

2017-2018 Funded Projects



This table summarizes approved 2017-2018 funding allocations for technical committee projects.

Supporting Committee: Rivers

of Projects: 16

Status	Project Title	Delivery Region	Allocated \$
Ongoing	Steelhead Index Stream Monitoring - Vancouver Island	1- West Coast	27,843
Completed	Coquihalla River Summer Steelhead Migration Rehabilitation	2 - South Coast	30,000
Ongoing	Seymour River Rockslide Mitigation Project	2 - South Coast	61,276
Ongoing	Lower Fraser River Guardian	2 - South Coast	25,322
Ongoing	Thompson Region River Guardian Program	3 - Thompson	43,000
Completed	Develop Plan for Public Angler Access on the St. Mary River	4 - Kootenay	6,000
Ongoing	Kootenay River Guardian Program (non-CW)	4 - Kootenay	52,500
Ongoing	Quesnel River Watershed Bull Trout Assessment	5 - Cariboo	10,000
Ongoing	Dean River Steelhead – Juvenile Assessment	5 - Cariboo	20,000
Completed	Developing Best Management Practices for Catch and Release Fisheries	6 - Skeena	48,000
Completed	Tyee Test Fishery Extension to Monitor Steelhead Escapement in Skeena	6 - Skeena	35,000
Ongoing	Skeena Region Bull Trout Monitoring Program – Redd Count Surveys	6 - Skeena	17,000
Ongoing	Stellako Spring Fishing Closure Evaluation	7a - Omineca	18,148
Completed	Evaluation of Regulation Changes via the Kettle River Guardian Program	8 - Okanagan	39,285
Completed	Developing a Software Package to Automate Production of Bioenergetic-Based Habitat Suitability Curves	Provincial	25,000
Completed	Keogh River Data Compilation	Provincial	20,000
			478,374



Delivery Region Locations



1. Region 1 West Coast
2. Region 2 South Coast
3. Region 3 Thompson
4. Region 4 Kootenay Boundary
5. Region 5 Cariboo
6. Region 6 Skeena
7. Region 7a Omineca
8. Region 7b North East (Peace)
9. Region 8 Okanagan

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Lower Fraser River Guardian

Status: Ongoing

The Lower Fraser River Guardian program was successfully launched August 2017. The program collaborates with members of the Lower Fraser Fisheries Alliance (LFFA) as part of a greater initiative to promote awareness, education and conservation of White Sturgeon on the lower Fraser River. Crew members have significant experience on the river and are currently working as technical experts on many facets of the White Sturgeon program under the direction of Region 2 MFLNRO staff.

The program is designed to randomly sample the river three days a week from August to the end of October. The program is intended to collect information on species catch and by-catch (Sturgeon and Steelhead) from commercial, recreational and First Nation fisheries occurring on the river during the time period. While there are other time periods where the aforementioned fisheries occur, based on the available budget and other factors, the summer-fall period was identified as the best time to implement the program. In addition, the program is intended to build relationships and partnerships with other stakeholders that have the same common goal of ensuring the health of White Sturgeon populations in the lower Fraser River.

Based on participation from commercial and First Nation fishers, one of the program objectives is to develop relationships with these fishers to educate and promote awareness around White Sturgeon issues on lower Fraser River. The net fisheries targeting salmon, authorized by DFO, are considered to be a major source of mortality for White Sturgeon in the river. Understanding the relative number and magnitude of by-catch of Sturgeon within the net fisheries is an important aspect of the future conservation and management of the species. Due to the timing and openings of many of the commercial and FN net fisheries, LFFA members have a unique advantage of being available and having access to the traditional and non-traditional fisheries along the river. The program will work with DFO and Province to undertake the removal of "ghost nets" that are illegally fishing or abandoned in the river, also considered another source of Sturgeon mortality.

Similarly, based on the participation from guided and non-guided recreational anglers, another program objective is to develop relationships with the recreational angling community to educate and promote awareness around White Sturgeon issues on lower Fraser River. There is substantial concern that the recreational catch and release fishery, which has grown significantly in last decade, contributes substantively to the mortality on the population. Recent research has indicated that Sturgeon experience elevated stress levels in response to the capture and release by anglers within the fishery. There is concern that the fishery may have impacts on Sturgeon during critical time periods which include the spring, during the critical spawning period, and in the summer when water temperatures are elevated. Working with the angling community to be aware of these issues and promoting best handling practices is an important aspect of the program.

Lastly, the program is intended to promote compliance with regulations associated with the fisheries occurring on the river. While crews are not licensed officers, they are expected to be the "eyes and ears" on the river and report violations to DFO or COS patrolling the river. In addition to compliance within fisheries, another program goal is to document and report on any violations related to habitat destruction; including dumping, construction, polluting and alteration within the main water course in the lower Fraser River. Habitat degradation has been a major factor identified in maintaining and sustaining the future health of White Sturgeon populations in the river. This objective also promotes awareness and builds relationships with compliance and enforcement staff in both agencies that manage the river.

River Guardians conducted 38 days of patrols on the river. From the 38 days, 647 interviews were conducted with anglers and guided anglers. In addition, 6 days were utilized to conduct interviews with FN fishers during FSC (food, social and ceremonial) and EO (economic opportunity) openings for salmon. While many interviews were conducted, limited information on bycatch was provided by FN fishers on Steelhead or White Sturgeon. A myriad of factors are associated with the limited reporting on bycatch which will not be discussed in the reporting.

Tracking No. R1807

Year 1 of 5

Total Spent to Date \$14,644

Quesnel River Watershed Bull Trout Assessment

Status: Ongoing

This project is capitalizing on investments currently being made through the ongoing HCTF/FLNRORD/MOE/FFSBC Quesnel Lake exploitation project. An acoustic array has been set up which includes a total of 33 receivers distributed throughout Quesnel Lake as well as the Mitchell and Horsefly rivers. The Quesnel and Cariboo rivers also have known bull trout populations, however, very little is known with regards to habitat use, distribution or migratory behaviour. In addition, despite the presence of recreational fisheries that support both guided and unguided effort, there is a general lack of information with regards to current exploitation.

Preliminary results from the Quesnel Lake exploitation project indicate bull trout stocks within the Quesnel River watershed are being exploited across a range of lake and stream fisheries, which includes the Quesnel and Cariboo rivers. In many instances, current angling regulations are not consistent across these fisheries. This project was initiated to provide the basic information required to sustainably manage blue-listed bull trout across the watershed. Results of this project will be used directly to develop sustainable angling regulations; inform future habitat protection measures and develop an effective population monitoring plan.

As planned, year 3 of this project was focussed on downloading and maintenance of acoustic receivers deployed within streams across the Quesnel River watershed. Ten acoustic receivers have been successfully deployed in the Quesnel, Cariboo and Horsefly Rivers, which when added to the 24 receivers in the lake, provides excellent acoustic coverage for detecting movements throughout the system. During the first two years of the study, thirty bull trout were successfully tagged with five year acoustic tags. Tags were distributed across the Quesnel and Cariboo rivers. All acoustic tagged fish were also marked with high reward floy tags, consistent with methodology currently being utilized on Quesnel Lake. The high reward tags provide an incentive for anglers to report re-captured bull trout and ultimately improve our understanding of exploitation dynamics within the system.

FFSBC funding received in 2017/2018 was utilized to hire contractor support to deploy, download and maintain acoustic receivers. Funding to purchase receivers and tags for this project was secured through FLNRORD. This project remains on track and on budget.

Tracking No.	R1618	Year 3 of 5	Total Spent to Date	\$42,498
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Developing Best Management Practices for Catch and Release Fisheries

Status: Completed

No report provided.

Tracking No.	R1701	Year 2 of 2	Total Spent to Date	\$95,646
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Evaluation of Regulation Changes via the Kettle River Guardian Program

Status: Completed

The Kettle River Watershed provides one of the few quality fly fishing destinations in the Okanagan Region. The fishery is focused on wild stocks of fluvial rainbow trout (*Oncorhynchus mykiss*) which can attain sizes in excess of 50 cm. Over the past 2 decades, the quality of the Kettle River fishery has deteriorated due to low abundance and small size of rainbow trout. Issues such as: water and land practices, habitat availability, recruitment, over-fishing, low seasonal flows and high seasonal temperatures have been attributed to the decline (Sebastian 1989; Oliver 2002, Andrusak 2009; Andrusak & Epp 2013). A number of these concerns brought the Kettle River drainage to the 2nd most endangered river in British Columbia (Outdoor Recreational Council of BC 2009).

As the only fly fishing river in Region 8, the Kettle is managed as a quality fishery. To meet this objective, more conservative regulations were implemented in 2015 to protect the stocks, reduce related catch and release mortality and maintain large bodied fish size. Regulation changes included:

- (1) Movement to rainbow trout catch & release on the W. Kettle, Kettle and Granby rivers,
- (2) Implementation of an in-season closure (August), to protect wild stocks during the high temperature/low flow period and maintain the quality of the fishery.

Low compliance with existing regulations and infrequent enforcement presence are additional problems in the Kettle River watershed.

The Kettle River Guardian Program (KRG) was initiated in 2015 to monitor the status of rainbow trout stocks in the Kettle River watershed and evaluate the effectiveness of regulation changes as a mechanism to maintain a quality recreational fishery. Objectives will be achieved by:

- (1) collection of stock & biological data, and
- (2) estimation of current angler effort & fisheries statistics.
- (3) additional on-the-ground enforcement presence to curtail non-compliance

Project success will be measured by increased trout abundance and size over time, enhanced angler satisfaction/opportunity, and a reduction in the number of compliance infractions.

FY2015 (Year 1): Fire, drought, and the resulting fishery closure precluded river access & angling for much of year 1. As a result, only 14 anglers were interviewed and a significant portion of the funding was returned to FFBC. Ten compliance infractions were identified however, during the short fishery opening amounting; 75% of anglers interviewed were non-compliant.

FY2016 (Year 2): Year 2 was much more successful. A total of 94 interviews were conducted in 2016, of which 13 were non-compliant (14%). The majority of the interviews were completed during the summer months (July and August).

FY2017 (Year 3): Environmental conditions, including extended high flows/spring flooding, rapidly followed by forest fires and drought, precluded angling on the rivers the better part of the season. The Kettle River was fishable and the fishery accessible to anglers primarily during the month of July in 2017. The Granby River permitted a few more angler days. A total of 37 interviews were conducted in 2017, of which 2 were non-compliant (5%). The majority of the interviews were completed during the month of July.

Tracking No.	R1609	Year	3 of 3	Total Spent to Date	\$97,646
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Keogh River Data Compilation

Status: Completed

This project is to capture all historical data for the Keogh River Steelhead Population Dynamics project. This project was funded a mid-cycle proposal and the finished database is projected to be completed by May 2018. We have begun conversations MOE-data management for future incorporated into the BC Government stock assessment database.

Tracking No. R1806 **Year 1 of 1** **Total Spent to Date \$20,000**