

# Technical Memorandum

## WRE Committees Technical Support

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To: Angela Johnson, Washington State Department of Ecology  
From: Chad Wiseman, HDR  
Copy:  
Date: June 26, 2019  
Subject: WRIA 12 Draft Subbasin Delineation  
(Work Assignment WA-01, Task 2)

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## 1.0 Introduction

HDR is providing technical support to the Washington State Department of Ecology and the Watershed Restoration and Enhancement (WRE) committee for Water Resource Inventory Area (WRIA) 12. The Streamflow Restoration law (Revised Code of Washington [RCW] Chapter 90.94) requires that WRE plans include actions to offset new consumptive-use impacts associated with permit-exempt domestic water use. RCW 90.94.030(3)(b) states, “The highest priority recommendations must include replacing the quantity of consumptive water use during the same time as the impact and in the same basin or tributary.” Therefore, delineations must be developed for the subbasins in WRIA 12 that will be used as a spatial framework for growth projections, consumptive-use estimates, and priority offset projects. The Net Ecological Benefit (NEB) evaluation will also be based on this framework. This technical memorandum addresses the basis for subbasin delineation in WRIA 12 (Chambers-Clover).

## 2.0 Subbasin Delineation

This section explains the initial and draft delineations for WRIA 12.

### 2.1 Initial Delineation

The WRIA 12 workgroup (a subcommittee of the WRE committee) was tasked to delineate subbasin boundaries for discussion at WRE committee meetings.

The WRIA 12 workgroup started with 12th-field hydrologic unit codes (HUCs) (USGS 2013) as an initial delineation. In the May 8, 2019 WRE committee meeting, comments were made that the Chambers Creek watershed (i.e., downstream of Steilacoom Lake and tributaries) were more important to fish than the Clover Creek watershed (i.e., upstream tributary of Steilacoom Lake and tributaries). Several stretches of Clover Creek and its tributaries are known to be naturally dry during different times of the year, and have less fish use.

### 2.2 Draft Delineation

During the June 12, 2019 WRE committee meeting, a draft subbasin delineation was agreed upon. The subbasins were groups of 12th-field HUCs grouped into the following subbasins:

- Chambers: Chambers Creek watershed and multiple small drainages discharging directly to Puget Sound and Commencement Bay; the lower portion of Clover Creek, downstream of the confluence with Clover Creek and Morey Creek
- Clover: Clover Creek upstream of the confluence with Morey Creek; Morey Creek and Spanaway Creek
- Sequilatchew Creek watershed, American Lake, and tributaries

The WRE committee indicated that the topographic divide between Chambers Bay and the Sequilatchew Creek watershed was not reflected with the 12th-field HUC boundaries and needed to be delineated. HDR delineated the boundary and developed the draft delineation (Figure 1). This map was presented to the WRIA 12 workgroup on June 17, 2019. The workgroup agreed to recommend that this subbasin delineation reflected the WRE committee's instructions, and therefore this draft delineation is approved.

### 3.0 Conclusion

The WRIA 12 workgroup draft subbasin delineation will be used as an organizational framework for growth projection and consumptive-use scenarios. The draft subbasin delineation is subject to change after evaluation with the growth projection and consumptive-use scenarios. The final subbasin delineation will be used as a framework for consumptive-use impacts and offset benefit accounting and for the NEB evaluation.

### 4.0 References

- Revised Code of Washington (RCW). 2019. Streamflow Restoration, Chapter 90.94 RCW. Accessed June 23, 2019, at <https://app.leg.wa.gov/RCW/default.aspx?cite=90.94>.
- U.S. Geological Survey and U.S. Department of Agriculture, Natural Resources Conservation Service (USGS). 2013. Federal Standards and Procedures for the National Watershed Boundary Dataset (WBD) (4 ed.): Techniques and Methods 11–A3, 63 p., <https://pubs.usgs.gov/tm/11/a3/>.



**Figure 1. WRIA 12 Draft Subbasin Delineation**

WRIA Boundary

Subbasin

Chambers

Clover Creek

Sequalitchew

River or Creek

Incorporated City

Unincorporated Urban Growth Area

County

*Preliminary delineation of subbasins, for discussion purposes only. Subbasins were delineated using surface water boundaries and other considerations and do not represent groundwater basins.*

