



## Washington State Legislature

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### Joint Legislative Task Force on Water Resource Mitigation

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November 22, 2019

Dear Secretary of the Senate and Chief Clerk of the House of Representatives:

As the co-chairs of the Joint Legislative Task Force on Water Resource Mitigation, we are pleased to notify you that the Task Force has approved the attached report to the Legislature due November 15, 2019.

This report reflects the work of the Task Force to date. Because the water resource mitigation pilot projects, the purpose of which is to inform the Task Force process, are moving more slowly than originally anticipated, the Task Force is not in a position to make recommendations that could lead to legislation at this point.

Work will continue next year in order to develop recommendations for legislation the following year.

Sincerely,

A handwritten signature in blue ink, reading "Judy Warnick", written over a horizontal line.

Senator Judy Warnick, Co-Chair  
13th Legislative District

A handwritten signature in blue ink, reading "Steve Tharinger", written over a horizontal line.

Representative Steve Tharinger, Co-Chair  
24th Legislative District

Cc: Members of the Washington State Legislature  
Non-legislative members of the Joint Legislative Task Force on Water Resource Mitigation  
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# JOINT LEGISLATIVE TASK FORCE ON WATER RESOURCE MITIGATION REPORT

November 22, 2019

## MEMBERS

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Representative Steve Tharinger, Co-Chair  
Senator Judy Warnick, Co-Chair  
Representative Joe Fitzgibbon  
Senator Jim Honeyford  
Senator Marko Liias  
Representative Jacquelin Maycumber  
Senator Kevin Van De Wege  
Representative Jim Walsh  
Carla Carlson, Northwest Indian Fisheries Commission Representative  
Dave Christensen, Department of Ecology  
Michael Garrity, Department of Fish & Wildlife  
Bob Hunter, Municipal Water Purveyors Representative  
Sarah Mack, Business Interests Representative  
Lisa Pelly, Environmental Advocacy Organizations Representative  
Carl Schroeder, Washington Cities Representative  
Evan Sheffels, Department of Agriculture  
Jeff Slothower, Farming Industry Representative  
Bruce Wishart, Environmental Advocacy Organizations Representative

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## Introduction

In 2018, the Legislature created the Joint Task Force on Water Resource Mitigation (Task Force) as a part of Engrossed Substitute Senate Bill No. 6091, Sec. 301. The Legislature directed the Task Force to review the treatment of surface water and groundwater appropriations as they relate to instream flows and fish habitat, and to recommend a mitigation sequencing process and scoring system to address such appropriations. The Legislature also directed the Task Force to review the Washington Supreme Court decision in *Foster v. Department of Ecology*, 184 Wn.2d 465, 362 P.3d 959 (2015).

This report describes the formation and activities of the Task Force, the water mitigation pilot projects authorized by ESSB 6091, and challenges the Task Force faced in developing recommendations based on the progress of the pilot projects.

## Overview of Task Force

### Task Force Charge

The Legislature directed the Task Force to review the treatment of surface water and groundwater appropriations as they relate to instream flows and fish habitat, to develop and recommend a mitigation sequencing process and scoring system to address such appropriations, and to review the Washington Supreme Court decision in *Foster v. Department of Ecology*. Additionally, the Legislature directed the Task Force to submit recommendations to the Legislature by November 15, 2019. Minority recommendations supported by at least five Task Force members may be submitted.

### Composition and Membership

The enabling legislation called for two members each from the largest caucuses of the Senate and House of Representatives, appointed by the President of the Senate and Speaker of the House, respectively; one representative each from the departments of Ecology (Ecology), Fish and Wildlife (WDFW), and Agriculture, appointed by the respective agency directors; and several members appointed by consensus of the Task Force co-chairs representing a variety of interested parties. Those interested parties include the farming industry, cities, municipal water purveyors, business interests, environmental organizations, and two federally recognized Indian tribes, one invited by recommendation of the Northwest Indian Fisheries Commission and the other invited by recommendation of the Columbia River Intertribal Fish Commission. The state agency representatives are not eligible to vote on Task Force recommendations.

The Task Force consists of the following members:

- Representative Steve Tharinger (D), Co-Chair
- Senator Judy Warnick (R), Co-Chair
- Representative Joe Fitzgibbon, (D)
- Senator Jim Honeyford (R)
- Senator Marko Liias (D)
- Representative Jacquelin Maycumber (R)
- Senator Kevin Van De Wege (D)
- Representative Jim Walsh (R)
- Carla Carlson, representing Northwest Indian Fisheries Commission\*\*
- Dave Christensen, Department of Ecology\*
- Michael Garrity, Department of Fish and Wildlife\*
- Bob Hunter, representing municipal water purveyors
- Sarah Mack, representing business interests

- Lisa Pelly, representing an environmental advocacy organization
- Carl Schroeder, representing Washington cities
- Evan Sheffels, Department of Agriculture\*
- Jeff Slothower, representing the farming industry
- Bruce Wishart, representing an environmental advocacy organization

\*Non-voting member.

\*\*Participating as a non-voting member.

## Updates Resulting from 2019 legislation

Legislation enacted in 2019 made several adjustments to the Task Force and related provisions. First, any position on the Task Force left vacant does not count towards a quorum.<sup>1</sup> Second, the Task Force expiration date was extended to December 31, 2020, and, if determined appropriate by a majority of the members, the Task Force may update its 2019 recommendations by November 15, 2020, based on additional information generated from the pilot projects.<sup>2</sup> Additionally, Ecology was directed to provide an update on the mitigation plans for each of the pilot projects based on additional information developed after the initial report in November 2018.<sup>3</sup>

## Summary of *Foster v. Ecology*

### Introduction

On October 5, 2015, the Washington State Supreme Court issued its ruling in *Foster v. Department of Ecology*, 184 Wn.2d 465, 362 P.3d 959 (2015). The Supreme Court in *Foster* held that Ecology improperly used the "overriding consideration of public interest" (OCPI) exception to approve a water right permit by the City of Yelm, reversing decisions of both the Thurston County Superior Court and Pollution Control Hearings Board (PCHB). According to the Supreme Court, the prior appropriation doctrine does not allow for any impairment, even de minimis impairment, of senior water rights, in accordance with the Court's earlier decision in *Postema v. Pollution Control Hearings Board*, 142 Wn.2d 68, 11 P.3d 726 (2000). Accordingly, out-of-kind mitigation may not be used to remedy impairments to senior water rights, and the OCPI exception may only be used to offset temporary impairment of minimum flows.

### City of Yelm Municipal Water Permit

Due to its growing population, the City of Yelm applied to Ecology for a new municipal water permit to meet its increasing water needs. Both Ecology and the City of Yelm acknowledged that minimum flows would be impacted even with the mitigation plan, with Ecology asserting that the plan would still result in a net ecological benefit despite the net loss of water. Ecology conditioned the permit on a mitigation plan that included several strategies using both in-kind and out-of-kind mitigation, to account for the impairments to minimum flows that would result from the new water uses. Ecology generally may not issue a water right permit for any use of water that would result in withdrawals that impair minimum flows, unless "it is clear that overriding considerations of public interest [OCPI] will be served."<sup>4</sup> Ecology approved the permit under the OCPI exception based on a determination that water was available for appropriation for a beneficial use, and that appropriation would not impair existing water rights or be

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<sup>1</sup> Chapter 413, Laws of 2019, Sec. 7305 (3) (Substitute House Bill No. 1102)

<sup>2</sup> Chapter 413, Laws of 2019, Sec. 7305 (8)(a) (Substitute House Bill No. 1102)

<sup>3</sup> Chapter 413, Laws of 2019, Sec. 7305 (13) (Substitute House Bill No. 1102)

<sup>4</sup> RCW 90.54.020(a)

detrimental to the public welfare.

The City of Yelm permit was first appealed to the PCHB, which ruled in favor of Ecology and approved the permit. Although the PCHB found that Ecology's three-step test was not sufficiently stringent, the PCHB concluded that Ecology's analysis still met the statutory OCPI exception standards, properly considered all impacts to minimum flows, and mitigated impacts in ways that would clearly benefit fish and wildlife habitat and outweigh any negative impacts of minimum flow impairment. The PCHB's decision was appealed to Thurston County Superior Court, which affirmed the PCHB's decision, and the Supreme Court granted direct review of the Superior Court's decision.

### Supreme Court Analysis

After noting the similarities to *Swinomish Indian Tribal Community v. Department of Ecology*, 178 Wn.2d 571, 311 P.3d 6 (2013), the Supreme Court in *Foster* held that Ecology had exceeded its authority in granting the City of Yelm's permit under the OCPI exception, finding that: (1) the OCPI exception only permits temporary impairment of minimum flows; (2) municipal water needs do not qualify as "exceptional circumstances" needed to apply the OCPI exception; and (3) a mitigation plan may not use ecological benefit to correct impairment to a senior water right. The Supreme Court also upheld the standard established in *Postema*, finding even de minimis impairment to a senior water right to be a violation of the water code. In its analysis, the Supreme Court assumed the Legislature did not intend to use the terms "withdrawal" and "appropriation" synonymously in the water code. Accordingly, the Court concluded that the Legislature uses the term "appropriation" when assigning a permanent legal water right, and "withdrawal" when it intends to refer to a temporary use or diversion of water. A three-Justice minority of the Court dissented, disagreeing with both the majority's interpretation of the word "withdrawal" to mean a temporary use or diversion of water, and with the comparison of *Foster* to *Swinomish*, stating that the PCHB correctly had applied the law and that the permit and accompanying mitigation plan should be upheld.

### Water Resource Mitigation Pilot Projects

Engrossed Substitute Senate Bill 6091 required Ecology to issue permit decisions for up to five water resource mitigation pilot projects. The purposes of the pilot projects are (1) to inform the Task Force process created by ESSB 6091 and (2) to enable the processing of water right applications that address water supply needs.

Ecology is authorized to issue water right permits in reliance upon water resource mitigation of impacts to instream flows and closed surface water bodies under the following mitigation sequence:

- Avoiding impacts by complying with mitigation required by adopted rules that set forth minimum flows, levels or closures, or making the water diversion or withdrawal subject to the applicable minimum flows or levels;
- Where avoidance of impacts is not reasonably attainable, minimizing impacts by providing new or existing trust water rights or through other types of replacement water supply resulting in no net annual increase in the quantity of water diverted or withdrawn from the stream or surface water body and no net detrimental impacts to fish and related aquatic resources; or
- Where avoidance and minimization are not reasonably attainable, compensating for impacts by providing net ecological benefits to fish and related aquatic resources in the WRIA through in-kind or out-of-kind mitigation or a combination thereof, that improves function and productivity of affected fish populations and related aquatic habitat. Out-of-kind mitigation may include

instream or out-of-stream measures that provide a net ecological benefit to existing water quality, riparian habitat, or other instream functions and values for which minimum instream flows or closures were established in that WRIA.

Ecology must monitor the implementation of these pilot projects, including all related mitigation, at least annually through the end of 2028.

Engrossed Substitute Senate Bill 6091 set forth criteria for eligible pilot projects:

- A city operating a Group A water system in Kitsap County and Water Resource Inventory Area (WRIA) No. 15, with a population between 13,000 and 14,000;
- A city operating a Group A water system in Pierce County and WRIA No. 10 with a population between 9,500 and 10,500;
- A city operating a Group A water system in Thurston County and WRIA No. 11, with a population between 8,500 and 9,500;
- A nonprofit mutual water system operating a Group A water system in Pierce County and WRIA No. 12, with between 10,500 and 11,500 service connections; and
- An irrigation district located in Whatcom County and WRIA No. 1, solely for the purpose of processing changes of water rights from surface water to groundwater, and implementing flow augmentation to benefit instream flows.

Water right applicants eligible to be processed as pilot projects under ESSB 6091 were required to notify Ecology of their interest in participating in the pilot program by July 1, 2018. Five water right applicants that met the eligibility criteria submitted applications to Ecology of their interest by that date:

- City of Port Orchard;
- City of Sumner;
- City of Yelm;
- Spanaway Water Company; and
- Ag Water Board of Whatcom County.

Once pilot project applicants notified Ecology of their interest, applicants then worked to develop a proposed mitigation strategy in accordance with the avoid-minimize-compensate sequence established by ESSB 6091. The development of proposed mitigation strategies is underway as of the date of this report.

Once mitigation strategies have been developed, applicants will submit a draft Report of Examination (ROE) to Ecology. Ecology will review each ROE and make it available to the public for a 30-day comment period. At the end of the public comment period, modifications to the ROE will be made if needed. Ecology will then issue a final decision on the ROE, which will be made available for a 45-day public comment period.

As required in ESSB 6091, Ecology provided the Task Force with information on conceptual mitigation plans for each pilot projects by November 15, 2018. A description of the conceptual mitigation plans for the five pilot projects is located on the Task Force webpage at <http://leg.wa.gov/JointCommittees/WRM/Documents/EcologyConceptualMitigationPlans.pdf>.

Engrossed Substitute Senate Bill 6091 requires Ecology to expedite processing of applications for water

resource mitigation pilot projects in order to ensure that the processing of pilot projects could inform the task force process in a timely manner. ESSB 6091 also requires each pilot project applicant to reimburse Ecology for Ecology's costs of processing its application.

As of September 2019, the timeline by which each pilot project applicant is projected to submit its draft ROE to Ecology is:

- City of Yelm: late 2019
- City of Sumner: early-mid 2020
- Spanaway Water Company: mid-late 2020
- City of Port Orchard: mid-late 2020
- Ag Water Board of Whatcom County: in 2020

## Ecology's Net Ecological Benefit Guidance

### Introduction

Engrossed Substitute Senate Bill 6091 directed Ecology to conduct a Net Ecological Benefit (NEB) analysis in three instances: when evaluating updates to existing watershed plans in accordance with Section 202 of ESSB 6091; when evaluating new watershed restoration and enhancement plans in accordance with Section 203 of ESSB 6091; and, when issuing permit decisions for water resource mitigation pilot projects in accordance with Section 301 of ESSB 6091.

In the context of evaluating new and updated watershed plans, Ecology must determine that the actions identified in the plan, after accounting for new projected uses of water over the subsequent 20 years, will result in a NEB to instream resources within the applicable WRIA before the plan may be adopted. In the context of evaluating water resource mitigation pilot projects, in the event that the impacts of a pilot project cannot reasonably be avoided or minimized, the pilot project must compensate for its impacts by providing NEB to fish and related aquatic resources in the WRIA.

Ecology has determined that NEB is not a term that has been defined in the natural sciences. Accordingly, Ecology has prepared interpretive guidance to define and evaluate NEB. Ecology issued interim NEB guidance in June 2018, and issued final guidance, titled "Final Guidance for Determining Net Ecological Benefit", Ecology Publication No. 19-11-079, in July 2019 (NEB Final Guidance). Ecology intends its NEB Final Guidance to apply to its review of future watershed plans, and to its review of updates to watershed plans, generated pursuant to ESSB 6091. The NEB Final Guidance is also intended to guide Ecology's review of water resource mitigation pilot projects authorized by ESSB 6091. As part of its preparation of the NEB Final Guidance, Ecology consulted with the Water Research Center at Washington State University.

As part of its consultation, the Water Research Center produced "Technical Supplement: Determining Net Ecological Benefit" (NEB Technical Supplement), which appears as Appendix C to the NEB Final Guidance. This summary of NEB will provide an overview of Ecology's NEB Final Guidance as well as of the Water Research Center's NEB Technical Supplement.

## Use of NEB within ESSB 6091

### *Watershed Plans*

For one set of WRIAs, Section 202 of ESSB 6091 requires that existing watershed plans be updated according to certain parameters set forth in the legislation. For these WRIAs, prior to adoption of an

updated plan, Ecology must determine that the actions identified in the plan, after accounting for new projected uses of water over the subsequent 20 years, will result in a NEB to instream resources within the WRIA. The WRIAs subject to Section 202 are WRIA Nos. 1 (Nooksack), 11 (Nisqually), 22 (Lower Chehalis), 23 (Upper Chehalis), 49 (Okanogan), 55 (Little Spokane), and 59 (Colville).

For a second set of WRIAs, Section 203 of ESSB 6091 directs Ecology to prepare and adopt watershed restoration and enhancement plans for each WRIA, in collaboration with WRIA-specific watershed restoration and enhancement committees. Prior to adoption of a watershed restoration and enhancement plan for these WRIAs, Ecology must determine that the actions identified in the plan, after accounting for new projected uses of water over the subsequent 20 years, will result in a NEB to instream resources within the WRIA. The WRIAs subject to Section 203 are WRIA Nos. 7 (Snohomish), 8 (Cedar-Sammamish), 9 (Duwamish-Green), 10 (Puyallup-White), 12 (Chambers-Clover), 13 (Deschutes), 14 (Kennedy-Goldsborough), and 15 (Kitsap).

### *Water Resource Mitigation Pilot Projects*

As described earlier in this report, Section 301 of ESSB 6091 requires Ecology to issue permit decisions for up to five water resource mitigation pilot projects. Where avoidance and minimization of impacts is not possible, pilot projects may compensate for impacts by providing NEB to fish and related aquatic resources in the WRIA through in-kind or out-of-kind mitigation that improves the function and productivity of affected fish populations and related aquatic habitat.

### *Use of NEB in the Watershed Planning Process*

For purposes of implementing ESSB 6091, Ecology's NEB Final Guidance defines NEB as, "The outcome that is anticipated to occur through implementation of projects and actions in a plan to yield offsets that exceed impacts within: a) the planning horizon; and, b) the relevant WRIA boundary."

As required by ESSB 6091, planning groups will prepare watershed plans for the WRIAs subject to the planning requirements of ESSB 6091. These plans must include projects and actions designed to achieve NEB. Ecology's NEB Final Guidance indicates that these watershed plans should include "a clearly and systematically articulated NEB evaluation." Ecology's NEB Final Guidance indicates that Ecology will review a plan that includes a NEB evaluation "with considerable deference in light of the knowledge, insights, and expertise of the partners who influenced the preparation of their plan." In the event that a watershed plan does not include a NEB evaluation, or where the NEB evaluation does not meet the standards articulated in Ecology's NEB Final Guidance, Ecology indicates that it will review such a plan with "considerably less deference than plans that include NEB evaluations that meet the standards" described in the NEB Final Guidance.

According to Ecology's NEB Final Guidance, watershed plans must consider both the estimated quantity of new consumptive water use from domestic permit-exempt wells brought online during the 20-year planning horizon, as well as the geographic distribution of the new consumptive water uses. A plan's evaluation of impacts to instream resources resulting from new consumptive uses should consider impacts to fish habitat, impacts to fish and related aquatic species, impacts to ecosystem function, as well as whether streamflow, or streamflow-affected qualities such as temperature, are a limiting factor to salmon recovery in the WRIA.

The watershed plans must describe the projects that are proposed to be implemented in order to address new consumptive water uses and achieve NEB. Classes of such projects, as provided by Ecology

in the NEB Final Guidance, include water right acquisition projects, water offset projects that do not include the acquisition of water rights, and habitat and other related projects. Examples within this last category include floodplain restoration, instream habitat restoration, beaver reintroduction, beaver dam analogs, riparian or upland conservation practices, fish barrier removal, and reconnection of off-channel habitat.

In order to facilitate Ecology's review of watershed plans for compliance with the NEB requirement of ESSB 6091, Ecology's NEB Final Guidance recommends that planning groups consider the following steps in preparing their NEB evaluations:

- The NEB evaluation should include a comparison of total projected impact from new consumptive uses in the overall WRIA with the total water offset and other types of benefits produced by the projects planned for the overall WRIA;
- The NEB evaluation should then divide the projected impacts and planned benefits into the individual sub-basins that comprise the WRIA;
- Because ESSB 6091 requires not just that impacts from new consumptive uses be offset, but that NEB be achieved at the WRIA scale, Ecology's NEB Final Guidance next recommends that planning groups identify the projects and other actions that will provide additional benefits to instream resources beyond the minimum necessary to offset the impacts of new consumptive water uses; and
- The NEB evaluation should articulate the planning group's determination that the projects and other actions identified in the watershed plan do, or do not, achieve NEB.

### Use of NEB in Evaluating Water Resource Mitigation Pilot Projects Authorized by ESSB 6091

As described by Ecology's NEB Final Guidance, pilot projects must first demonstrate that water offset projects were not reasonably attainable. Pilot projects must then conduct a quantitative analysis of any negative impacts of the proposed water withdrawal, and compare those impacts to the pilot project's benefits to habitat and resources. In particular, pilot projects must quantify all consumptive use impacts to instream resources, and must similarly describe - by amount, location, and timing - all water that is being provided through water offset projects. The pilot projects must also describe, as quantitatively as possible, the benefits from proposed mitigation projects.

The NEB Final Guidance indicates that pilot project water permit applications and NEB analysis should address the following elements, among others:

- The analysis should include a documentation of institutional and other controls that will ensure that the mitigation will be fully implemented throughout the duration of the new water use;
- The analysis should include a monitoring and maintenance plan; and
- The analysis should include a contingency plan that describes the corrective actions to be taken if mitigation goals are not met.

### Washington State University Technical Supplement: Determining Net Ecological Benefit

In order to assist in the preparation of the NEB Final Guidance, Ecology consulted with the Water Research Center (WRC) at Washington State University. As part of that consultation, the WRC produced the NEB Technical Supplement, which is included as Appendix C to the NEB Final Guidance. The purpose of the NEB Technical Supplement is to supplement the NEB Final Guidance by providing technical support

for the ecological assessments that are a part of the NEB process. The NEB Technical Supplement is divided into three broad categories: identifying the steps in a NEB determination; describing the issues common to all NEB determination approaches; and, describing five different approaches to NEB determination.

### Identifying the Steps in a NEB Determination

Consistent with the NEB Final Guidance, the NEB Technical Supplement identifies four key parts in the NEB determination process. Broadly, these parts are: characterizing and quantifying potential impacts to instream resources from new domestic permit-exempt wells; describing individual offset projects; placing individual offset projects within the larger context of other existing plans and actions underway; and, describing and quantifying the NEB of the watershed plan.

#### *Characterize and quantify potential impacts to instream resources*

As required by ESSB 6091, watershed plans must evaluate potential impacts to instream resources. In particular, planning groups must identify changes in streamflow resulting from new consumptive use withdrawals as well as impacts to fish and fish habitat. Identification of impacts may include, for example, identifying reduced fish numbers, area of habitat lost, area of habitat permanently altered, and degree of alteration.

#### *Describe and evaluate individual offset projects*

Proposed offset projects should be described in detail, including details about design, implementation, and desired outcomes. Consistent with the prioritization set forth in ESSB 6091, projects should also be described according to whether they are in-time or out-of-time (that is, whether they offset consumptive uses at the same time the consumptive use is occurring, or at a different time), and whether they are in the same sub-basin as the consumptive use or a different sub-basin.

#### *Place individual projects within the larger context of existing plans and activities*

The NEB Technical Supplement acknowledges, as does the NEB Final Guidance, that habitat improvement projects may already be taking place in the WRIs subject to the watershed planning requirements of ESSB 6091, and that coordination with existing plans and projects is likely to yield a greater environmental benefit.

#### *Provide a narrative description and quantitative evaluation of the NEB of the plan*

The NEB Technical Supplement suggests that the evaluation of a watershed plan's NEB should include three broad areas. First, the evaluation should describe the benefits expected to be produced by offset projects. Second, the evaluation should address any uncertainty associated with the realization of those benefits, including the uncertainty in the magnitude of the benefit produced by the projects and the time scale by which the benefit is produced. Third, the evaluation should describe the management process and contingency measures that will be employed in the event the offset project does not produce the expected environmental benefits.

### Issues Common to all NEB Determination Approaches

The NEB Technical Supplement identifies four elements that any approach to NEB determination will need to include: monitoring; accuracy and precision; ecological context, scale, and critical flow periods; and, the basis for comparison of out-of-kind offsets for NEB determination.

### *Monitoring*

The NEB Technical Supplement notes that, given the uncertainties surrounding the forecasting of NEB, both as to impacts and as to benefits, ongoing monitoring will be a critical tool in the development of any watershed plan. In particular, monitoring of offset projects can identify whether or not performance targets are being met. By helping to identify the need for possible course corrections over the course of the 20-year planning horizon, monitoring is a critical tool in reducing the risk that a watershed plan will not result in NEB.

### *Accuracy and precision*

The NEB Technical Supplement notes, as does the NEB Final Guidance, that each watershed plan must characterize the areas of uncertainty in its assessment of impacts and benefits in the context of NEB evaluation. The NEB Technical Supplement divides uncertainty into two components: precision and accuracy, with precision defined as how close predictions or observations are to each other, and accuracy defined as how close a prediction is to the truth. The ideal model features both high accuracy and high precision, but the NEB Technical Supplement notes that this rarely happens in practice. Accordingly, the NEB Technical Supplement suggests that watershed plans be transparent about what choices and assumptions are made, and how and why, with regard to determinations of impacts and benefits.

### *Ecological context, scale, and critical flow periods*

The NEB Technical Supplement notes that the determination of the benefits that flow from a given project will depend not just on the project itself, but also on the ecological context in which the project exists - that is, elements like the location of the project, the type of stream reach in which the project is located, and the characteristics of the stream reach in which the project is located. Accordingly, the NEB Technical Supplement indicates that watershed planners must accurately describe the ecological context, scale, and any critical flow periods for any project site in order to facilitate an accurate NEB evaluation.

### *Basis for comparison for out-of-kind offsets for NEB determination*

The NEB Technical Supplement acknowledges that an inherent part of the NEB determination is the valuation and comparison of potentially different ecological attributes, at potentially different times and at potentially different locations. For example, the NEB Technical Supplement asks, how does one evaluate a project that augments the habitat for one salmonid species in one sub-basin against a loss of habitat for another species? The NEB Technical Supplement suggests that economic valuation models may be useful in addressing questions of relative value such as this.

## **Approaches to NEB Determination**

The NEB Technical Supplement suggests five possible approaches to NEB determination, and notes that the appropriate approach for any given watershed plan will depend on the different needs, opportunities, and constraints present in the WRIA for which the plan is prepared. The five approaches described in the Technical Supplement are:

- In-kind / in-place habitat replacement;
- Habitat function replacement;
- Habitat capacity for single species replacement;
- Fish abundance replacement; and
- Fish production replacement.

To assist watershed planners in identifying the appropriate approach for a given WRIA, the NEB Technical

Supplement provides a decision tree composed of a series of location-specific questions. Responses to these questions are intended to guide watershed planners to the most appropriate approach for their particular WRIA.

#### *In-kind / in-place habitat replacement*

The NEB Technical Supplement describes in-kind / in-place offset projects as the most simple offset mechanism because the equivalence of habitat for habitat is the most straight-forward. Because of the challenges associated with applying this approach at larger scales, the NEB Technical Supplement indicates that in-kind / in-place habitat replacements are most appropriate for smaller habitat units where there is not a conversion from one habitat type to another. The primary metric for in-kind habitat replacement is stream flow, commonly expressed in cubic feet per second. Calculation of environmental impact is achieved by measuring impacts from consumptive water use and then establishing appropriate offsets.

#### *Replacing habitat function*

The NEB Technical Supplement describes this approach as replacing the ecological function of certain habitat features with a different combination of features at different locations in order to provide the overall same ecological function. This approach may be appropriate, for example, where the habitat impacted by a new water withdrawal provides a non-critical ecological function and there is a desire to employ an offset that addresses a different ecological function that has been a limiting factor to salmonid recovery. One version of this approach is the Habitat Equivalency Analysis, which is used in other settings to determine the compensation for damages to natural resources resulting from events like oil discharges and ship groundings.

#### *Replacing habitat capacity for specific species*

The NEB Technical Supplement notes that there is generally good empirical evidence for the combinations of habitat features - for example, water depth, water velocity, substrate type, vegetation cover - preferred by various life-stages and species of fish. Adding up the available habitat features in a given stream reach and processing those features through a habitat capacity model allows scientists to estimate the potential fish-bearing capacity of that reach. According to the NEB Technical Supplement, these habitat capacity models allow the amount of available habitat area to serve as a comparable currency for determining both impact and offset.

#### *Replacing fish abundance*

According to the NEB Technical Supplement, under the fish abundance replacement approach, a determination of NEB is based on fish abundance in offset areas equaling or exceeding the abundance of fish lost from impact areas. Under this approach, NEB is determined in terms of the abundance of fish of the same type. The fish abundance replacement approach is similar to the habitat capacity replacement approach but is more complicated because it requires more detailed information on fish abundance at both the offset and impact locations. Additionally, the calculation of fish abundance becomes increasingly difficult as the size of the assessment area increases.

#### *Replacing fish production*

The fish production replacement approach consists of replacing lost fish production in impacted areas with equivalent or greater fish production in offset areas through the use of management actions designed to change population growth or mortality. It differs from the fish abundance replacement approach, among other ways, in that it examines overall fish production capacity, as opposed to the

abundance of fish of a certain type. According to the NEB Technical Supplement, this approach to NEB evaluation may be more appropriate when assessment units are large in size and diverse with respect to fish populations.

## Summary of Meetings

### June 13, 2018 Meeting

#### Meeting Agenda:

**1. Election of co-chairs.**

Representative Tharinger nominated Senator Warnick as co-chair and Senator Liias nominated Representative Tharinger as co-chair. They were elected unanimously.

**2. Briefing on task force.**

- Karen Epps, Senior Counsel, Senate Committee Services
- Rob Hatfield, Counsel, Office of Program Research

Staff provided background on the Task Force creation and purpose and a list of representatives to be appointed. Additionally, staff discussed the pilot projects outlined in the legislation that are designed to inform the Task Force process.

**3. Other business.**

The Task Force discussed the pilot projects, which are designed to provide a conceptual framework for what a mitigation sequence could look like for future projects. Ecology briefed the Task Force about its discussions with pilot project proponents.

**4. Public comment.**

The Task Force heard comments from the public.

Meeting materials are available on the Task Force webpage:

<https://app.leg.wa.gov/committeeschedules/Home/Documents/20333?//28559/01-01-2018/12-31-2018/Schedule///Bill/>

Audio recording is also available:

<http://media.avcaptureall.com/session.html?sessionId=ab97a8f9-2cdf-41ff-8c44-556e2281dde7&prefilter=44,79>

### June 22, 2018 Meeting

#### Meeting Agenda:

**1. Introduction of task force members.**

Legislative Task Force members introduced themselves and the legislative co-chairs introduced the representatives from the farming industry, cities, environmental advocacy organizations, municipal water purveyors, business interests, and state agencies.

**2. Briefing on the *Foster* Supreme Court decision.**

- Robin McPherson, Assistant Attorney General, Office of the Attorney General

The presentation included an overview of Washington water law and the *Foster* decision. In *Foster*, the PCHB developed a twelve-point list to consider when deciding if it was appropriate to impair base flows through the OCPI exception and upheld the City of Yelm's water permit because it felt OCPI was met. The Supreme Court acknowledged the NEB but held it was not sufficient to satisfy the OCPI exception, and that permanent water use cannot interfere with base flows.

### **3. Briefing on pilot projects.**

#### **a. Pilot project overview:**

- Dave Christensen, Program Development Manager, Water Resources Program, Washington Department of Ecology

The goal of the pilot project process is to have Ecology issue decisions for up to five water resource pilot projects. Ecology issued NEB interim guidance on June 20, 2018. Key components include describing all the impacts, describing any ecological impacts that are not offset in-place and in-kind, providing detailed hydrological analysis or conceptual models, providing monitoring and evaluation plans, and providing scientific sources and methods.

#### **b. Pilot project briefings:**

- Michael Grayum, City Administrator, and Grant Beck, Director, Public Works, City of Yelm

Under the permit application at issue in the *Foster* decision, Yelm developed a mitigation plan that included retiring irrigation water rights, but it did not cover certain periods in the spring and fall when irrigation water rights are not used. To address those periods, out-of-kind mitigation including wetlands restoration, channel restoration, bank stabilization, riparian buffer enhancement, off-channel habitat improvements, and upland restoration was proposed. As part of the pilot project process, Yelm is reviewing well logs for any potential water rights that could be available for purchase and then be retired to eliminate impacts. Yelm is also reviewing other methods of avoiding impacts, including aquifer storage and recovery and artificial recharge.

- Jason Van Gilder, Associate City Engineer, City of Sumner

Sumner built a new deep aquifer well as the most sustainable and environmentally responsible approach to address its water need. Although the city has been able to obtain a temporary water right to use this well as a point of withdrawal for its other water rights, Ecology's determination on the final water right has been delayed due to the *Foster* decision. Sumner is waiting for the completion of a United States Geological Survey (USGS) regional hydrogeologic model of groundwater in the Puyallup and White River Basins to use as part of its mitigation plan. Sumner has some water rights that can be used to address impacts, including irrigation rights from former agriculture operations and a contract to purchase mitigation water from Cascade Water Alliance. Sumner is also looking at ways to provide for a NEB to fish and related aquatic resources to mitigate anticipated impacts. Sumner has developed a conceptual habitat restoration plan through collaboration with the Puyallup Tribe, the Muckleshoot Tribe, and Pierce County. Sumner plans to restore approximately 161 acres of habitat along three miles of the White River.

- Jeff Johnson, Manager, Spanaway Water Company (SWC)

SWC plans to use the USGS groundwater model to determine surface water impacts of additional withdrawals, including the conversion of 2000 acre feet of non-additive rights to primary rights. SWC

will also provide mitigation to address in-time, in-kind, but not necessarily in-place, replacement mitigation water. Mitigation would be completed in areas with viable aquatic habitat for improving the salmonid fishery and related aquatic habitat. SWC is also looking at mitigation that could include acquiring and retiring existing rights, groundwater or streamflow augmentation, or possibly some out-of-kind measures. The 2019 model includes spring and seep flows which will better represent horizontal and vertical groundwater flows. SWC will consult with Ecology, WDFW, the Puyallup Tribe, the Nisqually Tribe, related fisheries and habitat biologists, and other interested stakeholders, and then prepare a draft ROE to be submitted to Ecology.

- Thomas Hunter, City Utility Manager, City of Port Orchard

Port Orchard's project is to replace two wells that are within the sea level aquifer with deeper wells that reach a deeper aquifer, resulting in reduced impacts on surface water. Port Orchard wants to drill into the deeper aquifer for several reasons, in part because it is the most sustainable and drilling into the deeper aquifer reduces the impact on surface water. The Kitsap Peninsula recently had a groundwater model completed by USGS and it is a good tool to look at impacts. There is value in piping mitigation lines to nearby creeks if it is reasonably attainable and if it is able to demonstrably minimize impacts. Port Orchard is consulting with Ecology, WDFW, and the Suquamish Tribe to identify the greatest habitat needs and benefits. Port Orchard is also working with a stakeholder group to develop a mitigation plan that provides NEB.

- Bill Clarke, Consultant, Ag Water Board of Whatcom County

The Ag Water Board of Whatcom County is a special purpose district formed under the irrigation district statutes. The Ag Water Board has been doing instream flow work for a number of years, but it stopped because of the *Foster* decision. The Ag Water Board's streamflow enhancement projects are designed to ensure agriculture has water for irrigation; to provide improved stream flows and fish habitat; to provide education and incentives to landowners; and, to create a path to legal water supply for farmers. These projects pull ground water system from a well, pump it to the creek, and discharge it into the creek. These projects increase the flows in Bertrand Creek and improve water quality when the stream is at its lowest and is most critical to fish habitat. When changing the point of diversion from a point in the stream to a groundwater source, there are changes to the timing of the return flows and there are changes to when the impact occurs to the streams or its tributaries. The goal of the Ag Water Board's project is to provide streamflow improvements without permanent loss of water rights.

#### **4. Discussion of task force mission, possible operating procedures, future meeting schedule.**

There was discussion about the importance of having tribal representatives on the Task Force. Operating procedures will be discussed at the next meeting. Task Force members are interested in touring mitigation sites.

#### **5. Public comment.**

The Task Force heard comments from the public related to tribal water rights.

Meeting materials are available on the Task Force webpage:

<https://app.leg.wa.gov/committeeschedules/Home/Documents/20334?//28559/01-01-2018/12-31-2018/Schedule///Bill/>

TVW broadcast is also available:

<https://www.tvw.org/watch/?eventID=2018061074>

## September 28, 2018 Meeting and Field Tour

### Meeting Agenda:

#### 1. Introductions.

Committee members, staff, and others introduced themselves.

#### 2. Discussion - committee procedures.

A motion to adopt the draft committee procedures passed unanimously.

#### 3. Groundwater modeling.

- Rick Dinicola, Associate Director, USGS, Washington Water Science Center

A presentation was given about building a numerical groundwater flow model in which the hydrologic framework is mapped. The USGS establishes a water-level monitoring network. The USGS then creates a model grid representing the real world with discrete volumes, boundary conditions that define allowable flows into and out of the model domain, and features that include streams, springs, rivers, and agricultural drains. The model specifies groundwater withdrawals from domestic wells, municipal wells, and irrigation wells. The USGS calibrates the model, adjusting model parameters to control how readily water flows or how much is stored. USGS is currently working on a Southeast Sound groundwater model that includes the lower Puyallup and Chambers-Clover basins. Additionally, USGS is constructing groundwater budgets for all lowland Puget Sound basins with a focus on all groundwater uses, considering population growth, urbanization, and climate change.

#### 4. Mitigation sequencing.

- Dan Haller, PE, CWRE, Principal Water Resources Engineer, Aspect Consulting, LLC

The presentation discussed mitigation sequencing that has been used in Eastern Washington, specifically in Twisp, Lake Roosevelt, Kittitas County, and Chelan County. The presentation raised questions for the Task Force to consider, including what criteria exist for avoidance. There was also discussion about what criteria might exist for minimization. Finally, there was discussion about what criteria might exist for compensation. The Task Force asked additional questions about these projects, including questions about co-management of the fisheries, conservation, and consumptive use impacts.

#### 5. Implementing and monitoring mitigation.

- Peter Dykstra, Partner, Plache & Carr, LLP

A presentation was given about monitoring instream flow restoration in which easements are granted to the restoration proponent for monitoring to ensure land is fallowed and infrastructure is not being used. Stream gauges are also used for monitoring water instream. Partnerships with Ecology, DFW, conservation districts, and others are needed to enforce out-of-priority withdrawals. Agricultural well mitigation also requires the use of stream gauges for monitoring water instream in critical reaches and metering of new wells to ensure that ongoing water use is within limits of mitigating water right and to help agricultural users provide evidence of development of their well

use. A mitigation approach for domestic well mitigation is more complex to develop because water is needed to mitigate much smaller uses over a much larger area and over a longer period of time. Domestic well mitigation must monitor the instream flow component of the mitigation program as well as the domestic use component of the program. Instream flow monitoring and metering of new wells would usually be necessary. When considering implementing out-of-kind mitigation, there are concepts that can be borrowed from the ecological restoration or mitigation banking world. Once proposed restoration is agreed, development of restoration construction plans and modeling the ecological uplift that will result is necessary, and then the proposed restoration must be documented in a mitigation banking instrument.

#### **6. Public comment.**

There were comments about allowing tribes to continue to work out any problems at the local level. It is important to make sure tribes are on board with a mitigation plan because if not, the project could end up in litigation. Tribes must be able to continue to work at the local level, in a government to government relationship, to address any issues.

#### **Field Tour Itinerary:**

1. The City of Yelm's reclaimed water infiltration facility at Cochrane Memorial Park in Yelm.
2. The Smith Ranch, located along the Deschutes River east of Yelm and the site of multiple mitigation projects.
3. McAllister wellfield, which has recently replaced McAllister Springs as one of the primary sources of drinking water for the City of Olympia, and also serves as a source of drinking water for the Nisqually Tribe.

Meeting materials are available on the Task Force webpage:

<https://app.leg.wa.gov/committeeschedules/Home/Documents/24604?//28559/01-01-2018/12-31-2018/Schedule///Bill/>

TVW broadcast is also available:

<https://www.tvw.org/watch/?eventID=2018091078>

#### **December 14, 2018 Meeting**

##### **Meeting Agenda:**

#### **1. Report on pilot projects.**

- Dave Christensen, Program Development Manager, Water Resources Program, Washington Department of Ecology

Ecology must issue permit decisions for up to five water resource mitigation pilot projects. The five applicants include Yelm, Sumner, Port Orchard, Spanaway Water Company, and Ag Water Board of Whatcom County. Ecology submitted a report to the Task Force on November 15, 2018 summarizing the status of the pilot projects. Ecology will coordinate check-in meetings with the five pilot projects by the end of March 2019. Applicants will prepare draft ROEs under the cost-reimbursement process, with some submitting their ROEs as early as mid-2019. Ecology must monitor the implementation of the pilot projects, including all mitigation associated with each pilot project, at least annually through December 31, 2028. The Task Force asked questions about the timing of the pilot projects.

## 2. Tribal treaty water rights.

- Ann Tweedy, Tribal Attorney, Muckleshoot Indian Tribe

The presentation discussed tribal reserved water rights which may exist on or off the reservation, may apply to surface or groundwater, are regulated under federal law, are not lost through non-use, and may be recognized by treaty or executive order. There are two seminal cases that are the basis for these rights, *Winters v. United States*, 207 U.S. 564 (1908) and *Winans v. United States*, 198 U.S. 371 (1905). The *Winters* decision held that the setting aside of a reservation implicitly included water for agriculture. Treaty fishing rights under the Stevens Treaty were at issue in the *Winans* decision. The Supreme Court held that private property owners must allow native fishers to cross their land to access usual and accustomed areas. The treaty right to fish in usual and accustomed areas has been recognized in the *Boldt* decision and affirmed in the culverts case. Similar rights exist under the treaties for water to support hunting and gathering. Most tribes view state instream flow rules as set too low to adequately protect fisheries, yet these rules provide a modicum of protection and sometimes enough comfort to allow a tribe to put off seeking quantification of their rights through the courts.

## 3. Instream flows necessary for fish and mitigation of instream flow rules.

- Kiza Gates, PhD, Water Science Section Manager, Habitat Program, Science Division, Washington Department of Fish and Wildlife

Instream flows are water rights for the stream, set by Ecology with scientific guidance from DFW, to protect and restore habitat for fish and wildlife. The Water Flow Policy Act of 1949 provides that "it is the policy of this state that a flow of water sufficient to support game fish and food fish populations be maintained at all times in the streams of the state." Washington has a number of sea-run salmonids and char, including chinook, coho, pink, chum, sockeye, steelhead, cutthroat trout, and bull trout, that are considered when setting instream flows. Salmon rely on fresh water resources throughout their life cycle and during different times of the year. When considering instream flows, DFW makes recommendations based on empirical knowledge to protect fish and wildlife.

- G. Thomas Tebb, Director, Office of the Columbia River (OCR)

OCR was established in 2006 to provide water for instream and out-of-stream uses in the Columbia Basin. OCR rules provide that any water right application will be evaluated for possible impacts on fish and existing water rights. OCR must consult with appropriate local, state, federal agencies, and Indian tribes when making this evaluation. Any permit which is approved for the use of such waters will, if deemed necessary, be subjected to instream flow protection or mitigation conditions determined on a case-by-case basis through evaluation conducted with the appropriate agencies and tribes. Mitigation projects in the basin were discussed, including the Lake Roosevelt incremental storage and releases program, the Kennewick Irrigation District Red Mountain project, the Odessa groundwater replacement program, and the Potholes supplemental feed route. OCR faces challenges including recent Supreme Court decisions, Columbia River Treaty negotiations, long-term funding uncertainties, aging water supply infrastructure, and federal Columbia River power system biological opinion uncertainties.

## 4. The benefits and potential limitations of conservation.

- Michael Brent, Water Resources Manager, Cascade Water Alliance (CWA)

CWA is a municipal water provider formed in 1999 which serves 400,000 residents and 20,000 businesses. CWA has had an active water conservation program since 2004, which includes replacement of old showerheads, toilets, and washing machines; establishment of landscape irrigation systems; education and outreach; and training. Municipal water demand is decreasing due to the water use efficiency rule, the rising cost of water, repeated droughts, and limited water availability. Municipal water use can be further reduced, and a per capita water use of 20 to 40 gallons per day is achievable. Future opportunities include advanced metering infrastructure, submetering, increased efficiency standards, rainwater use, and landscape irrigation. Water conservation can protect quality of life for future generations, delay or defer expensive new water sources, provide increased instream flows, reduce greenhouse gas emissions, aid in drought mitigation, and demonstrate stewardship of water resources.

- Scott Revell, Manager, Roza Irrigation District

The Yakima Basin is managed by the Bureau of Reclamation and includes five reservoirs with 1 million acre-feet of capacity. Snowpack in the basin acts as a sixth reservoir. The Roza Irrigation District is located in the Yakima Basin and serves 72,000 irrigated acres with 450 miles of canals and a total crop value of \$1 billion on mostly 2nd and 3rd generation family farms. In the 2015 drought, many growers let their orchards go fallow or let some portion go fallow in order to water higher value crops. Roza has very high irrigation efficiency, including eliminating rill irrigation, eliminating overhead irrigation, and lining canals with sealant. Roza has also built main canal pump backs to recover canal seepage and farmers in the district have replaced irrigation systems with more efficient systems.

- Dave Christensen, Program Development Manager, Water Resources Program, Washington Department of Ecology

Conservation provides significant benefits for utilities, streamflows, and other water users and is required under the Municipal Water Law. Ecology provides cost-share funding through an irrigation efficiencies program for agriculture. The presentation discussed considerations for use of conserved water, including that it cannot be assumed that the full reduction in water diverted or withdrawn is saved for other users; reduction in consumptive use must be considered if the saved water is going to be reallocated; and there is the possibility that downstream users and streamflows are dependent on the location of diversions and return flows.

##### **5. Task force discussion.**

Future agenda items were discussed, including population growth, water capacity, cost of inaction, and limitations of models. The Task Force is interested in having presentations regarding Washington water utilities, regional water supplies, and reclaimed water.

##### **6. Public comment.**

The public provided comments about conservation, pilot projects, modeling, agricultural conservation, and reclaimed water.

Meeting materials are available on the Task Force webpage:

<https://app.leg.wa.gov/committeeschedules/Home/Documents/24713?//28559/01-01-2018/12-31->

[2018/Schedule///Bill/](#)

TVW broadcast is also available:

<https://www.tvw.org/watch/?eventID=2018121044>

September 10, 2019 Meeting

**Meeting Agenda:**

**1. Review of previous task force meetings.**

- Rob Hatfield, Counsel, Office of Program Research

A brief presentation was provided on the statutory framework that created the Task Force and changes that occurred as a result of legislation that passed in the 2019 session. The Task Force's activities in the 2018 interim were also discussed.

**2. Discussion of mitigation pilot projects.**

- Dave Christensen, Program Development Manager, Water Resources Program, Washington Department of Ecology

Ecology provided a brief update on the status of the pilot project permit applications. Conceptual mitigation plans for each pilot project were provided on November 15, 2018. Applicants' technical consultants will prepare draft ROE under the cost-reimbursement process.

- Michael Grayum, City Administrator, City of Yelm

Yelm is no longer accepting subdivision applications and has 208 water connections remaining before a moratorium must be considered. Yelm is considering mitigation alternatives including in-kind mitigation, avoidance of impacts to water bodies subject to minimum instream flow rules, out-of-kind mitigation, water rights acquisition and transfer to municipal water rights, and groundwater recharge. Yelm has a reclaimed water facility and they are making improvements to its reclaimed water facility. Yelm plans to submit its ROE to Ecology this fall.

- Jason Van Gilder, Associate City Engineer, City of Sumner

Sumner built a deep aquifer well as the most sustainable and environmentally responsible approach to address its domestic water needs. Sumner is looking at available mitigation water, including seasonal irrigation water and reserved water and tailrace water from Cascade Water Alliance. Although the quantity of mitigation water will probably meet the level of impact, it may not meet the in-time and in-kind standard and so Sumner is considering a habitat restoration project along the White River. Sumner is waiting for the USGS's southeast sound hydrological model that is anticipated in 2020. Sumner is working on its NEB analysis as part of its mitigation plan. The analysis will focus on crediting key habitat improvements in mitigation, assign relative habitat functional value to habitat types, and calculate acreages of each habitat type in the mitigation project and impact area. Sumner plans to submit its mitigation plan to Ecology in late 2020.

- Jeff Johnson, Manager, Spanaway Water Company (SWC)

SWC is waiting for the USGS model to be finished before developing its mitigation plan. SWC would like to convert 2000 feet of existing nonadditive water rights to primary water rights. SWC would like to provide in-time and in-kind mitigation, but may not always be able to provide in-place mitigation. SWC wants to make sure that any mitigation takes place in viable habitat. SWC has acquired water rights from a golf course and is looking at pursuing stream augmentation. The USGS model will be used to model surface water impacts of potential withdrawals from deeper aquifers, determine whether quantitative impacts can be feasibly addressed, and evaluate potential for stream augmentation. If mitigating impacts is determined to be feasible, SWC will begin a consultation process with its project team and prepare a mitigation package based on that process. During the spring and summer of 2020, SWC plans to determine the scope of the cost reimbursement agreement, conduct peer review of the proposed mitigation package, and prepare its draft ROE to be submitted in the summer or fall of 2020.

- Jacki Brown, Utility Manager, City of Port Orchard

Port Orchard has selected its consultants and their renewal contracts should be approved shortly. Port Orchard is looking at whether replacement water is reasonably attainable and is looking for potential water rights available for purchase as mitigation for impacts to streams. Preliminary modeling has been completed and they are now looking at seasonal modeling. Port Orchard encountered problems with the modeling, and they are working with tribes, Ecology, and USGS to work out issues with the Kitsap model. They are looking at testing deep wells, including one that is 2,000 feet deep and has reached the deep aquifer. Port Orchard plans to complete the mitigation analysis next spring and submit the ROE to Ecology by September 2020. Consultations with tribes, DFW, and stakeholders could delay the project, but they hope to complete the ROE before the 2021 legislative session.

- Bill Clarke, Consultant, Ag Water Board of Whatcom County (Ag Water Board)

In 2010, the Ag Water Board began working with farmers to do voluntary surface to groundwater changes, combined with tributary flow augmentation. This work was partially funded by Ecology, but three projects were cancelled because of the *Foster* decision. The pilot project is designed to reduce direct impacts of irrigation withdrawals by converting tributary irrigation surface diversions to deeper groundwater withdrawals and use direct flow augmentation to increase instream flows for fish in critical tributaries without the permanent loss of agricultural water rights, and to integrate streamflow restoration efforts with habitat restoration. The Ag Water Board plans to file applications in 2020.

### **3. Department of Ecology's net ecological benefit guidance.**

- Dave Christensen, Program Development Manager, Water Resources Program, Washington Department of Ecology

Ecology published interim guidance in June 2018, sought feedback on the interim guidance, and then sought public comment on the draft final guidance in May and June of 2019. Ecology published its "Final Guidance for Determining Net Ecological Benefit" in July 2019 after receiving significant input from watershed stakeholders. Under a NEB analysis, an applicant must demonstrate that water offset projects are not reasonably attainable and then provide a structured and transparent evaluation for Ecology to use when evaluating the NEB analysis. Ecology's guidance identifies

information that will be used to make the NEB determination. Net ecological benefit is not a formula, but instead relies on available data, ecological context, and local expertise.

#### 4. Task force discussion.

The Task Force discussed that, because some projects are moving more slowly in part due to the USGS model, the Task Force is not in a position to make recommendations that could lead to legislation at this point. Possible future agenda items were discussed, including the impacts of climate change and the handling of modeling errors, and the streamflow restoration work being done under the streamflow restoration program.

#### 5. Public comment.

There were no public comments.

Meeting materials are available on the Task Force webpage:

<https://app.leg.wa.gov/committeeschedules/Home/Documents/26039?//28559/01-01-2019/10-06-2019/Schedule///Bill/>

TVW broadcast is also available:

<https://www.tvw.org/watch/?eventID=2019091039>

### Conclusion

As noted above, the timeline by which each pilot project applicant is projected to submit its draft ROE to Ecology is:

- City of Yelm: late 2019
- City of Sumner: early-mid 2020
- Spanaway Water Company: mid-late 2020
- City of Port Orchard: mid-late 2020
- Ag Water Board of Whatcom County: in 2020

The City of Sumner and Spanaway Water Company are both waiting for the USGS model that was initially projected to be completed in 2019. The USGS model is now projected to be complete by the end of May 2020.

Because the water resource mitigation projects are moving more slowly than originally anticipated, the Task Force is not in a position to make recommendations that could lead to legislation at this point. Work should continue next year in order to develop recommendations for legislation the following year. The Task Force may want to consider defining the measurement of ecological impacts, whether Ecology's NEB guidance is sufficient to allow out-of-kind mitigation under certain parameters, what impacts should be mitigated, whether instream flows are adequate, whether there is a need for additional conservation, and whether there is a need for a scientific framework with scoring when considering mitigation.