Guidelines for Developing a Plan for Applying Measures to Offset Harmful Impacts to Fish And Fish Habitat

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Context and purpose of these guidelines

Fish and fish habitat can be negatively affected by works, undertakings or activities (referred to as "projects") that could result in the death of fish or the harmful alteration, disruption or destruction of fish habitat (collectively referred to in this document as "harmful impacts to fish and fish habitat" or simply "harmful impacts")[1]. Under paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act*, the Minister or responsible official of Fisheries and Oceans Canada (referred to as "DFO") may authorize harmful impacts to fish and fish habitat and set out conditions under which the impacts can occur.

The *Authorizations Concerning Fish and Fish Habitat Protection Regulations* (referred to in these Guidelines as "the Regulations") requires a proponent to provide an offsetting plan with their application for a *Fisheries Act* authorization under non-emergency conditions[2]. Offsetting plans describe the actions a proponent will take to counterbalance the harmful impacts to fish and fish habitat resulting from their project, after avoidance and mitigation measures have been applied.

The *Policy for Applying Measures to Offset Harmful Impacts to Fish and Fish Habitat*, ("the Offsetting Policy") provides guidance to proponents on DFO's expectations regarding offsetting measures, including guiding principles and the acceptable types of offsetting. This document supplements the Offsetting Policy by providing additional guidance to proponents on the development of an offsetting plan.

A summary of the Offsetting Policy and these guidelines can be found in the tip sheet Project planning: What is offsetting and how to prepare an offsetting plan.

For the development of fish habitat bank conservation project plans, please see the *Guidelines for Establishing and Managing Fish Habitat Banks*.

Disclaimer

The Guidelines for Developing a Plan for Applying Measures to Offset Harmful Impacts to Fish and Fish Habitat is not a substitute for the *Fisheries Act,* the *Species at Risk Act* or their regulations. In the event of an inconsistency between these guidelines and the *Fisheries Act,* the *Species at Risk Act* or their regulations, or any other legislation or regulations, the legislation or regulations will prevail. In the event of an inconsistency between these guidelines and the Policy for Applying Measures to Offset Harmful Impacts to Fish and Fish Habitat, the policy will prevail.

[1] For more information about what constitutes "harmful impacts" see the *Fish and fish habitat protection policy statement, August 2019* (https://www.dfo-mpo.gc.ca/pnw-ppe/policy-politique-eng.html)
[2] An offsetting plan is not required for applications related to emergency situations, as defined in section 3 of the Regulations.

Guiding principles for offsetting

Offsetting measures are the actions a proponent takes to counterbalance the harmful impacts to fish and fish habitat that their project causes after avoidance and mitigation measures have been applied. As long as the measures provide benefits to fish and fish habitat, the proponent has flexibility in what they can propose. DFO gives priority to offsetting measures that focus on restoring degraded fish habitat.

The Offsetting Policy describes DFO's guiding principles for offsetting in greater detail. They are summarized as:

> Principle 1: Offsetting is last in a hierarchy of measures. Offsetting counterbalances what cannot be avoided or mitigated.
>
> Principle 2: There are limits to what can be offset. Some types of fish habitat are rare, sensitive or of exceptional ecological or cultural value and cannot be replaced.
>
> Principle 3: The benefits from offsetting measures must counterbalance the harmful impacts, including time lags and uncertainties.
>
> Principle 4: Indigenous Peoples are engaged in the planning, design, implementation and monitoring of measures to offset.
>
> Principle 5: Measures to offset are in addition to what would have otherwise occurred, that is, what a proponent already has to do as part of their business practices or to comply with a law, regulation or a program.
>
> Principle 6: Offsetting measures are located to optimize ecological outcomes, taking into account the needs of rights holders and resource users.
>
> Principle 7: Measures to offset generate benefits that last over the long term.
>
> Principle 8: Time lags between the impact and offsetting measures are avoided or minimized.

Note that the principles are not listed in order of priority. Proponents should demonstrate how they have taken these principles into account when developing their offsetting plan.

Offsetting measures should complement fisheries management objectives and contribute to achieving them where they exist. Fisheries management objectives include, but are not limited to:

- regional restoration plans developed under DFO's *Framework to identify fish habitat restoration priorities*[3]
- restoration plans developed as part of Ecologically Significant Area designations
- federal and provincial fisheries management plans

[3] See Fisheries and Oceans Canada. 2023. Framework to identify fish habitat restoration priorities. Fish and Fish Habitat Protection Program. iii+12 pp. (https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41104602.pdf.)

- conservation and restoration priorities of Indigenous Peoples
- marine protected area objectives
- recovery or conservation objectives found in recovery strategies, action plans and management plans related to aquatic species at risk.

For more information on the use of different offsetting techniques, see Offsetting Techniques for Managing the Productivity of Freshwater Fisheries[4]. Detailed technical guidance on the use of these measures is beyond the scope of this document.

Preparing an offsetting plan

Developing a complete and comprehensive offsetting plan that reflects this guidance from the outset of project planning will reduce delays in the approval process and better protect fish and their habitat. The Regulations set out the information requirements and documentation that proponents must submit in an application for authorization under paragraphs 34.4(2)(b) and/or 35(2)(b) of the *Fisheries Act*. Offsetting plan requirements are set out in section 16 of Schedule 1 of the Regulations. Insufficient information can result in delays in processing an application.

In addition to regulatory requirements, subsection 34.1(1) of the *Fisheries Act* sets out factors that must be considered in decision-making under the fish and fish habitat protection provisions of the Act. Proponents are encouraged to keep these factors in mind when designing their offsetting plan as it may influence DFO's authorization decision. Specifically, it is helpful if the offsetting plan clearly outlines how the proposed offsetting measures will:

- contribute to the productivity of fisheries and fish and fish habitat
- align with or support fisheries management objectives
- address cumulative effects from the carrying on of the work, undertaking or activity on fish and fish habitat
- give priority to restoration of degraded fish habitats
- take into account any Indigenous Knowledge that may have been provided.

For more information on the factors to consider, please refer to the *Fish and Fish Habitat Protection Policy Statement 2019*.

If a listed aquatic species at risk will be affected by a project and the proponent is also seeking approval under the *Species at Risk Act* (that is, the *Fisheries Act* authorization is to have the same effect as a *Species at Risk Act* permit), then the proponent must provide certain information in the offsetting plan in addition to the information required by the Regulations. This additional information will allow assessors to determine whether the project meets the conditions for permitting an activity under *Species at Risk*

[4] DFO. 2014. Science Advice on Offsetting Techniques for Managing the Productivity of Freshwater Fisheries. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2013/074. https://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2013/2013_074-eng.html

Act. The offsetting plan must specify how the offsetting measures will specifically benefit the species at risk, support their recovery or conservation objectives, and counterbalance impacts on that (or those) particular species.

The application for an authorization must also include a description and the results of any engagement[5] the proponent undertakes in relation to the proposed project, including with Indigenous Peoples and the public. The description should include the results of their engagement activities and how it has influenced the offsetting plan.

Offsetting plans can be complex, and can have long-term implications for fish and fish habitat. It is recommended that qualified environmental professionals be involved in developing the plan. DFO provides a concierge service to proponents of major projects to support the proponent in the development of their application, including offsetting plans. Please contact your local DFO office for more information and to determine if your project is eligible for this service.

Appendix A provides additional guidance on the steps for preparing an offsetting plan and the required information to be included in the application for authorization. For developing fish habitat bank conservation project plans, see the Guidelines for Establishing and Managing Fish Habitat Banks.

Key steps in preparing an offsetting plan

These guidelines outline the content and key steps for preparing an offsetting plan. Proponents should review the *Applicants Guide Supporting the Authorizations Concerning Fish and Fish Habitat Protection Regulations* for more information on the application review process, time limits and information requirements for submitting an application for a *Fisheries Act* authorization.

Step 1: Identify and engage with potentially affected Indigenous Peoples

Proponents benefit from establishing positive working relationships with Indigenous Peoples upon whose traditional territories they will be working. Early and sustained engagement helps proponents address any impacts on Indigenous rights from the start leading to better outcomes for fish, fish habitat and aquatic ecosystems as well as for Indigenous Peoples. It sets up a foundation for an efficient consultation process when DFO undertakes its duty to consult obligations. Conversely, a proponent who fails to engage Indigenous Peoples runs the risk of having to substantially redesign both their project and offsetting plan, which could delay the authorization process.

[5] The Regulations require the proponent to provide a "description and the results of any consultations undertaken in relation to the proposed work, undertaking or activity, including with Indigenous communities or groups and the public," however, proponent's discussions with Indigenous Peoples will be referred to as "engagement" to avoid confusion with consultation undertaken as part of the Crown's duty to consult.

Indigenous Peoples are best placed to provide information about:

- the potential impacts of the proposed project on asserted or established section 35 Aboriginal and treaty rights
- the importance of the fish and fish habitat to their Nation or community
- how the proposed project could affect their ability to practice their rights related to fish and fish habitat.

Consistent with Principle 4 of the Offsetting Policy, proponents are expected to follow the best practice of engaging Indigenous Peoples early in the planning phase of the offsetting plan, and maintain this relationship during the design and implementation phases.

Section 7 of Schedule 1 of the Regulations specifies that the proponent provide a description and the results of consultations with Indigenous Peoples. If the Indigenous group at the project site is different from the one at the offset site, proponents will need to engage with both groups. There may be more than one Indigenous group whose rights may be impacted at a single site. Proponents will need to engage with all of the potentially impacted Indigenous groups.

Indigenous Knowledge may provide insights into whether the proposed offsetting plan adequately addresses the concerns of the affected Indigenous group. It can also address uncertainties about the proposed offsetting measures or provide other information that could point to the need to change the proposed offsetting plan. It is up to the Indigenous group to decide whether they wish to share Indigenous Knowledge. If they choose to share this information, they will help the proponent understand its context and significance. They will also set the terms and conditions for how the proponent may use the information. Such Knowledge may extend beyond fish and fish habitat.

If the proponent would like to share the Indigenous Knowledge they received with DFO (for example, as part of their applications for authorization), then they **must** have written approval from the Indigenous group. If the Indigenous group has not given their consent, the proponent should not share the Indigenous Knowledge with DFO. DFO will not accept it without the Indigenous group's written approval. Proponents should also specify the confidential nature of any Indigenous Knowledge provided to them.

It is beyond the scope of this document to provide proponents with detailed guidance on engaging with Indigenous Peoples, as each Indigenous group will have their own processes and protocols governing their relationships with industry and with the Crown. It is key that proponents develop a relationship with the Indigenous group to learn how they wish to collaborate, and what kind of capacity support (funding) the proponent can provide to facilitate this collaboration.

Once this relationship is established, proponents are expected to maintain it throughout the project and be ready to respond to any adverse impacts and concerns as they arise. It is recommended that proponents take the time to learn more about the Indigenous groups and their concerns.

Proponents should contact their DFO Regional office to identify the communities in the area of a proposed project with whom DFO has a duty to consult. Proponents can also consult the Aboriginal and Treaty Rights Information System (ATRIS), a web-based system intended to show the location of Indigenous groups and display information pertaining to their potential or established Aboriginal and treaty rights.

ATRIS can also provide information on consultation protocol agreements between Canada, Indigenous groups and provinces or territories. The document "Guidance: Assessment of Potential Impacts on the Rights of Indigenous Peoples" by the Impact Assessment Agency of Canada provides another source of helpful guidance on the assessment of potential impacts on the Rights of Indigenous Peoples.

Step 2: Characterize the anticipated harmful impacts on fish and fish habitat

Section 8 of Schedule 1 of the Regulations states that proponents must provide a detailed description of the fish and fish habitat within the area likely to be affected by the proposed project. Section 9 requires proponents to provide a detailed description of the likely effects of the project on fish and fish habitat.

It is important to adequately quantify these harmful impacts to fish and fish habitat because they must be counterbalanced by the proposed offsetting measures. Proponents should use the best available scientific information, Indigenous Knowledge (if provided) and local knowledge to inform their descriptions.

Anticipated effects are defined as the difference between the pre-project and the post-project condition of fish and fish habitat in the impacted area. These effects should be quantified using scientifically defensible methods. The pre-project condition must be well documented and based on the same parameters that will be used for monitoring and evaluating the offsetting measures' effectiveness.

For more information on describing the fish and fish habitat and the effects of the project on them, see the Applicant's Guide Supporting the Authorizations Concerning Fish and Fish Habitat Protection Regulations (the Applicant's Guide).

Step 3: Select measures to offset

The offsetting plan must include a detailed description of the proposed offsetting measures. It must also explain how those measures will meet the objective to counterbalance the harmful impacts to fish and fish habitat of the project. The offsetting plan must also include contingency measures that will be implemented if the offsetting measures do not meet their objectives within the specified timelines. The proponent has some flexibility in choosing the types of offsetting measures, provided they benefit fish and fish habitat. For more information on the types of offsetting measures, see Part 2 of the Offsetting Policy.

In evaluating proposed measures, DFO prioritizes the restoration of degraded fish habitat pursuant to paragraph 34.1(1)(f) of the *Fisheries Act*. Offsetting measures should be selected with restoration priorities or fisheries management objectives in mind, particularly Indigenous restoration priorities. As part of the Framework to Identify

Fish Habitat Restoration Priorities, each DFO Region has identified regionally important fish species, areas and ecosystem functions which can be considered when identifying offsetting opportunities.

> When considering potential offsetting measures, proponents should be mindful of how climate change may affect their long-term effectiveness. Proponents are not expected to counterbalance the impacts of climate change, nor undertake modelling to account for the many uncertainties associated with it, but the better-known effects such as warmer water, sea level rise, loss of permafrost and more frequent drought and storm events can be considered and described in the offsetting plan.

If the project affects a listed species at risk, offsetting measures must support the objectives of any available recovery strategy and/or action plan for the species (or management plan for species listed as Special Concern). These documents can be found at the Species at Risk Public Registry. The relevant province or territory may also have recovery planning documents for that species.

Proponents need to be aware of any provincial permits or licences required to carry out their offsetting measures. DFO's regulatory decisions will not presuppose decisions associated with areas of provincial or territorial jurisdiction. Proponents should also be aware of provincial land, water and resource management plans and priorities. Potential conflicts, risks and trade-offs between the proponent's development goals and other management objectives should be identified before making decisions and investments. In addition to engaging with Indigenous Peoples, proponents are encouraged to also work with resource users, landowners and interested parties to identify sites that would benefit from restoration and are compatible with the needs of the local community.

Regardless of the type of offsetting measures selected, the proponent should provide a sound rationale to demonstrate how the measure will benefit fish and fish habitat, such as evidence of the successful application of the measure under similar conditions (for example, similar aquatic ecosystems).

Depending on the ecological benefits they provide, efficient offsetting measures can serve the overlapping requirements of decision-making authorities, such as between different federal departments or between the federal government and other jurisdictions (Indigenous, provincial, municipal). For example, an offsetting project that counterbalances the impacts of a diamond mine can satisfy the requirement to offset under the *Authorizations Concerning Fish and Fish Habitat Protection Regulations*, as well as the *Metal and Diamond Mining Effluent Regulations*.

Step 4: Determine the amount of offsetting required

If the offsetting measures aim to restore or construct the same type of habitat impacted by the project ("like-for-like" or "in-kind" offsetting), the extent of offsetting required would be based on the size of the impacted area, with multipliers applied for time lags and uncertainties. By keeping losses and gains comparable in type and area, ecosystem functions are expected to be maintained.

While this is an acceptable approach, proponents may instead choose to focus on addressing local restoration priorities. In this case, the amount of offsetting required to counterbalance the harmful impacts will depend on a number of influences, including:

- the magnitude of the harmful impact, that is, the area over which the harmful habitat impacts occur, and the number of fish being killed
- the nature of the impact (for example, reduced function, temporary loss, permanent loss)
- the value or quality of habitats and fish species affected by losses and gains
- the uniqueness, rarity, or sensitivity of the habitat or fish affected by the losses and gains, and whether they can easily be replaced (see Principle 2)
- incidental ecological benefits derived from work, undertaking, or activity and whether they support fisheries management objectives
- alignment of offsetting measures with a restoration priority or fisheries management objective
- the distance of the offsetting measures from the area affected by the project, and the impact associated with that distance
- uncertainty associated with the effectiveness of the proposed offsetting measures
- any time lag between the harmful impacts and the time it takes for the offsetting measures to become functional.

Anticipated gains from the offsetting measures should be quantified relative to what would occur in the absence of the measure to offset. Evidence, assumptions and limitations used to predict the outcome of the offset and to calculate equivalency should be included and must be based on scientifically defensible methods and techniques.

There are a variety of equivalency analysis methodologies to show how the benefits provided by proposed offsetting measures will counterbalance the anticipated harmful impacts of a proposed project. Generally, they require calculating a common unit of measure that may be used to compare the harmful impacts and offsetting measures across fish life stages, species and habitat types (for example, habitat indices, fish biomass or abundance). Some methods may require more data and specific expertise than others. Publications by DFO's Canadian Science Advisory Secretariat[6,7] provide an overview of equivalency analyses. The proponent may choose to provide their own equivalency analysis, which will be reviewed by DFO.

[6] DFO. 2017. Science Advice on the Determination of Offset Requirements for the Fisheries Protection Program. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2017/009 (publications.gc.ca/site/eng/9.834340/publication.html).

[7] Bradford, Michael J; Smokorowski, K.E; Clarke, Keith D; Keatley, B.E; Wong, Melisa C. 2016. Equivalency metrics for the determination of offset requirements for the Fisheries Protection Program. Canadian Science Advisory Secretariat. National Capital Region. (https://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2016/2016_046-eng.html)

> The Ontario and Prairies Region of DFO offers some habitat modelling tools that may help proponents determine the amount of offsetting that is required to counterbalance their project. For example, the Habitat Ecosystem Assessment Tool (HEAT) is a tool that aims to predict how a set of physical modifications to a study area will affect the overall habitat suitability for all fish species in the region. Using this framework, users can assess the potential impacts of planned nearshore developments, make more informed decisions on how best to restore degraded aquatic habitats, and address other questions about how specific changes to aquatic habitats affect the fish assemblages that occupy them.

Note that ecosystem functions and features that could be considered equivalent from an ecological perspective may have unique values for Indigenous Peoples or local resource users. By engaging these communities, proponents can better understand these values which in turn should influence the design of offsetting measures.

Incidental benefits from the project may reduce the pressures on fish and fish habitat. Depending on the extent to which they support fisheries management objectives or restoration priorities, these incidental benefits can decrease the amount of offsetting measures needed. These incidental benefits can be included as part of the equivalency analysis, provided that they are reasonably predictable and follow-up monitoring will be undertaken to determine if they actually manifest.

Step 3 and Step 4 may be difficult to separate in some circumstances. If the selected offsetting measures are not sufficient to counterbalance impacts, it may be necessary to revisit step 3.

Accounting for uncertainty

There are many sources of uncertainty when developing and implementing offsetting measures. For example, uncertainty may arise in:

- the initial prediction of the extent of death of fish and/or harmful alteration, disruption or destruction of fish habitat
- the effectiveness of measures to avoid or to mitigate these harmful impacts
- the offsetting measures being compromised through design or implementation failure
- the overestimation of the ecological benefits of a particular measure to offset
- unexpected events changing the future state of the fish habitat.

One approach to address uncertainty is to implement extra offsetting measures as a buffer against unforeseen outcomes to help ensure that the conservation and protection objectives are still achieved. For example, a proponent may restore an area double the size of the habitat area that is being impacted.

Another possibility is an adaptative approach, with initial offsetting measures sufficient to cover the anticipated impacts, and a set of contingency measures planned if monitoring shows initial offsetting measures are not adequate to counterbalance harmful impacts. These corrective or additional measures, and the circumstances for implementing them, form part of the offsetting plan. A combination of both approaches is often used.

For more information on managing uncertainty related to offsetting plans, please refer to publications available from DFO's Canadian Scientific Advisory Secretariat[8].

Accounting for time lags (if any)

Time lags between harmful impacts and the benefits from the offset becoming fully effective can range from months to years. These lags must be accounted for when assessing how much offsetting is needed. For example, if neither the original habitat nor the restored habitat is available during a critical point in the life cycle of the fish, this could have an effect on population numbers. As stated in Principle 8 of the Offsetting Policy, time lags should be avoided where possible by implementing the offsetting measures before beginning the project.[9]

Avoidance is especially important when the project impacts a species at risk, since a time lag could jeopardize the survival or recovery of the species. Proponents should consult the recovery strategy, action plan, or management plan for the species in question to better understand how their project and offsetting measures could impact their survival or recovery.

When a time lag is unavoidable, extra offsetting measures should be implemented to counterbalance the harmful impacts to fish and fish habitat resulting from the time lag. To determine how much extra offsetting is needed, the time lag could be regarded as being equivalent to a temporary loss (disruption) of the same quantity of fish or fish habitat for the same duration of time. Alternatively, a method using discount rates could be used[10].

Step 5: Establish the monitoring plan and reporting

A monitoring plan is a legally binding part of the *Fisheries Act* authorization outlining the process used to monitor, evaluate and report on an offsetting project's progress. Proponents are responsible for developing a comprehensive monitoring plan to demonstrate that offsetting measures are delivering measurable benefits to fish and fish habitat.

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[8] Fisheries and Oceans Canada. 2014. Science Advice for Managing Risk and Uncertainty in Operational Decisions of the Fisheries Protection Program. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2014/015 (https://waves-vagues.dfo-mpo.gc.ca/Library/363993.pdf)

[9] The timing of the offsetting measures will be a condition of the Fisheries Act Authorization for the project.

[10] See Clarke, K.D. and Bradford, M.J. 2014. A Review of Equivalency in Offsetting Policies. DFO Can. Sci. Advis. Sec. Res. Doc. 2014/109. v + 18 p. (www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2014/2014_109-eng.html)

Monitoring plans have several key features, including a statement of the objective of the offsetting measures, expected outcome statements for each offsetting measure, and a monitoring timeframe. Expected outcome statements must support the objectives of the offsetting measures and include benchmarks, targets and indicators[11,12]. Each expected outcome should be specific, measurable, achievable, realistic and time-related (SMART)[13]. Fisheries management plans, recovery documents for aquatic species at risk or rebuilding plans may be helpful resources for developing expected outcomes and their associated benchmarks, targets and indicators.

An essential component of a monitoring plan is the monitoring timeframe, which defines the frequency and duration of data collection, analysis, and reporting activities. The timeframe should be tailored to reflect the scale and level of uncertainty associated with the offsetting measures. The timeframe may include pre-construction monitoring and must extend for a sufficient period after construction to determine that all offsetting measures are well-established, self-sustaining and have met expected outcomes. Longer monitoring periods may be required for large, complex offsetting projects or projects with a high level of uncertainty.

Monitoring and reporting should be done at time intervals (frequencies) that coincide with the benchmarks or targets specified in the expected outcome statements. The monitoring timeframe is essential for tracking progress and identifying problems or delays requiring the implementation of contingency measures.

A well-prepared monitoring plan creates a roadmap for data collection and results reporting to inform decision making. It ensures that the project's performance is tracked against expected outcomes and that any necessary adjustments can be made in a timely manner. Engagement with Indigenous Peoples during the development of the monitoring plan is expected to be part of a proponent's Indigenous engagement process. Requirements associated with the monitoring plan, including contingency measures and the submission of monitoring reports, will be specified as conditions of the *Fisheries Act* authorization. Monitoring reports are subject to DFO verification, which may include site inspections, and review of the monitoring report information to verify conformity, compliance and effectiveness of the offsetting measures.

[11] Braun, D.C., Smokorowski, K.E., Bradford, M.J., and Glover, L. 2019. *A review of functional monitoring methods to assess mitigation, restoration, and offsetting activities in Canada.* DFO Can. Sci. Advis. Sec. Res. Doc. 2019/057. vii + 75 p.

[12] Smokorowski, K.E., Bradford, M.J., Clarke, K.D., Clément, M., Gregory, R.S., Randall, R.G. 2015. *Assessing the effectiveness of habitat offset activities in Canada: Monitoring design and metrics*. Can. Tech. Rep. Fish. Aquat. Sci. 3132: vi + 48 p.

[13] Doran, G. T. (1981). *There's a S.M.A.R.T. way to write management's goals and objectives.* Management Review. 70 (11): 35–36.

Step 6: Submit the offsetting plan as part of an application for authorization to Fisheries and Oceans Canada

The proponent is encouraged to communicate with DFO throughout the development of their offsetting plan to help facilitate the approval process. The final offsetting plan is submitted as part of an application for authorization. The Applicant's Guide has details on:

- how to submit the application
- how DFO processes applications
- associated timelines and how those timelines stop, start or reset.

The application for authorization will usually be accompanied by an irrevocable letter of credit[14] issued by a recognized Canadian financial institution, or another equivalent financial guarantee, including a performance bond, to cover the costs of implementing the offsetting plan. Annex A of the Applicant's Guide Supporting the *Authorizations Concerning Fish and Fish Habitat Protection Regulations* provides a template for financial guarantees (letter of credit and performance bonds). Annex B of that document provides guidance on determining the monetary value of the financial guarantee. The secured amount of financing can be reduced at set points in project implementation. Based on the conditions of the authorization and the results of follow-ups, DFO will determine the amount that can be released. The final installment will be held until the proponent has no further obligations.

DFO will review the submitted offsetting plan and financial guarantee as part of the application assessment. Proponents may be asked to revise or clarify elements of the plan to ensure it meets regulatory requirements.

Access and approvals for implementing offsetting plan

Proponents may need access to land they do not own to implement the offsetting plan, and may require permits from other federal, provincial, municipal or Indigenous jurisdictions, such as provincial fishing licences or water diversion permits. It is the responsibility of the proponent to obtain these approvals.

The proponent will be required to obtain a written agreement from the landowner, that would allow DFO to access the land for monitoring purposes or to complete the measures in the offsetting plan and monitor them, should the proponent fail to do so.

[14] A proponent who is His Majesty in right of Canada, His Majesty in right of a province or the government of a territory is exempt from the requirement of providing financial guarantee.

Additional guidance

The following Departmental guidance documents are available from DFO's Projects Near Water website:

- Policy for Applying Measures to Offset Harmful Impacts to Fish and Fish Habitat
- Project planning: What is offsetting and how to prepare an offsetting plan
- Applicant's Guide Supporting the *Authorizations Concerning Fish and Fish Habitat Protection Regulations*
- Fish and fish habitat protection policy statement, August 2019
- Framework to identify fish habitat restoration priorities
- Pathways of Effects

This website also indicates how to contact your local DFO office which can provide additional guidance specific to your region.

Appendix A: Additional guidance on preparing an offsetting plan

Schedule 1 of the *Authorizations Concerning Fish and Fish Habitat Protection Regulations* sets out the list of information and documentation required as part of an application for authorization, including the requirements for the offsetting plan in section 16. If the proponent does not provide it, the application will be deemed incomplete.

Appendix A describes how the requirements can be met or supported. This information will help the assessment biologist review and evaluate the proposed offsetting plan and avoid delays.

Information required under the Regulations as part of an offsetting plan

This information is required as part of an offsetting plan under section 16 of Schedule 1 of the A*uthorizations concerning fish and fish habitat protection regulations*. The section numbers that correspond to the Regulation are provided for reference.

16 (a) and (b): the geographic coordinates of the location where offsetting measures will be implemented and boundaries of the location where the proposed offset site will be implemented

- Describe the location where the proposed offsetting measures will be carried out, including:
    - the geographic coordinates (latitude and longitude or Universal Transverse Mercator [UTM] Grid co-ordinates with zone)
    - a small-scale site plan identifying the general location and project boundaries.

  It would be helpful to include access routes to the site (e.g. via road, water, air) and, if applicable, the nearest communities.

16 (c): a detailed description of the measures and how those measures will meet their objectives

- Describe the offsetting measures that will be implemented, making reference to any
    - relevant engineering specifications and drawings
    - construction methods
    - building materials
    - machinery and other equipment that will be used
- Describe the objectives of the offsetting measures, making reference to how the objectives
    - contribute to the productivity of fisheries and fish and fish habitat
    - support fisheries management objectives
    - support regional or local restoration objectives
    - contribute to Indigenous restoration or ecological management priorities
    - are aligned with recovery strategies, action plans, management plans or similar documents for aquatic species at risk (if relevant)
    - support marine protected area objectives (if relevant)

    - counterbalance the impacts from the work, undertaking, or activity, taking into account
        - the vulnerability of the fish and fish habitat being impacted
        - the severity of the impact of the work, undertaking or activity
        - time lags between when the impact of the work, undertaking or activity occurs and when the offsetting measures will be fully effective
        - uncertainties associated with the effectiveness of offsetting measures
- Explain how the offsetting measures will meet the objectives described above
- Explain why these measures are a better choice if restoration of fish habitat was not used.

16 (d) Monitoring measures to assess effectiveness

- Describe in detail the monitoring measures that will be implemented to assess the effectiveness of the offsetting measures in meeting their objectives. Include:
    - expected outcomes that support the objective
    - benchmarks, indicators, targets, related to the expected outcomes and associated sampling methodology
    - monitoring frequency and schedule
- Describe the monitoring measures that will be used to ensure the offsetting measures continues to achieve fish and fish habitat benefits over the long-term.

16 (e) Contingency measures and associated monitoring measures

- Describe the contingency measures that will be implemented if monitoring determines that the offsetting measures are not functioning as intended.
- Describe the indicators and thresholds that would trigger the implementation of contingency measures.
- Describe any monitoring actions which would be taken to ensure that contingency measures are performing as planned.
- If seeking approval under the *Species at Risk Act*, describe the contingency measures to be taken if the offsetting measures are not found to be counterbalancing the effects to relevant listed aquatic species.

16 (f) Adverse effects that could result from the implementing of the offsetting plan

- If any of the offsetting measures are likely to result in the death of fish or the harmful alteration, disruption or destruction of fish habitat, provide a description of the impacts and their extent.
    - If any species at risk are affected that are listed as threatened, endangered, or extirpated, including their critical habitat and any residences, provide a description of the impacts and their extent.

16 (g) Measures and standards to avoid or mitigate harmful impacts to fish and fish habitat when implementing the proposed offsetting measures

- Describe the measures and standards that will be implemented to avoid or mitigate the harmful impacts to fish and fish habitat while building and maintaining the proposed offsetting measures.
- Describe the monitoring measures to assess the effectiveness of these measures and standards referred to above.

16 (h) Timeline for the implementation of the offsetting plan

- Provide the timeline for the implementation of the offsetting plan including the start and end dates.
- Describe the anticipated phases, including the sequencing of the phases, of each of the proposed offsetting measures.
- Describe when the offsetting measures are likely to become fully functional, and how long their benefits are expected to last.

16 (i) The cost of implementing the plan

- Provide a detailed estimate of the cost of each element of the plan, including:
    - the costs of implementing the offsetting plan (for example, labour, project supervision, equipment, materials, monitoring, and maintenance)
    - additional costs if the plan must be managed by DFO (for example, project management costs, seasonal adjustment, availability of local expertise, inflation)
    - costs of implementing and monitoring all contingency measures

16 (j) Land ownership / tenure

- Describe the land ownership/tenure status of the lands, water sources or waterbodies that are necessary for the implementation of the offsetting measures.
- If the land, water sources or waterbodies are treaty lands, indicate that the proponent, including Crown proponents, have obtained authorization from the treaty Nation to access the lands in question.
- If the implementation of the plan requires access to lands, water sources or water bodies that are not owned by the proponent or a federal, provincial, or territorial government, describe how the proponent will obtain the authorization to do so. Include details on how proponents will secure access for themselves, DFO, and any individuals authorized to act on behalf of DFO for access to the relevant lands, water sources or waterbodies.
- List any permits and approvals, specific to land tenure / ownership necessary to implement the offsetting plan.

Information required under the Regulations that supports the assessment of the offsetting plan

This information is required in the *Authorizations Concerning Fish and Fish Habitat Protection Regulations* (section 7 of Schedule 1), but not as part of the offsetting plan. It is, however, important for the assessment of an application and, if sufficient, will expedite the authorization process.

Section 7: A description and the results of any consultations undertaken in relation to the proposed work, undertaking or activity, including with Indigenous Peoples and the public.

- Describe how Indigenous Peoples were involved in the development of the offsetting plan, and explain how they will be involved in the implementation. Describe the extent to which the offsetting plan is seen by Indigenous Peoples as accommodations for impacts on rights of the project.
- Describe any engagement or consultation activities undertaken with any interested parties and the public, and how the results influenced the offsetting plan.

Additional information to support the assessment of the offsetting plan

While this information is **not** required in the *Authorizations Concerning Fish and Fish Habitat Protection Regulations*, it is important for the assessment of an application and, if provided, considerably expedites the process.

Fish and fish habitat found at the location of the proposed offset site (benchmark of the freshwater or marine environment)

- Describe the fish and fish habitat found at the location of the proposed offsetting project site and within the area likely to be affected by the proposed offsetting project, including
    - the type of water source or water body (for example, groundwater, river, lake, marine, estuary)
    - the fish species present, and an estimate of the abundance of these species and their life-cycle stages (for example, juvenile, yearling, adult)
    - the characteristics of the water source or water body to be restored/ enhanced and how those characteristics directly or indirectly support fish in carrying out their life processes
    - any aquatic species at risk in the area and their status, and any residences or critical habitat
    - any aquatic invasive species (including non-indigenous species) that are present in the proposed offsetting project site and its vicinity, and
    - any seasonal variations in any of the above characteristics.
- Explain why this site was chosen for offsetting measures
- Describe if any significant terrestrial, riparian or wetland habitat will be impacted by the offsetting measures.

- Describe how the information provided above was derived, including the sources, methodologies and sampling techniques used and their limitations.

Benefits to fish and fish habitat resulting from the proposed offsetting measures:

- Describe the predicted effects of the proposed offsetting measures on fish and fish habitat found at that location, including the changes in the structure and function of the fish assemblage or the fish habitat (for example, in terms of physical, chemical and biological characteristics), as well as potential indirect effects (for example, downstream and upstream effects). These effects should be described relative to what would occur in the absence of the offsetting measures.
- Describe the methods and techniques, evidence and assumptions used to predict the outcome of the offsetting measures.
- If the offsetting measures are anticipated to benefit aquatic species at risk, indicate which species will benefit and describe the structure and the function of the habitat that will benefit that species including whether any activities or measures identified in the *Species at Risk Act* recovery strategy, action plan or management plan will be implemented.

Aquatic species at risk

If a listed aquatic species at risk will be affected by a project and the proponent is also seeking approval under the *Species at Risk Act* (that is, the *Fisheries Act* authorization is to have the same effect as a *Species at Risk Act* permit) then in addition to the requirements set out in the Regulations, the offsetting plan should provide

- a description of the measures that will be implemented to counterbalance the effects to aquatic species at risk, their residences or their critical habitat
- an analysis of how those measures will benefit them and support their recovery or survival
- a description of the contingency measures and associated monitoring measures that will be put into place if the measures are not successful in offsetting the effects to listed aquatic species.

Appendix B: Bibliography and further reading

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Fisheries and Oceans Canada. 2019. Applicant's Guide Supporting the Authorizations Concerning Fish and Fish Habitat Protection Regulations.

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Fisheries and Oceans Canada. 2014. Science Advice on Offsetting Techniques for Managing the Productivity of Freshwater Fisheries. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2013/074.

Government of Canada. Department of Aboriginal Affairs and Northern Development Canada. 2011. Updated Guidelines for Federal Officials to Fulfill the Duty to Consult. (https://www.rcaanc-cirnac.gc.ca/DAM/DAM-CIRNAC-RCAANC/DAM-CNSLTENGE/STAGING/texte-text/intgui_1100100014665_eng.pdf).

Smokorowski, K.E.; Bradford, M.J.; Clarke, K.D.; Clément, M.; Gregory, R.S.; Randall, R.G. 2015. Assessing the effectiveness of habitat offset activities in Canada: Monitoring design and metrics. Can. Tech. Rep. Fish. Aquat. Sci. 3132: vi + 48 p.