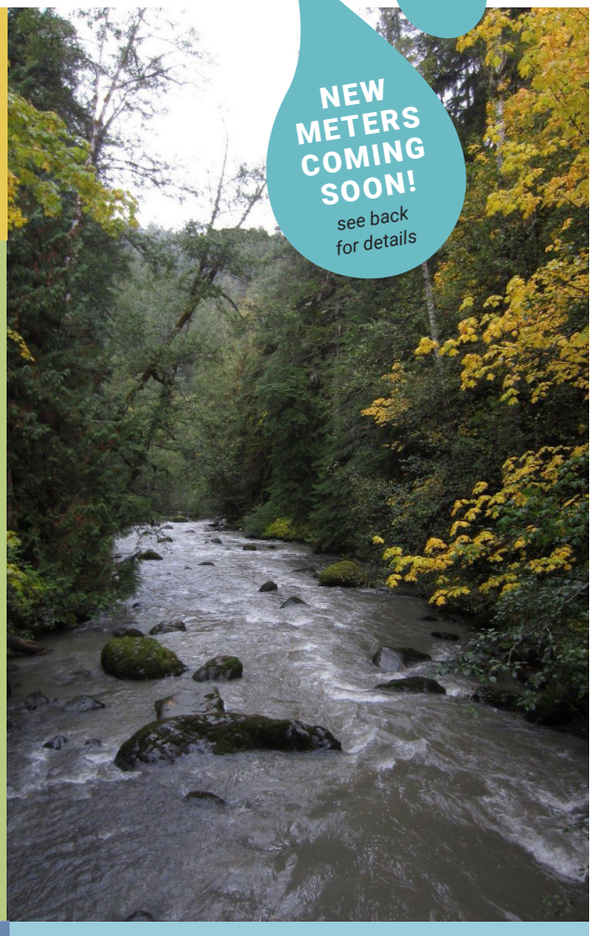
DOWNSTREAM DUNGENESS

2018 DUNGENESS WATER EXCHANGE ANNUAL REPORT

*Welcome to **Downstream Dungeness,** the annual report for the Dungeness Water Exchange (DWE). **Downstream** shares information about the operations of DWE and your participation in this cutting edge model of water management. Your mitigation certificate is one part of a host of local projects to ensure water sustainability in the Dungeness watershed.*



Foundations of the Dungeness Water Exchange

In 2013, the Dungeness Instream Flow Rule was adopted by Department of Ecology (DOE) to protect streamflow, a key condition of healthy salmon habitats. DWE was launched to provide mitigation for all new water uses as required by the Flow Rule.

DWE is a water bank operated by Washington Water Trust, a non-profit organization, in coordination with Clallam County Department of Community Development. Since 2013, the impacts of water use associated with more than 280 new structures in the Dungeness have been mitigated and have no net impact on low streamflow. DWE is able to issue mitigation certificates because of:

- water rights purchased by DOE;
- a groundwater model, used to anticipate how a new water use will impact the aquifers, rivers and streams; and
- mitigation projects such as those using existing irrigation canals/pipes/ditches to deliver purchased water to aquifer recharge sites.

DWE is guided by an Advisory Committee whose members include: City of Sequim, Clallam Conservation District, Clallam County, Clallam PUD No.1, Dungeness Water Users Association, Jamestown S'Klallam Tribe, Washington Department of Ecology, and Washington Department of Fish and Wildlife.

photo: RVWithTito.com

From the Olympic Mountains to Streamflow

The Dungeness River basin is a watershed which relies on glaciers and snowpack in the Olympic Mountains for water storage. Snowmelt has historically sustained river flows throughout the summer until the rain returned in the fall. However, the Dungeness has experienced accelerated snowpack loss, resulting in critically low late summer flow. Late summer is also peak demand for both irrigation needs and salmon migration. In 2018, snowpack shifted from above average levels to drought* in just one month—May, diminishing the late summer water supply. Unfortunately this climate trend is anticipated to continue with less snowpack, earlier snowmelt, and more precipitation by rain that will quickly leave the basin to the Strait of Juan de Fuca.

**According to USDA/NRCS Snow Water Equivalent Map www.wcc.nrcs.usda.gov*

Innovative Storage Solution Addresses Annual Late Summer Water Shortfalls

With snow storage increasingly compromised, local watershed partners developed a project to respond to this water supply challenge—The Flow Restoration and Aquifer Recharge Reservoir—to store river flow water during spring. This project would provide an alternative supply for many irrigators in late summer instead of withdrawing from the river when river flows are low. The project, off River Road, was recently awarded initial funding from a competitive state grant program under the Streamflow Restoration Act.

COMMUNITY BENEFITS

More Water Remains in the River.
When irrigation demand is highest and salmon are spawning, switching irrigation diversions from the river to the reservoir may improve late summer flows by up to double of historic low flow levels.

More Water Storage. The reservoir will expand capacity for the existing aquifer recharge mitigation and restoration programs to offset new uses and restore small streams.

Prevent Flooding. The project will intercept flood flows from upland forest runoff, before they impact Sequim infrastructure.

New Park. The reservoir site will be located within a new public park.

Alternative Water for Agriculture. The project secures an alternative and drought resilient source of water which increases agriculture viability in the Dungeness Valley.

Water Flows Both Ways in the Dungeness

An important part of DWE is replacing withdrawn groundwater in order to mitigate for new wells. Aquifer recharge uses irrigation pipes and canals to move purchased mitigation water to specific infiltration sites. This enables new wells to have no net impact on area streams in late summer when most critical to salmon. Clallam Conservation District has designed and constructed six aquifer recharge sites with a seventh to be constructed in 2019. Also, DWE recharges streamflows by infiltrating high river flows from snow melt in spring.

Water delivered by irrigation pipe to an aquifer recharge site runs down an abandoned irrigation ditch to infiltrate the shallow aquifer, offsetting new groundwater well impacts and supplying water to area streams.

Mitigation vs. Restoration

How does DWE address these goals?

Mitigation Offsetting an impact to a natural system. A DWE mitigation certificate supports aquifer recharge projects and other sustainable water management projects developed and managed to offset well impacts to streams in perpetuity.

Restoration Improving a degraded natural system towards healthier function. DWE uses state and federal dollars to replenish groundwater and small streams through aquifer recharge.

How much water does a household use?

DWE issues indoor certificates for 150 gallons per day (GPD) annual average, based on a home size of two people.* DWE has collected water meter data since 2014 and has found the vast majority of homes are within their permitted certificate amounts.

In 2018 the average household used 119 GPD. New meters to be installed in Spring 2019 (see back) will provide homeowners online access to their own water use data. Since DWE replaces the full certificate amount, household water use below certificate amounts results in watershed restoration.

**It is recognized that with more home occupants, usage may differ*

Agriculture in the Dungeness Basin, Past and Present

Written by Gary Smith, a 4th generation dairy farmer, President of the Sequim Prairie-Tri Irrigation Association, and founding member of the WUA.

Commercial agriculture in the Dungeness Valley developed in the late 1800's and became predominately dairy production in the 1940's. The valley shipped butter, hogs and beef to Seattle. In 1896, the first irrigation ditch was constructed with horses and a whiskey bottle ½ full of water to set the grade. In 1924, irrigators were permitted rights to divert a volume greater than the river flow most of the year.

Today irrigation companies and districts form an association called the Dungeness Water Users Association (WUA). Through aggressive conservation, WUA now diverts less than half of the water diverted in the 1980's while irrigating about the same acreage. The WUA has sold water rights to DWE to support mitigation of new water uses in the community.

It's important to recognize the cooperation that allows so much progress to be made. During water short years, domestic users in irrigation networks have voluntarily stopped their use during dry months to allow the commercial farmers to maintain crops. As we look to the future of our valley, we must continue to work together to protect our resources for agriculture and the entire community.

Window on the Watershed

River Run is a 60 acre farm at river mile 3.2 of the Dungeness. One of the owners, Noah Bresler, talks about life there.

Q: When did you first learn about water issues in the Dungeness?

A: In 2015, with little snowpack, the river was extremely low and it was the first time we realized these conditions limited our water deliveries. We didn't know that the irrigation ditch could be turned off early. In 2015 and 2018, our ditch association asked users to cut their water usage because of limited river water. We were able to hold off on watering pasture, but for vegetables we needed water to avoid an entire crop loss.

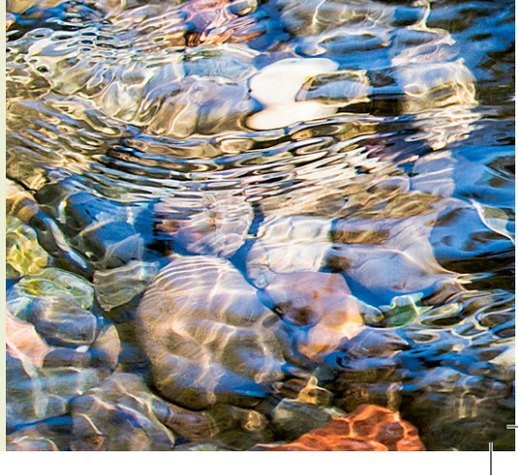
Q: What is your favorite way to unwind in the area?

A: Walking up and down the river. It's a great way to connect with this place and our farm in a way that we don't experience when we're amongst the cultivated crops. We're super fortunate to be along the Dungeness. It's wild and dynamic and on a relatively short path from the mountains to the ocean.

Q: What is your biggest motivator to contributing to a sustainable Dungeness?

A: My children and the children in the community. I hope that they will have a place that is healthy to live in. I hope they have meaningful community relationships, that the Dungeness still runs clean, and good farmland is growing high quality crops.

Reach Noah and River Run Farm at:
http://www.riverrun.farm/



NEW METERS COMING SOON!
See below for details

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Dungeness Water Exchange
c/o Washington Water Trust
1500 Westlake Avenue N
Suite 202
Seattle, WA 98109

NEW WATER METERS COMING THIS SPRING

New upgraded water meters will be provided and installed for all DWE certificate holders using water from their well.

New legislation (ESSB 6091) created a 10-year Pilot Metering Project, in which the Washington Department of Ecology will supply the new meters in the DWE service area. The Clallam Conservation District will be leading installation of the meters with a plumbing contractor.

Please anticipate to be contacted by a contracted plumber later this spring to arrange and schedule installation.

WHAT WE NEED FROM YOU:

Please provide your

- contact name
- property address
- phone
- email

to the **Dungeness Water Exchange** at **dwe@washingtonwatertrust.org** or **206-675-1585**

For further information on the metering program, contact the **Clallam Conservation District**

info@clallamcd.org
or **360-775-3732**

Dungeness Collaboration Counts

The Dungeness Basin continues to be at the forefront of sustainable water management. While other watersheds across the state are now working to find and implement similar solutions to restore and balance the impacts on groundwater and streams, thanks to each mitigation certificate holder, and ongoing collaboration of basin partners, **the Dungeness is leading the way.** Watershed partners continue to identify and implement sustainable water management projects to protect this special place, from the Olympic Mountains to the Downstream Dungeness.

Dungeness Water Exchange
managed by
WASHINGTON WATER TRUST

Questions or comments, please contact
dwe@washingtonwatertrust.org

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