Standardized Methods for the Long-Term Monitoring of Run-of-River Hydropower Facilities in British Columbia and the Yukon: Summary and Preliminary Results

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Abstract

With the development of multiple run-of-river projects in the past 15 years, there have been increasing calls by the regulatory agencies for more standardized approaches to baseline and long-term monitoring. As a result, a series of guideline documents have been developed to outline the types of data required and the recommended data collection methods to aid proponents and their consultants during the permitting and operation phases. The most recent of these documents, commissioned by Fisheries and Oceans Canada, describes the nine parameters that are recommended for study during long-term operational monitoring, and provides guidance as to if, when, where, and how each parameter should be monitored. We provide a brief summary of the guideline document along with some preliminary results from monitoring using these standardized approaches on a number of projects in the Lower Mainland and on Vancouver Island. We identify a variety of responses to project operation, note some common themes, and discuss some challenges and confounding factors. The adoption of these guidelines is in its infancy, but the hope is that by promoting standardized methods meta-analyses can be conducted to draw comparisons across multiple projects and evaluate common environmental effects. Ultimately, it is hoped that this will improve our ability to predict, mitigate and minimize adverse environmental effects of these projects.