



Whatcom County WRIA 1 Rule Amendment 2020 Annual Report

In an effort to address the WRIA 1 Rule Amendment Annual Reporting requirement, Whatcom County has prepared a brief memo to submit to Ecology annually following rule adoption, and every year thereafter during the planning horizon period.

This memo addresses the following reporting requirements:

- a. The number of new building permits associated with new domestic permit-exempt wells issued in the prior calendar year.
- b. The email addresses associated with the new building permit recipients in (a), where available.
- c. A brief (no more than a few sentences) description of the status of each of the WRIA 1 Streamflow Restoration projects/actions undertaken to meet the offsets and/or NEB related to this rule amendment.
- d. Any other RCW 90.94.020 rule implementation actions to date, including any changes in approach since the last report, and any challenges identified that may require a change in approach.

This Annual Report has been submitted to the Northwest Regional Office (NWRO) Water Resources Section Manager Ria Berns, ria.berns@ecy.wa.gov, on April 14, 2021 by Senior Watershed Management Planner Chris Elder, celder@co.whatcom.wa.us.

- a. The number of new building permits associated with new domestic permit-exempt wells issued in the prior calendar year.
 - Whatcom County issued 26 building permits associated with new domestic permit-exempt wells issued in the prior calendar year (2020)
- b. The email addresses associated with the new building permit recipients in (a), where available.
 - See final page of report
- c. Brief description of the status of each of the WRIA 1 Streamflow Restoration projects/actions undertaken to meet the offsets and/or NEB related to this rule amendment are described below.
 - **Project ID 1: Dairy waste processing treatment:** Coldstream Farm, a dairy located near Acme, received a grant from United States Department of Agriculture (USDA) to serve as pilot for a manure-processing system that turns out solid fertilizer, liquid fertilizer and, water. Whatcom PUD is contributing the cost for permitting completion. Whatcom PUD may eventually receive the discharge water through an agreement with Coldstream Farm.

- Project ID 2: Bertrand groundwater augmentation of tributaries:** AESI, Reichardt and Ebe Engineering, and the Ag Water Board consulted with Ecology about how to proceed with this project. Consensus was to identify potential sites for future surface to ground water conversions and augmentation sites. Towards this end AESI assisted AWB and the Drayton and Bertrand WID in suggesting improvements and corrections to the available data compilation that Aspect Consulting prepared for the Regional Water Supply Plan. This data will assist in identifying key project locations in each of these pilot watersheds. After consulting with the Bertrand and Drayton WIDs it appeared the best location for a 2021 Augmentation project would be in Dakota Creek. Locations have been identified in consultation with WDFW and costs estimates are being prepared.
- Project ID 4-7, 9: MAR Various WRIA 1 Locations:** The City of Lynden received grant funding through Ecology's streamflow restoration competitive grant program to pursue a managed aquifer recharge (MAR) project at various locations in WRIA 1 (Project ID 4-7,9-: MAR—Various WRIA 1 locations) including the North Fork Site (Project ID 8: MAR - North Fork Site). Lynden finalized the grant agreement with Ecology in the first quarter of 2021, and is currently working on preliminary MAR feasibility at multiple potential project sites. Lynden plans to select two potential project sites by the end of 2021 and begin detailed assessments of those sites in 2022.
- Project ID 8 MAR – North Fork Site:** See Project ID 4-7, 9 description above.
- Project ID 19: Skookum Creek Restoration:** Whatcom Land Trust completed the acquisition of ~1,100 acres of Lower Skookum Creek in 2018, including 2.5 miles of Skookum Creek upstream of the confluence with the South Fork Nooksack River. Acquisition of an additional 1,000 acres connecting Lower Skookum Creek to the Arlecho Creek Old Growth Preserve is expected to be completed in June 2021. Together, these acquisitions will include over 5 miles of Skookum Creek and create a nearly complete protected corridor from the South Fork Nooksack River to federally-protected wilderness at the base of the Twin Sisters Range. Forest Management and Restoration Planning has begun on these projects to maximize streamflow and temperature benefits through enhanced forest management practices. The Nooksack Indian Tribe has contracted Natural Systems Design to model the potential increase flow in Skookum Creek as a result of changed forest management using EPA's gridded ecohydrological model called VELMA: Visualizing Ecosystem Land Management Assessments. Preliminary modeling results to-date suggests that managing the watershed for mature and old growth age classes can increase August streamflow by 5 cfs under current climate compared to a harvest scenario with a stand age of 40 years. Future modeling will include climate scenarios that may result in a larger increase in flow for mature and old growth age classes into the future with continued climate change.
- Project ID 19NG: Wetland restoration, enhancement, and/or creation on Ecology NEP approved parcels:** The Nooksack Indian Tribe obtained both EPA CWA 319 competitive funding and EPA-NEP-Ecology competitive funding for riparian and wetlands restoration and protection along the South Fork Nooksack River (SFNR). So far, the project has involved the purchase and wetland/riparian restoration of two 40-acre parcels (reimbursement to Whatcom Land Trust) immediately adjacent to the SFNR using both

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NEP and CWA 319 funds as well as a third parcel in the Black Slough drainage, tributary to the SFNR, where wetland restoration will take place using EPA 319 funding. The Tribe is seeking additional funding to protect and restore additional parcels in the Black Slough watershed to further augment summer flows in the SFNR. As part of existing CWA 319 funding, the Tribe will be modeling the potential gains in summer flows in the SFNR as a result of the riparian and wetlands restoration activities on these three parcels.

- **Project ID 21: Stewart Mountain/South Fork Nooksack Conservation Sale:** Whatcom Land Trust, Evergreen Land Trust, Whatcom County, and the Nooksack Indian Tribe have begun a partnered effort to establish a 6,000 acre community forest on Stewart Mountain with the goal of implementing sustainable forest management practices to benefit the local timber economy, streamflow in the South Fork Nooksack River, habitat quality, and recreation. The project partners have worked with the current landowners to sign a letter of intent for the 500-acre phase 1 acquisition, and have begun conversations regarding the acquisition of the remaining ~5,500 acres. The Nooksack Indian Tribe has contracted Natural Systems Design to model the potential increase flow on Stewart Mountain as a result of changed forest management using EPA's gridded ecohydrological model called VELMA: Visualizing Ecosystem Land Management Assessments. The VELMA model has just recently been calibrated for the SFNR watershed and is being readied to simulate flows from Stewart Mountain under a variety of forest management scenarios and with and without climate change into the future. Preliminary modeling results to-date for nearby Skookum Creek suggests that managing the watershed for mature and old growth age classes can substantially increase August streamflow under current climate compared to a harvest scenario with a stand age of 40 years. Future modeling will include climate scenarios that may result in a larger increase in flow for mature and old growth age classes into the future with continued climate change. Funding for this research is currently being sought from various granting agencies.
- **Project ID 23: Middle Fork Porter Creek Alluvial Fan Project:** Project construction was completed in mid-October 2020. Approximately 2,900 cubic yards of the right bank artificial levee was removed, and the site was graded to match the natural slope of Porter Creek. Protective slash was spread over the restored surface to minimize erosion. Native grass seed was placed in disturbed areas above Ordinary High Water and straw waddles were placed to prevent erosion. Nine habitat trees were placed in the channel. Immediately after construction, Porter Creek began engaging with the floodplain. New floodplain channels are now forming, and high flows are reconnecting to historical floodplain channels. Riparian planting will occur in Spring 2021. Pre- and

post-construction monitoring of surface and groundwater levels, water temperature, channel geomorphology, and habitat conditions is ongoing.

- **Project ID 24: Birch Bay Water and Sewer District/City of Blaine deep wells:** Birch Bay Water and Sewer District completed an analysis of the California and Dakota Basins regarding what could be accomplished to provide water to agriculture through development of a water bank. The deep wells have the potential to provide water to such a water bank. This report has been delivered to Whatcom County to work into the Drainage Based Management process.
 - **Project ID 26: Convert surface water users to groundwater sources:** There are several surface to ground water conversions in various stages of development. Some are designed and ready for permitting, others merely conceptual. AWB applied for the additional funding to complete three of them but did not receive the funding. All previously secured grant dollars have been reassigned to the augmentation project on Dakota Creek next summer.
 - **Project ID 28: Storage projects, including gravel pits:** No progress
 - **Project ID 46NG: WRIA 1 Conservation Program:** Whatcom County has provided funding to advance three elements of this project. A report, Water Rights and Relinquishment in Whatcom County, was completed by RH2 in December of 2019 and provides an overview of the challenges and opportunities of water conservation as related to water rights, use requirements, water banking, and relinquishment. Whatcom Conservation District worked with members of the Whatcom Water Alliance to develop a domestic and municipal water use efficiency and conservation program, entitled Enhanced Whatcom Water Alliance Program. The County has provided additional funds for program implementation and over the next couple of years municipal water purveyors will provide funds to continue program implementation. The Whatcom Conservation District is also currently developing an agricultural water use efficiency and conservation program which should have a completed program plan by the end of 2021.
 - **Project ID 44: Vista Road Project:** Whatcom PUD provides potable water and fire flow to Grandview Industrial Park (Industrial Park). In 2019, to improve the fire flow system, Whatcom PUD constructed a pipeline from its Plant No. 2 north on Vista Road to the Industrial Park. The pipeline construction was funded by Whatcom PUD. There has been no further progress on the rest of the work as Whatcom PUD is still in negotiation with Ecology on terms of the agreement between Whatcom PUD and Ecology.
 - **Project ID 45: Lake Terrell/Coastal Drainages:** No progress
- d. Any other RCW 90.94.020 rule implementation actions to date, including any changes in approach since the last report, and any challenges identified that may require a change in approach.
- No