

Addendum to Island County Best Available Science and Existing Conditions Report for Fish and Wildlife Habitat Conservation Areas

July 2014

Section 3.4 (Streams) of the January 31, 2014 Island County Best Available Science and Existing Conditions Report for Fish and Wildlife Habitat Conservation Areas should be amended as follows to correctly account for documented and potential anadromous salmonid use of County streams.

Section 3.4 Streams

In general, freshwater streams will be managed under the County's Fish and Wildlife Habitat Conservation Area regulations. Streams are defined in ICC 17.02.030 as follows:

"Those areas where naturally occurring surface waters produce a defined channel, bed, bank or side, and where there is clear evidence of the passage of water such as bedrock channels, gravel beds, sand and silt beds and defined channel swales. The channel or bed need not contain water year-round. This definition is not intended to include irrigation or drainage ditches or swales, canals, storm or surface water run-off devices or other artificial watercourses unless they are used by salmonids or to convey streams naturally occurring prior to construction of such watercourses."

There are no streams classified as Shorelines of the State in Island County (>20 cfs); however, where any stream passes through shoreline jurisdiction (extending 200 feet landward of marine shorelines or lakes over 20 acres, and including associated wetlands) or is influenced by tides, it will be managed under the SMP once it is adopted under Ecology's 2003 Shoreline Master Program Guidelines.

Most streams in Island County are intermittent or ephemeral. Anadromous salmonid spawning has been documented in Kristoferson, Maxwellton, Zook, and Glendale Creeks, and may occur more widely than has been documented. Chapman Creek has also been noted as supporting chum salmon (Kearsley 2013). on Whidbey Island in the following creeks: Dugualla, Swantown, Crescent, North Bluff, Honeymoon, Useless, Maxwellton, Quade, Scatchet, Cultus,

~~Glendale, Deer, Old Clinton, Sandy Point and Langley, and on Camano Island in the following creeks: Kristoferson, Cavalero, Carp, Chapman and Cama as shown on Map 6.~~ No comprehensive effort has been undertaken to ascertain the extent of salmon spawning in Island County streams. The lack of spawning in suitable streams may be a result of fish passage barriers (example: Old Clinton Creek). Coho salmon have been supplemented sporadically in Maxwelton Creek since 1956, although no supplementation has occurred since 2003 (Robin Clark, personal communication, January 24, 2014). Natural spawning occurs in Maxwelton, and this Creek has been noted in planning documents as an independent population (SRP 2005). Other basins may also support independent stocks that have not yet been documented. For example, redds and coho fry with egg sacks were recently documented in Zook Creek (Beamer et al. 2013).

In addition to documented anadromous salmonid use, the following streams have been identified by WDFW (electronic reference) as creeks with potential anadromous salmonid use based on their gradient: Dugualla, Swantown, Crescent, North Bluff, Useless, Quade, Cultus, Deer, and Cavalero. Of these creeks, Dugualla, North Bluff, Deer, Cultus, and Cavalero have been identified as supporting cutthroat trout (Kearsley 1999). WDFW mapping in the Puget Sound Watershed Characterization Project Volume 2 (Wilhere et al. 2013) identified additional streams as potential salmonid habitat that are not identified as potential anadromous salmonid habitat; these creeks may be used by resident cutthroat trout. These include Honeymoon, Scatchet, Sandy Point and Langley Creeks on Whidbey Island, and Carp and Cama Creeks on Camano Island. Mapping of potential use may be flawed where creeks have barriers, hydrologic conditions, or systemwide alterations that limit potential instream habitat. For example, Swantown Creek is a highly altered drainage that consists of a system of drainage ditches connecting existing wetlands to Swantown Lake (J. Hartley, Island County, personal communication, July 22, 2014). A partially functional tidegate links Swantown Lake to the Strait of Juan de Fuca (J. Hartley, Island County, personal communication, July 22, 2014), which could present a partial barrier to salmonid rearing in Swantown Lake. Based on local knowledge, anadromous use of Swantown Creek is unlikely (J. Hartley, Island County, personal communication, July 22, 2014).

3.4.1 Special Consideration to Anadromous Fisheries

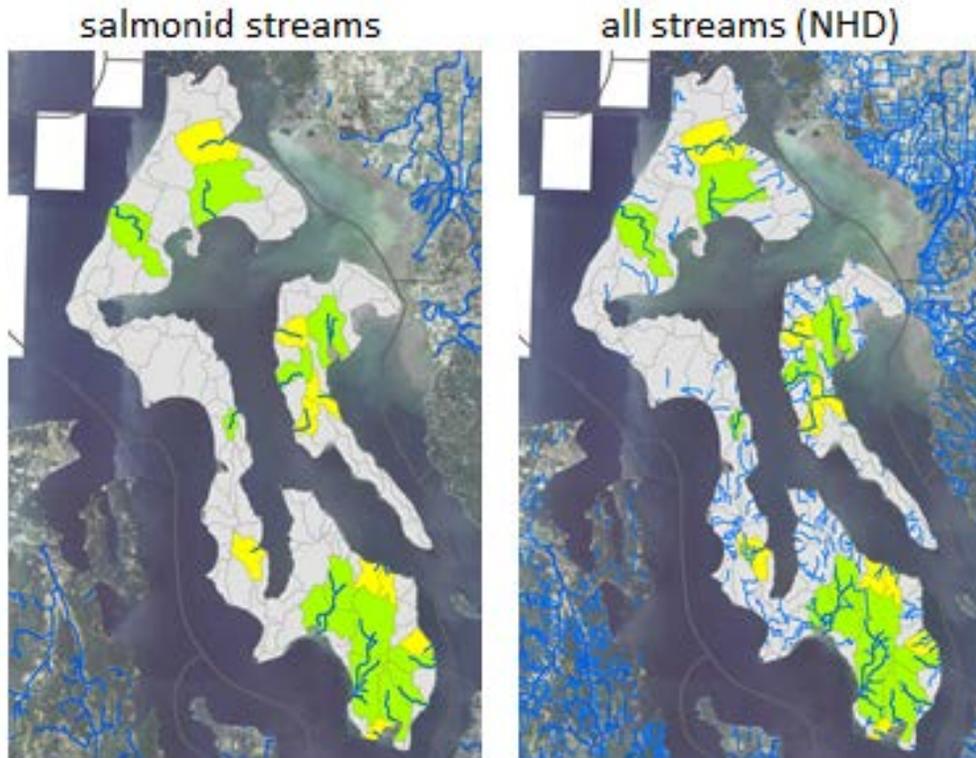


Figure 2. ~~Anadromous Fish Bearing~~ Potential Anadromous or Resident Salmon Streams (Left) and All Streams (Right) in Island County

As previously noted, the GMA requires ‘special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries’ (RCW 36.70A.132172(1)). The map on the left in Figure 2 shows streams with ~~documented potential~~ salmonid usage by WDFW using the freshwater habitats model from the Puget Sound ~~Characterization~~ Watershed Characterization Project Volume 2 (Wilhere et al. 2013).

The freshwater habitat assessments model focuses on connectivity of the freshwater system. Therefore, it considers how materials upstream (water, wood, sediment) are transported to the mouth of the system. Reach quality is affected by stream connectivity, and the model includes an assessment of relative conservation value both upstream and downstream within each assessment unit. In addition, the map focusses heavily on the presence of salmon, which have been the focus of significant conservation planning work in the Puget Sound region over the last decade; salmon are considered an umbrella species, although the authors caution that the results should be supplemented by WRIA-specific planning which is more locally focused than the Puget Sound model (Wilhere et

al. 2013). The assessment units noted in green have a higher relative conservation value than those shown in yellow.

The GMA directs local governments to “consider recommendations found in salmon recovery plans...to designate, protect, and restore salmonid habitat” (WAC 365-190-130(4)(i). In 2005 Island County adopted the WRIA 6 Multispecies Salmon Recovery Plan (SRP, 2005). The WRIA 6 Multispecies Salmon Recovery Plan establishes geographic priority areas for salmon restoration within Island County. The geographic priorities from the Plan are reproduced below:

“Geographic Area 1 (top priority) includes the WRIA 6 sub-basins and shorelines of Deception Pass, Skagit Bay, and Port Susan. These shorelines are within ~5 miles of the mouths of the Skagit, Stillaguamish, and/or Snohomish rivers. This area is utilized by the largest number of Chinook fry migrants, from these rivers, during their first day of nearshore migration. The shorelines are primary pathways for bull trout migrating between these rivers. And the area is used heavily by juveniles and adults from the 47 salmon and trout stocks that originate in these rivers; over 20% of the stocks in Puget Sound.” ~~The following salmon-bearing streams occur within Geographic Area 1:~~

- ~~Dugualla Creek~~
- ~~Kristofferson Creek~~
- ~~Cavalero Creek~~

“Geographic Area 2 (medium priority) includes the WRIA 6 sub-basins and shorelines of Saratoga Passage, Possession Sound, Southeast Admiralty Inlet (Double Bluff to Possession Point), and Northwest Whidbey (Deception Pass to the north end of West Beach). The Saratoga Passage and Possession Sound shorelines and sub-basins were included because they are within the Whidbey Basin, which is an area that has been regionally recognized as important to all south and central Puget Sound stocks. Southeast Admiralty Inlet was included because this section of the south Whidbey coast is likely to be used by juveniles from a large number of south and central Puget Sound stocks and part of this area is included in the bull trout critical habitat definition. Northwest Whidbey was included because it is adjacent to the top priority area and it is included in the bull trout critical habitat definition.” ~~The following salmon-bearing streams occur within Geographic Area 1:~~

- ~~Crescent Creek~~
- ~~North Bluff Creek~~

- Honeymoon Creek
- Useless Creek
- Maxwelton Creek
- Quade Creek
- Scatchet Creek
- Cultus Creek
- Glendale Creek
- Deer Creek
- Old Clinton Creek
- Sandy Point Creek
- Langley Creek
- Carp Creek
- Chapman Creek
- Cama Creek

“Geographic Area 3 (lower priority) includes the WRIA 6 sub-basins and shorelines of the west side of Whidbey, south of West Beach and north of Double Bluff. This area has been given low priority because it is not adjacent to any of the rivers with natal populations and it is at the entrance to Puget Sound and most habitats are impacted by high wave energy and current energy. It is hypothesized that West Whidbey habitats function primarily as migration corridors and for food production for larger juveniles and returning adults” (SRP, 2005). ~~Swantown Creek is located within this Geographic Priority Area.~~

While all streams are regulated within Island County, the geographic prioritization adopted as a part of the WRIA 6 Multispecies Salmon Recovery Plan could be considered as an overlay onto existing regulations related to protecting and prioritizing salmon habitat restoration and protection within the County. However, it should be noted that the geographic priorities in the Salmon Recovery Plan have not been updated to include new data regarding salmonid presence in and around Island County as noted in Beamer et al. (2013), and discussed in this report.

Recent research has documented non-natal salmonid use of the lowermost portions of 16 out of 32 streams sampled in Island County. This finding indicates an underappreciated function of many presumed non-fish bearing streams in the County. Based on statistical analyses, juvenile Chinook are likely to be found in accessible streams within basins that are larger than 111 acres, with a channel gradient less than 6.5%. Streams that are closer to natal rivers (Skagit,

Snohomish and Stillaguamish) are more likely to be used by juvenile Chinook (Beamer et al. 2013). This suggests that small watercourses in Island County may support juvenile Chinook salmon originating in watersheds outside of Island County. Results of this study are shown on Map 6.

Resident fish, including resident cutthroat trout, have been documented in Maxwellton, Glendale, North Bluff, Dugwalla, and Chapman Creeks. Another 10 watersheds have been identified as having potential to support salmonid populations (WSCC 2000). Map 6 shows potential anadromous or resident salmonid-bearing streams as documented in Island County, as well as stream mouths where any fish presence was confirmed. Map 7 shows ~~non-salmonid bearing~~ all streams in Island County.

Additional References:

Kearsley, J. 1999. Fish Bearing Creeks Identified in Island County.

Kearsley, J. 2013. Letter to Mark Goldsmith, Washington Department of Fish and Wildlife. November 21, 2013.

Washington Department of Fish and Wildlife. Electronic reference. Salmonscape. <http://apps.wdfw.wa.gov/salmonscape/> [Accessed May 22, 2014].