Summary of Fish Catch Results for Fisherman Bay Lagoon N, 2008 and 2009

Skagit River System Cooperative Research Program

May 2012

Beach seine sampling for fish was conducted at Fisherman Bay Lagoon N as part of Washington State's Salmon Recovery Funding Board Project # 07-1863 N: *WRIA2 Habitat Based Assessment of Juvenile Salmon*, also locally known as the *Big Picture Project*.

Fisherman Bay Lagoon N is located on the western side of Lopez Island, in Fisherman Bay, within the San Juan Islands (Figure 1). Small net beach seines were used at Fisherman Bay Lagoon N after methods described in Skagit System Cooperative Research Department (2003). We made 26 beach seine sets over the two-year study period. Beach seining occurred monthly March through September in both 2008 and 2009.

The beach seine site at Fisherman Bay Lagoon N consisted of mixed fines and sand substrate, usually without vegetative cover (such as eelgrass, kelp or other macro algae). Average maximum water depth was 0.6 meters and average salinity was 32.0 parts per thousand within the area seined. Water temperatures varied by month, ranging from a low of 7.9 °C in March 2008 to a high of 14.1 °C in July 2009. Water temperatures remained high after July and into September of both years, averaging approximately 13 °C.

We caught a total of 1,348 fish from 16 different species or species groupings over the two-year study period, but did not catch any juvenile salmon nor forage fish species (Table 1). The most abundant fish species was Pacific staghorn sculpin, which was present in over 90% of the beach seine sets. We kept count of Dungeness crab (1) caught by seines, as this species is of commercial and recreational interest.

Please refer to Beamer and Fresh (2012) for more information regarding timing, abundance, and habitat selection of focal fish species for the Big Picture Project. The focal species are: Chinook salmon, chum salmon, pink salmon, Pacific herring, surf smelt, Pacific sand lance, and hexagrammids (greenlings and lingcod).

References

Beamer, EM and KL Fresh. 2012. Juvenile Salmon and Forage Fish Presence and Abundance in Shoreline Habitats of the San Juan Islands, 2008-2009: Map Applications for selected fish species. Report to San Juan County Department of Community Development and Planning and San Juan County Marine Resources Committee. Friday Harbor, WA.

Skagit System Cooperative Research Department. 2003. Estuarine fish sampling methods. Skagit River System Cooperative. LaConner, WA. Available: http://www.skagitcoop.org/documents

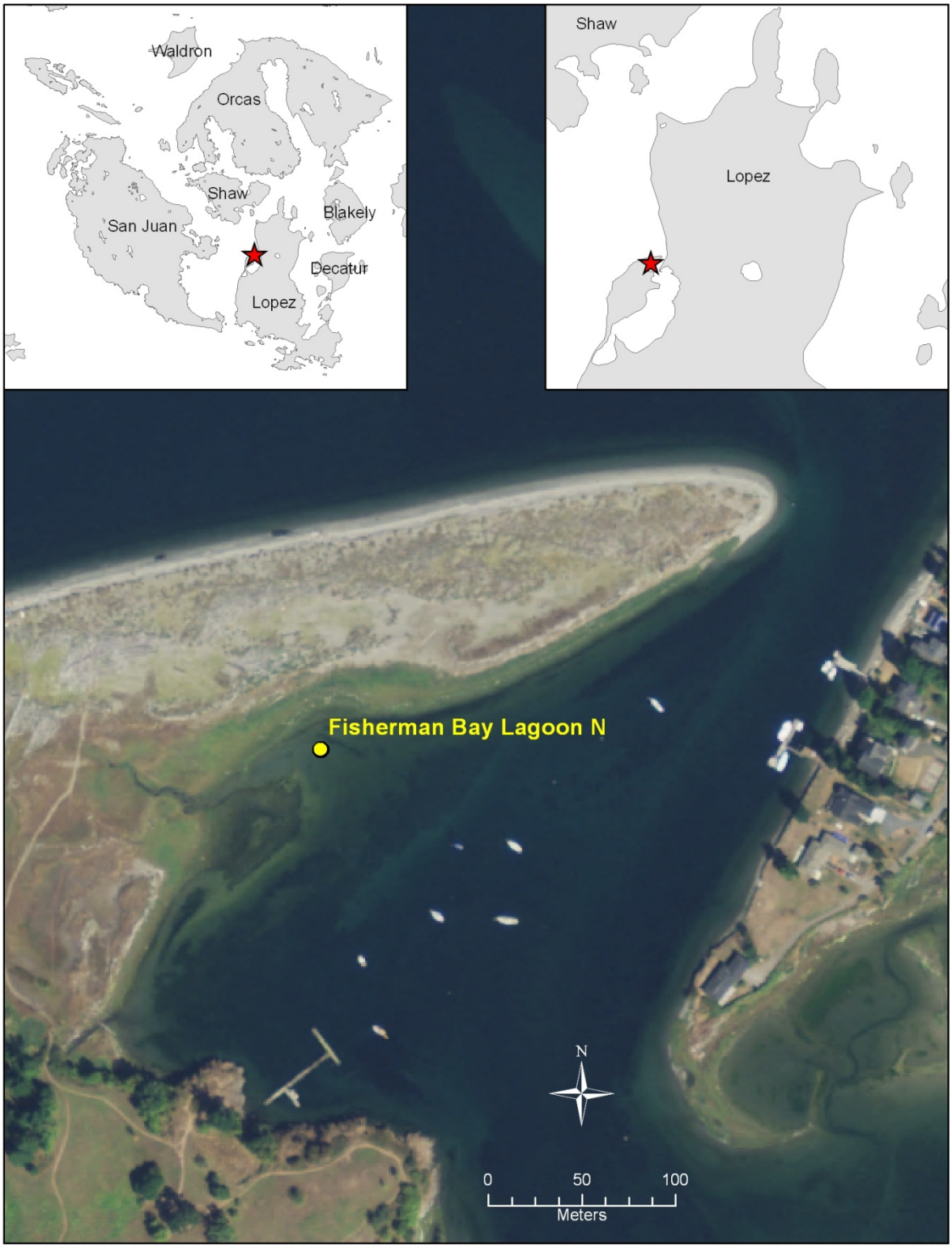

Figure 1. Location of Fisherman Bay Lagoon N beach seine site.

Table 1. Fish catch summary for Fisherman Bay Lagoon N beach seining, 2008 and 2009.

Assemblage Groupings	Taxonomic family	Genus species, age & mark	Common name	Total catch	Catch per set	Frequency in catch
Crabs	Cancridae	Cancer magister <6.5"	Dungeness crab, sublegal size	1	0.04	3.8%
Flatfish	Pleuronectiformes	Other or unknown flatfish	Unidentified flatfish species	7	0.27	11.5%
		Platichthys stellatus	Starry flounder	1	0.04	3.8%
Greenlings/lingcod	Hexagrammidae	Hexagrammos spp	Unidentified greenling species	15	0.58	11.5%
Gunnels and Pricklebacks	Stichaeidae	Lumpenus sagitta	Snake prickleback	24	0.92	15.4%
	Pholidae	Unidentified Gunnel Species	Unidentified gunnel species	7	0.27	7.7%
		Pholis ornata	Saddleback gunnel	4	0.15	11.5%
Other – marine	Gobiidae	Clevelandia ios	Arrow goby	4	0.15	7.7%
	Agonidae	Other or unknown Agonid	Unidentified poacher species	1	0.04	3.8%
Sculpins	Cottidae	Leptocottus armatus	Pacific staghorn sculpin	1220	46.92	92.3%
		Other or unknown Cottid	Unidentified sculpin species	16	0.62	11.5%
		Clinocottus acuticeps	Sharpnose sculpin	10	0.38	11.5%
		Myoxocephalus polyacanthocephalus	Great sculpin	3	0.12	7.7%
		Gilbertidia sigalutes	Soft sculpin	1	0.04	3.8%
Sea perches	Embiotocidae	Cymatogaster aggregata	Shiner perch	26	1.00	11.5%
Sticklebacks	Gasterosteidae	Gasterosteus aculeatus	Three spined stickleback	8	0.31	19.2%
True cods	Gadidae	Microgadus proximus	Pacific tomcod	1	0.04	3.8%