

WASHINGTON STATE DEPARTMENT OF ECOLOGY MEMORANDUM

Date: June 2, 2021

To: Laura Watson, Ecology Director

From: Mary Verner, Water Resources Program Manager

Re: Recommendation to Adopt WRIA 12 Watershed Restoration and Enhancement Plan

The Water Resources Program (Program), based upon its review and analysis of the locally approved Water Resource Inventory Area (WRIA) 12 Watershed Restoration and Enhancement Plan (Watershed Plan), **recommends that Ecology adopt this Watershed Plan, as described in RCW 90.94.030(3).**

This memorandum provides the Program's analysis and recommendations regarding Ecology's action required pursuant to Streamflow Restoration, RCW 90.94.030(3)(c).

Program Analysis of the WRIA 12 Watershed Restoration and Enhancement Plan

As required under this law, the Program has reviewed the locally approved WRIA 12 Chambers-Clover Watershed Plan, and recommends that Ecology adopt this Watershed Plan as described in RCW 90.94.030(3). The Program reviewed the Watershed Plan in accordance with the requirements of RCW 90.94.030(3), as well as programmatic Guidance and Policy.¹ The Program determined that the "...actions identified in the 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."²

Based upon a thorough review of the Watershed Plan, it is the Program's conclusion that the WRIA 12 Chambers-Clover Watershed Restoration and Enhancement Committee (Committee) used reasonable and scientifically-sound methods to forecast new PE well consumptive water use for the twenty year planning horizon (2018-2038). The Committee projected 145 new permit-exempt domestic (PE) wells with a total projected consumptive use for the WRIA of 57.4/acre-feet per year (AFY). The Committee set a higher offset target based on a high growth scenario of 227 new PE

¹ Final Guidance for Determining Net Ecological Benefit - GUID-2094 Water Resources Program Guidance - July 31, 2019 - Publication 19-11-079; Streamflow Restoration Policy and Interpretive Statement – POL-2094 Water Resources Policy – July 31, 2019.

² RCW 90.94.020(3)(c)

domestic wells with a total projected consumptive use for the WRIA of 89.9 AFY.

The Committee sought projects to provide water offset benefits exceeding the 89.9 AFY offset target. The plan includes two projects to meet the offset needed for the projected PE well consumptive use. The Program determined that the Committee used reasonable and scientifically-sound methods to project an estimated 1,425 AFY in water offset benefits from those projects. These projects are intended to offset the impacts from new PE well consumptive water use, with estimated offset benefits that exceed the projected consumptive use by 1,335.1 AFY. The Plan includes three additional projects that may provide water offset benefits. The Committee did not estimate the potential water offset benefits of those three projects.

The Plan also includes eight habitat improvement projects that contribute towards the achieving net ecological benefit (NEB) requirements of the law. The habitat improvement projects provide benefits to the watershed such as:

- Floodplain restoration.
- Streambed improvement.
- Estuary restoration.

To allow for analysis of the relationship between new consumptive use and offsets, the WRIA 12 Committee divided WRIA 12 into three subbasins. Table 1 provides a comparison of project benefits and offset target by subbasin and at the WRIA scale. Figure 1 shows the location of water offset and habitat projects and the estimated consumptive use and water offsets by subbasin. If implemented, the benefits from the water offset projects and habitat improvement projects achieve a NEB.

The Program's recommendation to adopt the Watershed Plan is reinforced by the commitment of the project sponsors to implement the identified water offset projects. Two of the projects, with benefits estimated at 1,425 AFY, are well developed projects with project sponsors. The Repair Diversion Structure at Lake Sequalitchew is nearing the end of the project design phase. The South Tacoma Channel Stormwater Infiltration Project received funding from the 2020 competitive streamflow grant program for feasibility and design. Other habitat projects in Clover Creek, Chambers Creek and the Titlow Estuary are in the feasibility, design and planning phase. In addition, the salmon recovery lead entities are highly involved in the work of the Committee and have a history of successful collaboration and project implementation.

The Watershed Plan includes adaptive management measures, including:

- PE well tracking.
- Project implementation tracking.
- Periodic watershed plan implementation reporting.
- Recommended adjustments to the plan based on progress of implementations.

These measures, in addition to the surplus water offset and supplemental habitat improvement projects, provide reasonable assurance that the plan will adequately offset new consumptive use from PE wells anticipated during the planning horizon.

The Plan includes an NEB evaluation, but does not include a statement regarding meeting NEB. The Plan’s NEB evaluation concludes:

“Based on the information and analyses summarized in this plan and the intention that projects in the plan will be implemented, the WRIA 12 Committee finds that this plan, when implemented, will enhance streamflows in several important salmon streams and, for the WRIA as a whole, offset new consumptive use from PE wells anticipated during the planning horizon.”

As discussed below and in the attached NEB Determination, the Program is sufficiently assured the projects described in the WRIA 12 Watershed Plan will offset the anticipated impacts from new permit except domestic wells projected from 2018 through 2038, and result in a NEB to instream resources within WRIA 12.

Table 1 Consumptive Water Use Estimate and Water Offset Project Volumes Summary per subbasin for the higher offset target (adapted from Table 14 in the Watershed Plan).

Subbasin	Offset Project Totals (AFY)	PE Well Consumptive Use (AFY) ¹	Surplus/Deficit (AFY) ^{2,3}
Chambers	701	2.8	+698.2
Clover Creek	Unquantified at this time	87.1	-87.1
Sequalitchew	724	0	+724
WRIA 12 Total Consumptive Use	1425	89.9	+1335.1

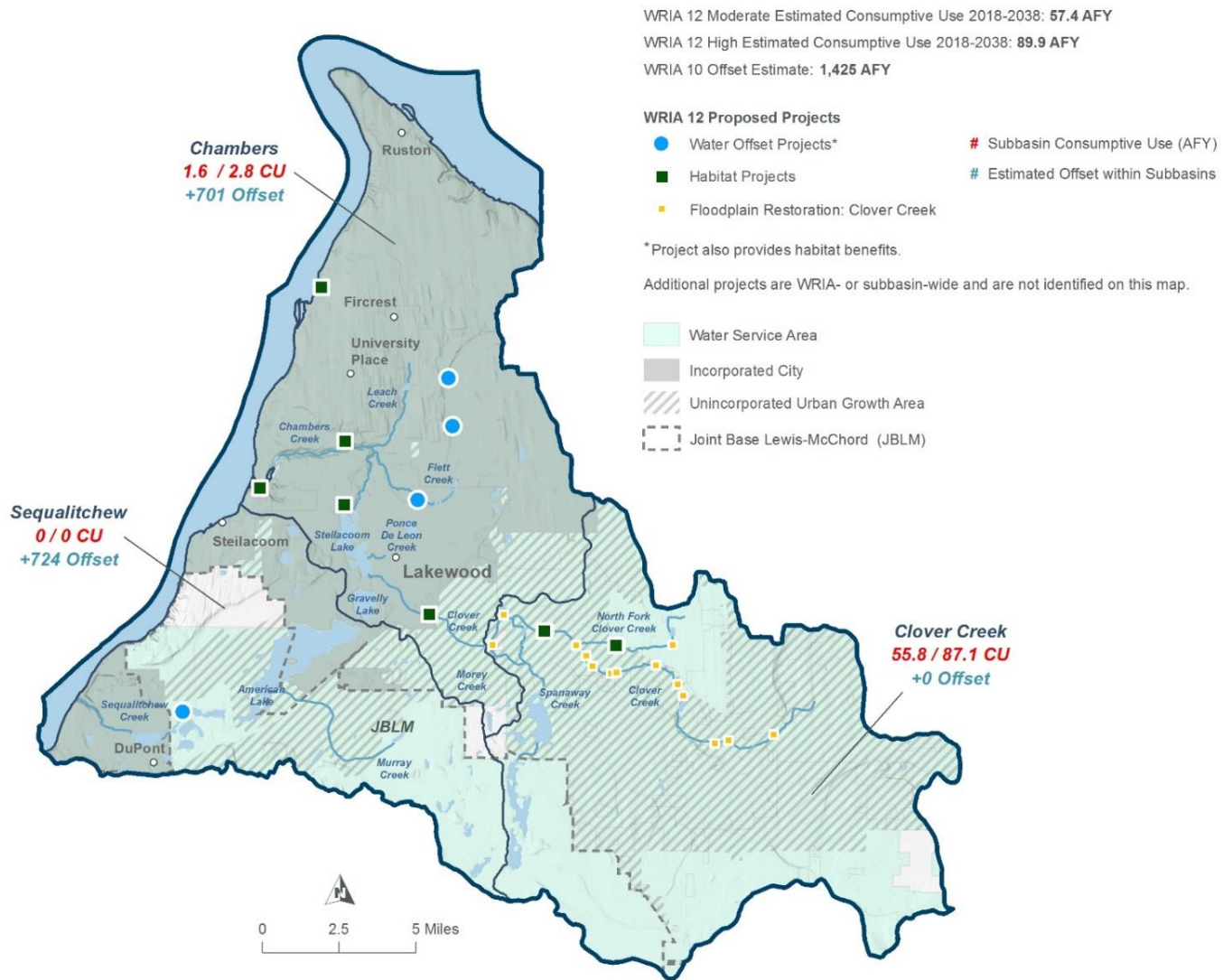


Figure 1: PE Well Consumptive Use and Water Offsets, by Subbasin, for Offset Projects. (Figure 1 in the Watershed Plan). The map presents the consumptive use estimate for the moderate growth projection and the higher growth projection (offset target).

Agency Authorities

RCW 90.94.030 directs Ecology to establish and chair a watershed restoration and enhancement committees in WRIA 12. The law directs Ecology to prepare and adopt a watershed restoration and enhancement plan in collaboration with the Committee. This law requires the Watershed Plan to forecast the potential impacts of new PE wells from 2018 to 2038 on instream flows, and to identify projects and actions to offset those impacts.

All members of the Committee must approve the Watershed Plan prior to submission to Ecology. Ecology's statutory deadline for adoption of the WRIA 12 Watershed Plan is June 30, 2021. Prior to adopting any such Watershed Plan, Ecology is required by RCW 90.94.030(3)(c) to "... *determine that actions identified in the 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.*"

To support the work of the Committees, Ecology issued the *Final Guidance for Determining Net Ecological Benefit* (NEB Guidance) in July 2019. Ecology's NEB Guidance provides that Ecology will determine that the Watershed Plan achieves a NEB if the outcome that is anticipated to occur through implementation of projects and actions in a plan yields offsets that exceed impacts within: a) the planning horizon; and, b) the relevant WRIA boundary.³

In addition, Ecology's role with the Committee and Watershed Plan is described in RCW 90.94.030(2) and (3). Ecology established the Committee, chaired the Committee, and prepared the Watershed Plan in collaboration with the Committee. Ecology contracted with a technical consultant and a facilitation team to support the development of the Watershed Plan and work with Committee. Ecology staff led the preparation of the Watershed Plan, reviewing Committee conclusions and Watershed Plan language with Ecology management throughout the process. The WRIA 12 Committee work was led by Rebecca Brown.

Ecology prepared the non-project programmatic SEPA determination of non-significance, which has completed the public review process. The SEPA public comment period opened on April 29, 2021 and closed on May 23, 2021. Ecology did not receive any comments and retained the determination of non-significance. The SEPA checklist and DNS are attached.

Watershed and Planning Overview

Watershed Characteristics

WRIA 12, the Chambers-Clover Watershed, is the smallest watershed of the 62 designated WRIAs in Washington State. The 180 square mile Chambers-Clover Watershed is entirely within Pierce County, Washington. The watershed includes Chambers Creek and Clover Creek, as well as approximately 2,020 acres of lakes and extensive wetlands. These creek systems originate from springs and groundwater drainage to streams in the northeast corner of the watershed.

The Chambers-Clover Watershed is predominantly urban, characterized by a combination of residential, industrial, commercial, manufacturing, transportation, communication, and military land

³ Final Guidance for Determining Net Ecological Benefit - GUID-2094 Water Resources Program Guidance - July 31, 2019 - Publication 19-11-079

uses. The Chambers-Clover Watershed includes the western half of the City of Tacoma, all of the cities of Lakewood, University Place, Dupont, Fircrest, and Ruston, and the town of Steilacoom. It also includes the unincorporated communities of Parkland, Spanaway, Elk Plain, Frederickson, and Midland. Approximately 67 percent of WRIA 12 is within a city or designated urban growth area. Joint Base Lewis-McChord (JBLM)⁴ occupies 18.2 percent of the watershed (32.7 square miles).

The Chambers-Clover Watershed has experienced a steady pace of urbanization. Land use conversion from natural forested condition to residential, commercial, and agricultural uses has resulted in filling of floodplain wetlands, compaction of soils, and increased impervious surface, contributing to an increased magnitude and frequency of peak stream flows and reduced groundwater and wetland storage, reducing baseflows. In addition, sanitary sewers collect wastewater from most of the watershed. The wastewater is treated and discharged into the Puget Sound, further reducing groundwater recharge and baseflows in the WRIA.

Planning Process

WRIA 12 is one of eight watersheds listed in RCW 90.94.030. These watersheds all have existing instream flow rules that do not address PE well use, and the watersheds did not complete watershed planning under RCW 90.82.

Following the enactment of RCW 90.94 in early 2018, Ecology established the WRIA 12 Committee by inviting the entities to participate as identified in RCW 90.94.030(2)(b). The Committee first met in November 2018 and continued to meet monthly or bi-monthly as needed through April 2021.

This planning process, by statutory design, brought diverse perspectives to the table. The authorizing legislation required all members of the Committee to approve the final Watershed Plan prior to Ecology's review. The Committee did not find a process for making interim conclusions that was acceptable to all Committee members. The Committee relied on a workgroup to bring forth recommendations. The Committee discussed the recommendations and identified areas of agreement and concerns. Ecology took on the role of making interim conclusions as needed. The Committee continued to meet to develop and reach agreement on the Plan without operating principles.

The Squaxin Island Tribe disagreed with Ecology's interpretation of 90.94.030. The Tribe actively participated in the planning process and proposed solutions to address the differences in interpretation. Footnotes throughout the Plan identify areas of different interpretations. The Squaxin Island Tribe submitted a statement in the accompanying compendium that outlines their interpretation of 90.94.030.

The plan compendium includes statements and additional information provided by committee members. The compendium provides background information, additional context relevant to the plan, and plan approval processes. The documents included in the compendium were not presented to the Committee for review and approval, and represent the individual entity's opinion only.

The Committee reviewed draft plan and draft plan chapters on an iterative basis throughout the

⁴ The former McChord Air Force Base and Fort Lewis.

summer and fall of 2020. Ecology distributed a fully compiled plan draft on December 11, 2020. On January 13, 2021, the Committee reviewed outstanding comments on the draft plan. Ecology distributed the Final Draft Watershed Plan to the Committee members on January 28, 2021.

Technical Review of WRIA 12 Watershed Restoration and Enhancement Plan

This section of the memorandum summarizes the attached NEB Determination prepared by the Program's technical staff, who were also extensively engaged in supporting the planning work in WRIA 12. The NEB Determination forms the technical basis for the Program's recommendation to adopt the Watershed Plan.

Ecology technical staff concludes that the WRIA 12 Watershed Plan adequately describes and evaluates the collective effects of new PE wells and offset projects. The Watershed Plan's narratives, and quantitative and qualitative assessments are thorough in their development, and followed a clear and systematic logic. The Watershed Plan provides a well-organized and transparent evaluation of the offset benefits from projects. The Watershed Plan appendices include maps, pictures, figures, quantification of benefits where available, and cost estimates when appropriate. There is a reasonable assurance that the offsets and NEB within the plan will occur.

The combined water balance at the WRIA-scale indicates a basin-wide surplus of 1,335 AFY, supporting attainment of NEB by providing additional benefits to instream resources beyond those necessary to offset the anticipated new, 20-year PE well demand in WRIA 12. This surplus provides reasonable assurance that new PE well demand will be offset at the WRIA scale. Projects without an assigned offset benefit may provide benefits in the watershed, especially the subbasin expecting the most consumptive use. If an offset project is not developed due to funding constraints or other issues, a subset of projects can still provide sufficient water offset to meet the projected new consumptive uses.

The portfolio of projects will offset projected impacts from PE wells in two subbasins, and at the WRIA scale. The projects will enhance streamflow in subbasins that have a surplus of offset water and will improve biological function in all of the subbasins that implement habitat projects. Collectively, the projects will achieve NEB in WRIA 12.

In conclusion, Ecology technical staff's analyses of the plan indicate that relative to the impacts created by future PE wells anticipated in WRIA 12 over the twenty-year planning horizon, the offset strategies proposed will result in a NEB for the watershed. Therefore, Ecology technical staff conclude that the plan meets the intent of the legislation and requirements of RCW 90.94.

Recommendation

The Program staff acknowledge that the WRIA 12 Watershed Plan includes plan implementation and adaptive management recommendations, including tracking and monitoring new PE wells and project implementation, reporting on implementation, and adaptive management of the plan. For many WRIA 12 Committee members, these additional recommendations build assurance for Watershed Plan implementation and achieving NEB. We do not present these additional recommendations in this memo. The Program will review recommendations for Ecology across all of the Watershed Plans, and make a programmatic decision on where and how to invest resources

on recommendation implementation.

This Watershed Plan does not include recommendations that would trigger rulemaking, such as modification of fees or water use quantities as described in RCW 90.94.030(3)(f).

In summary, I concur, based upon the Program technical staff's analysis of the locally approved WRIA 12 Watershed Restoration and Enhancement Plan, with the Watershed Restoration and Enhancement Committee's conclusion and therefore recommend that Ecology adopt this Watershed Restoration and Enhancement Plan, as described in RCW 90.94.030.