



# Gitanyow *Fisheries* Authority



August 19, 2020

## **2020 Kitwanga River Salmon Enumeration Facility Update #4**

The Gitanyow Fisheries Authority (GFA) is pleased to announce that the Kitwanga River Adult Salmon Enumeration Facility (KSEF) is operational for 2020. Like in other years GFA will be providing weekly updates on salmon escapement to the Kitwanga River (middle Skeena index) from July through to the end of October. This year marks the 18<sup>th</sup> consecutive year that GFA has implemented the program, which collects important in-season pacific salmon stock assessment and biological information. GFA would like to thank their 2020 funders and supporters, specifically the Gitanyow Chiefs (Gitanyow Huwilp Sustainability Fund), the Pacific Salmon Commission's Northern Endowment Fund and Fisheries and Oceans, Canada. GFA would also like to acknowledge and thank the Gitwangak Wilp Simadeeks for allowing GFA to continue to work within their traditional territory, as set out by our 2002 agreement. As in other years, weekly updates will be distributed and posted on our website: [www.gitanyowfisheries.com](http://www.gitanyowfisheries.com)



*View towards right bank of KSEF on August 18, 2020*

Also for 2020, GFA in partnership with researchers from Simon Fraser University (led by Dr. Vicki Marlatt) will be building on the KSEF infrastructure and scientific program to include the monitoring of Kitwanga River salmon stocks using environmental DNA (eDNA). More specifically, researchers will quantify the number of fish passing the KSEF fish fence based on the eDNA samples collected from the Kitwanga River in conjunction with establishing a discharge rating curve and compare this information with traditional salmon counting methods at the facility from June till November of 2020. The hope is that this project will demonstrate the potential of eDNA for quantifying salmonids in the Kitwanga River and that these methods can also be applied to the many rivers currently not assessed in BC. This project was funded through Genome BC's Sector Innovation Program.

GFA staff installed the in-river KSEF components from July 6-10, 2020 under higher than normal water level conditions. The fence was fish tight by the end of the day on July 10, our usual start date. For 2020, we once again have installed and have operational, a digital video camera recorder (DVR). The DVR camera box has been in place and operational since July 15, 2020 and has been passing Chinook successfully.

The water levels at the KSEF are currently at **1.43m**, approximately 0.38m above the long-term average and over double the average (0.62m) over the past 72 hours (see KSEF water stage graph below for more detail). **Between August 16 and August 17, after heavy rainfall on August 14 and 15, a few panels had to be opened intermittently to relieve pressure on the fence. Fish were not observed to be holding below the fence prior to this, but it is not certain if fish passed through the fence uncounted during this time.**



*View towards right bank of KSEF on August 16, 2020. Water level is ~ 1.68m*

Water temperatures in the Kitwanga River are slightly lower than normal for this time of year and are currently fluctuating between 10-12°C. Total salmon counts to the end of **August 18, 2020** are as follows:

**Sockeye = 9      Chinook = 108      Pink = 373      Chum = 4      Coho = 2**

To date we have counted **9 sockeye** through the KSEF. This year's sockeye escapement compares to a previous **maximum** observed to the day of 7,652 in 2010, which resulted in an overall escapement of 20,804 and the **minimum** observed to the day of 61 in 2016, which resulted in overall escapement of 1,283. Based on average run timing for Kitwanga sockeye to the day (2003-2019) it is predicted that approximately **29.1%** of the run should have passed the KSEF. For more information on cumulative Kitwanga sockeye salmon abundance by day, refer to the sockeye salmon graph below.

To date we have counted **108 Chinook** through the KSEF. We have also counted 106 jack Chinook through the KSEF. This year's Chinook escapement compares to a **maximum** observed to the day of 2,939 in 2007, which resulted in an overall escapement of 3,225 and the **minimum** observed to the day of 123 in 2010, which resulted in an overall escapement of 852 for the year. Based on average run timing for Kitwanga Chinook to the day (2003-2019) it is predicted that approximately **74.7%** of the run should have passed the KSEF. For more information on cumulative Kitwanga Chinook salmon abundance by date, refer to the Chinook graph below.

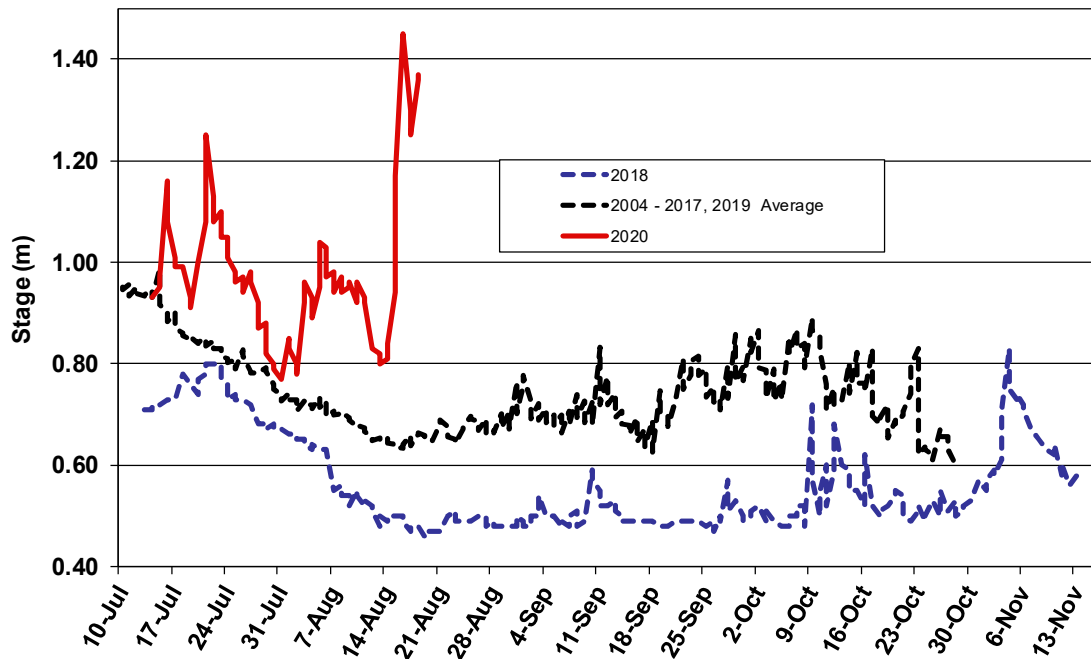
To date we have counted **373 pink** salmon through the KSEF. This year's even year pink escapement compares to a **maximum** observed to the day of 28,378 in 2004, which resulted in an overall escapement of 71,070 and the **minimum** observed to the day of 4 in 2018, which resulted in an overall escapement of 2,736. Based on average run timing for pink salmon to the day (2004-2018) it is predicted that **23.9%** of the run should have passed the KSEF. For more information on cumulative Kitwanga even year pink salmon abundance by date, refer to the pink salmon graph below.

To date we have counted **4 chum salmon** through the KSEF. This year's chum escapement compares to a **maximum** observed to the day of 291 in 2005, which resulted in an overall escapement of 1,862 and the **minimum** observed to the day of 0 in 2006 and 2019, which resulted in overall escapements of 685 and 492 respectively for the years. Based on average run timing for chum salmon to the day (2003-2019) it is predicted that approximately **7.2%** of the run should now have passed the KSEF. For more information on cumulative Kitwanga chum salmon abundance by date, refer to the chum salmon graph below.

To date we have counted **2 coho salmon** through the KSEF. This year's coho escapement compares to a **maximum** observed to the day of 298 in 2005, which resulted in an overall escapement of 7,933 and the **minimum** observed to the day of 0 in 2006, which resulted in an overall escapement of 2,572 for the year. Based on average run timing for coho salmon to the day (2003-2019) it is predicted that approximately **2%** of the run should now have passed the KSEF. For more information on cumulative Kitwanga coho salmon abundance by date, refer to the coho salmon graph below.



**KSEF Water Stage Comparison  
2004-2017, 2019 Average & 2018 & 2020**



**KSEF Water Temperature Comparison  
2011-2017, 2019 Average & 2018 & 2020**

