



Environment
Canada

Environnement
Canada



Operational Framework for Use of Conservation Allowances

PDF version
Cat. No.: En14-77/2012E-PDF
ISSN 978-1-100-21427-6

Information contained in this publication or product may be reproduced, in part or in whole, and by any means, for personal or public non-commercial purposes, without charge or further permission, unless otherwise specified. You are asked to:

- Exercise due diligence in ensuring the accuracy of the materials reproduced;
- Indicate both the complete title of the materials reproduced, as well as the author organization; and
- Indicate that the reproduction is a copy of an official work that is published by the Government of Canada and that the reproduction has not been produced in affiliation with or with the endorsement of the Government of Canada.

Commercial reproduction and distribution is prohibited except with written permission from the Government of Canada's copyright administrator, Public Works and Government Services of Canada (PWGSC). For more information, please contact PWGSC at 613-996-6886 or at droitdauteur.copyright@tpsgc-pwgsc.gc.ca.

© Her Majesty the Queen in Right of Canada, represented by the Minister of the Environment, 2012

Aussi disponible en français

Operational Framework for Use of Conservation Allowances

This framework sets the parameters, based on existing legislated authorities, practice and policy, for how and when conservation allowances should be used or recommended by Environment Canada. Conservation allowances are the third step of the mitigation hierarchy, a three-step approach that first examines options to avoid and minimize environmental impacts. The framework applies where Environment Canada has a role related to the review or approval of proposed land- or resource-use activities, including those that occur on federal lands or waters, projects, or activities that are subject to federal legislation, actions that would affect Aboriginal and/or treaty rights, or when Environment Canada has environmental protection or conservation objectives that would be affected by the proposed activity.

The use of conservation allowances by Environment Canada under this framework will be monitored and the results, including both demonstrated ecological success and other indicators (e.g. percent of proponents who successfully meet all the provisions of their allowance agreement) will be tracked. These allowances will be reviewed in the context of periodic evaluations of departmental programs and initiatives that employ them.

To support the framework, Environment Canada will develop implementation guidance for Environment Canada practitioners on the use of conservation allowances. This guidance would address the specific goals and objectives of legislation and policy, as well as specific issues related to the nature of the biological element (e.g. wetlands versus species at risk).

1. Background

Conservation allowances (also referred to as conservation offsets) provide measurable conservation outcomes through implementation of project-based actions. Conservation allowances provide a balancing effect by establishing new environmental features (such as habitat or ecosystem types) to compensate for those that have been impacted. Conservation allowances address the “residual impacts” that remain after measures to avoid and minimize are adopted.

The goal of conservation allowances is to achieve environmentally responsible development by replacing ecosystem functions that would be lost as a result of proposed land- or resource-use activities. When used effectively, conservation allowances help to conserve and protect important environmental resources. For example, a conservation allowance could entail securing and preserving high-quality replacement habitat to compensate for the loss of species' habitat due to a land- or resource-use activity.

2. Current Practice Internationally and in Canada

Conservation allowances have long been used in Canada and internationally to achieve conservation objectives for wetlands, biodiversity, endangered species and other valued ecosystem components.

Most Government of Canada experience with conservation allowances has been gained through two policies:

- The Policy for the Management of Fish Habitat, which was developed and administered by the Department of Fisheries and Oceans, and supported the former habitat protection provisions of the *Fisheries Act*;
- Canada's Federal Policy on Wetland Conservation (FPWC), which provides a framework for undertaking measures such as conservation allowances to address impacts on wetlands in relation to the federal environmental assessment process.

In addition to federal government experience, a number of provinces, including British Columbia, Alberta, Nova Scotia, New Brunswick and Prince Edward Island, also have experience with or are developing approaches to the use of measures such as allowances.

Internationally, the U.S. Wetland Mitigation program is one of the longest-standing programs for conservation allowances (referred to in their policy and legislation as offsets). As described in section 404 of the U.S. *Clean Water Act*, adverse impacts on wetlands, streams and other aquatic resources must be avoided and minimized to the extent practicable. For impacts that cannot be avoided, compensatory mitigation is required to replace the loss of wetland and resource functions within the watershed. Also in the U.S., conservation banking for endangered species was first undertaken in the early 1990s and is enabled by the U.S. *Endangered Species Act*, which requires federal agencies to ensure that their actions do not jeopardize listed species.

Australia, New Zealand and the EU also have experience in the use of measures such as conservation allowances.

3. Environment Canada's Authorities Related to Conservation Allowances

Opportunities for the consideration of conservation allowances may arise through processes administered under the *Migratory Birds Convention Act, 1994* (MBCA), the *Species at Risk Act* (SARA), the *Canadian Wildlife Act* (CWA) and *Canadian Environmental Assessment Act, 2012* (CEAA 2012) that could allow Environment Canada to consider a proposal for conservation allowances as a means of mitigating residual environmental effects. However, each case will have to be determined on its own set of facts to see whether the proposal is consistent with the purposes of the Act in question and effectively addresses the environmental effect.

Under CEAA 2012, the Minister of the Environment, the National Energy Board and the Canadian Nuclear Safety Commission may consider in the environmental assessment process any mitigation measures that the decision maker considers appropriate for the "elimination, reduction or control of the adverse environmental effects of a designated project", including "restitution for any damage to the environment caused by those effects through replacement, restoration, compensation or any other means." Such mitigation measures may include a range of possible actions, including conservation allowances.

When used in relation to authorities provided by MBCA or CWA, conservation allowances could involve de-listing an identified portion of a sanctuary or wildlife area and, at the same time, adding a new portion of land (the allowance area) to the listed area. This provides Environment Canada with a means of dealing with allowance proposals involving federal lands or, in the case of the CWA, public lands as defined under the Act, where appropriate. The decision to list or de-list a migratory bird sanctuary or a wildlife area will be subject to the discretion of the Governor in Council upon recommendation of the Minister and will require clear justification for why it should be adopted. For example, if a third-party proponent requests the ability to conduct activities on an area within an existing National Wildlife Area, the boundaries could be amended to exclude the area proposed for impact and to include a new area that has been deemed an acceptable replacement. Once the new allowance area is added to a listed protected area, it would be subject to the enforcement provisions either for migratory bird sanctuaries under MBCA or wildlife areas under CWA.

In limited cases, allowance proposals can be considered under SARA, provided the permitting requirements under section 73 are met and the allowance helps meet the goals of the Act. Section 73 of SARA enables the government to enter into an agreement or to issue a permit authorizing a person to engage in an activity affecting a listed wildlife species, any part of its critical habitat or the residences of its individuals provided that all reasonable alternatives have been considered and the best solution adopted, all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals, and the activity will not jeopardize the survival or recovery of the species. In cases where an allowance activity is aligned with SARA's goals, Environment Canada could include an allowance as part of permit conditions to further protect the species in order to make that proposed impact acceptable.

The use of conservation allowances could also be established through agreements under the *Department of Environment Act* (DOE Act). Under the DOE Act, the Minister of Environment has authority to enter into agreements (which could include conservation allowances) for issues concerning the mandate of the Department, as long as the agreement is not contrary to or inconsistent with the purposes of other statutes falling within the Minister's mandate.

Lastly, the FPWC, established in 1991, provides a framework for mitigating proposed impacts to wetlands that are connected to federal actions and provides Environment Canada with some of its earliest ongoing experience in the application of conservation allowances. The FPWC commits all federal departments to the overall goal of no net loss of wetland functions (1) on federal lands and waters, (2) in areas affected by the implementation of federal programs where the continuing loss or degradation of wetlands has reached critical levels, and (3) where federal activities affect wetlands designated as ecologically or socio-ecologically important to a region.

4. Key Participants

Environment Canada: As administrator of the framework, Environment Canada's role includes evaluation of the appropriate application of conservation allowances within the mitigation hierarchy, review of proposed allowances, entry into allowance agreements or approval of permits, providing advice to other federal departments or provincial authorities, review of monitoring reports and compliance promotion activities.

Allowance proponent: The allowance proponent is the entity responsible for the undertaking of a land- or resource-use activity expected to have adverse impacts on the environment. In most cases, the proponent will also be responsible for the development of the conservation allowances, including developing and submitting a proposal to Environment Canada or the responsible authority. Allowance proponents may work with third-party organizations to undertake any part of the allowance proposal or development, implementation or monitoring.

Other government departments: The Framework is an Environment Canada document, but partnering with other government departments will be necessary in many cases. For example, partnering with Aboriginal Affairs and Northern Development Canada will be sought for some activities located in the North. Where impact avoidance is not possible, the Framework's approach to determining the appropriate design and use of conservation allowances could be used to contribute to increased consistency in consultation and accommodation for impacts on s.35 or treaty rights.

Similarly, collaboration with the Department of Fisheries and Oceans will be sought for conservation allowances and activities with impacts related to the mandates of both departments. In cases where other federal departments are involved, Environment Canada would provide advice to and work with the regulatory authority, as required.

Other levels of government: While other levels of government are not bound by this framework, their partnership will be essential in areas of shared or overlapping jurisdiction. The most frequent partnering is expected with provincial governments for activities being undertaken on provincial Crown lands or privately owned lands not under federal jurisdiction. Where there is overlap in federal and provincial conservation allowance programs, a single conservation allowance may suffice if it meets the criteria of both jurisdictions.

Environment Canada will consult and work with Aboriginal governments when conservation allowances are contemplated for impacts from proposed land- and resource-use activities that would affect Aboriginal and/or treaty rights or lands and when a proposal is made for an allowance activity to be situated on Aboriginal lands.

5. Determining whether to use conservation allowances

Conservation allowances are the last step of the mitigation hierarchy, a conceptual framework that, in its basic form, has three steps:

- Avoid proposed impacts;
- Minimize proposed impacts; and
- Address any residual environmental effects that cannot be avoided or sufficiently minimized with the use of conservation allowances.

For each of these steps, all alternatives should be considered, with the “best practicable option(s)” being applied in each case. The best practicable option means the best method for preventing or minimizing the proposed adverse effects of a land- or resource-use activity on the environment having regard, among other things, to:

- The nature of the proposed impact and the sensitivity of the receiving environment to adverse effects;
- The financial implications, and the effects on the environment, of that option when compared with other options;
- The current state of technical knowledge and the likelihood that the option can be successfully applied; and
- The ability to successfully mitigate the effects, for example, by replacing the affected habitat with a new area performing similar ecological functions to those that were lost.

The options considered should include the possibility of not proceeding with the land- or resource-use activity.

Consideration of whether to use conservation allowances should be undertaken as early as possible for a planned land- or resource-use activity when it is apparent that there will be residual effects after all practicable avoidance and minimization measures have been adopted. The analysis of alternatives should be documented, and the level of effort devoted to the analysis should be commensurate with the risks associated with the proposed land- or resource-use activity.

Applying the mitigation hierarchy

- **Identify all potential adverse impacts** – including direct, indirect and cumulative. Include not only physical impacts but also other effects on species, individuals or functional habitat such as increases in noise or predators.
- **Determine whether potential impacts can be avoided.** The viability of avoidance and mitigation options should be examined with respect to ecological risk, whether ecological features are replaceable, economic viability, land ownership, technological feasibility and logistics in light of the overall project. A relatively high cost of an alternative may not necessarily make it “impracticable.”
- **Determine whether potential impacts can be minimized.** This should consider modifications such as changes to engineering designs, alternative construction techniques, contingency planning, timing considerations and location considerations.

- **Determine whether residual effects may still be expected.** After all avoidance and minimization options have been fully considered, determine whether conservation allowances would be an appropriate means to address residual environmental effects.

Other considerations regarding the appropriate use of conservation allowances

Once the avoidance and minimization steps of the mitigation hierarchy have been applied, the decision on whether to implement a conservation allowance will also be influenced by a number of other factors:

- The proposed plan for providing allowances must meet the legislative authorities of any relevant Act and, in certain circumstances, informed by the conservation objectives of Environment Canada. Conservation allowances will not be automatically required for every residual impact.
- The proposed conservation allowance must have a high probability of ecological success.
- Where the proponent is not able to secure full ownership of an ecologically and geographically appropriate tract of land, it should be ascertained whether the proponent has sufficient capacity to deliver allowances that will provide for the desired conservation benefits, or whether another approach to mitigation is needed.
- Another jurisdiction may have established a conservation or land-use plan that adequately addresses the proposed impact. The measures put in place by the other jurisdiction would need to be reviewed carefully to ensure that Environment Canada's allowance criteria are addressed. For example, a provincial or regional land-use plan may contemplate expected land- or resource-use activities and set aside protected areas ahead of time in anticipation of the adverse environmental impacts associated with these expected activities. In this case, the protected area could function as a "habitat bank" from which future allowances could be obtained.

6. Allowance Design Elements

The following allowance design elements reflect international best practices for conservation allowances and are to be used as the starting point in the development of a conservation allowance. The design elements should be applied case-by-case based on the legislative framework under which the allowance is being applied, potential environmental impacts of the proposed land- or resource-use activity and desired socio-ecological outcomes as well as consideration of Canada's unique conservation goals and needs.

The allowance design elements are:

Equivalency: *Conservation allowance projects should compensate for adverse impacts by protecting, enhancing or restoring equivalent ecological function at another site.*

Ecological functions are processes (such as nutrient cycling or seed dispersal) that are carried out or enabled by an ecosystem and that are necessary for the self-maintenance of that ecosystem. Analysis of equivalency should consider both quality (provision of similar or dissimilar ecological function) and quantity of ecological functions in the context of conservation priorities. Provision of similar habitat types or ecosystem functions provide a starting point for the design of a conservation allowance.

In some cases, a conservation allowance may be designed to provide greater than equivalent ecological functions in order to account for identified risks, such as that the allowance will not be fully successful. Whatever the unit of measurement, the ratio of the conservation allowance habitat area to impacted habitat should be greater than 1:1 in all cases, and normally at least 2:1. There will be instances where much higher ratios are appropriate; for example, experience in other jurisdictions in North America shows use of ratios ranging from 3:1 to 40:1. The choice of ratio for each allowance will be case-specific, based on an assessment of a number of factors (e.g. impact type, severity and duration, site characteristics, existing regional mitigation ratios, uncertainties).

Additionality: *Conservation allowances should provide ecological protection beyond what would be provided under a business-as-usual scenario.* “Additionality” ensures that the new ecological feature(s) provided by the conservation allowance replace what has been lost through land or resource development, providing an overall balance between what is lost and what is gained. The following criteria should be assessed in order to establish whether an allowance is additional:

- *Does the allowance result in incremental conservation benefits?* (E.g. actions to create, enhance, restore or rehabilitate habitat, or measures to preserve existing habitat that is under threat.)
- For allowances that propose to preserve existing habitat, *is that existing habitat under identified threat and does the proposed allowance extend effective legal protection that responds to that threat?* This may be achieved, for example, through land trust ownership and management.
- *Can proponents demonstrate that the proposed allowance is additional to existing legislation, regulations, programs, land-use plans and funding?* If the allowance action has already received funding, been incentivized or is required, does it build upon the existing actions in a clearly identified way?
 - If no legislative or funding commitment has been put in place to implement an existing conservation program or land-use plan, an allowance designed to implement some aspect of that plan may still be considered additional if it meets federal conservation allowance criteria.
 - Where there is overlap in the allowance requirements of two jurisdictions, a single allowance may suffice in some cases. However, the measures put in place by another level of government or federal department would need to be reviewed carefully.
 - In addition, a single allowance may be proposed to meet the conservation allowance requirements related to more than one federal act or policy. For example, an environmental assessment may consider a proposed impact to a migratory bird sanctuary on federal lands, and the allowance design could account for both CEEA objectives and MBCA objectives.

Location: *The location of a conservation allowance should have comparable ecosystem values, such as species composition and habitat structure, and should be determined based on an assessment of the relevant species and habitat/ecosystem context.*

Where information to make the above assessments is unavailable, the default location of a conservation allowance should be as close to the original site of impact as possible.

However, in some cases it may be most ecologically appropriate to undertake an allowance at a site that is distant from the site of impact. For example, a more distant allowance site may be appropriate if it is able to provide greater ecological benefit to the affected species.

Timing: *The preference is for conservation allowances that can be implemented before the adverse impacts of proposed development occur.* In cases where implementing compensatory measures prior to impact is not feasible, the next best solution would be to implement the compensatory measures at the same time as the land- or resource-use activity. Establishing the conservation allowance agreement after the land- and resource-use activity has commenced is not considered appropriate.

Duration: *The positive effects of the conservation allowance should last an appropriate amount of time to compensate for the duration of the ecological loss resulting from the project.* A conservation allowance should be actively maintained until it is self-sustaining or it has met predetermined performance standards. While conservation outcomes should ideally be guaranteed until the adverse impacts of a land- or resource-use activity cease to exist, the duration of allowance activities may be limited by the legislative authority, including the ability to enforce the provisions of a supporting agreement. Conservation allowances that are maintained only as long as the land- or resource-use activity's adverse impacts endure are appropriate where the impacts of the activity are short-term and reversible.

Accountability: *Conservation allowances should be formalized through written documentation, such as an agreement between Environment Canada and the allowance proponent (and, where appropriate, other partners, such as provincial or Aboriginal governments), or, where possible, formalized through permitting or other conditions.* The form of the documentation (referred to in this document generically as an "agreement") could take many forms.

It could be in the form of a letter of agreement, a memorandum of understanding, or other formal agreement such as an agreement under the DOE Act (described in more detail in Section 3 above).

Alternatively, it could also be a condition within a Decision Statement issued under CEAA 2012. Likewise, in certain circumstances, it may be possible to include elements of an allowance agreement in the terms and conditions of a permit or agreement under section 73 or through a section 11 conservation agreement under SARA. Each proposal would need to be examined on a case-by-case basis to see whether it respects the purposes of SARA. If the full details of the conservation allowance are not covered by the permit or conservation agreement, there may still be a need for an allowance agreement.

There may also be cases where it is appropriate to undertake a conservation allowance through an approach such as the transfer of title or by applying land-use restrictions to relevant land. The terms of the allowance could also be included in provincial permits or authorizations where those permits or authorizations are able to account for off-site measures.

An allowance agreement should include key elements such as the amount and nature of the allowance, timing, duration, monitoring procedures, milestones and consequences for non-performance. The content and detail of an allowance plan will be greater for land- or resource-use projects of greater scale or complexity, such as those identified as designated projects under CEAA 2012.

The enforceability of allowance agreements depends on the nature of the instrument through which they are implemented. For example, if a conservation agreement was included as a condition in a Decision Statement issued under CEAA 2012, that condition would become subject to enforcement provisions contained within the Act. Allowance requirements contained in the terms and conditions of a section 73 SARA permit could also be subject to enforcement conditions, including permit withdrawal.

Where allowances are provided under an agreement, then the agreement should include clauses that set out the consequences if there is failure by the proponent to complete the conservation allowance appropriately. These clauses could include:

- Payment of damages equivalent to the harm caused by the failure to complete the conservation allowance;
- Payout of a letter of credit;
- Provisions, including written agreement by a third-party landowner where necessary, to allow the Minister or a third party access to the site to complete the conservation allowance, if it is not satisfactorily completed by the proponent; and/or
- The commitment of a province to undertake regulatory action, for example environmental protection orders.

Other Design Considerations: Some jurisdictions have established conservation areas called “banks” from which developers can purchase “credits” representing a particular species or ecosystem type. In Canada, a proactive, proponent-led approach might be possible where one or more proponents or a third party would acquire and set aside an area of land that they would be able to draw upon to mitigate future impacts. The conserved area would be established prior to approval of any land- or resource-use activities. The conserved area would have to be administered in a transparent manner that would ensure that no portion of the conserved area would be used more than once for a conservation allowance. It would be determined on a case-by-case basis whether the conserved area (or some portion of it) would qualify as an allowance for a specific impact, and whether the provision of the allowance could constitute compliance with particular legislative or other obligations.

7. Conclusion

This framework allows for flexibility, so that each conservation allowance can be tailored according to the different types and scales of land- and resource-use activities and their potential impacts. Each allowance must be developed in consideration of the facts of the specific case and the purpose of the relevant legislative authority. The aim is to ensure that all allowances are supported by formal written agreements or other documentation such as permitting conditions, which will allow for better enforceability, monitoring and tracking of results.

Annex A

Environment Canada Experience with Conservation Allowances

In Canada, conservation allowances are currently being used at the federal and provincial levels to achieve statutory and policy objectives. This annex provides a description of Environment Canada's experience to date with conservation allowances. This experience reflects a range of approaches, based on the different contexts within which the allowance activities have been applied.

Conservation allowances under the Federal Policy on Wetland Conservation

In accordance with the FPWC, Environment Canada has provided recommendations for measures such as conservation allowances in environmental assessment processes. For example, allowances were recommended to help compensate for 4 ha of wetlands that were displaced during construction of the Canadian Museum of Nature's Aylmer Consolidation Facility. Prior to construction, an initial environmental screening report completed under the *Canadian Environmental Assessment Act* in November 1995 found that 15 ha of the 17 ha building site were wetlands. The report recommended that the construction project still go ahead because it was expected that the project would stimulate the local and regional economy and that the functions of the wetland did not have a significant role either in the ecosystem or in the economy. It was determined that "targeted mitigation measures" including stewardship conservation of wetland not impacted by construction and the transfer of additional land to the Canadian Museum of Nature for ongoing stewardship would be sufficient to compensate for the expected impacts to the wetland.

Subsequent to the start of construction at the site, in February 1996 the Minister of Canadian Heritage called for an independent panel to review the environmental screening report. The independent panel determined that the suggested mitigation measures were not sufficient compensation for the loss of 4 ha of wetland, since all areas slated for conservation stewardship as part of the mitigation measures were already wetlands and already federal lands subject to the FPWC and thus already protected by the policy for the long term. In order to strengthen the mitigation measures and fully comply with the "no net loss" provision of the FPWC, it was recommended that the federal government either restore former wetlands or construct new wetlands on federal lands near the construction site, with a replacement ratio of at least 2:1. Environment Canada advised that site selection should emphasize the ability of the allowance site to replace specific wetland functions lost on the 4 ha of impacted wetland rather than simply aiming to replace the lost area acre-for-acre.¹

Wetland conservation allowances can also be undertaken in accordance with the FPWC by allowing a third party to arrange for an offsite allowance for an approved impact on a wetland. An example of the application of this approach to mitigation is provided by the

¹ Example adapted from: Lynch-Stewart, Pauline. "Canadian Museum of Nature Aylmer Consolidation Facility: Important Lessons About Applying the *Federal Policy on Wetland Conservation*". In Cox, K,W,, Grose, A. (eds.) (2000) *Wetland Mitigation in Canada: a framework for application*. Sustaining Wetlands Issues Paper 2000-1. North American Wetlands Conservation Council (Canada), Ottawa.

compensation undertaken for impacts on wetlands during the construction of a new bus terminal at Lewis Estates in the City of Edmonton. The proposed wetland impact required approval from Environment Canada. Ducks Unlimited Canada (DUC) was the third party that received funds from the City of Edmonton to undertake this activity. In order to meet Environment Canada's expectations, DUC committed to restoring an existing wetland rather than creating a new one, since restored wetlands tend to be more successful than those that are created. DUC agreed to secure a restoration site within an agreed-upon area in order to ensure the allowance site would be relatively close to the site of impact. The terminal construction impacted a total of 1.31 ha of wetland, thus requiring 3.93 ha of restored wetland to replace it, based on the agreed 3:1 allowance ratio. The funds provided by the City of Edmonton for this conservation allowance enabled partial restoration of an 11.32-ha wetland basin. Other compensation approvals funded the outstanding restoration needs, and the construction required to complete the restoration of this wetland basin is now complete.

Environment Canada has also sought conservation allowances for impacts on wetlands in cooperation with other federal departments. A good example of this is provided by the Vancouver Airport expansion in the early 1990s, which resulted in impacts to 350 ha of wetland and upland habitat. Avoidance and minimization options were considered during the 1989 Environmental Assessment Review Process for the proposed project; however, compensation was deemed necessary for residual effects to 350 ha of habitat. Environment Canada took the lead in developing a Compensation Strategy that would compensate for these residual effects. Compensation included transfer from Transport Canada to Environment Canada of 171 ha of ecologically important land for protection as well as monetary compensation of \$9 million to pay for the outstanding 178 ha of impacted land. The dollar value of monetary compensation provided was calculated based on a 1:1 ratio and "fair market value" for non-commercial upland delta lands. Environment Canada manages the transferred parcels of land as the Sea Island Conservation Area and as part of the Alaksen National Wildlife Area. The \$9 million has been used to secure new protected lands, enhance habitat quality on existing protected lands and provide an endowment to implement a private land-stewardship program.

Other examples of the application of conservation allowances for wetlands include the CP Edmonton Intermodal Facility and the Anthony Henday South East Extension ring road, also in Edmonton. Both projects replaced impacted wetlands at a 3:1 compensation ratio.

Conservation allowances as part of *Species At Risk Act* section 73 permits

Environment Canada has experience issuing permits that require the use of habitat compensation measures such as conservation allowances under SARA. For example, Environment Canada recently issued a permit for the cutting of 9 Butternut trees for the construction of a highway in Quebec. Prior to issuing the permit, all feasible measures were considered to avoid and minimize the impact of the project on the Butternut trees, but none were found. Since the project will not jeopardize the survival or recovery of the Butternut tree, whose populations have been mostly impacted by disease, the use of measures such as a conservation allowance was accepted as an appropriate approach to compensate for

the impact. A 2:1 ratio was required for the allowance (18 trees will be planted in place of the 9 cut). The exact location of the replacement plantation will be determined according to expert recommendations, and a five-year monitoring program will be implemented to monitor the health status of the planted trees. Adaptive management requires replacement of any trees that die.

Conservation allowances as amendments to boundaries of existing National Wildlife Areas and Migratory Bird Sanctuaries

Past management of the Cape Jourimain National Wildlife Area (NWA) provides an example of the application of conservation allowances in an NWA. The road approaching the bridge linking New Brunswick and Prince Edward Island runs through the Cape Jourimain NWA. The opening of the bridge in 1997 resulted in increased traffic congestion along an upgraded road right-of-way (originally built in the 1960s) located in the NWA. Significant safety concerns arose as a result of the increase in traffic and the New Brunswick Department of Transportation requested release and use of 3.7 ha of the NWA in order to construct off-ramps that would address these safety concerns. An adjacent 1.2 ha parcel of land was also proposed for de-listing in order to accommodate future plans to build a parking lot for the proposed Cape Jourimain Nature Centre. The total 4.9 ha proposed for de-listing had no uncommon biological communities, being comprised of second-growth mixed woods and old pasture land. In exchange, 75.8 ha of biologically significant lands were added to the NWA as follows:

- The Department of Public Works and Government Services Canada transferred 11.8 ha of biologically important land adjacent to the NWA from its land holdings to Environment Canada. This strip of land was identified as providing an important songbird migration corridor and valuable riparian habitat.
- Strait Crossing Development Incorporated purchased and transferred into Environment Canada's inventory 64 ha of privately held wetland and associated upland adjacent to the NWA.

These changes to the boundaries of the Cape Jourimain NWA required an amendment of the CWA's *Wildlife Area Regulations*, which provide detailed boundaries for each listed NWA, by the Governor in Council. The regulatory amendment was final on May 26, 1999.² Decisions regarding the quality and quantity of the required allowance were based on the professional judgment of Environment Canada staff, who negotiated the required quantity of conservation allowances with the project proponent.³

Similar to the Cape Jourimain NWA example, Environment Canada has also recommended the use of terrestrial conservation allowances for proposed impacts to Migratory Bird Sanctuaries during the environmental assessment (EA) process. For example, during the EA for the Mackenzie Gas Project (MGP) in the Northwest Territories, allowances were recommended for the predicted flooding to the Kendall Island Bird Sanctuary that would result from MGP activities. While a final decision on whether the MGP will go ahead has

² Description of this allowance is based on the *Regulations Amending the Wildlife Area Regulations* published in the *Canada Gazette*, Part II, Vol. 133, No. 11, 26/5/99.

³ Terriplan Consultants (2011). *Habitat Offsets as Compensation and Mitigation for Habitat Loss Due to Industrial Activities*. Prepared for Environment Canada – Canadian Wildlife Service, Yellowknife (18-19).

not yet been made, it does provide a good example of how allowances may be applied through the EA process. In this case, since flooding associated with a gas extraction project was determined to be unavoidable, conservation allowances were deemed to be a suitable mitigation approach. The proposed allowance project was to establish replacement bird habitat outside of the existing sanctuary area. The area of replacement habitat was to be provided at a 5:1 ratio, meaning that the allowance area would have been five times the size of the flooded area. Environment Canada would have worked to determine the exact location of the allowance activity by engaging the Inuvialuit, Gwich'in, other governments, other government departments and stakeholders (including environmental non-governmental organizations and industry).

Conservation allowances as agreements as part of environmental assessment process

Environment Canada has experience in the development of voluntary allowances undertaken to promote responsible resource development. For example, Environment Canada entered into an agreement for a conservation allowance with Total E&P Canada Ltd. (TOTAL) for their Joslyn North Mine Project in Alberta.

The joint federal-provincial review panel established to oversee the EA of the project recommended mitigation, such as off-site offsets, be identified in addition to the on-site mitigation and avoidance measures to mitigate impacts on valued wildlife, species at risk and migratory birds, and reduce the overall cumulative effects on wildlife in general.

TOTAL responded by offering lands on a neighbouring oil-sands lease as replacement wildlife habitat while reclamation on the Joslyn North Mine Project proceeds. This was formalized with an agreement with Environment Canada that included monitoring to gauge the effectiveness of the reclamation in re-establishing wildlife habitat.

Additional Resources:

For additional information on the use of conservation allowances and other mitigation measures, please visit the following links:

Fisheries and Oceans Canada

www.dfo-mpo.gc.ca/habitat/role/141/1415/14154-eng.htm

Environmental Mitigation Policy for British Columbia

www.env.gov.bc.ca/emop

Alberta's Provincial Wetland Restoration and Compensation Guide

www.waterforlife.alberta.ca/01533.html

Alberta Land-Use Framework

<https://landuse.alberta.ca/ConservationStewardship/ConservationStewardshipTools/ConservationOffsets/Pages/default.aspx>

Nova Scotia Wetland Conservation Policy

www.gov.ns.ca/nse/wetland/conservation.policy.asp

Prince Edward Island Wetland Conservation Policy

www.gov.pe.ca/forestry/index.php3?number=1015685

www.ec.gc.ca

Additional information can be obtained at:

Environment Canada

Inquiry Centre

10 Wellington Street, 23rd Floor

Gatineau QC K1A 0H3

Telephone: 1-800-668-6767 (in Canada only) or 819-997-2800

Fax: 819-994-1412

TTY: 819-994-0736

Email: enviroinfo@ec.gc.ca