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A Review of Methods Used to Offset Residual Impacts of Development Projects on Fisheries Productivity

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Abstract

Recent amendments to Canada's *Fisheries Act* (Bill C38, June 2012 and Bill C45, December 2012) will alter the way Fisheries and Oceans Canada (DFO) assesses and manages the impacts of development projects on aquatic ecosystems. Efforts will continue to be made to avoid and mitigate negative impacts to aquatic ecosystems, and offset or compensate for residual impacts, as per current practice within DFO (DFO 2010). In the future, a flexible approach will be taken to compensating residual impacts of project development in order to achieve better outcomes for fish and fish habitat while using measures that are efficient, effective, predictable and measurable. The department will shift to a focus on managing impacts to fisheries, specifically commercial, recreational, and Aboriginal (CRA) fisheries, to ensure their sustainability and ongoing productivity (DFO 2012). When residual impacts are unavoidable and cannot be mitigated, offset techniques such as those described in this report can be used to achieve no net loss or a net gain of fisheries productivity.

The top priority for maintaining or improving fishery productivity will be avoiding impacts to fish and fish habitat via project relocation and reducing impacts via mitigation measures and only after those efforts have been exhausted will other options to offset impacts be considered. The amount of offsetting needed to ensure there are no adverse impacts to fisheries productivity needs to be carefully considered and monitoring should be conducted to ensure that productivity is maintained or increased.

This report includes information on several potential measures to offset impacts to fisheries productivity including fish habitat creation, habitat restoration, stocking, and chemical manipulations (including nutrient addition) and includes a description of habitat banking as a possible approach to implement offset measures. Information and experiences of DFO Fisheries Protection practitioners across Canada are also incorporated into the report and information on fisheries-related policies from other countries including the United States, Australia, and the European Union are briefly summarized. Although not exhaustive, this review also includes information on baseline data needs and monitoring that will be important in developing an offsetting policy for Canadian fisheries.

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