Pacific Salmon of the Ganaraska River and the Ganaraska Region Conservation Authority

The Ganaraska River contains runs of wild Chinook and Coho Salmon. Since the Ganaraska River is not stocked, it is believed that significant natural reproduction is occurring, and is one of the dominant producers of wild Chinook Salmon on the north shore of Lake Ontario. This means that most of the adult Chinook and Coho Salmon returning to the Ganaraska River are not hatchery origin fish, but were born in the river and survived to return as adults.

Figure 1: Wild juvenile Coho and Chinook Salmon.

Figure 2: Trout and Salmon spawning and juvenile rearing habitat.

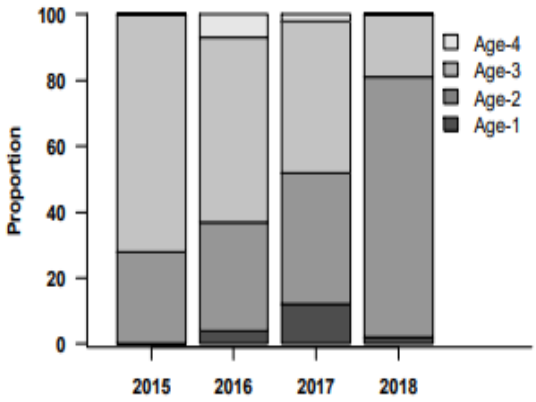

Figure 3: Age proportions of spawning Chinook Salmon at the Ganaraska River. [1]

Since the installation of the fish counter at the Ganaraska Fishway in Port Hope, an average of 8,857 Chinook Salmon and 1,438 Coho Salmon have been observed[1]. The presence of significant natural reproduction is an indicator of watershed health. The continued occurrence of natural reproduction can be used to ensure that the physical habitat, water quality, and water quantity within Ganaraska Region Conservation Authority watersheds remain in good condition. Since the Ganaraska River and other GRCA watersheds support significant amounts of natural reproduction for Coho and Chinook Salmon, they are important spawning and nursery streams that contribute towards the Lake Ontario recreational fishery.

Spawning takes place in the fall, with the mature fish beginning to return from Lake Ontario usually in September. Pacific Salmon are anadromous, which means that adults will die a few days to two weeks after spawning. The carcasses within the tributaries act as a main food source for aquatic insects, smaller fish, and terrestrial scavengers. As for the carcasses that decompose along the banks, they are a perfect nutrient source for trees, which will allow for larger canopy cover and prevent bank erosion.

Hatching usually takes place in early spring and they smolt to Lake Ontario within three to eight weeks after hatching, with about 10% staying in tributaries for a full year before smolting. Pacific Salmon usually spend two years in the Lake before they return to the tributaries to spawn in the fall. The Ministry of Natural Resources and Forestry have conducted life history analysis on the Ganaraska River Chinook Salmon and have determined that they return to spawn between the ages of one and four, with proportions generally between age two and three.

1. Ontario Ministry of Natural Resources and Forestry. 2019. Lake Ontario Fish Communities and Fisheries: 2018 Annual Report of the Lake Ontario Management Unit. Ontario Ministry of Natural Resources and Forestry, Picton, Ontario, Canada.