

### **2019-2020 COALITION NAVIGATION RESEARCH PROGRAM**

The 2019 components of the **COALITION** research package entails obtaining the environmental signatures of various classes of motor boats, the Matrix component, and investigating the cumulative impacts of motor boat activities with an Observer device. The Observer will be applied to a salmon river.

In Winter 2019, the École de technologie supérieure (ETS) affiliated with the Université du Québec, developed the design of the Observer device on cumulative impacts within their curriculum activities.

During Spring 2019, the Observer will be built by ETS and /or another research organization. Once completed, the Observer will be validated and calibrated in the laboratory of the Institut national de la recherche scientifique, Water Earth Environment Centre.

Concurrently, in Spring 2019, student interns will be hired to develop and assemble the Matrix. Details on how Coalition Navigation remain to be determined.

If all goes well, the on-water applications of the Matrix and two Observer devices will occur in Summer 2019. Modifications of the Observer device will be performed, as appropriate. Unanticipated delays may mean that some of this research will have to be completed in 2020, particularly with respect to the Matrix project.

Pending on the success of the Coalition Navigation initiatives to obtain financing, the 2019 on-water applications of two Observers on cumulative impacts of motor boat activities will focus on the Shuswap River, a salmon river in the BC Regional District of North Okanagan. One Observer will be applied to the spawning or "islands area" in the Enderby to Ashton reach and the second to the migrating salmon area in the water ski wake boat reach with sand/silt banks, between Mara and Grindrod. These two areas are quite different in that, the slightest wake in the "islands zone", mainly from jet boats, kills the fry and destroys the nests, while the latter zone has deep water pools where adult salmon congregate. The research would be incomplete if it didn't cover both types of marine environments and boating activities.

The Shuswap River approach is the product ongoing discussions with the Shuswap Pro-River community, and UBC in the development of the research approach and will include on-site community collaboration.

The methodologies for the 2019 research work which follows has been conceived by the **COALITION**.