

This notice of determination is being issued by Parks Canada under the *Impact Assessment Act*. Parks Canada has determined that the project is not likely to cause significant adverse environmental effects.

Historic stocking practices in the mountain national parks saw the widespread introduction of non-native fish. SARA listed Westslope Cutthroat Trout (WSCT) populations in Alberta and British Columbia and aquatic ecological integrity will be negatively impacted if conservation and restoration efforts are deferred. If no action is taken, or if we continue to use less efficient methods for the removal of non-native fish, there will be continued decline in core populations of WSCT through competitive exclusion and hybridization.

This project builds upon the successes of WSCT restoration in Banff National Park. By removing non-native Brook Trout from these three lakes in KNP, and reintroducing pure populations of WSCT in sites within their historic range, it will create habitat strongholds for native species that will aid in developing more robust populations that inhabit a greater proportion of their historical distribution, require less fisheries management intervention, and provide thermal refugia in an ever-changing climate. Other native fish species, such as Bull Trout, will also benefit by alleviating stress on important spawning grounds in the East Verdant and Vermilion rivers. This project meets the goals and objectives in the *Kootenay National Park Multi-Species Species at Risk Action Plan (2017)*, *Kootenay National Park Management Plan (2022)* and *Department of Fisheries and Oceans in Recovery Strategy-Action Plan (2019)*.

This Detailed Impact Assessment (DIA) assessed potential impacts of the project in the context of active management and future conservation gains. Parks Canada has explored several alternatives for non-native fish removal and reintroduction of WSCT. Application of fish toxicant will efficiently and effectively eradicate non-native Brook Trout in these lakes to allow pure WSCT populations to be re-established and maintained. Minor adverse effects, such as those associated with nontarget invertebrates and altered water quality, are short-term and limited in scale. Monitoring of benthic macroinvertebrates and zooplankton has demonstrated that community composition and organism abundance return to pre-application conditions within two years following fish toxicant applications. Timing of treatments will mitigate adverse impacts to larval stage amphibians. Brook Trout are a widespread and dominant species, therefore, no significant impacts to the populations are expected as a result of this project.

While several options for reintroduction will continue to be investigated, the project intends to conduct WSCT gamete (eggs and milt) fertilization using nearest neighbour donor populations and use remote site incubation as there are fewer adverse residual effects using this method.

WSCT and/or their gametes may be negatively impacted by incidental mortality during capture, handling, storage holding and transport. Incubating fertilized WSCT eggs will lead to the mortality of some embryos. Critical habitat will not be adversely affected. Following reintroduction of WSCT monitoring will be required. Presence monitoring, DNA monitoring, and habitat usage monitoring will be conducted to ensure proliferation of WSCT into reintroduced areas. Reintroduction will require determination of donor population genetics and pathogen presence. Donor populations will be selected to provide adequate genetic diversity to the reintroduced population.

The project has the potential for adverse effects on other Valued Components that, because of known impacts and mitigations, were considered to be of low risk. The DIA found that there are negligible to no residual adverse effects associated with these interactions.


Feedback on the project was received from two members of the public during the public engagement period. Feedback was related to the project and not the impact assessment process or DIA. Comments opposed the eradication of non-native Brook Trout and use of fish toxicant raising concerns with inhumane euthanasia and human health. An online petition was initiated by one of the commenters, where 187 signatures were obtained. No requests were received to review the draft DIA. No changes to the DIA were required as a result of the feedback received. The DIA has evaluated project alternatives and has appropriately assessed and sufficiently mitigated potential impacts of the use of fish toxicant on the aquatic environment, human health, fish, and wildlife.

Parks Canada is currently working with representatives of the Secwépemc and Ktunaxa Nations on an Aquatics Stewardship Plan for Kootenay National Park. A working group has been established and is in the process of drafting an initial plan. This restoration project has been discussed during engagement and there is support for restoring aquatic ecological integrity on the landscape. Further to the working group, Parks Canada invited Indigenous communities, including three Stoney Nations (Bears paw, Chiniki and GoodStoney), five Secwépemc Nations (Adams Lake, Neskonlith, Shuswap, Skw'lax te Secwepemculucw and Splatsin), Ktunaxa Nation Council as well as the four Ktunaxa Nations (ʔakisq̓nuk, yaqan nukiy, ʔaq̓am, Yaq̓it ʔa·knuq̓i'it), to provide input on the draft DIA. The Ktunaxa Nation Council provided the sole response, and they had no concerns with the project. Parks Canada will continue to engage with interested Nations to seek input on the project and are committed to addressing interests or concerns raised through further engagement activities, which may result in additional mitigations and plans for involvement.

Mitigation measures will be implemented for the following Value Components during the Project: WSCT populations, fish and fish habitat, water quality, invertebrates, visitor experience and safety, species at risk, vegetation and soils, cultural resources, wildlife, and Indigenous people's values and rights.

Taking into account implementation of mitigation measures outlined in the DIA, and the overall benefit anticipated for WSCT in KNP, the project is not likely to cause significant adverse environmental effects.

RECOMMENDATION AND APPROVAL

Recommended by: Jón Stuart-Smith, Manager Integrated Land Use Planning & Policy	Date: 2024-08-08
Approval: François Masse Superintendent, Lake Louise, Yoho & Kootenay Field Unit: 	Date: 2024-08-08