2018 Kitwanga River Salmon Enumeration Facility Update #13

The Gitanyow Fisheries Authority (GFA) is pleased to announce that the Kitwanga River Adult Salmon Enumeration Facility (KSEF) is operational for 2018. Like in other years GFA will be providing weekly updates on salmon escapement to the Kitwanga River (middle Skeena index) from July through to October. This year marks the 16th 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 2018 funders and supporters, specifically the Gitanyow Chiefs (Gitanyow Huwilp Sustainability Fund), the Pacific Salmon Commission 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

Drone Photograph of KSEF taken on August 7, 2018. Note very low water conditions.
GFA staff installed the in-river KSEF components from July 4-9, under lower than normal water levels. The fence was rendered fish tight during the evening of July 9 and operational (diverting fish through sample boxes) on the afternoon of July 10, which is the usual starting date for the project. Water levels at the KSEF are still very low, some of the lowest conditions ever recorded at the site since operations started in 2003. Currently levels are at 0.49m, approximately 27% below the long-term average (see KSEF water stage graph below for more detail).

*Photograph of KSEF taken on October 16, 2018. Note water conditions are still relatively low.*

Upper daily water temperatures in the Kitwanga River are slightly lower than normal (~1.5°C) and are currently fluctuating between 4 - 7°C. Total salmon counts to the night of **October 22, 2018** are as follows:

**Sockeye = 1,381  Chinook = 618  Pink = 2,736  Chum = 273  Coho = 75**

To date we have counted *1,381 sockeye* through the KSEF and the KsF (see update #1 for explanation why both facilities were used for this years counts). This year’s sockeye escapement compares to a previous **maximum** observed to the day of 20,804 in 2010, which resulted in an overall escapement of 20,804 and the **minimum** observed to the day of 240 in 2007, which resulted in overall escapements of 240. Based on average run timing for Kitwanga sockeye to the day (2003-2017) it is predicted that approximately **94%** 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.

Like last year GFA will be tracking radio tagged sockeye throughout the Kitwanga Watershed to learn more about their freshwater habits and identify key spawning areas for 2018. To date 57 sockeye have been tagged.

To date we have counted **618 Chinook** through the KSEF. Based on average run timing for Kitwanga Chinook to the day (2003-2017) it is predicted that all 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.

As a pilot project for this year we have installed and operated a digital video camera recorder (DVR) to the KSEF project (Thank you DFO and Rob Dams for loaning us the equipment). The DVR has been in place and operational since July 24, 2018 and has been passing both sockeye and chinook successfully. Fish seem more comfortable moving through the camera box than through our regular sample box areas and to date approximately 80% of the fish enumerated through the KSEF to date have been counted through the DVR camera box.

To date we have counted **2,736 pink salmon** through the KSEF. Based on average run timing for pink salmon to the day (2003-2017) it is predicted that all of the run should now 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 **273 chum salmon** through the KSEF. Based on average run timing for chum salmon to the day (2003-2017) it is predicted that all 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 **75 coho salmon** through the KSEF. This year’s coho escapement compares to a maximum observed to the day of 9,484 in 2009, which resulted in an overall escapement of 12,080 and the minimum observed to the day of 622 in 2016, which resulted in an overall escapement of 1,307 for the year. Based on average run timing for coho salmon to the day (2003-2017) it is predicted that approximately **92%** 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 Average & 2018

KSEF Water Temperature Comparison
2011-2017 Average & 2018
Cumulative Kitwanga Sockeye Abundance at KSEF & KsF, 2003-2018

Cumulative Kitwanga Chinook Abundance through the KSEF, 2003-2018
Cumulative Pink Abundance to the KSEF, 2004 - 2018 (Even Years Only)

- 2004 - 2016 Average
- 2004 (Largest Return)
- 2008 (Smallest Return)
- 2018

Cumulative Chum Abundance to the KSEF, 2003-2018

- 2005 Largest
- 2008 Smallest
- 2003-2017 Average
- 2018
Cumulative Coho Salmon Abundance to the KSEF, 2003-2018

- 2006 Largest
- 2003-2017 Average
- 2006 Smallest
- 2018