Overview of

- Interim Guidance for Determining Net Ecological Benefit
- Streamflow Restoration Grants FY-2019 – Interim Funding Guidelines
- Initial Watershed Planning Unit Efforts in WRIA 1 – Nooksack Watershed
- Curtailment Updates in Washington

Mike Gallagher
Department of Ecology – Water Resources Program
June 22, 2018
Chehalis Basin Partnership Meeting

DEPARTMENT OF
ECOLOGY
State of Washington

Interim Guidance for Determining Net Ecological Benefit

for streamflow restoration planning and water permit mitigation pilots under the 2018 Streamflow Restoration Act

Background

The 2018 Streamflow Restoration Act (Engrossed Substitute Senate Bill (ESSB) 6091) requires the Department of Ecology (Ecology) to determine that a Net Ecological Benefit (NEB) will result when adopting and approving:

- Watershed plan updates, as required under Section 202.
- Watershed restoration and enhancement plans under Section 203.
- Water resource mitigation pilot projects under Section 301.

This interim guidance will be used to evaluate plans that are completed within the next twelve months, or later if there is prior agreement with Ecology, and for pilot projects being conducted under Section 301. To convert this interim guidance to final guidance, Ecology will seek input from tribes, other resource managers, and an academic research team affiliated with the Washington Water Research Center at Washington State University, along with feedback from groups preparing plans under ESSB 6091. The final NEB guidance will be used to evaluate the remaining plans submitted to Ecology later in 2019 through 2021.

A Net Ecological Benefit determination means anticipated benefits to instream resources from actions designed to restore streamflow will offset or exceed the projected impacts to instream resources from new water use.

NEB evaluation of plans under Sections 202 and 203 of ESSB 6091

Sections 202(4)(a) and 203(3)(a) of ESSB 6091 state that prior to adoption of updated watershed plans or new watershed restoration and enhancement plans:

> "…the department must determine that actions identified in the watershed plan, after accounting for new projected uses of water over the subsequent twenty years, will result in a net ecological benefit to instream resources within the water resource inventory area."

Ecology's NEB determination must occur within the deadlines for plan adoption prescribed in Sections 202(7) and 203(3) by the legislature to prevent triggering other actions identified in the new law, including requirements for rulemaking.

Ecology interprets "instream resources" in the context of this provision of ESSB 6091 to include the instream resources and values protected under RCW 90.22.010 and RCW 90.54.020(3)(a), with an emphasis on measures to support the recovery of threatened and endangered salmonids.

The law requires that plans address potential impacts to instream flows from the consumptive portion of permit-exempt domestic water use over the subsequent 20 years. Element 1 below provides guidance on calculating consumptive domestic permit-exempt water use impacts. The starting point, or baseline, for the 20-year period that must be accounted for is the date ESSB 6091 was signed into law—January 19, 2018.

ESSB 6091 establishes a hierarchy of priority for actions (projects) aimed at offsetting the impacts of consumptive domestic permit-exempt well use:

- Highest priority are projects that replace consumptive domestic water use impacts during the same time and in the same subbasin as the impacts occur.
- Lower priority are projects that replace consumptive domestic water use impacts elsewhere within the WRIA or only during critical flow periods.

Planning groups will be responsible for developing and submitting plans to Ecology. Ecology will provide guidance during this process. Ecology strongly recommends that planning group members attempt to reach agreement on NEB.

When addressing NEB, plans should address the following elements, as discussed in more detail below:

1. Characterize and quantify potential impacts to instream resources from the projected 20-year new domestic permit-exempt water use at a scale that allows meaningful determinations of whether mitigation is in-time and/or in-place.
2. Describe and evaluate individual offset projects.
3. Explain how the planned projects are linked or coordinated with other existing plans and actions underway to address existing factors impacting instream resources.
4. Provide a narrative description and quantitative evaluation (to the extent practical) of the net ecological effect of the plan.

Element 1

Characterize and quantify potential impacts to instream resources from the proposed 20-year new domestic permit-exempt water use at a scale that allows meaningful determinations of whether mitigation is in-time and/or in-place.

Plans should provide a quantitative evaluation of the consumptive domestic permit exempt uses of water associated with all projected new domestic permit-exempt wells over the next 20 years. Methods for estimating consumptive domestic permit exempt use are described in "*ESSB 6091 - Recommendations for Water Use Estimates.*"

To determine the benefit of highest priority and lower priority water offset projects, estimates of the consumptive impact of new domestic permit-exempt water use should be calculated for discreet areas. This approach requires partitioning the WRIA into suitably-sized subbasins or sections of subbasins. This partitioning will provide clarity when describing impacts and the offsetting beneficial projects. For example, if a plan proposes offsetting or partially offsetting the consumptive impact of new domestic permit-exempt water use with a high priority project within a subbasin, it should estimate new domestic permit-exempt water use for that subbasin.

Where information is readily available, estimated impacts should be quantified or described for individual river or stream reaches, so that the miles of diminished stream channel habitat can be calculated. However, the number of affected reaches could be extensive. Therefore, bearing in mind the intent of Sections 202 and 203 to improve ecological benefit on a WRIA-scale basis, instead of analyzing individual impacts, plans may provide generalized information about affected reaches.

Element 2

Describe and evaluate individual offset projects.

Projects proposed to offset impacts to stream flows and achieve NEB generally fall under the categories of water offset projects and non-water offset projects. Water offset projects include water right acquisition projects and other projects that provide flow benefits. Non-water offset projects provide ecological benefits by enhancing aquatic systems to improve capacity to support viable populations of native species.

Water Offset Projects

Plans should include accurate calculations of water offsets so Ecology can effectively evaluate whether statutory requirements have been met. Using the best information available, plans should quantify the amount, location and timing of benefits for all of the water offset projects.

There are two major types of water offset projects: (1) water right acquisitions, and (2) other projects that provide flow benefits. Proposed water right acquisitions must be coordinated with Ecology to ensure that the water rights being considered provide actual stream flow benefits. Other projects that may provide stream flow benefits include:

- Shallow aquifer recharge
- Floodplain restoration/levee removal
- Floodplain reconnection
- Switching the source of withdrawal from surface to groundwater, or other beneficial source exchange
- Streamflow augmentation
- Off-channel storage

Descriptions of water offset quantity, location, and timing are needed to accurately evaluate whether a water offset project can be considered a high priority project. Those attributes can then be evaluated against available information or documented assumptions about the amount and location of the projected consumptive impact of new domestic permit-exempt water use within a subbasin.

Where highest priority projects are not feasible, ESSB 6091 authorizes plans to include lower priority projects—those that do not occur in the same subbasin or tributary (but are within the same WRIA) or only replace water during critical flow periods. To determine the viability of a lower priority water offset project, planning groups will need to determine critical flow periods. The critical flow period determinations should consider fish presence and distribution, and the historic hydrograph, if available.

Non-water Offset Projects

Plans may include projects that protect or improve instream resources without replacing the consumptive quantity of water. Non-water offset projects must be in addition to those actions the planning group determines necessary to offset consumptive domestic permit exempt use impacts to instream flows associated with new domestic permit-exempt water use on a watershed-wide basis. **Non-water offset projects are not required to be in a plan if NEB can be achieved through water offset projects.**

Non-water offset projects should focus on actions that improve the composition, structure, and function of aquatic systems impacted by flow limitations. These projects should support the recovery of threatened or endangered salmonids and/or native species.

Examples of non-water offset projects that are eligible for funding under ESSB 6091 are listed in the *Interim Funding Guidelines for Streamflow Restoration*. In addition, plans may recommend other actions that may or may not be eligible for funding under 6091 to protect instream resources or offset potential impacts to instream flows such as:

- Specific conservation requirements for new water users to be adopted by local or state permitting authorities.
- Requesting rulemaking to establish standards for water use quantities that are less than authorized under RCW 90.44.050, or more or less than authorized under ESSB 6091.
- Requesting rulemaking to modify fees established under ESSB 6091.
- Subbasin scale stormwater management strategies to protect or restore hydrologic processes.

Element 3

Explain how the planned actions are linked or coordinated with other existing plans and actions underway to address factors impacting instream resources.

Planning efforts under ESSB 6091 should be coordinated with other assessments and plans for water resource management and the protection and restoration of instream resources. Plans should also be consistent with existing land use regulations. Ecological benefits are greater when projects and plans build on previous efforts by leveraging resources and collaborating with partners.

Plans with projects based on improving watershed functions and historical impacts will ensure alignment between ongoing restoration efforts and maximize successful outcomes. This approach may also increase the likelihood of demonstrating NEB.

Element 4

Provide a narrative description and quantitative evaluation (to the extent practical) of the net ecological effect of the plan.

Ecology's expectation is that plans will provide a transparent, structured evaluation to be used in Ecology's NEB analysis to determine whether the requirement in ESSB 6091 has been met. If the planning group concludes that the planned actions recommended in the plan will achieve NEB, the plan should include a clear explanation and justification for that conclusion.

Plan components to be used in the NEB analysis:

- May be structured in the form of a ledger or matrix that describes all the impacts and offsets in detail and sums up the net ecological effect.
- Should describe the scale at which the plan is designed to achieve success (e.g., subbasin or WRIA).
- Should include a description of the projected impact to instream flows that will not be offset through replacement of water. To the extent possible, describe this projected flow impact in terms of ecological impact to instream resources.
- Should include a description of how the recommended projects and actions will offset the total projected new consumptive domestic permit-exempt water use over the subsequent 20 years throughout the watershed.
- Should address the feasibility of plan implementation. This includes what is known about fund available under ESSB 6091 and other funding sources. The plan should also prioritize projects for funding and clearly identify the group of projects and actions that must be funded to achieve NEB.

Ecology strongly recommends that the planning group attempt to reach consensus on NEB. In cases where full agreement or consensus is not reached, the different opinions and rationale from planning participants should be provided in the transmittal of the plan to Ecology.

Conclusion

Ecology will determine that a plan or pilot project meets the ESSB 6091 Net Ecological Benefit (NEB) requirement if anticipated benefits to instream resources from actions designed to restore streamflow will offset or exceed the projected impacts to instream resources from new water use. NEB should be identified at appropriate basin or sub-basin scale based on as much existing local information as possible. Scientific rigor should be demonstrated. Quantitative analysis of impacts, water and non-water offsets, and NEB should be provided, with clearly identifiable methodology. If quantitative analysis is not possible, any qualitative analyses should be thoroughly explained in detail. Local consensus and support should be attained if possible, and transmitted to Ecology with plans and pilot project applications.

Applicability of this Interim Guidance

This document is intended to provide only interim guidance to assist groups planning under section 202 and 203 of ESSB 6091 with near-term completion deadlines, and pilot projects being completed under Section 301. Ecology will continue its work to produce final guidance for use early in 2019. The final guidance will provide a summary of available scientific resources and analytical tools, along with more detailed implementation guidance such as a comparison of data needs, outputs, and relative strengths and weaknesses of different available methods to evaluate NEB. Planning groups proceeding in the near-term may rely upon this Interim Guidance to complete and submit their plans for adoption. Water permit pilot project applications likewise may rely upon this Interim Guidance. Plans and pilot project applicants submitted later, after issuance of final guidance, should rely on that final guidance.

DEPARTMENT OF
ECOLOGY
State of Washington

Streamflow Restoration Grants
Fiscal Year 2019

Interim Funding Guidelines

Chapter 1: Program Overview

The 2018 Streamflow Restoration Act (ESSB 6091) provides for actions in watersheds to offset potential impacts to instream flows associated with permit exempt domestic water use and achieve net ecological benefit. The purpose of this Streamflow Restoration Grant program is to provide funding for those actions ("projects").

In passing this new law, the Legislature also authorized the sale of capital bonds for this purpose in the aggregate amount of $300 million over the next 15 years. Of this total, $20 million was made available to start projects in 2018-19.

The Washington State Department of Ecology's (Ecology) Water Resources Program administers the Streamflow Restoration Grants program. Ecology awards grants on a competitive basis for projects throughout the state that improve streamflows and instream resources, as directed under the new law.

This Interim Funding Process will be used for projects seeking funding in the first round of Streamflow Restoration Grants in 2018-19. This document describes how to apply for funding, meet program requirements, and manage funded projects.

Finalized guidance for future rounds of grants will be in place in 2019.

Timeline

The planned schedule for making funding decisions for this first round of grants is:

- Interim Funding Guidance issued late spring 2018.
- One-month solicitation of grant applications no later than September 2018.
- Ecology's rating and ranking of applications in fall 2018.
- Grant awards decided by the end of December 2018.

Project Selection

Project Priorities[1]

In watersheds where updated watershed plans and streamflow restoration plans are being developed under the new law, plans must identify projects to offset impacts from new domestic permit exempt uses and achieve net ecological benefit. The law prioritizes projects in plans as follows:

1. Highest priority projects will offset the impacts of new domestic permit-exempt consumptive water use during the same time and in the same place as the impact of that use.

2. Lower priority projects are in the same Water Resource Inventory Area (WRIA) and replace new domestic permit-exempt consumptive water use only during critical flow periods.

3. Lowest priority are projects that protect or improve instream resources without replacing the consumptive quantity of water, where such projects are in addition to those actions necessary to offset potential impacts to instream flows associated with new permit-exempt domestic consumptive water use.

1 ESSB 6091 Section 202 (4)(b) & 203 (3)(b)

Project Categories

Water Projects - higher priority

1. Water acquisition. Proposed water right acquisitions must be coordinated with Ecology to ensure that the rights being considered provide actual stream flow benefits.

2. Water storage. The proposal must demonstrate how the storage or aquifer recharge project will enhance streamflows and benefit instream resources.

3. Altered water management (such as conservation) and infrastructure projects may be eligible for funding; however, the project will be prioritized by the amount of resulting water that will benefit streamflows.

Non-water Projects – lower priority

4. This category includes projects that protect or improve instream resources but do not replace water. These would include a variety of riparian and habitat projects such as channel habitat improvement, riparian restoration, strategic land acquisition, or floodplain modification, etc. that can demonstrate a beneficial impact to the fisheries resource.

Geography

Entities submitting projects in a Water Resource Inventory Area (WRIA) in Washington are eligible to apply for funding. Ecology will prioritize funding consistent with ESSB 6091 as follows:

1. WRIAs prioritized specifically under this new legislation. [2]

2. WRIAs that contain ESA-listed fish species, for projects that benefit recovery of listed salmonids.

3. The remainder of the state.

[2] ESSB 6091 Section 208 (2)

Rating and Ranking Projects

Ecology staff will evaluate and prioritize projects for the first round of grant funding in 2018. Project scoring will be driven by requirements in the legislation along with other important factors such as:

- Project benefits and basin needs.
- The permanence and resiliency of the project.
- Project costs.
- The capacity of the project proponent to manage the project, their readiness to proceed, and the adequacy of their plan (included in their application) to monitor and maintain the project to ensure continued project benefits.

Chapter 2: Funding Program

This chapter provides a basic overview of the funding program, including applicant and project eligibility and funding provisions. More specific information about project eligibility may be found in Chapter 3 and Appendix D.

Applicants must complete an application in Ecology's grant and loan management system (EAGL) to apply for funds from the Streamflow Restoration Grant program. Ecology reviews, rates, and ranks applications. Ecology then distributes funds to the highest priority projects that are ready to proceed.

Eligible Applicants

Applicants eligible for funding include:

- Counties, cities, and towns.
- Water districts and sewer districts.
- Port districts.
- Conservation districts.
- Irrigation districts.
- Watershed improvement districts.
- Quasi-municipal corporations.
- Federally recognized tribes.
- Washington State agencies.
- Washington State institutions of higher education if the project is not included in the institution's statutory responsibilities.
- Federal agencies.
- Non-profit organizations.

Ineligible Project Elements

Projects or project components that are ineligible to receive Streamflow Restoration Grant funding include, but are not limited to:

- Projects or project objectives previously funded by Ecology. However, additional phases of the same project that provide additional stream restoration benefits beyond those identified in earlier phases may be eligible.
- Applicants proposing to purchase property must get pre-approval from Ecology. Requirements for property acquisition projects will align with the Washington Recreation and Conservation Office's (RCO) *Acquisition Manual 3*; see http://www.rco.wa.gov/documents/manuals&forms/Manual_3_acq.pdf.
- Projects that treat process water to meet an individual or general NPDES permit.
- Major and capital equipment purchases without pre-approval from Ecology.
- Lighting, landscaping, or other project elements that do not provide a benefit to instream resources.
- Contaminated soils removal or remediation.
- Projects required under statute, rule, ordinance, or court order.

Grant Match

Streamflow restoration grants do not require match, but match may increase the likelihood of your project receiving funding by increasing its ranking. When rating the applications received, Ecology will compare costs and benefits. Match reduces Ecology's costs and may also indicate local prioritization and commitment to a project.

Match is often in the form of cash, but a recipient may provide match with in-kind contributions. Funds, goods, or services cannot be used as match more than once. The following describes the forms of acceptable match.

Cash Match

Cash match includes any eligible project costs paid directly by the recipient that are not reimbursed by the Ecology grant or another third party. Ecology considers donations that become the long-term property of the recipient as cash match.

Grants Used to Match Grants

If a recipient wants to use a grant from another funding agency as match, the recipient should check with the funding agency issuing the grant to ensure that it can be used as match for an Ecology grant. The following applies when using other grants to match an Ecology grant:

- The scope of work on the matching grant must directly satisfy the portion of the scope of work on the Ecology grant where the work is contributed.
- The date that the recipient incurs costs for the matching grant must fall within the effective and expiration dates of the Ecology grant.
- The costs incurred under the matching grant must be eligible according to all criteria for the Ecology grant.
- The matching grant cannot originate from the same funding source as the Ecology grant.
- Grants provided by the Washington State Conservation Commission can be used as match.

Chapter 3: Eligible Project Types

The purpose of the Streamflow Restoration Grant Program is to fund projects that improve stream flows and provide permanent benefits to instream resources.

Eligible projects fall into two main categories and four types:

Water projects category

- Water acquisition
- Water storage
- Altered water management or infrastructure

Non-water projects category

- Riparian and fish habitat improvement

Water Acquisition

The highest priority acquisition projects are water right purchases that offset the impacts of permit-exempt domestic well consumptive water uses during the time and in the locations that the impacts occur. The next highest priority projects are water right purchases that offset the impacts from permit-exempt domestic well consumptive water uses during critical low flow periods.

Eligible acquistions projects may also include a portion of a water right (for example, the purchase of 20 acre-feet from a 50 acre-foot water right, or purchasing just the late season water use in a basin where late season low flows are impacting the fisheries resource). Proponents of partial and late season acquistions projects must show that the water right was historically available in dry years.

Proposed water right acquisitions must be coordinated with Ecology to ensure that the rights being considered provide actual stream flow benefits.

Payment for water acquisitions will be based on the quantity of the water right determined to be valid.

Funding of a water right purchase will require that:

- The applicant describes when, and to what extent, the water right purchase will offset permit-exempt domestic well consumptive water use and/or benefit stream flow.

- The water right is conveyed to Ecology to be held and managed in Ecology's Trust Water Rights Program.

Water right studies, assessments, and valuations will **not** be eligible for funding in the 2018-2019 grant cycle.

Water Storage

Examples of water storage that are eligible for grant funding include:

- *Surface storage*: Depressions in the land surface can be utilized or created to serve as surface storage reservoirs or ponds. Streamflow (when available) or other water sources can be diverted to the reservoir for later release to enhance streamflow during low flow periods. The reservoir can be lined to prevent seepage loss and allow the maximum retention of stored water (minus evaporative loss). Alternatively, a pond could be unlined, to allow the release of water through the bed of the pond into the subsurface and ultimately recharge the shallow aquifer. This would increase instream baseflow by increasing groundwater discharge back to connected surface water sources.

  Storage projects such as reservoirs constructed by damming a canyon to take advantage of natural topography are not likely to receive funding given their significant environmental footprint and controversial nature.

- *Managed aquifer recharge*: Managed aquifer recharge (MAR) is the purposeful recharge of water to aquifers for eventual groundwater discharge to benefit streamflows. For example, shallow spreading basins excavated into the landscape to expose the top of the permeable gravel material (which makes up the matrix of the water table aquifer) can be filled with diverted surface water, when it is available. This water can then percolate into the subsurface, eventually reaching the groundwater table. This extra recharged water can flow downgradient, augmenting the naturally occurring groundwater. Eventually, this groundwater can then re-emerge as instream baseflow in connected surface water sources. Another option is to use an infiltration gallery, which is a buried structure with horizontally placed perforated plastic pipe installed in porous material to expedite the transfer of water to the shallow aquifer.

  MAR sites require a significant investment in water quality testing to ensure groundwater quality is not degraded pursuant to WAC 173-200, Water Quality Standards for Groundwater of the State of Washington. Certain aspects of MAR projects may fall under the jurisdiction of WAC 173-218, Underground Injection Control Program rules also designed to protect groundwater quality. Also, water with surface water continuity should not exceed surface water quality standards.

- *Infiltration ponds*: An infiltration pond is a shallow artificial depression that is designed to infiltrate water through permeable soils into the shallow aquifer.

- *Cisterns*: A cistern is a waterproof receptacle for holding water. They have historically been built to catch and store rainwater. Below ground cisterns are distinguished from wells by their waterproof linings.

Applicants proposing water storage projects must:

- Identify the source of water for storage.
- Demonstrate how water will be managed and maintained to offset the impacts of new consumptive domestic permit exempt well uses.
- Document how the project will acquire and maintain all necessary permits.
- Document how water quality standards and aquatic species will not be negatively effected.

Altered Water Management or Infrastructure

Water management improvements involve changes in how and when water is used. Eligible water conservation and efficiency projects must provide permanent streamflow benefits.

To be eligible, projects that save water - such as conservation, irrigation efficiencies, or market reallocation - must occur in tandem with changes that ensure saved water will benefit stream flow during critical flow periods. An example of an eligible water conservation project would be one that occurs in conjunction with retirement of a portion of a valid water right.

Examples of other potentially eligible types of infrastructure or water management projects include:

- Source switches: includes moving a surface water diversion from fish-critical tributaries to mainstem rivers or wells.
- Streamflow re-timing: includes projects that modify the date or season when water is withdrawn or diverted in order to improve flow conditions during times of critical low flow.
- Infrastructure improvements that conserve water. Examples include but are not limited to:
    - Diversion modification
    - Lining and piping
    - Sprinkler conversion
- Stream augmentation: e.g., pumping water upstream or from a deep aquifer to increase streamflow.

Applicants proposing altered water management or infrastructure projects must:

- Identify the source of water for the project.
- Identify how the project will provide stream benefits.
- Demonstrate how the project will be managed and maintained to permanently improve stream flows.
- Document how the project will acquire and maintain all necessary permits.
- Document how water quality standards and aquatic species will not be negatively affected.

Funding is not available for projects that are otherwise obligated under statute.

Riparian and Fish Habitat Improvement

Although riparian and stream habitat improvements without direct and measurable stream flow benefits are a lower priority for funding, ESSB 6091 provides that they are eligible under the grant program. Applicants must clearly identify how the projects will improve instream resources and include quantitative and/or qualitative estimates of the benefit provided. Proposed riparian and fish habitat improvement projects must provide: metrics for project success; plans for monitoring; commitments to long-term maintenance; and, contingency plans in the event the project fails to provide the proposed benefit in perpetuity. Projects that do not have adequate assurances for on-going project benefits are ineligible for funding.

Potentially eligible projects include:

- *Channel habitat improvements*: This type of project improves stream conditions without increasing stream flow. Examples include streambank restoration, gravel and woody structure augmentation, and channel remeandering.
- *Riparian restoration:* Riparian planting to replace invasive species with native vegetation, increasing shading and food sources; livestock exclusion fencing; removing creosoted wood and garbage; reducing impervious surfaces.
- *Strategic land acquisition*: Acquisitions, conversions, or easements should be associated with improving stream conditions such as protecting stream banks, promoting a healthy riparian corridor, and preserving an area against future development.
- *Levee modification*: Levee setback projects are the most common, but any modification that improves stream conditions, such as increased shading, will be considered.
- *Floodplain modification*: Healthy floodplains provide numerous ecological benefits such as juvenile rearing, high flow refuge, and increased species diversity. These projects may provide streamflow benefits by elevating the water table.
- *Fish passage*: Removing or modifying barriers to allow fish passage is helpful when it increases the range of salmonid access. Removing an upstream barrier when downstream barriers still exist is not eligible for funding under this grant funding opportunity. In addition, culvert replacement required by law, ordinance, or court order is not eligible for grant funding.
- *Beaver introduction*: Beaver dams increase channel complexity, species diversity, and salmonid rearing habitat. These projects may provide streamflow benefits by elevating the water table, which improves baseflow conditions.

Applicants proposing riparian and fish habitat projects must:

- Demonstrate how the project will be managed to ensure streamflow benefits persist over time.
- Document how the project will acquire and maintain all necessary permits.
- Document how water quality standards and aquatic species will not be negatively affected.

Chapter 4: Applying for Funding

The Funding Cycle

The state fiscal year 2019 application cycle is planned to begin in September 2018. Applications will be accepted for a minimum of 30 days. Ecology will review and rank the applications based on the ranking guidelines. Additional assessment may occur, including on-site field evaluations and consultations with other agencies or entities.

A prioritized list of the top ranked eligible projects will be developed by Ecology. A courtesy copy of the draft list of projects to be funded will be provided to the Governor's Office of Financial Management, appropriate legislative commitees and tribes. Development of agreements with grant recipients will begin in late 2018/early 2019.

How to Apply

The Application

Applicants submit applications for funding through the Ecology Administration of Grants and Loans (EAGL) system. The funding application is available by going to https://ecology.wa.gov/About-us/How-we-operate/Grants-loans and following the instructions. Once in the EAGL system, applicants can access the funding application and an EAGL User's Manual that provides instructions on accessing and using the system.

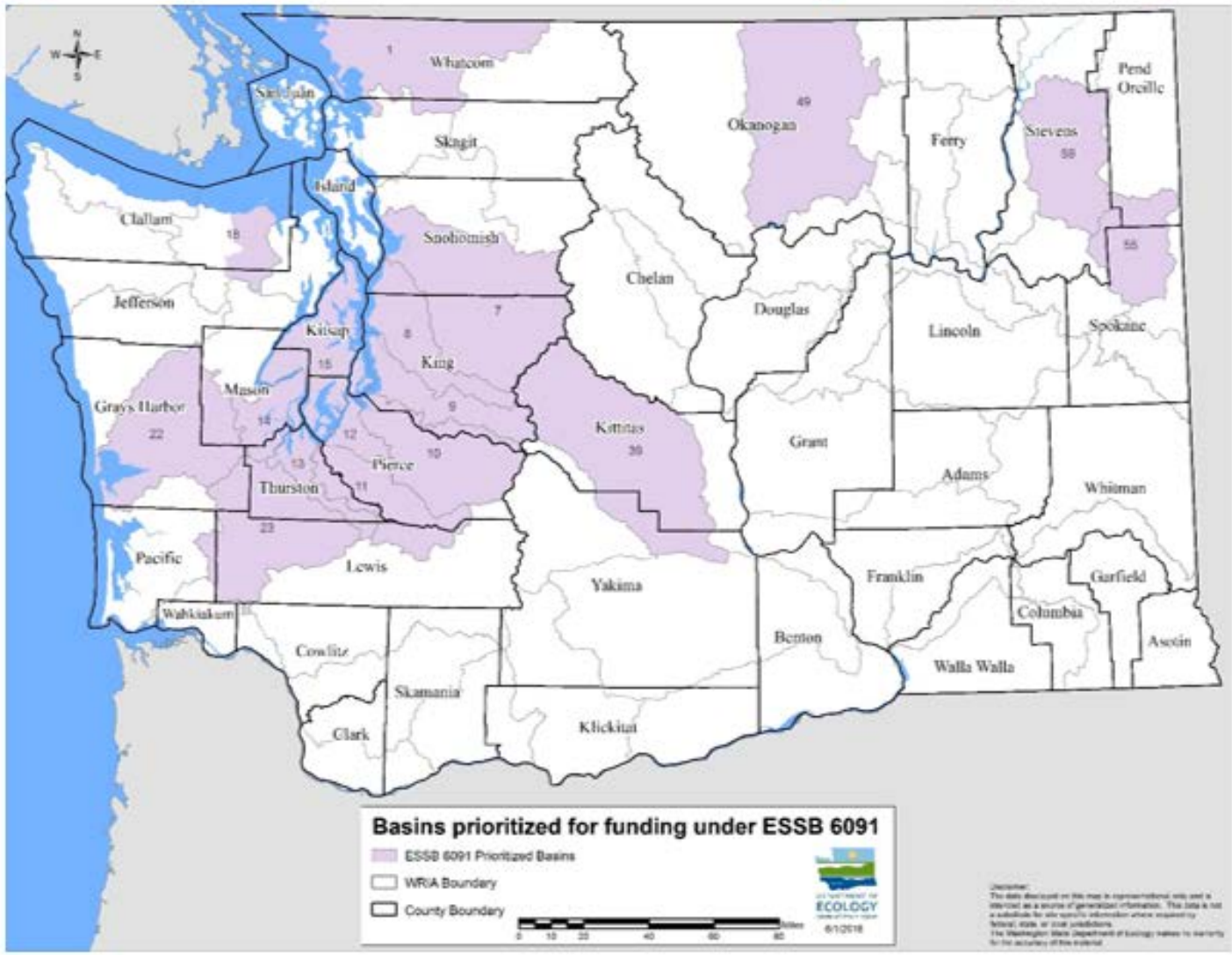
All applications must be submitted by 5:00 pm on **October 31, 2018**.

Appendix B: Department of Ecology Regional Offices

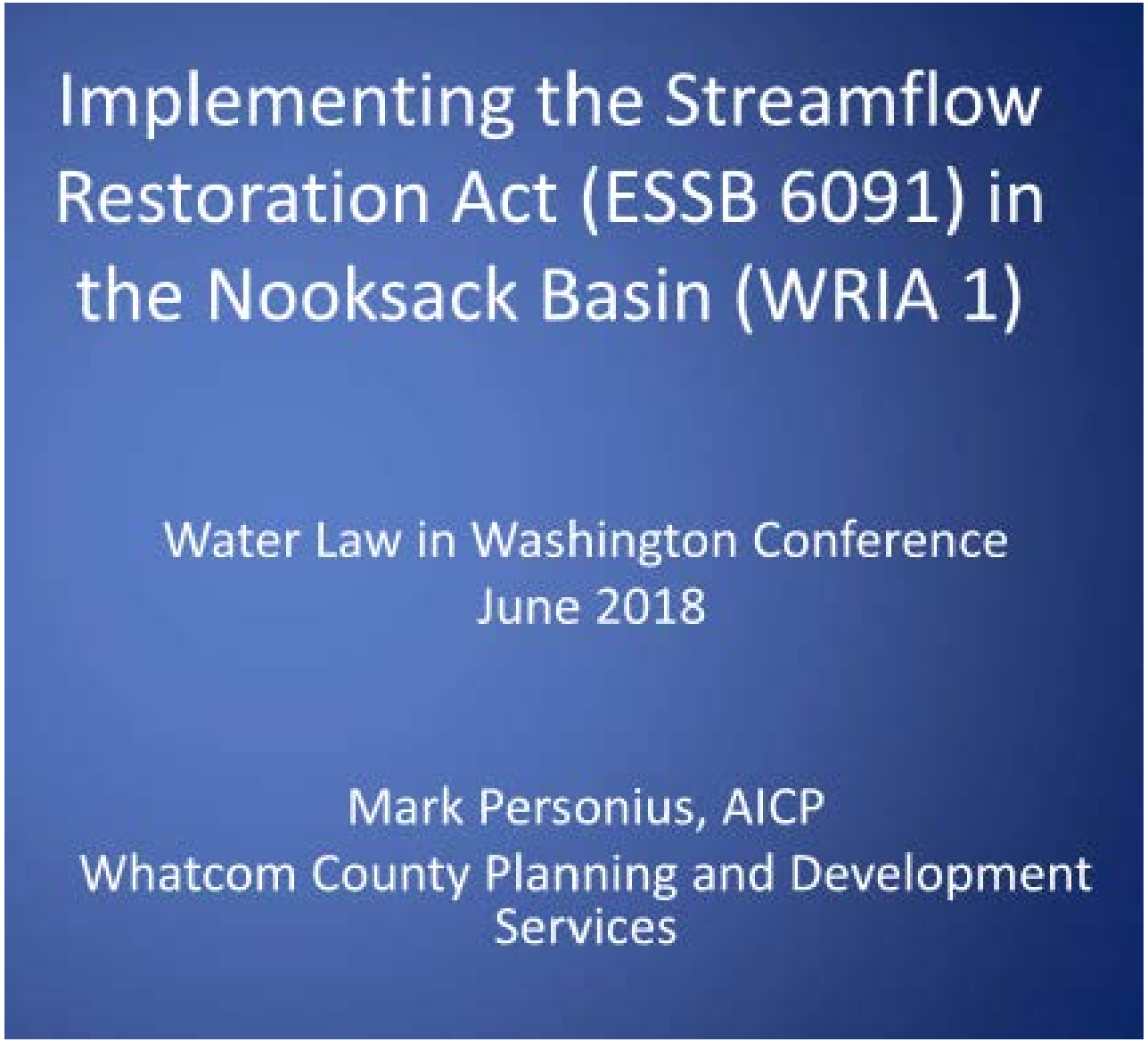
Map of Counties Served

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	3190 160th Ave SE Bellevue, WA 98008	425-649-7000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400

Appendix C: Water Resource Inventory Areas (WRIAs)



Some Initial Watershed Planning Unit Efforts in WRIA 1 – Nooksack Watershed



20-Year Growth Projections

- Define Nine (9) Aggregated Sub-basins in WRIA 1
- 20-year growth projections consistent with adopted GMA Comp Plan non-UGA growth rate (1.6%)
- Analyze 20-year distribution of non-UGA housing unit growth served by public water systems vs. permit exempt wells in each sub-basin
- Allocate 20-year non-UGA projected growth to the 9 sub-basins
- Estimate and subtract out projected non-UGA population growth expected to use public water supplies in each basin
- Convert remaining projected permit exempt domestic withdrawal dependent non-UGA growth to households and connections

20-Year Consumptive Use Projections

- Calculate average outdoor domestic water use
  - Sample GIS analysis of (non-commercial) outdoor (lawn and garden) irrigation per house
- Develop six (6) consumptive water use scenarios
  - Minimum/Maximum indoor/outdoor use scenarios
- Calculate consumptive use for 20-year projection by sub-basin using Ecology guidance
  - 10% indoor/80% outdoor use consumptive

Identifying Potential Watershed Improvement Actions & Projects

- ✓ Brainstorming
- ✓ Ecology Workshop with Planning Unit
- ❑ Criteria for Evaluation
  - Priority Hierarchy *(Section 202(4b))*
  - Planning Level Cost/Benefit
- ❑ Selection

Proposed Solutions to Date....

- *Revisit 1985 ISF Rule*
- *Increase monitoring/stream gaging*
- *Floodplain restoration*
- *In-channel storage*
- *Off-channel storage & high flow/flood management (aquifer recharge)*
- *Outdoor water use efficiency*
- *Metering*
- *Water markets/banks/exchanges*
- *Focus growth near existing public water systems*
- *Convert surface water withdrawals to groundwater*
- *Streamflow augmentation*
- *Deep aquifer exploration*
- *Consider municipal water rights for mitigation source*
- *Extend piped water for public delivery or low flow stream augmentation*

Low Flow Stream Augmentation (Bertrand Creek)

Figure 13 - Photo of the completed expansion of the Locher Road site's main recharge basin, December 2011.

Figure 14 - Photo of the Locher Road site operating during the 2011-2012 recharge season.

Using old gravel pit for surface water storage & groundwater recharge (Walla Walla)

Some Examples of Streamflow Restoration Actions

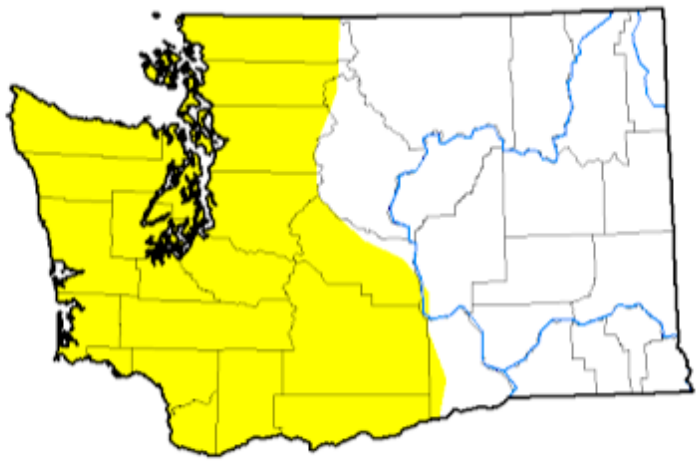
Challenges Ahead

- Process….
- Timing….
- Achieving Consensus….
- Funding and Implementation….
- Permitting….
- GMA Compliance….
- Public vs. Private Water Supply Policies….
- Monitoring & Adaptive Management….

Curtailment Updates

U.S. Drought Monitor

Washington



June 12, 2018

(Released Thursday, Jun. 14, 2018)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	50.36	49.64	0.00	0.00	0.00	0.00
Last Week 06-05-2018	72.86	27.14	0.00	0.00	0.00	0.00
3 Months Ago 03-13-2018	88.28	11.72	0.00	0.00	0.00	0.00
Start of Calendar Year 01-02-2018	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 09-26-2017	4.97	95.03	63.66	0.00	0.00	0.00
One Year Ago 06-13-2017	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

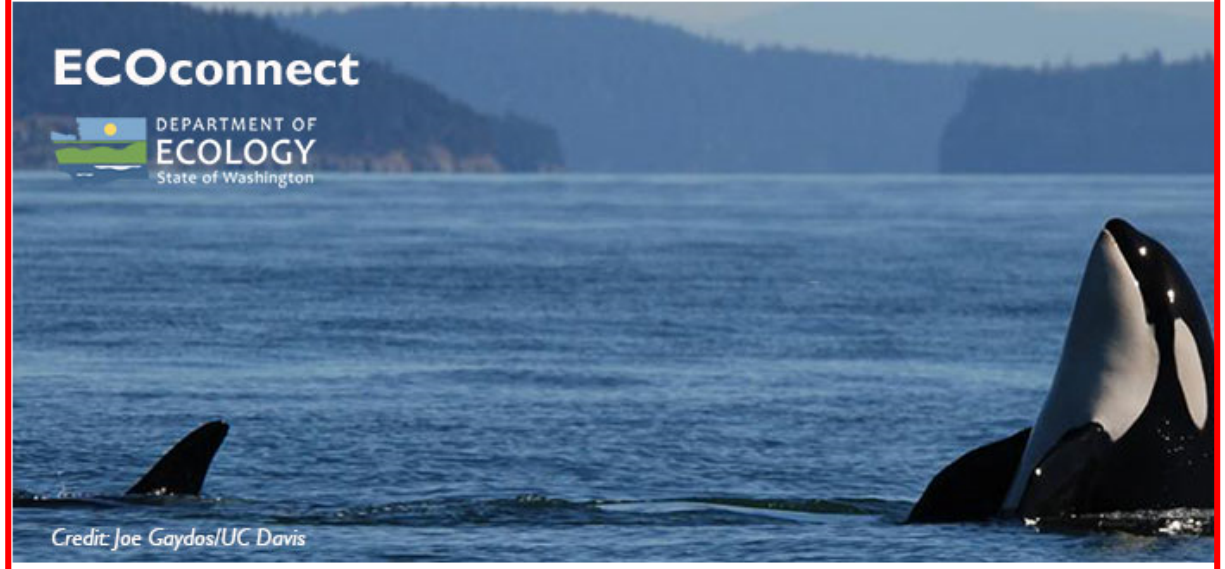
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Brian Fuchs

National Drought Mitigation Center

http://droughtmonitor.unl.edu/



Thursday, June 7, 2018

Curtailments come to the Chehalis River basin

Notice applies to outdoor water use only—mostly irrigation

After an unseasonably warm and dry May, we have notified 93 junior water right holders in the Chehalis River basin that their access to surface water for irrigation is curtailed until streamflows increase in the state's second largest watershed and drainage basin.

The curtailment notice affects junior water right holders.

The water users have rights that are junior to (younger than) the 1976 instream flows set by state rule for the basin. Those junior water right holders need to stop diverting water from the Chehalis, Newaukum, Satsop, and Wynoochee rivers when flows are not being met to keep the water in the stream. We sent notification letters to the 93 junior water right holders on May 31.

This is the fourth consecutive year we have issued curtailment orders or notices for junior surface water irrigation uses in the Chehalis basin to comply with the regulation requirements. The curtailment notice does not apply to indoor water use or water for livestock.

As we've done in prior years, our staff will periodically visit the basin and are available to answer questions in person, by telephone, or email.

Check our website to see if instream flows are being met:

- Lower Chehalis watershed
- Upper Chehalis watershed

Unusual May weather

The Chehalis basin receives most of its runoff from rain, with some minor contributions from snowpack at higher elevations in headwater streams in the southern Olympic Mountains. Streamflows in the basin are lower than normal for this time of year. It's been warm and dry in the Chehalis River basin and there is little melting snow left to compensate for the tightening water supply.

Instream flows protect rivers

The Newaukum River

We are required by law to protect senior water right users and adopted streamflows for rivers and streams to make sure there is enough water to meet the needs of people, farms, and fish. One of the most effective tools for protecting streamflows is to set instream flows, which are flow levels adopted into rule.

An instream flow rule was established in 1976 for Chehalis basin streams. Since then, newer water rights have been issued that are junior to the flow rule. When flows drop below the adopted levels, junior water rights (those established after the instream flow rule was adopted into law) can be temporarily interrupted in an effort to keep the protected amount of water in the stream. This means junior water rights are curtailed from withdrawing water until streamflows rise above the established flow levels.

Thursday, June 21, 2018

Water supply update: Yakima Basin

Lack of spring rain puts irrigators on storage, other users shut off

What a difference one month can make.

Last time we blogged about our statewide water picture in February, we discussed Winter Storm Oliver's benefits to the Cascade snowpack. That storm dumped enough snow to close mountain passes and eased tensions we expressed in our Jan. 19, 2017 blog post, when we reported about unseasonably warm temperatures for November and December 2017.

Then there was May—when a warm and dry streak produced ultra-high snowpack runoff. Much of Western Washington and the Yakima River Basin are abnormally dry, as can be seen in this United States Drought monitor map of Washington. Already, water uses have been curtailed in the Chehalis River Basin.

In April, water managers announced a 100 percent water supply for Yakima irrigators this season. They optimistically predicted all water users were set.

That changed on June 11, when the U.S. Bureau of Reclamation began to rely on stored water at its five Cascade reservoirs.

Cle Elum dam provides stored water for irrigators in the Yakima River Basin

They also announced that junior irrigation districts like Roza and Kittitas Reclamation and others will receive at best 96 percent of their water allocation -- an amount that could worsen as the season progresses.

Because of this forecast, 300 more-junior water right holders along the Yakima River and its many tributaries are now shut off by court order. These users—with priority dates *after* May 10, 1905, as a group—are part of an adjudicated water basin that controls when surface water may be diverted.

What happened?

While reservoirs have been filling because of good snowfall, snowpack alone can't maintain an adequate water supply. Spring rains are needed to supplement supplies.

Since February, we've seen only modest precipitation in the Yakima Valley. The unseasonably warm, dry—and in some areas, record-breaking May—shows how a single month can turn things askew.