



## **Tides Canada Grant #GF01768 - Narrative Report**

*January 2014*

The Bulkey Valley Research Centre is pleased to provide this Narrative Report on the field activities associated with Tides Canada Grant #GF01768. Work completed to date has included the following;

- An assessment of historic Morice Floodplain salmon habitat utilization data (spawner locations by species and timing) and development of a set of field ortho-photo maps for data capture.
- A field sampling program during the first week of July to conduct redd counts and spawner surveys and habitat assessments from Morice Lake to Owen Creek along the main stem Morice River and side channels.
- A field sampling program during the second week of September to collect spawner and redd counts during the Chinook and Sockeye spawning period.
- Initial mapping of spawner / redd surveys and development of a GIS based reporting tool.

The field surveys successfully captured spawner and redd data across the study area. A further objective to estimate spawner depth and velocity preferences was problematic due to higher than expected flows and lower than expected water clarity. Species specific data was obtained but the number of replicates was lower than anticipated. Similarly, side channel surveys suffered from the effects of high water and turbidity (particularly during the July survey) but some quality observations were obtained where survey was deemed safe.

The original plan was to conduct the field surveys by raft and pontoon boat as an economic method of data capture. This proved problematic due to the lack of familiarity of the field crews with respect to raft handling and due to high flows. The plan was adaptively altered by using jet boats to do the surveys and by hiring a local guide to assist with the July surveys (Tony Harris). This proved to be advantageous in that it allowed repeat passes over spawning locations and allowed survey crews to obtain background data from the guide during the field tour. The guide was also able to provide field safety training and boat handling skills to the team.

One of the major learning outcomes of the field work was a greater appreciation for the diversity of habitats that are found on the floodplain particularly in the braided reach below the Gosnell confluence. Spawners were located in cryptic habitats on the floodplain during the July surveys. These habitats are under-represented in standard field surveys due to their difficult access yet they provide high quality spawning and rearing habitats that have good flow characteristics and cover. Remaining field work involves winter water quality sampling at selected floodplain habitats, digital photo capture in selected winter holding pools and hydrologic characterization of floodplain units with roads to estimate the degree of hydrologic isolation due to roads.