

Appendix G – Subbasin Delineation Memo

To: Angela Johnson, Washington State Department of Ecology
From: Chad Wiseman, HDR
Copy:
Date: June 26, 2019
Subject: WRIA 14 Draft Subbasin Delineation
(Work Assignment WA-01, Task 2)

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) 14. 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 14 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 14 (Kennedy-Goldsborough).

2.0 Subbasin Delineation

This section explains the initial and draft delineations for WRIA 14.

2.1 Initial Delineation

The WRIA 14 workgroup (a subcommittee of the WRE committee) was tasked to delineate subbasin boundaries for discussion at WRE committee meetings. The WRIA 14 workgroup started with the subbasins used in the draft WRIA 14 watershed management plan that was pursuant to Chapter 90.82 RCW (Plateau 2006). These subbasins were organized based on the receiving saltwater body. During this watershed planning process, the subbasin discharging to Hood Canal was co-opted by the WRIA 16 watershed plan. This subbasin is part of WRIA 14 and was included for the purposes of this Chapter 90.94 RCW planning process.

The following subbasins were defined in the initial delineation:

- Hood: includes multiple small drainages discharging directly to the Hood Canal
- Case: includes Sherwood Creek and multiple small drainages that discharge to Case Inlet, including Harstine Island and Squaxin Island
- Goldsborough: includes all drainages discharging to Oakland Bay, including Deer Creek, Cranberry Creek, Johns Creek, Goldsborough Creek, Mill Creek, and other small drainages
- Skookum: includes all drainages discharging to Little Skookum Inlet, including Skookum and other small drainages

- Kennedy: includes all drainages discharging to Totten and Eld inlets, including Kennedy Creek, Perry Creek, and other small drainages

The workgroup requested that an alternative delineation be developed that had smaller drainage granularity. Twelfth-field hydrologic unit codes (HUCs) (USGS 2013) were applied to WRIA 14 as an alternative. The comparison of the 12th-field HUCs delineation with 12th-field hydrologic units resulted in 16 subbasins and, in some cases, subbasins were viewed as too small (e.g., Snodgrass Creek, discharging to Totten Inlet).

2.2 Draft Delineation

During the May 9, 2019, WRIA 14 WRE committee meeting, HDR presented a comparison between the initial subbasin delineation (based on the draft Watershed Management Plan and the south shore of Hood Canal) with the 12th-field HUCs. The comparison included stream distribution, fisheries resources, and stream management units (i.e., streams with closures and minimum flows) associated with the WRIA 14 instream flow rule (Washington Administrative Code [WAC] Chapter 173-514).

During the June 7, 2019, WRIA 14 workgroup meeting, HDR presented the same comparison as during the May 9, 2019, WRE committee meeting. The Squaxin Island Tribe made recommendations for a draft delineation premised with the understanding that there would be an opportunity for revision after the growth projections and consumptive-use estimates were completed and compared to the draft delineation. The recommendations included separating Harstine, Squaxin, and Hope islands from the rest of the initial “Case” subbasin. The recommendations also included breaking up the initial “Goldsborough” subbasin into three separate subbasins (Oakland, Goldsborough, and Mill). The Goldsborough Creek and Mill Creek watersheds would be their own respective subbasins.

The remainder of the initial “Goldsborough” subbasin (including Deer Creek, Cranberry Creek, and Johns Creek) would compose the Oakland subbasin. The draft subbasin delineation is depicted in Figure 1. The following subbasins were defined in the draft delineation:

- Hood: includes multiple small drainages discharging directly to Hood Canal
- Case: includes Sherwood Creek and multiple small drainages that discharge to Case Inlet
- Harstine: includes Harstine, Squaxin, and Hope islands
- Oakland: includes Deer Creek, Cranberry Creek, Johns Creek, and other small drainages discharging to Oakland Bay
- Goldsborough: includes the Goldsborough Creek watershed
- Mill: includes the Mill Creek watershed and small drainages discharging to the south shore of Hammersley Inlet
- Skookum: includes all drainages discharging to Little Skookum Inlet, including Skookum and other small drainages
- Kennedy: includes all drainages discharging to Totten and Eld inlets, including Kennedy Creek, Perry Creek, and other small drainages

The WRIA 14 workgroup recommended that this draft subbasin delineation be approved by the WRIA 14 WRE committee on June 13 2019.

3.0 Conclusion

The WRIA 14 workgroup draft subbasin delineation will be used as an organizational framework for growth projection and consumptive-use scenarios, pending approval by the WRIA 14 WRE committee. The current draft subbasin delineation is currently only a recommendation by the WRIA 14 workgroup. Furthermore, 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

- Plateau Technical Communication Services (Plateau). 2006. WRIA 14 Watershed Management Plan: Kennedy–Goldsborough Watershed, Final Draft.
- Revised Code of Washington (RCW). 2019. Watershed Planning, Chapter 90.82 RCW. Accessed on June 23, 2019, at <https://app.leg.wa.gov/rcw/default.aspx?cite=90.82>.
- RCW. 2019. Streamflow Restoration, Chapter 90.94 RCW. Accessed on 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/>.