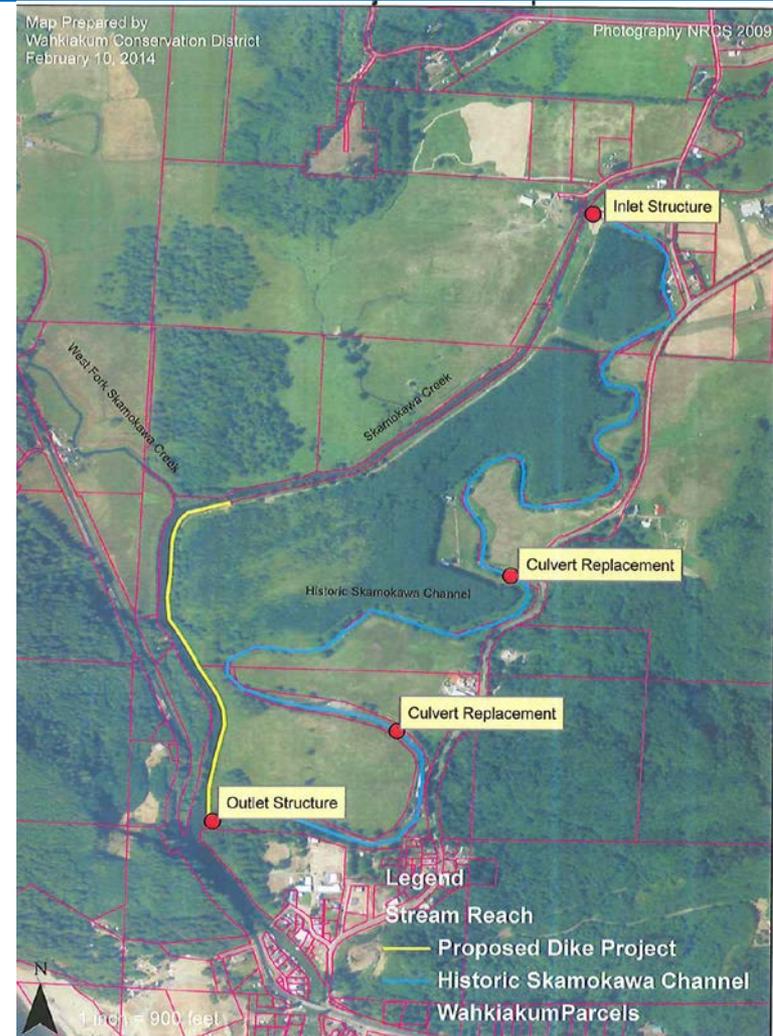
Tulalip Tribe – Qwuloolt Estuary

The Tulalip Tribe will use \$464,044 to complete a \$580,753 project. This project will complete a setback levee for the Qwuloolt Floodplain Restoration Project. The levee is a critical component to complete restoration of the 400 acres of floodplain along Ebey Slough. It will upgrade and enhance flood protection of existing facilities and businesses within the floodplain adjacent to the restoration project. The larger Qwuloolt project is a broad-based interagency and community effort to restore historic tidal processes and an intertidal marsh system to 400 acres of isolated floodplain, providing improving flood protection, future public access and recreational use. It improves flood conveyance in Allen Creek, restores marsh habitat, and improves water quality.



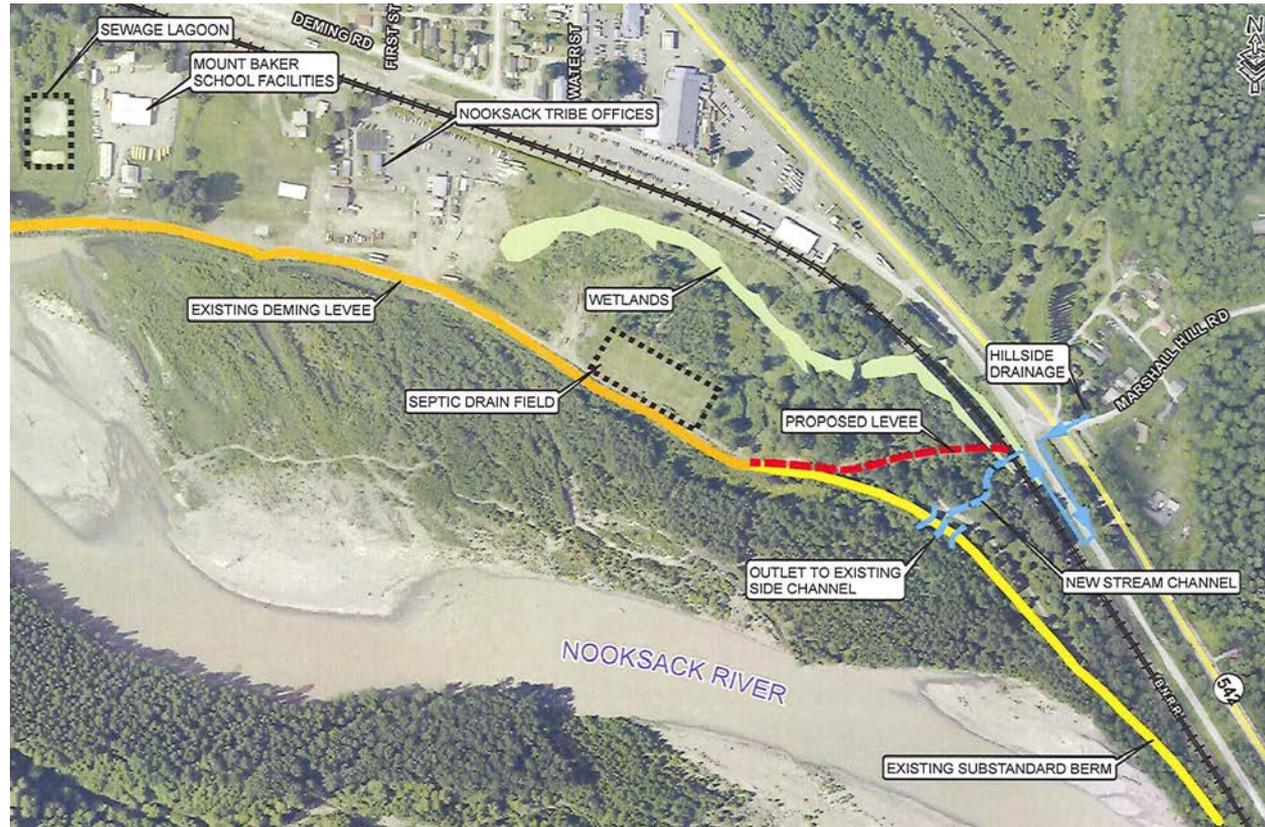
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(425) 649-7049.

The Wahkiakum Conservation District will use \$50,000 in state funding to complete a \$262,500 project. The project will assist Diking District 5's continued efforts to address flood hazards, water quality and salmon recovery concerns inherited because of the 1948 flood mitigation project design. Overtopping and subsequent erosion is an increasing concern with time. The original outlet structure is grossly insufficient at draining the system, prolonging floods. This project will clear sediment deposited in front of the freshwater inlet structure to allow it to be opened, which will have an immediate impact on both water quality and salmon recovery concerns. It will also spread available spoils to fill low spots on the dike and import additional soils necessary to raise the dike elevation.



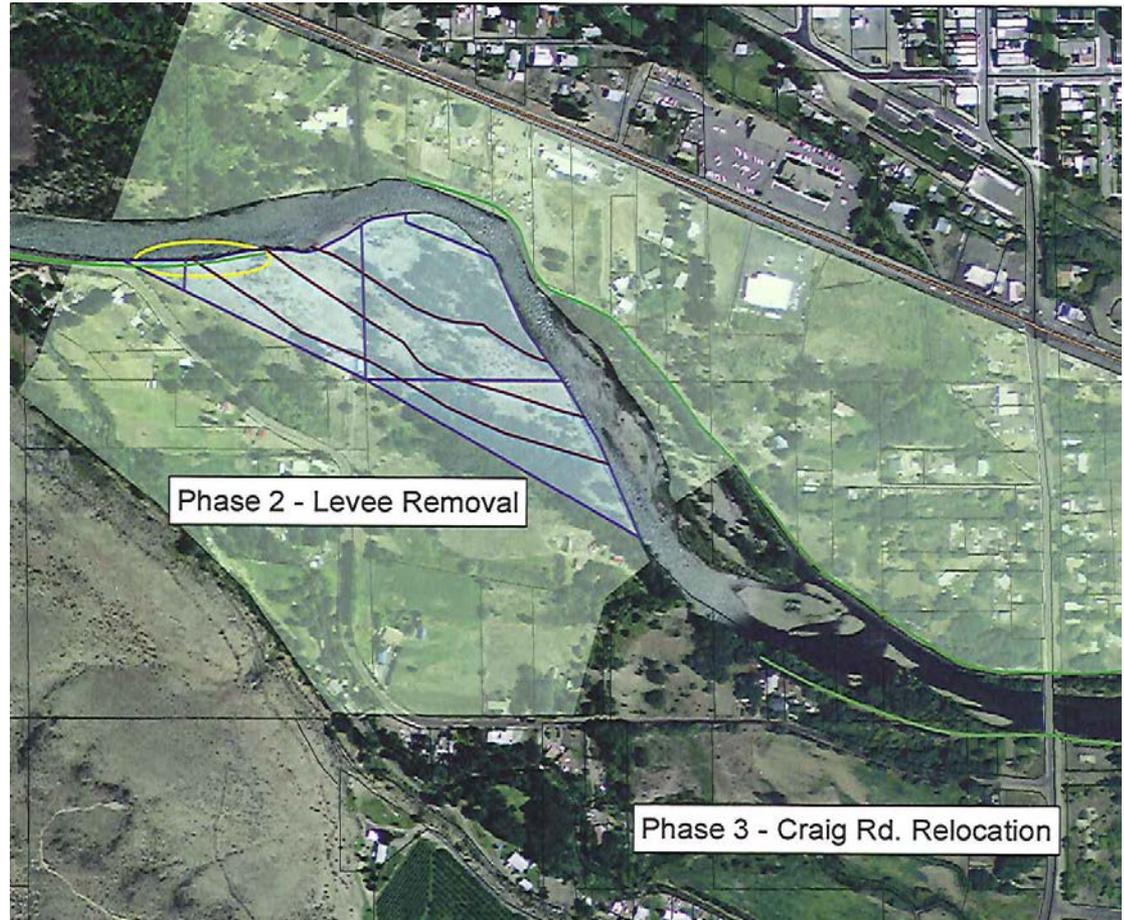
Ecology's Project Officer is Adam Sant,
Adam.Sant@ecy.wa.gov , (360) 407-7675.

Whatcom County FCZD will use \$1,440,000 in state funding to complete a \$2,400,000 project. This project will construct a new, 850-foot-long levee setback from the Nooksack River from the upstream end of an existing engineered levee. Currently, there is a non-engineered earthen berm at the upstream end which experiences frequent overtopping. Floodwaters enter the town of Deming when the berm overtops, affecting Mount Baker School District buildings and sewage lagoon, the Deming post office, BNSF Railroad and Nooksack Tribal buildings.



Project Officer is Jessica Hamill, Jessica.Hamill@ecy.wa.gov, (425) 649-7049.

Yakima County will use \$453,928 in state funding to complete a \$567,410 project. This project will remove the downstream 500 feet of the Naches River N-9 levee that directs flows against the Town of Naches N-7 levee and increases its failure risk. The project will pay for acquisition of 21 acres of floodplain behind the removed N-9 levee segment and create pilot channels to initiate reoccupation of the floodplain. The lower Naches where this project is located supports ESA-listed bull trout and steelhead plus salmon species, all part of a basin-wide recovery plan.



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Michelle.Gilbert@ecy.wa.gov , (509) 457-7139.