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FIVE-YEAR REPORT

(2003–2004 to 2007–2008)

Interdepartmental Recovery Fund
for Species at Risk



Canada 

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EXECUTIVE SUMMARY

Established in 2002, the Interdepartmental Recovery Fund (IRF) provides a central funding mechanism to support species-at-risk projects led by federal departments, which include agencies and Crown corporations. Projects aim to implement priority recovery activities identified under recovery strategies/action plans or conduct surveys on species at risk on federal lands or waters. This five-year report covers the time frame of 2003–2004 to 2007–2008. During this period, the program allocated \$9.9 million to 354 projects.

During this time frame, 48% (\$4.8 million) of the program investment went to the competent departments, namely Environment Canada, Fisheries and Oceans Canada, and Parks Canada. Of these organizations, Fisheries and Oceans Canada received the most funding (\$2.03 million), followed by Environment Canada (\$1.8 million) and then Parks Canada (\$994,300).

The remaining 52% (\$5.1 million) was allocated to federal government organizations other than the competent departments. Among those funded were Agriculture and Agri-Food Canada (\$1.35 million), Aboriginal Affairs and Northern Development Canada (\$1.28 million), National Defence (\$1.02 million), and Natural Resources Canada (\$1.01 million). Collectively, these organizations received 47% of the funds. The remaining 5% (\$437,238) was allocated to the following six other federal organizations: Public Works and Government Services Canada (\$188,266), the National Capital Commission (\$90,300), National Research Council Canada (\$64,172), the Canadian Broadcasting Corporation (\$60,000), Transport Canada (\$20,000), and the Fraser River Port Authority (\$14,500).

During this five-year time frame, the IRF was organized into three distinct project categories: Recovery, Survey and compliance with the *Species at Risk Act* (SARA). Each category had a very specific goal: the Recovery category aimed to implement recovery activities identified under recovery strategies or action plans; the Survey category allowed surveys for species at risk not necessarily identified in a recovery strategy; and the SARA-compliance category was created for activities that could help federal organizations meet the requirements under SARA. It is important to note that the SARA-compliance category existed only from 2003–2004 to 2005–2006. Recovery projects were the most popular, with a total of 256 projects totalling \$7.6 million being funded. Eighty-four projects, totalling \$1.8 million, focused on survey activities, while an additional 14 projects, totalling \$505,200, focused on activities under the SARA-compliance category.

Specific eligible activities under the IRF are grouped into three broad categories: Technical and Scientific; Management and Operational; and Outreach and Education. Technical and Scientific activities, which include surveys and research on species' biology and ecology, received the most funding (\$6.7 million). Management and Operational activities accounted for \$1.9 million of the funds, and \$780,000 was spent on Outreach and Education activities. When considering all project categories, the bird taxonomic group received the most funds (\$2.3 million).

Ninety-one different recovery strategies were targeted in the 256 Recovery category projects. The most frequently targeted recovery strategy was that of the Recovery Strategy for the Burrowing Owl (*Athene cunicularia*) in Canada at 23 projects. One hundred and forty-six species at risk were targeted under the 84 Survey category projects. Of these targeted species, the most frequently surveyed were the Great Basin Spadefoot (*Spea intermontana*), the American Badger (*Taxidea taxus jacksoni* and *Taxidea taxus jeffersonii*), the Least Bittern (*Ixobrychus exilis*), the Sprague's Pipit (*Anthus spragueii*) and the Western Screech-owl (*Megascops kennicottii macfarlanei*), each with 12, 11, 11, 9 and 7 projects, respectively.

This five-year report also includes summaries of seven projects funded during this time frame.

1. BACKGROUND

Proclaimed in 2003, the *Species at Risk Act* (SARA) provides for the recovery of threatened, endangered and extirpated listed species and the identification and protection of their critical habitat. Furthermore, for these species, SARA requires that a recovery strategy and one or more action plans be prepared by the competent ministers under SARA (i.e. the Minister of the Environment, which also includes Parks Canada¹, and the Minister of Fisheries and Oceans), in cooperation with interested parties. Implementation of recovery activities arising from recovery strategies/action plans typically involves organizations that own or manage lands on which individuals of the species occur. As the Government of Canada owns more than 40 million ha of land area across the country that is home to most species at risk, federal land managers have a predominant role to play in the protection and recovery of species at risk. It is their responsibility to adjust their practices in order to account for the needs of species at risk and to comply with SARA.

As part of the National Strategy for the Protection of Species at Risk, the federal government established the Interdepartmental Recovery Fund (IRF) in 2002.

2. THE INTERDEPARTMENTAL RECOVERY FUND

The IRF provides a central funding mechanism to support species-at-risk projects led by federal departments, which include agencies and Crown corporations. Projects implement priority recovery activities identified under recovery strategies or action plans. Additionally, projects can focus on conducting surveys on species at risk on federal lands or waters. More specifically, the IRF

- enhances the ability of federal organizations to undertake and carry out in a timely fashion activities important for the protection and recovery of species at risk;
- enhances cooperation and collaborative arrangements among federal organizations and other Canadian stakeholders (First Nations, universities, provincial governments, etc.) in the implementation of recovery projects; and
- contributes to the federal government's commitment to the Accord for the Protection of Species at Risk and the Convention on Biological Diversity.

3. PROGRAM GOVERNANCE

The IRF is co-managed by Environment Canada, Fisheries and Oceans Canada, and Parks Canada and is administered by Environment Canada. The Species at Risk Assistant Deputy Ministers Committee, composed of representatives from the three competent departments (Environment Canada, Fisheries and Oceans Canada, and Parks Canada), is in charge of making final decisions regarding program management, including project approval and program funding. The Species at Risk Directors General Operations Committee, also composed of representatives from the competent departments, is responsible for giving strategic direction to the program and making recommendations to the Species at Risk Assistant Deputy Ministers Committee on the management of the program and on projects recommended for funding. Since 2005, the Species at Risk Extended Directors General Operations Committee, which is an extension of the Directors

¹ Although the *Species at Risk Act* refers to the Minister of Canadian Heritage, it should be noted that pursuant to an Order in Council under the *Public Service Rearrangement and Transfer of Duties Act* dated August 11, 2004, the powers, duties and functions of the Minister of Canadian Heritage were transferred to the Minister of the Environment.

General Operations Committee and includes other departments, supports the recommendations made by the Directors General Operations Committee regarding the program. The Interdepartmental Review Committee, composed of representatives from various departments and agencies, including those receiving funding, provides advice on program direction and other matters, and also evaluates project proposals and makes funding recommendations to the Species at Risk Directors General Operations and Assistant Deputy Ministers Committees. Finally, the Interdepartmental Recovery Fund Secretariat, housed at the Canadian Wildlife Service within Environment Canada, chairs the Interdepartmental Review Committee, coordinates its activities and administers the program with help from the Interdepartmental Review Committee.



Current threats to the threatened Peregrine Falcon (*anatum* subspecies) are the small number of individuals in the population and the loss of habitat quality.

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4. PROJECT SELECTION

A call for proposals to implement recovery projects or to conduct surveys on species at risk for the following fiscal year takes place annually between mid-September and mid-November. A rigorous multi-step process is in place to ensure selection and funding of the highest quality proposals.

For each project, a first evaluation is done by the Recovery Team Chair of the targeted species, when appropriate, and, concurrently, by the representative from the appropriate region of the competent department. For example, a recovery project on the Burrowing Owl in Alberta would be assigned to the Chair of the Burrowing Owl Recovery Team and, at the same time, to Environment Canada's and Parks Canada's Prairie and Northern Region representatives. Following those reviews, the Interdepartmental Review Committee and two independent external scientific reviewers proceed with a detailed evaluation that considers the comments made by the Recovery

Team Chairs and the regional reviewers. Several key criteria evaluate various aspects of the project proposal and allow for a thorough assessment of the application, most notably to determine:

- whether the targeted species is a national priority;
- what the land tenure is (e.g. whether the project will occur on the land of a competent department or on the land belonging to another federal organization);
- whether the proposed activities are of a high priority for the recovery strategy; and
- what the intrinsic value and quality of the project proposal is.

The Interdepartmental Review Committee members subsequently meet in February to make recommendations for funding to the Species at Risk Directors General Operations Committee. The latter meets and discusses the recommendations made by the Interdepartmental Review Committee and makes final recommendations for funding to the Species at Risk Assistant Deputy Ministers Committee, which is responsible for approving the recommended projects for funding.

From 2003 to 2006, a separate call for proposals for SARA-compliance projects occurred in parallel with the recovery and survey projects call for proposals. Evaluations of these proposals were done by representatives of the competent departments only, and recommendations for funding were also made to the Species at Risk Directors General Operations and Assistant Deputy Ministers Committees.



A predictive habitat model for the threatened American Marten (Newfoundland population) was developed by Natural Resources Canada, with support from the IRF, to contribute to the recovery of the species.
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5. STATISTICS FOR THE 2003–2004 TO 2007–2008 PERIOD

Based on program files, the present section summarizes the funded projects under the IRF, covering fiscal years 2003–2004 through 2007–2008. Results for the first year of the program (2002–2003) can be found in the 2002–2003 Interdepartmental Recovery Fund Annual Report.

5.1 Overall Program Funding

For the five fiscal years covered by this report (2003–2004 to 2007–2008), a total of 354 projects, totalling \$9.9 million and led by various federal departments, agencies and Crown corporations,

were funded by the IRF. Table 1 outlines the total amount of IRF funds spent annually for each of these five fiscal years. These results indicate a general decline in IRF spending over the five years.

Table 1. Annual project expenditures during fiscal years 2003–2004 to 2007–2008 under the IRF.

Fiscal Year	IRF Funds Spent on Projects
2003–2004	\$2,228,883
2004–2005	\$2,457,045
2005–2006	\$2,051,534
2006–2007	\$1,597,074
2007–2008	\$1,590,892
Total	\$9,925,432

5.2 Funding by Federal Organizations

The IRF funded 13 different federal organizations (8 departments and 5 agencies or Crown corporations) during the 2003–2004 to 2007–2008 period:

- Aboriginal Affairs and Northern Development Canada
- Agriculture and Agri-Food Canada
- Canadian Broadcasting Corporation
- Environment Canada
- Fisheries and Oceans Canada
- Fraser River Port Authority
- National Capital Commission
- National Defence
- National Research Council Canada
- Natural Resources Canada
- Parks Canada
- Public Works and Government Services Canada
- Transport Canada

As shown in Figure 1, 52% of the funding totalling \$5.1 million was allocated to non-competent federal government departments (including agencies and Crown corporations). Among those funded were Agriculture and Agri-Food Canada (\$1.35 million), Aboriginal Affairs and Northern Development Canada (\$1.28 million), National Defence (\$1.02 million), Natural Resources Canada (\$1.01 million), Public Works and Government Services Canada (\$188,266), the National Capital Commission (\$90,300), National Research Council Canada (\$64,172), the Canadian Broadcasting Corporation (\$60,000), Transport Canada (\$20,000), and the Fraser River Port Authority (\$14,500).

The competent departments received 48% of the funding, for a total of \$4.8 million during this time frame. Of the total funding, 20% (\$2.03 million) went to Fisheries and Oceans Canada, while Environment Canada received \$1.8 million (18%) and Parks Canada received \$994,300 (10%) of the funds.

Interdepartmental Recovery Fund for Species at Risk

Five-year Report (2003–2004 to 2007–2008)

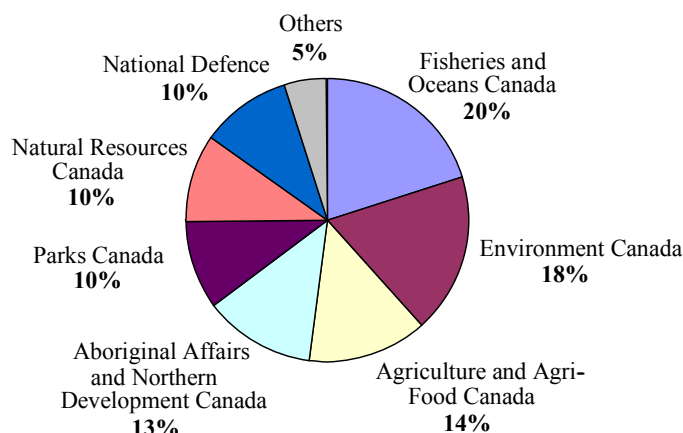


Figure 1. Percent of funding per federal organization from 2003–2004 to 2007–2008 under the IRF. “Others” include, in decreasing order of funding: Public Works and Government Services Canada, the National Capital Commission, National Research Council Canada, the Canadian Broadcasting Corporation, Transport Canada, and the Fraser River Port Authority.

5.3 Funding by Project Categories

For the first year of the program (2002–2003), only those recovery activities identified in recovery strategies or action plans were funded under the IRF. Recognizing that it is imperative to first identify what species at risk are found on what properties to effectively implement recovery activities, the program expanded its funding categories in 2004–2005 to include surveys. Creation of this new category also ensured a way to get species at risk funds to federal organizations for surveys that were not necessarily identified in recovery strategies or action plans.

Additionally, for three years (from 2003–2004 to 2005–2006), the mandate of the IRF expanded to include a limited number of SARA-compliance projects. This category specifically targeted federal organizations other than the competent departments to help them meet the SARA requirements. Funded projects under this category included a wide range of activities, such as the training of federal employees, the hiring of temporary SARA officers, and the development of SARA tool kits, species-at-risk databases and desktop surveys.

Of the 354 projects funded from 2003–2004 to 2007–2008, 84 were in the Survey category for a total of \$1.8 million, showing the importance of the newly created Survey category. Two hundred and fifty-six projects were funded under the Recovery category, for a total of \$7.6 million, and 14 were funded for SARA-compliance activities, for a total of \$505,200 over three years. Figure 2 shows the interest in the Survey category, with 15% (\$370,310 out of \$2.5 million) of the funds being spent in the first year of this category (2004–2005) on these projects. There has been a steady increase over the years in the Survey category. In fact, in 2007–2008, 31% (\$497,963) of the funds were allocated in this category. These results show the importance of providing federal organizations with the opportunity to first identify which species at risk inhabit their properties before implementing recovery activities.

Interdepartmental Recovery Fund for Species at Risk

Five-year Report (2003–2004 to 2007–2008)

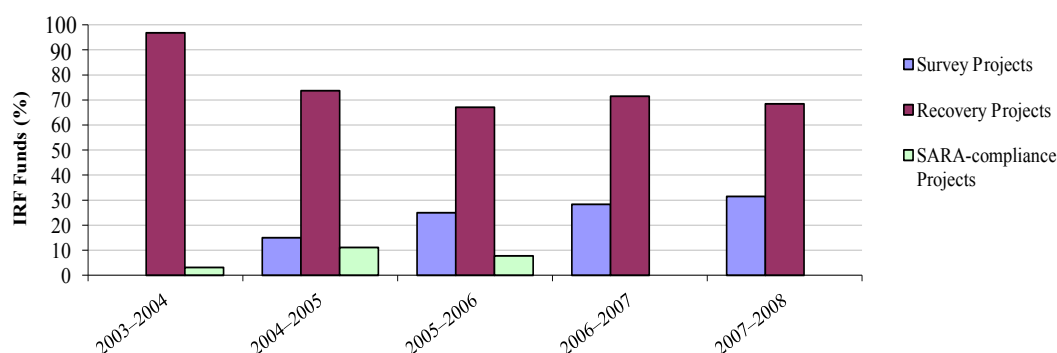


Figure 2. Percent of IRF funds expended per project category during the 2003–2004 to 2007–2008 period.

5.4 Funding by Activity

There are three major types of activities that a project can fall under: Technical and Scientific; Management and Operational; and Outreach and Education. Each activity is further divided into several sub-activities, allowing for a clear identification of linkages with requested funds. Based on the nature of the planned activities, all projects from the Survey category automatically fall under the Technical and Scientific activities; however, recovery projects can fall under one or more activity types, depending of the percentage allocated to each activity type. In this section, SARA-compliance projects have not been included as they are focused on different activities.

Technical and Scientific activities include those that can improve knowledge of species and their habitats. Eligible sub-activities include surveys and research on the biology or ecology of the species, along with research on threats and limiting factors surrounding the species at risk.

Management and Operational activities include those that will have a direct impact on the protection and/or recovery of species at risk. Eligible sub-activities include the improvement and protection of critical habitat, the development and implementation of management guidelines, and the direct mitigation of threats.

While not an overall program priority, projects targeting Outreach and Education activities can be funded when included as part of a recovery project. Eligible sub-activities include the preparation and delivery of workshops, the production and distribution of printed material, and direct community outreach.

As shown in Figure 3, more than 70% of all funding supported Technical and Scientific activities, for a total of \$6.7 million. They are followed by Management and Operational activities, which account for more than 20% of the funding (\$1.9 million). Finally, less than 10% of the funds (\$780,000) were allocated to Outreach and Education activities.

Interdepartmental Recovery Fund for Species at Risk

Five-year Report (2003–2004 to 2007–2008)

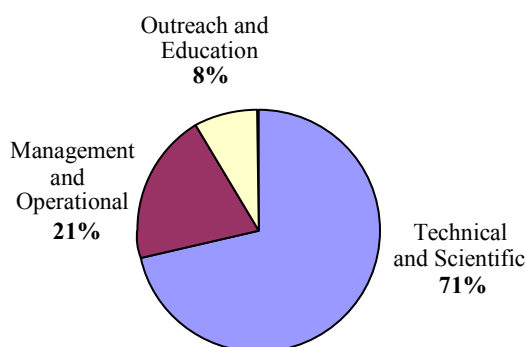


Figure 3. Percent of IRF funding expended per activity from 2003–2004 to 2007–2008 for projects in the Recovery and Survey categories.

For each of the three activities, the proportion of funds allocated to all sub-activities is depicted in Figure 4. Under the Technical and Scientific activities, the survey sub-activity was the most funded (\$2.8 million). In fact, of all the sub-activities, the survey sub-activity received the most funds (30% of all funding). As for Management and Operational activities, habitat improvement was the sub-activity allocated the most funds (\$613,573). Lastly, for Outreach and Education activities, direct community outreach was the sub-activity allocated the most funds (\$283,291).

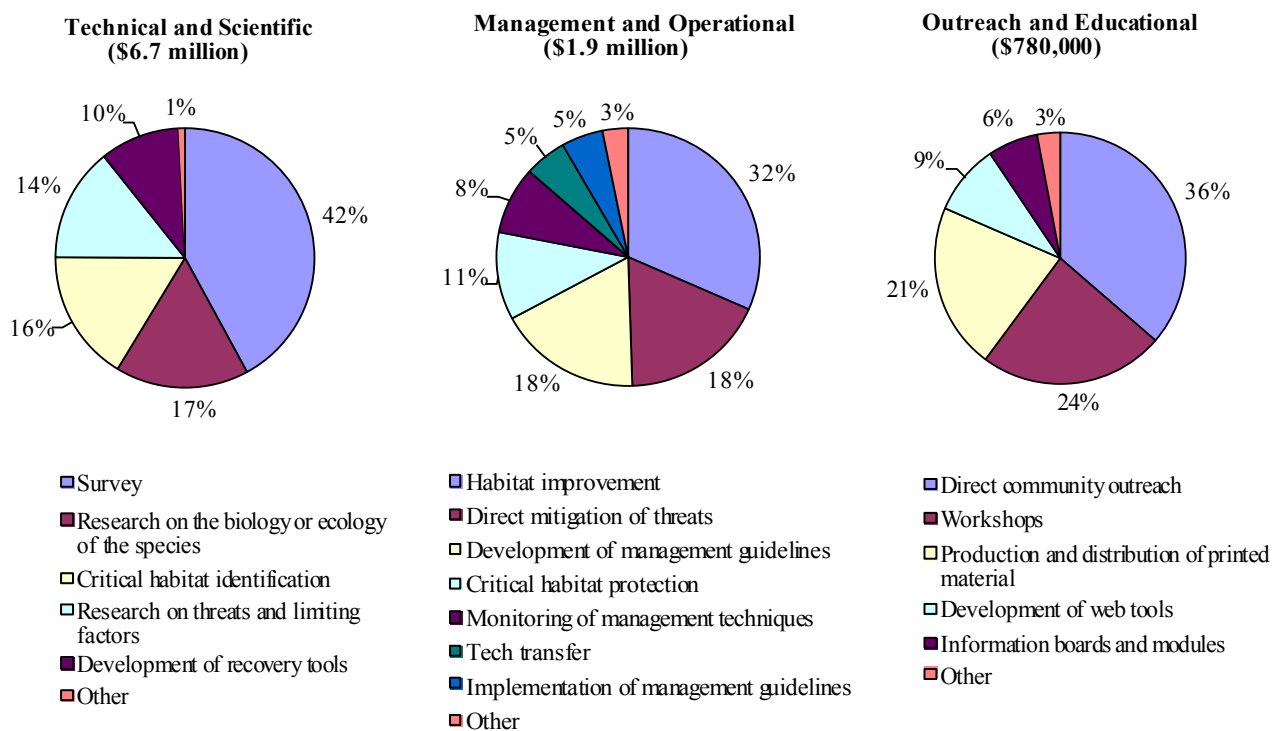


Figure 4. Percent of IRF funding expended per sub-activity under the IRF from 2003–2004 to 2007–2008 under the Recovery and Survey categories.

5.5 Funding by Taxonomic Type

Within a single project, targeted species can represent one taxon only or, in some cases, several taxa when several species are targeted. In the latter case, a project will be called a “multi-taxa project.” As projects funded for SARA-compliance activities do not target specific species at risk, these projects are not included in this section.

As shown in Figure 5, projects targeting birds (56 projects) received the most funds during this period, when considering all the projects funded under the Recovery category (256 projects). Indeed, a quarter (\$1.9 million) of the Recovery category funds (\$7.6 million) were allocated to projects where only bird species were targeted. Other taxonomic groups receiving considerable funding attention were fish (\$1.4 million; 50 projects), amphibians and reptiles (\$1 million; 37 projects), vascular plants (\$846,730; 36 projects), and multi-taxa (\$727,220; 25 projects).

The picture differs for the Survey category, where a total of \$1.8 million was spent on 84 projects. In fact, projects that targeted multi-taxa at the same time were the ones allocated the most funds (\$620,535; 28 projects). Combining multiple species from different taxa in a single survey project is common practice as it reduces the cost and the length of the project. Separately, vascular plants (18 projects) and birds (15 projects) were the two taxa identified in survey projects that received the most funds (\$518,200 and \$337,680, respectively).

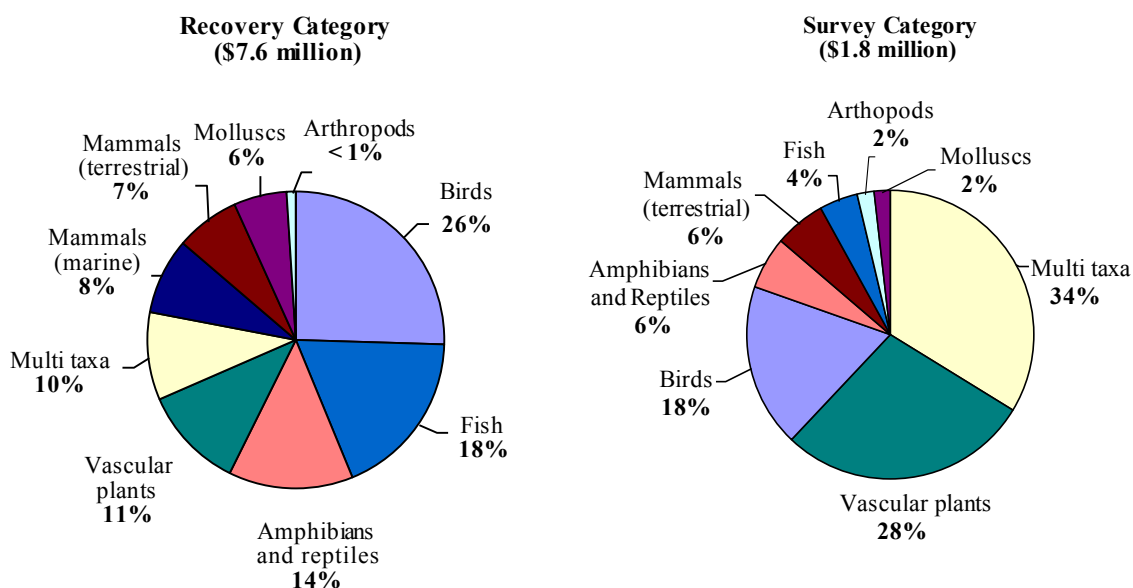


Figure 5. Percent of IRF funds expended per taxonomic group from 2003–2004 to 2007–2008 in the Recovery and Survey categories.

5.6 Number of Recovery Strategies Targeted

The purpose of projects in the Recovery category is to implement recovery activities identified under recovery strategies or action plans. A total of 91 national or provincial recovery strategies or action plans were targeted in the 256 recovery projects funded during the 2003–2004 to 2007–2008 period. Nearly a third of all recovery projects targeted the following four recovery strategies:

- Recovery strategy for the Burrowing Owl (*Athene cunicularia*) in Canada (23 projects);
- Recovery strategy for Garry Oak and associated ecosystems and their associated species at risk in Canada (20 projects);
- Recovery strategy for the Great Basin Gophersnake (*Pituophis catenifer deserticola*) in Canada (16 projects); and
- Recovery strategy for the Great Basin Spadefoot (*Spea intermontana*) in British Columbia (15 projects).



The Recovery Strategy for the Burrowing Owl (*Athene cunicularia*) in Canada encompassed the greatest number of recovery projects funded under the Recovery category. © Photos.com, 2011

5.7 Number of Species Targeted

Projects within the Survey category directly target one or more species. A total of 146 species at risk were targeted in the 84 survey projects during this period. The following five species were surveyed the most, with more than 50% of all projects (single species and multi-species) in the Survey category:

- the Great Basin Spadefoot (*Spea intermontana*) (12 projects);
- the American Badger (*Taxidea taxus jacksoni* and *Taxidea taxus jeffersonii*) (11 projects);
- the Least Bittern (*Ixobrychus exilis*) (9 projects);
- the Sprague's Pipit (*Anthus spragueii*) (7 projects); and
- the Western Screech-owl (*Megascops kennicottii macfarlanei*) (7 projects).

6. PROFILES OF SELECTED IRF-FUNDED PROJECTS

This section presents summaries of 7 recovery and survey projects funded under the IRF for the 2003–2004 to 2007–2008 period.

Adaptive Management of Species at Risk in the Garry Oak Ecosystems

By Arthur Robinson, Pacific Forestry Centre, Natural Resources Canada

Lead Organization	Natural Resources Canada
Province	British Columbia
Funding	Total: \$90,650 2004–2005: \$25,000; 2005–2006: \$36,500; 2006–2007: \$29,150
Project Category	Recovery
Activities	Technical and Scientific; Management and Operational; and Outreach and Education
Sub-activities	Research on the biology and ecology of the species; research on threats and limiting factors; development of recovery tools; direct mitigation of threats; habitat improvement; development of management guidelines; monitoring of management techniques; and information boards and modules

Many of the plant species at risk in the Garry Oak ecosystems on southeastern Vancouver Island face threats such as competition from invasive plants, grazing pressure from rabbits and deer, and impacts from human and canine activity. An adaptive management project was initiated in 2004 by the Canadian Forest Service within Natural Resources Canada, in partnership with federal landowners (i.e. National Defence and National Research Council Canada) and with support from the IRF. The overall objective was to implement management activities in the Garry Oak ecosystems on federal lands to help recover five species listed by SARA: Seaside Birds-foot Lotus (*Lotus formosissimus*); Bear's-foot Sanicle (*Sanicula arctopoides*); Dense-flowered Lupine (*Lupinus densiflorus*); Purple Sanicle (*Sanicula bipinnatifida*); and White-top Aster (*Sericocarpus rigidus*). Management activities undertaken were outlined in the Recovery Strategy for Multi-Species at Risk in Maritime Meadows associated with Garry Oak Ecosystems in Canada (2006) and the Recovery Strategy for Multi-Species at Risk in Garry Oak Woodlands in Canada (2006).

Invasive plant species were removed from sub-populations of these five species at risk on three federal properties. The results suggest that invasive species removal increases the chances of the species at risk producing flowering shoots. Future monitoring will determine the long-term impact that removal of invasive species has on these species. An unexpected result of the removal of the invasive species on one of the properties, an off-leash dog park, was an increase in the use of the treated area by canines and humans. An adaptive management approach was taken with the installation of educational signage and a split-rail fence to reduce human and canine impacts on the restoration site. Installation of exclosure cages around sub-populations of two species to deny herbivore access to both plant species showed that browsing damage was caused mainly by rabbits while deer had low browsing incidence. It was found that plants protected from grazing rabbits by the cages produced significantly more seed pods or had increased vigour compared to those plants that did not receive such protection.

The results of this project provided important information about future work that is needed to successfully manage species at risk on federal lands. Continuous monitoring will allow land managers to adapt management regimes so as to mitigate unexpected results that occur as a result of any activity.

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Before (A) and after (B) invasive plant removal from the endangered SARA-listed Seaside Bird's-foot Lotus (*Lotus formosissimus*) habitat on Bentinck Island, British Columbia, a property owned by National Defence. Initial results suggest that invasive species removal increases the chance of the species at risk to produce flowering shoots. © Canadian Forest Service, Natural Resources Canada



The installation of an exclosure that prevented both Eastern Cottontail (*Sylvilagus floridanus*) and Black-tailed Deer (*Odocoileus columbianus*) from grazing the endangered SARA-listed White-top Aster (*Sericocarpus rigidus*) is an excellent example of a mitigation of threats activity. © Canadian Forest Service, Natural Resources Canada

Least Bittern (*Ixobrychus exilis*) Count in Gatineau Park

By Isabelle Beaudoin-Roy, Gatineau Park, National Capital Commission

Lgcf 'Qti cpl cklq	National Capital Commission
Location	Gatineau Park
Province	Quebec
Funding	2005–2006: \$10,000
Project Category	Survey
Activities	Technical and Scientific
Sub-activities	Survey

Gatineau Park is a significant protected natural area managed by the National Capital Commission, a federal Crown corporation. The Park contains many water bodies, some of which show a good potential for the Least Bittern (*Ixobrychus exilis*), a protected bird that is designated threatened under SARA.

According to the *Banque de données sur les oiseaux menacés du Québec* [Quebec threatened birds database], this species was observed in two locations near the Park in 1987 and 2000. In addition, a Least Bittern was heard inside the Park in 2004 by a member of the Club des ornithologues de l'Outaouais. This indicated that breeding pairs probably frequented the Park.

The National Capital Commission received a grant from the IRF during the 2005–2006 fiscal year for an initial survey of the Least Bittern in Gatineau Park. The Least Bittern survey was conducted by the National Capital Commission between May 23 and June 27, 2005, on six water bodies by using the methods identified by the national team for the recovery of the species. The project was successful: a breeding pair was confirmed for the first time in the Park, on Lac La Pêche.

As part of this project, guidelines were drawn up for protecting the Least Bittern and its habitat in the Park. They identify, among other things, annual monitoring of the Lac La Pêche site by Park biologists. Therefore, the presence of the Least Bittern would be reconfirmed on this site over the next few summers. Surveys will also be conducted in other sites in the Park over the next few years. This will determine whether or not the species is present in other wetlands in the Park.

Data gathered will be useful to Park staff and to Environment Canada's Canadian Wildlife Service, which wants to get a description of breeding Least Bittern populations in Quebec in order to work effectively as part of the national recovery team.



The Least Bittern searches for marshes of at least 5 ha with a high density of bulrushes, reeds, and open water still available during breeding season, such as this site on Lac La Pêche in Gatineau Park. © National Capital Commission



Not exceeding the size of the American Robin, the Least Bittern is the smallest representative of the heron family in North America. © National Capital Commission

Clarification of Nunavik Beluga Whale Stock Boundaries

By Mike Hammill, Maurice Lamontagne Institute, Fisheries and Oceans Canada

Lead Organization	Fisheries and Oceans Canada
Location	Eastern Hudson Bay, Hudson Strait and Ungava Bay
Province	Quebec
Funding	2003–2004: \$60,000
Project Category	Recovery
Activities	Technical and Scientific; Management and Operational; and Outreach and Education
Sub-activities	Research on the biology or ecology of the species; direct mitigation of threats; development of management guidelines; direct community outreach; and production and distribution of printed material

In northern Quebec, stocks of Beluga Whales have been defined on the basis of summer aggregations in distinct areas. The Western Hudson Bay, Southeastern Baffin Island and threatened Eastern Hudson Bay stocks all may contribute to the harvest by northern Nunavik communities in the vicinity of Hudson Bay. A major difficulty in the recovery of the Eastern Hudson Bay beluga is the need to understand the proportion of this population in the harvest.

A beluga hunter sampling program was initiated in the early 1990s by Fisheries and Oceans Canada. Every year, hunters are asked to provide the Department with a tooth and skin sample from the animals that they harvest. The tooth is used to determine the age structure of the harvest while the skin sample is used for mitochondrial DNA analysis to help scientists understand the stock composition of the harvest. Yearly, participation among hunters is variable. Support from the IRF program was used in 2003–2004 to increase participation among hunters and clarify stock boundaries, including the degree of overlap between beluga stocks.

At the end of the 2003–2004 season, a total of 82 sampling kits, compared to 55 in 2002, were received from the 14 Nunavik communities. Twenty-four kits were received from the Ivujivik community, which had not participated in previous years. With the samples received, a genetic mixture analysis was performed with 37 mitochondrial haplotypes distributed among 1432 belugas caught by the Nunavik communities in the Hudson Bay–Hudson Strait–Baffin Island geographical complex. Genetic differentiation validated the traditional definition of beluga stocks in this area. The probabilistic estimation of stock contribution to mixed samples was heterogeneous among sectors and seasons. Contributions of the Western Hudson Bay and Southeastern Baffin Island stocks extended into Hudson Strait and Ungava Bay, but generally decreased further away from the summering grounds. Overall, the Eastern Hudson Bay stock contributed to an estimated 11% of all mixed samples. The Eastern Hudson Bay stock was best represented in spring and fall along the northeastern coast of Hudson Bay and in Ungava Bay, respectively. The array of haplotypes is unusual and very variable from belugas around Sanikiluaq community, with the spring composition suggesting, as per other studies, a distinct population in the vicinity.

The results were incorporated into a harvest model that Fisheries and Oceans Canada uses to determine whether harvest levels of the threatened Eastern Hudson Bay beluga population are too high or not. This information was presented at meetings with stakeholders to discuss the need to reduce harvest levels.



Beluga Whale © T.G. Smith (source: Fisheries and Oceans Canada)

Distribution and Health of the Butternut (*Juglans cinerea*) on Federal Land in Quebec

By Pierre DesRochers, Laurentian Forestry Centre, Natural Resources Canada

Lead Organization	Natural Resources Canada
Location	<ul style="list-style-type: none"> ■ Cap Tourmente and Lac Saint-François national wildlife areas and Île Ronde (Environment Canada) ■ Manoir-Papineau, Forges du Saint-Maurice, Grosse Île and Irish Memorial, Louis S. Saint-Laurent, Fort Lennox and Fort Chambly national historic sites and La Mauricie National Park (Parks Canada) ■ First Nations of Kahnawake, Kanasatake, Odanak and Kitigan Zibi (Aboriginal Affairs and Northern Development Canada) ■ Nicolet and Mont Saint-Bruno firing ranges (National Defence) ■ Plains of Abraham (National Battlefields Commission) ■ Rigaud Customs and Excise College (Public Works and Government Services Canada)
Province	Quebec
Funding	Total: \$99,750 2006–2007: \$66,000; 2007–2008: \$33,750
Project Category	Survey
Activities	Technical and Scientific
Sub-activities	Survey

To support the implementation of the Recovery Strategy for the Butternut (*Juglans cinerea*) in Canada, Natural Resources Canada, with the support of the IRF, has undertaken a project consisting of assessing the symptoms and presence of pathogenic agents in the Butternut and of detecting potentially resistant individuals.

From 2006 to 2008, Natural Resources Canada located the main Butternut concentrations on sites belonging to Environment Canada, Parks Canada, National Defence, the National Battlefields Commission, Public Works and Government Services Canada and three First Nations.

During the two years of this project, 702 Butternuts were inventoried. Of these, 72 were dead and 9 could not be assessed. Of the 621 remaining Butternuts, dieback distribution was as follows: mild: 49%; moderate: 42%; severe: 9%. A total of 381 potentially canker-resistant Butternuts were inventoried. There were more disease symptoms in southwestern Quebec, and they decreased northwestward, although some isolated populations were exceptions to this trend by presenting few symptoms regardless of where these trees were located.

More than 60 Butternut samples were taken and cultivated in the laboratory. A pathogenic agent test identified butternut canker on 27 samples from 9 sites. Pitch Canker (*Fusarium solani*), an aggressive pathogenic agent, was isolated from 13 trees on 5 federal lands. The other frequent pathogenic agents are the opportunistic Melanconia fungus disease and *Cadophora melinii*, a saprophytic fungus. Pathogenic agent identification remains a work in progress.

This study updates the state of Butternut diseases and establishes the geographic distribution of the trees. It also contributes to re-establishing the Butternut insofar as recommendations for managing affected individuals will be made to the people responsible for federal lands. The report on the state of the Butternut on federal lands (2006–2008) is currently in the publication process. Natural Resources Canada continues to train federal and provincial stakeholders and stakeholders from non-governmental organizations and to provide opinions and recommendations as needed. Over the next few years, Natural Resources Canada will undertake a project to select and multiply potentially canker-resistant Butternuts; this is a high-priority activity for recovery of the species.



Severely declining Butternut on the Kitigan Zibi First Nation territory (Aboriginal Affairs and Northern Development Canada) presenting 40% dieback. © Pierre DesRochers, Natural Resources Canada



Butternut trunk affected at the base by canker, Forges du Saint-Maurice National Historic Site (Parks Canada). © Jean Thibault, Natural Resources Canada

Conservation Biology and Management of Piping Plovers

By Paul Goossen, Canadian Wildlife Service, Environment Canada

Lead Organization	Environment Canada
Location	Lake Diefenbaker
Province	Saskatchewan
Funding	Total: \$48,500 2003–2004: \$33,500; 2005–2006: \$15,000
Project Category	Recovery
Activities	Technical and Scientific; Management and Operational
Sub-activities	Surveys; direct mitigation of threats; and monitoring of management technique

The Piping Plover (*Charadrius melodus*) is a migratory shorebird whose global population numbered just over 8000 adults in 2006. This endangered species faces numerous challenges to its survival, including predation, habitat loss or alteration, and human disturbance. Such is the case at Lake Diefenbaker, in southern Saskatchewan, which in some years hosts the highest Piping Plover breeding population of North America.

As part of international efforts to recover the Piping Plover, the Canadian Wildlife Service, in cooperation with partner agencies and funding support from the IRF (\$53,500), started implementing conservation actions at Lake Diefenbaker in 2002–2003. This project funded in 2003–2004 and 2005–2006 is a continuation of the first-year project. The project's ultimate goal was to increase Piping Plover reproductive success at this large freshwater reservoir. To counter

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egg losses to predators, 241 predator exclosures were placed over plover nests and 90 clutches were relocated in attempts to escape rising water levels. Threatened by reservoir waters, 356 eggs were collected for captive rearing. From these eggs, 175 captive-reared young were released on a wetland south of Lake Diefenbaker. Unfortunately, vegetation control was unable to attract nesting pairs to five historical breeding sites. Piping Plover surveys were carried out along the Gulf of Mexico in both Texas and Mexico to locate banded plovers. Over 90 colour-banded plovers were located. Original banding locations included Saskatchewan, Alberta and the north-central United States.

IRF funding support enabled this project to contribute to national recovery strategy objectives, facilitate cooperative partnerships in species at risk conservation and provide foundational data for a federal survival and dispersal research study.



Predator exclosures protect plover eggs during incubation and hatching.

© Paul Goossen

Prairie Farm Rehabilitation Administration Species at Risk Extension Project

By Heather Wiebe, Agri-Environment Services Branch, Agriculture and Agri-Food Canada

Lead Organization	Agriculture and Agri-Food Canada
Location	Agriculture and Agri-Food Canada Prairie Farm Rehabilitation Administration Community Pastures
Provinces	Alberta, Saskatchewan, Manitoba
Funding	Total: \$120,000 2003–2004: \$60,000; 2004–2005: \$60,000
Project Category	Recovery
Activities	Outreach and Education
Sub-activities	Direct community outreach; preparation and delivery of workshops; production and distribution of printed material; and development of Web tools

The Community Pasture Program (CPP) is Agriculture and Agri-Food Canada's (AAFC) largest and longest-running contribution to the conservation of biodiversity. Through active and ongoing management, the CPP essentially cares for landscapes in some of the world's most endangered ecosystems. The CPP uses cattle grazing as the primary tool, supported by the latest range

management science, to maintain a healthy, diverse landscape, which is representative of the natural functional prairie ecosystems. The CPP currently encompasses 920 000 ha of productive rangeland (1.75 times the size of Prince Edward Island) across the Prairies, and provides habitat for 23 species at risk.

The recovery strategies for species present on the pastures such as the Burrowing Owl, Swift Fox, Peregrine Falcon (*anatum* subspecies), Prairie Loggerhead Shrike, Piping Plover, Western Spiderwort and Tiny Cryptanthe all recognize the importance of informing the general public, landowners, AAFC staff and partners about specific species at risk and the grassland habitat they utilize.

In 2002–2003, with the support of the IRF (\$72,000), AAFC started an extension project. The project funded in 2003–2004 and 2004–2005 is the continuation of this extension project. AAFC has carried out a variety of targeted extension activities to meet the needs of unique client groups: field day presentations, flash-animation products and publications. An effective extension event in 2004–2005 was a species at risk symposium hosted by AAFC with a guest panel from Environment Canada. This symposium provided an opportunity for AAFC employees from across the Prairies to raise questions regarding species at risk surveys, management approaches, critical habitat designations, the consultation process and SARA permits. The important two-way dialogue established through this event provided baseline information to support future landscape management decisions implemented by the CPP.

This extension project has also provided the means and ability to increase knowledge, awareness and interest in local species at risk and their needs from Prairie Farm Rehabilitation Administration land managers, partners and landowners. It has given AAFC the ability to partner with an assortment of agencies involved in species at risk matters and to be active in the process of providing common species at risk information.



Agriculture and Agri-Food Canada's community pastures are home to many species at risk, such as the Swift Fox. © Lu Carbyn

Electronic Directory of Species at Risk on Crown Land

By Marielle Fortin, Environmental Services, Public Works and Government Services Canada

Lead Organization	Public Works and Government Services Canada (PWGSC)
Location	All PWGSC properties in Quebec and some Aboriginal Affairs and Northern Development Canada properties
Province	Quebec
Funding	Total: \$114,500 2004–2005: \$60,000; 2005–2006: \$54,500
Project category	Survey; compliance with SARA
Activities	Technical and Scientific
Sub-activities	Surveys

During the 2004–2005 and 2005–2006 fiscal years, PWGSC, in partnership with other federal entities and with the financial support of the IRF, began a study to determine the presence of species stated in Schedule 1 of SARA on its Quebec properties.

In the 2004–2005 fiscal year, an analytical methodology was developed and a number of federal properties were assessed, based on the presence of natural habitats that could be habitats for species at risk. An electronic directory of species at risk on Crown land was therefore developed.

To follow up on the recommendations that came out of this initial analysis, PWGSC and its federal partners, including Aboriginal Affairs and Northern Development Canada and several regional port authorities in Quebec, undertook, in the 2005–2006 fiscal year, validations on their respective properties where natural environments that could correspond to potential species-at-risk habitats were found. PWGSC developed and coordinated an inventory program on 16 different federal properties. These included an Aboriginal Affairs and Northern Development Canada property in Kanesatake, 8 PWGSC properties, and some land belonging to the Québec, Trois-Rivières, Montréal and Sept-Îles port authorities.

In addition to identifying habitats on each site visited and checking for the presence or absence of Schedule 1 species, recommendations were made regarding certain sites, such as implementing measures to protect the species and its habitat, conducting additional surveys, and implementing public awareness activities. The follow-up of the evolution of the species in Schedule 1 with regard to the potential for presence of habitats for these species on the properties is a recommendation that systematically applies to all of these locations.

All outcomes and recommendations from the surveys were entered into the respective databases of the federal departments involved. This update of electronic species-at-risk data allowed for a validation of these data from a theoretical analysis of compliance with regard to SARA. The electronic directory of species at risk is intended to be a useful source of information in decision making for federal department activities and for building management and is aimed toward meeting the objectives set in the greening of government operations.



The endangered Butternut was found while conducting a survey on one of PWGSC properties: the Rigaud Customs and Excise College. © Jardin botanique de Montréal

ANNEX 1

FULL LIST OF FUNDED PROJECTS BY LEAD ORGANIZATION FROM 2003–2004 TO 2007–2008

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
Aboriginal Affairs and Northern Development Canada					
2003–2004	SARA Compliance	Developing a SARA Tool-kit	Non-specific	\$20,000	Non-specific
2003–2004	Recovery	Conservation Technicians, Osoyoos Indian Band	B.C.	\$60,000	American Badger <i>jeffersonii</i> subsp. Burrowing Owl Great Basin Gophersnake Great Basin Spadefoot Nightsnake Peregrine Falcon <i>anatum</i> subsp. Sage Thrasher Scarlet Ammannia Small-flowered Lipocarpha Tiger Salamander (Southern Mountain pop.) Toothcup White-headed Woodpecker Yellow-breasted Chat <i>auricollis</i> subsp. (B.C. pops.)
2003–2004	Recovery	Post Egg-laying Movement, Seasonal Habitat Use Evaluation, and Morphometrics of the Oregon Spotted Frog (<i>Rana pretiosa</i>) at Seabird Island	B.C.	\$46,650	Oregon Spotted Frog
2004–2005	SARA Compliance	Implementing the <i>Species at Risk Act</i> on Reserve Through a Government-to-Government Approach Part I – Rapid Ecological Assessment	Non-specific	\$55,200	Non-specific
2004–2005	Recovery	Conservation Technician, Osoyoos Indian Band	B.C.	\$60,000	American Badger <i>jeffersonii</i> subsp. Burrowing Owl Great Basin Gophersnake Great Basin Spadefoot Nightsnake Pallid Bat Sage Thrasher Scarlet Ammannia Small-flowered Lipocarpha Tiger Salamander (Southern Mountain pop.) Toothcup Western Screech-Owl <i>macfarlanei</i> subsp. White-headed Woodpecker Yellow-breasted Chat <i>auricollis</i> subsp. (B.C. pops.)
2004–2005	Recovery	Recovery Activities Benefiting the Oregon Spotted Frog at Seabird Island, British Columbia	B.C.	\$65,000	Oregon Spotted Frog
2004–2005	Recovery	Secwepemc Cultural and Ceremonial Importance of Select Species at Risk	B.C.	\$22,000	American Badger <i>jeffersonii</i> subsp. Burrowing Owl Great Basin Gophersnake Great Basin Spadefoot Western Screech-Owl <i>macfarlanei</i> subsp. Woodland Caribou (Southern Mountains pop.)
2004–2005	Recovery	Heart Lake First Nation Wood Bison Conservation Project	Alta.	\$25,000	Wood Bison

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2004–2005	Survey	Pool of Aboriginal Wildlife Inventory Specialists	N.B., N.S., P.E.I.	\$20,000	Anticosti Aster Blanding's Turtle Boreal Felt Lichen Eskimo Curlew Least Bittern Leatherback Sea Turtle Peregrine Falcon <i>anatum</i> subsp. Piping Plover <i>circumcinctus</i> subsp. Roseate Tern
2004–2005	Survey	Species at Risk Surveys of the Spallumcheen Band's Lands – Year 1	B.C.	\$18,700	American Badger <i>jacksoni</i> subsp. Great Basin Gophersnake Great Basin Spadefoot Western Screech-Owl <i>macfarlanei</i> subsp.
2004–2005	Survey	Badger Distribution and Relative Abundance on Indian Reserve Lands	B.C.	\$25,000	American Badger <i>jacksoni</i> subsp.
2004–2005	Survey	Cowichan Tribes Marbled Murrelet Inventory	B.C.	\$10,000	Marbled Murrelet
2004–2005	Survey	Species at Risk on the St. Mary's Band Lands	B.C.	\$20,000	American Badger <i>jeffersonii</i> subsp., Northern Leopard Frog Western Screech-Owl <i>macfarlanei</i> subsp.
2004–2005	Survey	Surveys of Coastal/Pacific Giant Salamander Locations and Habitat	B.C.	\$19,010	Coastal Giant Salamander
2005–2006	SARA Compliance	Species at Risk Recovery Implementation on Indian Reserves in B.C.	B.C.	\$40,000	Non-specific
2005–2006	Recovery	Lake of the Woods Shortjaw Cisco (<i>Coregonus zenithicus</i>) Population Assessment – Year 1	Ont.	\$10,000	Shortjaw Cisco
2005–2006	Recovery	Pallid Bat Habitat and Population Research	B.C.	\$23,003	Pallid Bat
2005–2006	Recovery	Strategic Outreach for Conservation-project Planning Benefiting Garry Oak Ecosystems and Associated Species at Risk on Indian Reserve Lands of Southeast Vancouver Island	B.C.	\$50,640	Non-specific (species associated with Garry Oak ecosystems)
2005–2006	Recovery	Spadefoot Habitat Protection on the Spallumcheen Band's Lands	B.C.	\$5,210	Great Basin Spadefoot
2005–2006	Recovery	First Nations Fish and Mussel Inventory of the Lower Thames River	Ont.	\$15,000	Non-specific (species associated with Thames River ecosystems)
2005–2006	Recovery	Locatee Lands Species at Risk Inventory and Habitat Recovery on Penticton Indian Band Lands	B.C.	\$13,950	American Badger <i>jeffersonii</i> subsp. Behr's (Columbia) Hairstreak Burrowing Owl Great Basin Gophersnake Great Basin Spadefoot Western Screech-Owl <i>macfarlanei</i> subsp. Yellow-breasted Chat <i>auricollis</i> subsp. (B.C. pop)
2005–2006	Recovery	Chippewas of Nawash First Nation Application on Shortjaw Cisco Research: Reducing Uncertainty in Life History and Ecology Through Assessment and Management	Ont.	\$40,000	Shortjaw Cisco
2005–2006	Recovery	Lower Similkameen Environmental Protection Strategy	B.C.	\$25,000	Nightsnake Tiger Salamander (Southern Mountain pop.) Western Screech-Owl <i>macfarlanei</i> subsp.
2005–2006	Survey	Species at Risk Inventories on Secwepemc Reserve Lands	B.C.	\$20,000	Great Basin Gophersnake Great Basin Spadefoot Western Rattlesnake Western Screech-Owl <i>macfarlanei</i> subsp.

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2005–2006	Survey	Species at Risk Surveys on Indian Reserve 1 of the Okanagan Indian Band	B.C.	\$20,000	American Badger <i>jeffersonii</i> subsp. Great Basin Gophersnake Great Basin Spadefoot Western Rattlesnake Western Screech-Owl <i>macfarlanei</i> subsp.
2005–2006	Survey	Species at Risk Surveys of the Spallumcheen Band's Lands – Year 2	B.C.	\$5,225	Great Basin Gophersnake Great Basin Spadefoot Western Rattlesnake
2005–2006	Survey	Identification of Suitable Habitat Areas for Species at Risk in the Natural Sub-regions on the Blood Reserve (#148) and Blood Timber Limit (#148A) – Year 1	Alta.	\$25,000	Burrowing Owl Sprague's Pipit Swift Fox
2005–2006	Survey	Species at Risk on the St. Mary's and Lower Kootenay Band Lands	B.C.	\$14,980	American Badger <i>jeffersonii</i> subsp. Northern Leopard Frog Yellow-breasted Chat <i>auricollis</i> subsp.
2005–2006	Survey	Inventory of Species at Risk in the Cariboo Region	B.C.	\$10,000	American Badger <i>jeffersonii</i> subsp.
2006–2007	Recovery	Skeetchestn Rattlesnake and Gophersnake Conservation Project: 2006	B.C.	\$24,000	Great Basin Gophersnake
2006–2007	Recovery	Badger Habitat Restoration on Canoe Creek Indian Reserve	B.C.	\$20,000	American Badger <i>jeffersonii</i> subsp.
2006–2007	Recovery	Surveys and Habitat Restoration for Species at Risk on Beecher Bay Indian Reserve on Vancouver Island	B.C.	\$18,400	Garry Oak Ecosystems Garry Oak Vernal Pool
2006–2007	Recovery	Lake of the Woods Shortjaw Cisco Population Assessment – Year 2	Ont.	\$25,000	Shortjaw Cisco
2006–2007	Recovery	Reducing Uncertainty in the Distribution and Habitat Requirements of Shortjaw Cisco in Lake Huron	Ont.	\$37,500	Shortjaw Cisco
2006–2007	Recovery	Lower Similkameen Riparian Protection	B.C.	\$37,000	Tiger Salamander (Southern Mountain pop.) Western Screech-Owl <i>macfarlanei</i> subsp. Yellow-breasted Chat <i>auricollis</i> subsp. (B.C. pop.)
2006–2007	Recovery	Pallid Bat Habitat and Population Research	B.C.	\$57,000	Pallid Bat
2006–2007	Recovery	Locatee Species Recovery	B.C.	\$47,330	Behr's (Columbia) Hairstreak Great Basin Gophersnake Great Basin Spadefoot Tiger Salamander (Southern Mountain pop.) Western Screech-Owl <i>macfarlanei</i> subsp. Yellow-breasted Chat <i>auricollis</i> subsp. (B.C. pop.)
2006–2007	Survey	Great Basin Spadefoot Survey: Monitoring Recovery Actions	B.C.	\$2,745	Great Basin Spadefoot
2006–2007	Survey	Identification of Suitable Habitat Areas for Species at Risk in the Natural Sub-regions on the Blood Reserve (#148) and Blood Timber (#148A) – Year 2	Alta.	\$40,000	Burrowing Owl Sprague's Pipit Swift Fox
2006–2007	Survey	Secwepemc Species at Risk Inventory and Mapping on Reserve Lands 2006	B.C.	\$13,550	Great Basin Gophersnake Great Basin Spadefoot Western Rattlesnake Western Screech-Owl <i>macfarlanei</i> subsp.
2006–2007	Survey	Species at Risk Surveys on Reserves of the Okanagan Indian Band	B.C.	\$15,200	American Badger <i>jeffersonii</i> subsp. Great Basin Spadefoot Western Screech-Owl <i>macfarlanei</i> subsp.
2007–2008	Recovery	Beecher Bay Plants at Risk Stewardship	B.C.	\$22,770	Non-specific (plant species associated with Garry Oak ecosystems)

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2007–2008	Recovery	Locatee Lands Species at Risk Recovery	B.C.	\$30,000	Behr's (Columbia) Hairstreak Great Basin Gophersnake Great Basin Spadefoot Sage Thrasher Tiger Salamander (Southern Mountain pop.) Western Screech-Owl <i>macfarlanei</i> subsp. Yellow-breasted Chat <i>auricollis</i> subsp. (B.C. pop.)
2007–2008	Recovery	Northern Leopard Frog Monitoring of Reintroduced Populations at Bummers Flats	B.C.	\$12,000	Northern Leopard Frog (Southern Mountain pop.)
2007–2008	Survey	Survey for Species at Risk on Select Nicola Tribal Association Reserves near Merritt British Columbia	B.C.	\$32,000	American Badger <i>jeffersonii</i> subsp. Williamson's Sapsucker
2007–2008	Survey	Survey of American Ginseng on Kitigan Zibi Anishinabeg Lands	Que.	\$8,000	American Ginseng
2007–2008	Survey	Okanagan Chinook Habitat and Population Survey	B.C.	\$15,000	Chinook Salmon
2007–2008	Survey	Species at Risk Surveys on Indian Reserve #1 of the Okanagan Indian Band	B.C.	\$8,467	Great Basin Spadefoot Western Screech-Owl <i>macfarlanei</i> subsp.
2007–2008	Survey	Species at Risk Survey Hupacasath First Nation W1902 IR# 2&3	B.C.	\$7,000	Northern Goshawk <i>laingi</i> subsp.
2007–2008	Survey	Williamson's Sapsucker and Lewis' Woodpecker Surveys on St. Mary's Indian Reserves	B.C.	\$10,000	Lewis' Woodpecker Williamson's Sapsucker
2007–2008	Survey	Inventory of Species at Risk in the Cariboo Region: Great Basin Spadefoots	B.C.	\$10,000	Great Basin Spadefoot
Sub-total				\$1,277,531	
Agriculture and Agri-Food Canada					
2003–2004	SARA Compliance	Permit and License Protocol for <i>Species at Risk Act</i> Compliance: Assessment of the Agriculture and Agri-Food Canada, Prairie Farm Rehabilitation Administration, Community Pasture Program	Non-specific	\$25,000	Non-specific
2003–2004	Recovery	Multi-species Plant Inventory on Federal Community Pastures	Sask.	\$15,000	Burrowing Owl Greater Sage-Grouse <i>urophasianus</i> subsp. Hairy Prairie-clover Sand Verbena Slender Mouse-ear-cress Smooth Goosefoot Soapweed Tiny Cryptanthe Western Spiderwort
2003–2004	Recovery	Targeting Sediment Load Reduction	Ont.	\$17,000	Non-specific (species associated with Sydenham River ecosystems)
2003–2004	Recovery	Assessment of Grassland Management and Restoration Practices on the Availability and Quality of Insects as Food for Grassland Species at Risk	Alta., Sask.	\$30,000	Burrowing Owl Greater Sage-Grouse <i>urophasianus</i> subsp. Loggerhead Shrike <i>excubitorides</i> subsp. Swift Fox
2003–2004	Recovery	AAFC – Prairie Farm Rehabilitation Administration Species at Risk Extension Project: Year 2	Sask.	\$60,000	Burrowing Owl Loggerhead Shrike <i>excubitorides</i> subsp. Peregrine Falcon <i>anatum</i> subsp. Piping Plover <i>circumcinctus</i> subsp. Swift Fox

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2004–2005	SARA Compliance	Database for Species at Risk on AAFC and PFRA Lands – Part 2	Sask.	\$40,000	Burrowing Owl Greater Sage-grouse Hairy Prairie-clover Piping Plover Prairie Loggerhead Shrike Sprague's Pipit Swift Fox Western Blue-flag Western Spiderwort Whooping Crane
2004–2005	Recovery	AAFC – Prairie Farm Rehabilitation Administration Species at Risk Extension Project: Year 3	Sask.	\$60,000	Burrowing Owl Loggerhead Shrike <i>excubitorides</i> subsp. Peregrine Falcon <i>anatum</i> subsp. Piping Plover <i>circumcinctus</i> subsp. Swift Fox Western Blue-flag Whooping Crane
2004–2005	Recovery	Sediment Load Reduction	Ont.	\$31,000	Non-specific (species associated with Sydenham River ecosystems)
2004–2005	Recovery	Enhancing Burrowing Owl Nesting Habitat on Prairie Farm Rehabilitation Administration Pastures in Eastern Saskatchewan	Sask.	\$40,000	Burrowing Owl
2004–2005	Survey	Inventories for Targeted Species at Risk Plants on AAFC – Prairie Farm Rehabilitation Administration Community Pastures	Man., Sask.	\$45,000	Buffalograss Slender Mouse-ear-cress Small White Lady's-slipper Western Prairie Fringed-orchid Western Silvery Aster Western Spiderwort
2004–2005	Survey	Database for Species at Risk on AAFC and Prairie Farm Rehabilitation Administration Lands	Sask.	\$25,000	Burrowing Owl Greater Sage-Grouse <i>urophasianus</i> subsp. Hairy Prairie-clover Loggerhead Shrike <i>excubitorides</i> subsp. Piping Plover <i>melodus</i> subsp. Sprague's Pipit Swift Fox Western Blue Flag Western Spiderwort Whooping Crane
2005–2006	SARA Compliance	Species at Risk Habitat Modeling Tool	Sask.	\$40,000	Buffalograss Burrowing Owl Dakota Skipper Greater Sage-grouse Hairy Prairie-clover Least Bittern Piping Plover Prairie Loggerhead Shrike Sage Thrasher Slender Mouse-ear-cress Small-flowered Sand-verbena

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
					Sprague's Pipit Swift Fox Western Blue-flag Western Prairie Fringed Orchid Western Screech-owl Western Silvery Aster Western Spiderwort Whooping Crane
2005–2006	Recovery	Use of Sheep to Protect Western Spiderwort from Key Habitat Threats	Sask.	\$20,000	Western Spiderwort
2005–2006	Recovery	AAFC – Prairie Farm Rehabilitation Administration Species at Risk Management Practices and Extension	Sask.	\$13,500	Barrens Willow Burrowing Owl Fernald's Braya Loggerhead Shrike <i>excubitorides</i> subsp. Peregrine Falcon <i>anatum</i> subsp. Piping Plover <i>circumcinctus</i> subsp. Piping Plover <i>melodus</i> subsp. Roseate Tern Swift Fox Western Blue-flag Whooping Crane Woodland Caribou (Boreal pop. – Labrador)
2005–2006	Recovery	Shoreline Renaturalization and Reduction of Agricultural Releases in Copper Redhorse Habitat	Que.	\$72,000	Copper Redhorse
2005–2006	Survey	Surveys for Targeted Plant Species at Risk on AAFC – Prairie Farm Rehabilitation Administration Community Pastures and Douglas Provincial Park	Man., Sask.	\$40,000	Hairy Prairie-clover Small White Lady's-slipper Western Prairie Fringed-orchid Western Silvery Aster Western Spiderwort
2005–2006	Survey	Swift Fox Census	Sask.	\$65,000	Swift Fox
2005–2006	Survey	Species at Risk Comprehensive Survey at Summerland and Onefour Research Stations	Alta., B.C.	\$23,000	American Badger <i>jacksoni</i> subsp. Barn Owl Burrowing Owl Great Basin Spadefoot Greater Sage-Grouse <i>phaios</i> subsp. Loggerhead Shrike <i>excubitorides</i> subsp. Northern Leopard Frog Pallid Bat Pygmy Short-horned Lizard Sage Thrasher Tiger Salamander White-headed Woodpecker Yellow-breasted Chat <i>auricollis</i> subsp.
2006–2007	Recovery	Identifying and Enhancing Important Burrowing Owl Habitats on Prairie Farm Rehabilitation Administration Pastures	Sask.	\$70,000	Burrowing Owl
2006–2007	Recovery	Enhancement of Silver Sagebrush Habitat for Greater Sage-Grouse	Sask.	\$20,000	Greater Sage-Grouse <i>urophasianus</i> subsp. Sage Thrasher
2006–2007	Recovery	Conservation of Burrowing Owls and Mountain Plovers at Onefour Research Station, Alberta	Alta.	\$35,531	Burrowing Owl Mountain Plover

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2006–2007	Recovery	AAFC – Prairie Farm Rehabilitation Administration Species at Risk Extension	Sask.	\$15,000	Burrowing Owl Greater Sage-Grouse <i>urophasianus</i> subsp. Hairy Prairie-clover Loggerhead Shrike <i>excubitorides</i> subsp. Mormon Metalmark (Southern Mountains pop.) Peregrine Falcon <i>anatum</i> subsp. Piping Plover <i>circumcinctus</i> subsp. Piping Plover <i>melodus</i> subsp. Swift Fox Tiny Cryptantha Western Spiderwort Whooping Crane
2006–2007	Recovery	Shoreline Renaturalization and Reduction of Agricultural Releases in Copper Redhorse Habitat, Phase 2	Que.	\$47,000	Copper Redhorse
2006–2007	Survey	Surveys for Targeted Plant Species at Risk in Saskatchewan	Sask.	\$25,000	Hairy Prairie-clover Western Spiderwort
2006–2007	Survey	Survey and Development of Beneficial Management Practice for Targeted Species on Onefour Research Station – Alberta	Alta.	\$30,000	Slender Mouse-ear-cress Small-flowered Sand-verbena Soapweed Tall Woolly-heads Tiny Cryptantha
2006–2007	Survey	Systematic Plant Species at Risk Survey on Selected Saskatchewan AAFC – Prairie Farm Rehabilitation Administration Community Pastures	Sask.	\$40,000	Slender Mouse-ear-cress Tiny Cryptantha
2006–2007	Survey	Systematic Plant Species at Risk Survey on Selected Manitoba AAFC – Prairie Farm Rehabilitation Administration Community Pastures	Man.	\$30,000	Small White Lady's-slipper Western Prairie Fringed-orchid Western Silvery Aster
2006–2007	Survey	Species at Risk Inventory of AAFC – Prairie Farm Rehabilitation Administration Govenlock, Nashlyn and Battle Creek Community Pastures	Sask.	\$15,000	Burrowing Owl Greater Sage-Grouse <i>urophasianus</i> subsp. Loggerhead Shrike <i>excubitorides</i> subsp. Mountain Plover Sage Thrasher Slender Mouse-ear-cress Sprague's Pipit Swift Fox Tiny Cryptantha
2007–2008	Recovery	Mitigating Sediment Movement to Surface Waters	Ont.	\$30,000	Non-specific (species associated with Sydenham River ecosystems)
2007–2008	Recovery	Burrowing Owl Habitat Enhancement and Survey	Sask.	\$14,000	Burrowing Owl

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2007–2008	Recovery	AAFC – Prairie Farm Rehabilitation Administration Species at Risk Extension	Alta., B.C., Sask.	\$15,000	American Badger <i>jeffersonii</i> subsp. Burrowing Owl Great Basin Spadefoot Greater Sage-Grouse <i>urophasianus</i> subsp. Hairy Prairie-clover Loggerhead Shrike <i>excubitorides</i> subsp. Mountain Plover Piping Plover <i>melodus</i> subsp. Sage Thrasher Soapweed Sprague's Pipit Swift Fox Tiny Cryptanthe Western Spiderwort White-headed Woodpecker Whooping Crane
2007–2008	Recovery	Energy-sector Impacts on Space-use by Burrowing Owls	Alta., Sask.	\$50,000	Burrowing Owl
2007–2008	Recovery	Effect of Energy Developments on Swift Fox and Other Species at Risk	Sask.	\$30,000	Sprague's Pipit Swift Fox
2007–2008	Recovery	Conservation of Species at Risk at Onefour Agricultural Substation	Alta.	\$38,000	Burrowing Owl Loggerhead Shrike <i>excubitorides</i> subsp. Mountain Plover Sage Thrasher
2007–2008	Recovery	American Ginseng Best Management Practices	Ont., Que.	\$20,000	American Ginseng
2007–2008	Recovery	Shoreline Renaturalization and Reduction of Agricultural Releases in Copper Redhorse Habitat, Phase 3	Que.	\$72,500	Copper Redhorse
2007–2008	Survey	Small White Lady's-slipper and Rough Agalinis Surveys in Manitoba on AAFC – Prairie Farm Rehabilitation Administration Pastures	Man.	\$12,000	Rough Agalinis Small White Lady's-slipper
2007–2008	Survey	Survey for Eastern Yellow-bellied Racers on AAFC – Prairie Farm Rehabilitation Administration Pastures	Sask.	\$25,000	Eastern Yellow-bellied Racer
2007–2008	Survey	Species at Risk Desktop and Ground Surveys on AAFC Research Sites in Ontario and Quebec	Ont., Que.	\$15,000	Blanding's Turtle Blunt-lobed Woodsia Butternut Eastern Foxsnake Gray Ratsnake Kentucky Coffee-tree Spiny Softshell White Wood Aster
2007–2008	Survey	Yucca Moth Survey at AAFC OneFour Research Range	Alta.	\$15,000	Five-spotted Bogus Yucca Moth Non-pollinating Yucca Moth Yucca Moth
2007–2008	Survey	Survey for Buffalograss at Estevan-Cambria Prairie Farm Rehabilitation Administration Community Pasture	Sask.	\$13,000	Buffalograss
Sub-total				\$1,348,532	
Canadian Broadcasting Corporation					
2006–2007	Survey	Electronic Directory of Species at Risk on CBC/Radio-Canada Properties in Canada	B.C., Man., Ont.	\$60,000	Non-specific
Sub-total				\$60,000	

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
Environment Canada					
2003–2004	Recovery	Evaluating Options and Development of an Adaptive Management Framework for Genetic Management of Wood Bison in Canada	Alta., B.C., N.W.T., Y.T.	\$34,125	Wood Bison
2003–2004	Recovery	Role of Richelieu River Water Contamination in Copper Redhorse Fry Problems	Que.	\$73,000	Copper Redhorse
2003–2004	Recovery	Conservation Biology and Management of Piping Plovers at Lake Diefenbaker, Saskatchewan	Sask.	\$33,500	Piping Plover <i>circumcinctus</i> subsp.
2003–2004	Recovery	Conservation of Burrowing Owls on Federal Lands	Alta., Sask.	\$35,000	Burrowing Owl
2003–2004	Recovery	White-headed Woodpecker Habitat Improvement Project	B.C.	\$14,000	White-headed Woodpecker
2003–2004	Recovery	Effects of Silvicultural Practices on Acadian Flycatchers, Hooded Warblers, and Other Species at Risk Forest Bird Species in the Carolinian Forest Zone	Ont.	\$40,000	Acadian Flycatcher Hooded Warbler
2003–2004	Recovery	Sydenham River Recovery Strategy Implementation: Research and Monitoring for Endangered Freshwater Mussels	Ont.	\$30,175	Non-specific (mussel species associated with Sydenham River ecosystems)
2003–2004	Recovery	Conservation Plans for Ginseng in Protected Areas in Quebec	Que.	\$27,700	American Ginseng
2003–2004	Recovery	Identification of Roseate Tern Foraging Habitat (Year 1 of 2)	N.S.	\$17,000	Roseate Tern
2003–2004	Recovery	Habitat Needs and Restoration for the Endangered Sage Thrasher and Associated Sagebrush Species	B.C.	\$30,000	Sage Thrasher
2003–2004	Recovery	Ground-truthing of Critical Habitat for White-headed Woodpecker	B.C.	\$20,000	White-headed Woodpecker
2003–2004	Recovery	Herptile Conservation in South Okanagan	B.C.	\$21,000	Great Basin Gophersnake Great Basin Spadefoot Nightsnake Tiger Salamander (Southern Mountain pop.)
2003–2004	Recovery	Riparian Restoration at Vaseux-Bighorn National Wildlife Area for the Western Yellow-breasted Chat	B.C.	\$141,500	Yellow-breasted Chat <i>auricollis</i> subsp. (B.C. pops)
2003–2004	Recovery	Coordination of IRF-supported Burrowing Owl Activities on Federal Land in Canada	Alta., Sask.	\$20,000	Burrowing Owl
2003–2004	Recovery	Population Dynamics and Regional Movements of Saskatchewan Piping Plovers	Sask.	\$33,000	Piping Plover <i>circumcinctus</i> subsp.
2003–2004	Recovery	Assessment of Critical Habitat and Relative Abundance of Western Loggerhead Shrikes on Federal Lands of Prairie Canada – Year 2 of 3-Year Project	Alta., Man., Sask.	\$80,000	Loggerhead Shrike <i>excubitorides</i> subsp.
2003–2004	Recovery	Status of the Sage Thrasher on Federal Lands in Southwestern Saskatchewan	Sask.	\$16,700	Sage Thrasher
2004–2005	Recovery	Experimental Reintroduction of the Eastern Loggerhead Shrike in the Ottawa Valley in Quebec	Que.	\$32,900	Loggerhead Shrike of the subspecies <i>migrans</i>
2004–2005	Recovery	Population Dynamics and Regional Movements of Saskatchewan Piping Plovers	Sask.	\$33,000	Piping Plover <i>circumcinctus</i> subsp.
2004–2005	Recovery	Effects of Silvicultural Practices on Acadian Flycatchers, Hooded Warblers, and Other Species at Risk Forest Bird Species in the Carolinian Forest Zone	Ont.	\$25,000	Acadian Flycatcher Hooded Warbler
2004–2005	Recovery	Conservation Genetics and Population Dynamics of the Eastern Loggerhead Shrike (<i>Lanius ludovicianus migrans</i>) in North America	Ont.	\$40,000	Loggerhead Shrike <i>migrans</i> subsp.
2004–2005	Recovery	Identifying Critical Habitat for Burrowing Owls on Federal Lands across the Canadian Prairies	Alta., Sask.	\$15,000	Burrowing Owl
2004–2005	Recovery	Identification of Roseate Tern Foraging Habitat – Year 2 of 2	N.S.	\$17,250	Roseate Tern
2004–2005	Recovery	Distribution and Abundance of Endangered Freshwater Mussels in the Ausable and Maitland Rivers, Ontario and Identification of Critical Habitat for the Wavy-rayed Lampmussel	Ont.	\$19,720	Non-specific (mussel species associated with the Ausable River ecosystems)
2004–2005	Recovery	Wildfire and White-headed Woodpecker	B.C.	\$20,000	White-headed Woodpecker
2004–2005	Recovery	Peregrine Falcon Inventory and Conservation Project in the Cap Tourmente National Wildlife Area	Que.	\$14,500	Peregrine Falcon of the subspecies <i>anatum</i>

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2004–2005	Recovery	Implementation of Ginseng Conservation Plans in Three Protected Areas in Quebec	Que.	\$15,960	American Ginseng
2004–2005	Recovery	Assessment of Critical Habitat and Relative Abundance of Western Loggerhead Shrikes on Federal Lands of Prairie Canada – Year 3 of 3-Year Project	Alta., Man., Sask.	\$90,000	Loggerhead Shrike <i>excubitorides</i> subsp.
2004–2005	Recovery	Reptile and Amphibian Species at Risk Recovery Implementation in the South Okanagan	B.C.	\$15,000	Great Basin Gophersnake Great Basin Spadefoot Nightsnake Tiger Salamander (Southern Mountain pop.)
2004–2005	Recovery	Natural History Parameters, Limiting Factors and Movement of <i>Apalone s. spinifera</i> at Long Point National Wildlife Area	Ont.	\$25,000	Spiny Softshell
2004–2005	Recovery	Quantifying Marbled Murrelet Bycatch in Gillnet Fisheries	B.C.	\$35,000	Marbled Murrelet
2004–2005	Recovery	Conservation of Indian Reserve Land: Developing Tools and Approaches for First Nation Communities	B.C.	\$32,800	Non-specific
2004–2005	Survey	Species at Risk on Federal Lands in Atlantic Canada – A Strategy to Facilitate SARA Compliance	N.L.	\$25,000	American Marten Barrens Willow Eskimo Curlew Fernald's Braya Least Bittern Long's Braya Piping Plover <i>circumcinctus</i> subsp. Wolverine Woodland Caribou
2004–2005	Survey	Locating Sprague's Pipit and Their Habitat on Federal Lands	Alta., Sask.	\$40,000	Sprague's Pipit
2005–2006	Recovery	Conservation Biology and Management of Piping Plovers	Sask.	\$15,000	Piping Plover <i>circumcinctus</i> subsp.
2005–2006	Recovery	Quantifying Marbled Murrelet Bycatch in British Columbia Gillnet Fisheries	B.C.	\$25,000	Marbled Murrelet
2005–2006	Recovery	Population Dynamics and Regional Movements of Saskatchewan Piping Plovers	Sask.	\$53,000	Piping Plover <i>circumcinctus</i> subsp.
2005–2006	Recovery	Enhancing Burrowing Owl Habitat on Prairie Farm Rehabilitation Administration Pastures in Eastern Saskatchewan	Sask.	\$61,210	Burrowing Owl
2005–2006	Recovery	Determining Habitat Selection by Great Basin Gophersnakes (<i>Pituophis catenifer deserticola</i>) in British Columbia	B.C.	\$7,570	Great Basin Gophersnake
2005–2006	Recovery	Effects of Forest Management on Hooded Warblers and Acadian Flycatchers	Ont.	\$30,000	Acadian Flycatcher Hooded Warblers
2005–2006	Recovery	Implementation of Ginseng Conservation Plans in Three Protected Areas in Quebec	Que.	\$16,825	American Ginseng
2005–2006	Survey	Locating Sprague's Pipit and Their Habitat on Federal Lands	Alta., Sask.	\$47,780	Sprague's Pipit
2005–2006	Survey	Assessment of Critical Habitat and Relative Abundance of Western Loggerhead Shrikes on Federal Lands of Prairie Canada – 4th and Final Year of 4-Year Project	Alta., Man., Sask.	\$70,000	Loggerhead Shrike <i>excubitorides</i> subsp.
2006–2007	Recovery	Effects of Forest Management on Hooded Warblers and Acadian Flycatchers	Ont.	\$35,000	Acadian Flycatcher Hooded Warbler
2006–2007	Recovery	Quantifying Marbled Murrelet Bycatch in British Columbia Gillnet Fisheries	B.C.	\$60,000	Marbled Murrelet
2006–2007	Recovery	Population Dynamics and Regional Movements of Saskatchewan Piping Plovers	Sask.	\$33,000	Piping Plover <i>circumcinctus</i> subsp.
2006–2007	Survey	Amphibian Species at Risk Inventories, South Okanagan, B.C.	B.C.	\$6,876	Great Basin Spadefoot Tiger Salamander
2007–2008	Recovery	Quantifying Marbled Murrelet Bycatch in British Columbia Gillnet Fisheries	B.C.	\$50,000	Marbled Murrelet
2007–2008	Recovery	Population Dynamics and Regional Movements of Saskatchewan Piping Plovers	Sask.	\$25,000	Piping Plover <i>circumcinctus</i> subsp.
2007–2008	Recovery	Local and Landscape Influence on Sprague's Pipit Habitat Selection on Federal Lands in Saskatchewan	Sask.	\$30,000	Sprague's Pipit
2007–2008	Recovery	Critical Habitat Characterization for Acadian Flycatchers and Hooded Warblers in a Managed Forest Context	Ont.	\$21,000	Acadian Flycatcher Hooded Warbler

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2007–2008	Survey	Amphibian Species at Risk Inventories, South Okanagan, B.C.	B.C.	\$6,980	Great Basin Spadefoot Tiger Salamander
2007–2008	Survey	Survey of Ivory Gull Colonies and Quantifying Their Response to Disturbance on the Brodeur Peninsula of Baffin Island, Nunavut	Nun.	\$35,000	Ivory Gull
2007–2008	Survey	Survey for the Ottoe Skipper and the White Flower Moth on DND Canadian Forces Base Shilo, Manitoba	Man.	\$20,000	Ottoe Skipper White Flower Moth
Sub-total				\$1,812,072	
Fisheries and Oceans Canada					
2003–2004	Recovery	Grand River Black Redhorse Population Status and Limiting Factors	Ont.	\$17,000	Black Redhorse
2003–2004	Recovery	Testing Rebuilding Methods for Northern Abalone in Southern British Columbia	B.C.	\$68,200	Northern Abalone
2003–2004	Recovery	Sydenham River Non-wadeable Sampling Strategies for Fish Species at Risk	Ont.	\$16,550	Non-specific (fish species associated with Sydenham River ecosystems)
2003–2004	Recovery	Restricting Vehicle Use of Piping Plover Habitat	N.B.	\$35,000	Piping Plover <i>melodus</i> subsp.
2003–2004	Recovery	Monitoring, Assessment and Ex-situ Gene Banking of Inner Bay of Fundy Atlantic Salmon from New Brunswick Rivers	N.B.	\$20,000	Atlantic Salmon (Inner Bay of Fundy pops.)
2003–2004	Recovery	Integrated Wildlife Co-management Project	Que.	\$45,000	Beluga Whale (populations in Ungava Bay)
2003–2004	Recovery	Targeted Sampling of Fish Species at Risk in the Grand River Watershed	Ont.	\$7,000	Eastern Sand Darter
2003–2004	Recovery	Sea Otter Rafting Habitat and Behaviour	B.C.	\$16,000	Sea Otter
2003–2004	Recovery	Noise Exposure of St. Lawrence Beluga Whales in Their Critical Habitats	Que.	\$45,000	Beluga Whale (St. Lawrence pop.)
2003–2004	Recovery	Clarification of Nunavik Beluga Stock Boundaries	Que.	\$60,000	Beluga Whale (Eastern Hudson Bay and Ungava Bay pops.)
2004–2005	Recovery	Assessment of Key Threats to Sea Otter Recovery (Genetic Diversity, Disease, and Contaminants)	B.C.	\$28,000	Sea Otter
2004–2005	Recovery	Assessing the Status of Endangered Mussel Species in the Thames River, Ontario	Ont.	\$29,555	Non-specific (mussel species associated with Thames River ecosystems)
2004–2005	Recovery	Targeted Sampling of Fish Species at Risk in Non-wadeable Habitats of the Thames River	Ont.	\$23,000	Non-specific (fish species associated with Thames River ecosystems)
2004–2005	Recovery	Distribution and Habitat Characteristics of Endangered and Threatened Fish Species in the Ausable River	Ont.	\$19,700	Black Redhorse Eastern Sand Darter Lake Chubsucker Pugnose Shiner
2004–2005	Recovery	Monitoring and Maintenance of the Genetic Lineage of Inner Bay of Fundy Atlantic Salmon (<i>Salmo salar</i>) in New Brunswick Rivers	N.B.	\$67,700	Atlantic Salmon (Inner Bay of Fundy pops.)
2004–2005	Recovery	Noise Exposure of St. Lawrence Beluga Whales in Their Critical Habitats	Que.	\$60,000	Beluga Whale (St. Lawrence pop.)
2004–2005	Recovery	Testing Rebuilding Methods for Northern Abalone in Southern British Columbia	B.C.	\$60,000	Northern Abalone
2004–2005	Recovery	Modeling Oceanographic Productivity: An Approach to Predicting North Pacific Right Whale and Leatherback Turtle Distribution	B.C.	\$15,000	Leatherback Seaturtle (Pacific pop.) North Pacific Right Whale
2004–2005	Recovery	Thames River Critical Habitat Study	Ont.	\$10,000	Non-specific (fish species associated with Thames River ecosystems)
2004–2005	Recovery	Improved Sampling of Nunavik Beluga	Que.	\$35,000	Beluga Whale (Eastern Hudson Bay)
2004–2005	Recovery	Thames Sediment Source and Delivery Study	Ont.	\$4,750	Non-specific (species associated with Thames River ecosystems)
2004–2005	Recovery	Educating and Raising Awareness Among Inuit Communities in Nunavik, Phase III	Que.	\$25,000	Beluga Whale (populations in Ungava Bay and eastern Hudson Bay)
2005–2006	Recovery	Population Estimation and Critical Habitat Requirements of Eastern Sand Darter (<i>Ammocrypta pellucida</i>) in the Lower Thames River, Ontario	Ont.	\$23,000	Eastern Sand Darter
2005–2006	Recovery	Thames River Spawning Fish Species at Risk Inventory in Support of Springbank	Ont.	\$10,000	Non-specific (species associated with Thames River)

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
		Dam Fish Passage Design			ecosystems)
2005–2006	Recovery	Inventory and Critical Habitat Identification of Channel Darter Populations Along the North Shore of Lake Erie	Ont.	\$5,000	Channel Darter
2005–2006	Recovery	Characteristics of Habitat Occupied by Spotted Wolffish in the St. Lawrence Estuary and the Gulf of St. Lawrence	Que.	\$49,900	Northern Wolffish Spotted Wolffish
2005–2006	Recovery	Identifying Potential Critical Habitat Availability and Population Parameters of Pugnose Shiners and Lake Chubsuckers in the Old Ausable Channel, Ontario	Ont.	\$12,750	Lake Chubsuckers Pugnose Shiners
2005–2006	Recovery	Definition of Characteristics of Critical Habitat for the Copper Redhorse in the St. Lawrence and Richelieu Rivers	Que.	\$3,000	Copper Redhorse
2005–2006	Recovery	Assessing and Monitoring Mussel Species at Risk in the Lower Thames River	Ont.	\$15,625	Kidneyshell Round Hickorynut Wavy-rayed Lampmussel
2005–2006	Recovery	Monitoring and Maintenance of the Genetic Lineage of Inner Bay of Fundy Atlantic Salmon (<i>Salmo salar</i>) in New Brunswick Rivers	N.B.	\$52,975	Atlantic Salmon (Inner Bay of Fundy pops.)
2005–2006	Recovery	Atlantic Whitefish Population Recovery Research	N.S.	\$33,960	Atlantic Whitefish
2005–2006	Recovery	Nunavik Beluga: Enhanced Sampling and Science Involvement of Hunters	Que.	\$25,000	Beluga Whale (Eastern Hudson Bay and Ungava Bay pops.)
2005–2006	Recovery	Noise Exposure of St. Lawrence Beluga Whales in Their Critical Habitats	Que.	\$30,000	Beluga Whale (St. Lawrence pop.)
2005–2006	Recovery	Assessment of White Sturgeon Spawning Success in the Nechako River at Vanderhoof	B.C.	\$44,500	White Sturgeon (Nechako River pop.)
2005–2006	Recovery	Testing Rebuilding Methods for Northern Abalone in Southern British Columbia	B.C.	\$40,000	Northern Abalone
2005–2006	Recovery	Identifying the Critical Habitat of Black Redhorse	Ont.	\$7,000	Black Redhorse
2005–2006	Recovery	Sea Otter Rafting and Foraging Behaviour	B.C.	\$15,500	Sea Otter
2005–2006	Recovery	Identification of Factors Causing Collapse of the Endangered Stickleback Species Pair in Enos Lake to Inform Restoration Options	B.C.	\$18,645	Enos Lake Sticklebacks
2005–2006	Recovery	Ausable River Aquatic Habitat Assessment	Ont.	\$8,200	Black Redhorse Eastern Sand Darter Kidneyshell Northern Riffleshell Snuffbox Wavy-rayed Lampmussel
2005–2006	Recovery	The Effects of Inbreeding and Outbreeding Depression on Populations of Inner Bay of Fundy Atlantic Salmon	N.B.	\$40,346	Atlantic Salmon (Inner Bay of Fundy pops.)
2005–2006	Recovery	Project to Educate Nunavik Schools, in Collaboration with the Kativik School Board, on the Sustainable Protection and Exploitation of Fisheries Resources such as the Beluga Whale	Que.	\$36,000	Beluga Whale (populations in Ungava Bay and eastern Hudson Bay)
2005–2006	Recovery	Technology Development, and Testing of Delayed Deployment Micro Tags for Inner Bay of Fundy Atlantic Salmon Smolts	N.S.	\$55,840	Atlantic Salmon (Inner Bay of Fundy pops.)
2005–2006	Recovery	Species at Risk Sampling Protocol Development	Ont.	\$7,500	Non-specific (species associated with Thames River ecosystems)
2005–2006	Survey	Fish Community Assessment of Big Creek National Wildlife Area, Long Point National Wildlife Area and St. Clair National Wildlife Area	Ont.	\$19,000	Lake Chubsucker Pugnose Shiner Spotted Gar
2006–2007	Recovery	Sea Otter Raft Habitat. Measuring Physical Characteristics of Raft Sites as an Approach to Identifying Critical or Important Habitat for Sea Otters	B.C.	\$8,500	Sea Otter
2006–2007	Recovery	Glochidial Host Use by Wavyrayed Lampmussels in the Grand River	Ont.	\$20,000	Wavy-rayed Lampmussel
2006–2007	Recovery	Characteristics of habitat occupied by Spotted Wolffish in the St. Lawrence Estuary and the Gulf of St. Lawrence	Que.	\$40,000	Northern Wolffish Spotted Wolffish

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2006–2007	Recovery	Nechako White Sturgeon Spawning and Larval Habitat Study	B.C.	\$40,000	White Sturgeon (Nechako River pop.)
2006–2007	Recovery	Inventory and Habitat Characterization for the North-shore Lake Erie Populations of the Channel Darter	Ont.	\$7,050	Channel Darter
2006–2007	Recovery	Implementing a Monitoring Program for Endangered Mussels in the Ausable River	Ont.	\$12,000	Kidneyshell Northern Riffleshell Snuffbox Wavy-rayed Lampmussel
2006–2007	Recovery	White Sturgeon Larval Substrate Preference	B.C.	\$7,000	White Sturgeon (Nechako River pop.) White Sturgeon (Upper Columbia pop.)
2006–2007	Recovery	Killer Whale Foraging Behaviour: the Role of Echolocation in Prey Detection and Capture, and its Vulnerability to Interference from Vessel Noise	B.C.	\$20,000	Killer Whale (NE Pacific Northern and Southern Resident pop.)
2006–2007	Recovery	The Effects of Inbreeding and Outbreeding Depression on Populations of Inner Bay of Fundy Atlantic Salmon	N.B.	\$35,000	Atlantic Salmon (Inner Bay of Fundy pop.)
2006–2007	Recovery	Evaluating Egg and Smolt Survival for Atlantic Salmon on the Big Salmon and Point Wolfe Rivers	N.B.	\$34,825	Atlantic Salmon (Inner Bay of Fundy pop.)
2006–2007	Recovery	Investigating Seasonal Occurrence of North Pacific Right Whales in British Columbia Waters Using Long-term Passive Acoustic Monitoring	B.C.	\$23,600	North Pacific Right Whale
2006–2007	Recovery	Quantifying Population Dynamics, Refinement of Critical Habitat Requirements, and Establishment of Defensible Recovery Targets for Eastern Sand Darter (<i>Ammocrypta pellucida</i>) in the Lower Thames River, Ontario	Ont.	\$15,000	Eastern Sand Darter
2006–2007	Recovery	Atlantic Whitefish Recovery	N.S.	\$23,025	Atlantic Whitefish
2006–2007	Recovery	Testing Rebuilding Methods for Northern Abalone in Southern British Columbia	B.C.	\$50,000	Northern Abalone
2006–2007	Recovery	Artificial Reproduction, Stocking and Monitoring of Copper Redhorse Ingrowth	Que.	\$12,000	Copper Redhorse
2007–2008	Recovery	Photoidentification of Bowhead Whales (<i>Balaena mysticetus</i>) in Foxe Basin, Nunavut: Establishment of Calving Rates and Population Growth Potential	Nun.	\$25,000	Bowhead Whale (Eastern Arctic pop.)
2007–2008	Recovery	Quantifying Population Dynamics, Refinement of Critical Habitat Requirements, and the Establishment of Defensible Recovery Targets for Eastern Sand Darter (<i>Ammocrypta pellucida</i>) in the Lower Thames River	Ont.	\$25,000	Eastern Sand Darter
2007–2008	Recovery	Atlantic Whitefish Recovery Wrap Up	N.S.	\$26,838	Atlantic Whitefish
2007–2008	Recovery	Evaluating the Impact of Commercial Fishing of Baitfishes in the Spring and Summer on Five Fish Species at Risk	Que.	\$18,641	Grass Pickerel Copper Redhorse Eastern Sand Darter Channel Darter Bridle Shiner
2007–2008	Recovery	North Atlantic Right Whale: Investigations for Critical Habitat and Threat Mitigation	N.S.	\$51,075	North Atlantic Right Whale (Atlantic pop.)
2007–2008	Recovery	Characterization of the Copper Redhorse's Critical Fall, Winter and Spring Critical Habitats in the St. Lawrence River System	Que.	\$35,000	Copper Redhorse
2007–2008	Recovery	Assessing Critical Habitat and Threats to Endangered Stickleback Species Pairs	B.C.	\$14,100	Enos Lake Sticklebacks
2007–2008	Recovery	The Effects of Inbreeding and Outbreeding Depression on Populations of Inner Bay of Fundy Atlantic Salmon	N.B.	\$40,000	Atlantic Salmon (Inner Bay of Fundy pop.)
2007–2008	Recovery	Establishing Freshwater Mussel Index Monitoring Stations on the Upper Grand River	Ont.	\$16,000	Wavy-rayed Lampmussel
2007–2008	Recovery	Nechako White Sturgeon Spawning and Larval Habitat Study	B.C.	\$40,000	White Sturgeon (Nechako River pop.)
2007–2008	Recovery	Targeted Surveys for Threatened and Endangered Fishes of the Ausable River	Ont.	\$11,000	Black Redhorse Eastern Sand Darter Lake Chubsucker Pugnose Shiner
2007–2008	Recovery	Identifying the Critical Habitat, Limiting Factors and Threats of Spotted Gar	Ont.	\$27,625	Spotted Gar

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2007–2008	Recovery	Taxonomy, Abundance, Critical Habitat and Limiting Factors of Shortjaw Cisco in White Partridge Lake, Ontario	Ont.	\$13,605	Shortjaw Cisco
2007–2008	Survey	North Atlantic Shark Survey	N.L., N.S.	\$45,000	Porbeagle Shortfin Mako
2007–2008	Survey	Sable Island Bird Studies	N.S.	\$20,000	Roseate Tern
2007–2008	Survey	Northern Abalone Fine-scale Survey, Broken Group Islands, Pacific Rim National Park	B.C.	\$10,000	Northern Abalone
Sub-total				\$2,028,081	
Fraser River Port Authority					
05–06	Survey	Streambank Lupine Survey	B.C.	\$14,500	Streambank Lupine
Sub-total				\$14,500	
National Capital Commission					
2003–2004	Recovery	Recovery of the Eastern Loggerhead Shrike (<i>Lanius ludovicianus migrans</i>) in Gatineau Park	Que.	\$15,000	Loggerhead Shrike of the subspecies <i>migrans</i>
2004–2005	Recovery	Development and Construction of a Computerized (GIS) Model for Suitable Habitat for the Blunt-lobed Woodsia (<i>Woodsia obtusa</i>) in Gatineau Park	Que.	\$5,000	Blunt-lobed Woodsia
2005–2006	Survey	Least Bittern (<i>Ixobrychus exilis</i>) Count in Gatineau Park	Que.	\$10,000	Least Bittern
2006–2007	Survey	Butternut (<i>Juglans cinerea</i>) Count in Gatineau Park	Que.	\$25,500	Butternut
2007–2008	Recovery	Determining the Area Occupied by the Blanding's Turtle (<i>Emydoidea blandingii</i>), Inventorying Critical (Nesting) Sites and Assessing Road Mortality in Gatineau Park	Que.	\$17,700	Blanding's Turtle
2007–2008	Recovery	Blanding's Turtle and Stinkpot (Musk Turtle) Habitat Mapping in the National Capital Greenbelt	Ont.	\$17,100	Blanding's Turtle Eastern Musk Turtle
Sub-total				\$90,300	
National Defence					
2003–2004	SARA Compliance	Department of National Defence Request for IRF Funds for SARA Officer	Non-specific	\$15,000	Non-specific
2003–2004	Recovery	Habitat Creation and Management of the Endangered Oregon Spotted Frog at Naval Radio Section Aldergrove	B.C.	\$177,140	Oregon Spotted Frog
2003–2004	Recovery	Assessing Population, Distribution, and Ecological Requirements of Burrowing Owls at Canadian Forces Base Suffield	Alta.	\$23,593	Burrowing Owl
2003–2004	Recovery	Proposal to Develop Plan to Identify Rare Species and Suitable Habitats at the Chilcoltin Military Training Area, British Columbia	B.C.	\$10,000	Peregrine Falcon <i>anatum</i> subsp.
2004–2005	SARA Compliance	DND Request for IRF Funds for SARA Officer Term Position	Non-specific	\$60,000	Non-specific
2004–2005	Recovery	Recovery Activities Benefiting the Oregon Spotted Frog at Maintenance Detachment Aldergrove Receiver Site	B.C.	\$145,000	Oregon Spotted Frog
2004–2005	Recovery	Sharp-tailed Snake Habitat Suitability and Monitoring	B.C.	\$20,000	Sharp-tailed Snake
2004–2005	Recovery	Species at Risk Inventory and Habitat Protection at the Vernon Military Camp	B.C.	\$9,600	Great Basin Gophersnake Great Basin Spadefoot Pallid Bat Western Screech-Owl <i>macfarlanei</i> subsp.
2004–2005	Survey	Least Bittern Count on Department of National Defence Lands in Nicolet – Phase I	Que.	\$16,400	Least Bittern
2004–2005	Survey	Inventory of Species at Risk on the Valcartier Garrison Lands	Que.	\$12,000	Eastern Sand Darter Least Bittern

Interdepartmental Recovery Fund for Species at Risk

Five-year Report (2003–2004 to 2007–2008)

Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
					Peregrine Falcon of the subspecies <i>anatum</i>
2005–2006	SARA Compliance	DND Request for IRF Funds for SARA Compliance Assistance	Non-specific	\$40,000	Non-specific
2005–2006	Recovery	Monitoring of Oregon Spotted Frog Population and Habitat Creation Project at Naval Radio Section Aldergrove	B.C.	\$55,000	Oregon Spotted Frog
2005–2006	Recovery	Sharp-tailed Snake Inventory and Habitat Use Assessment	B.C.	\$20,000	Sharp-tailed Snake
2005–2006	Recovery	Vernon Military Camp Species at Risk Protection	B.C.	\$22,250	Great Basin Gophersnake Great Basin Spadefoot
2005–2006	Survey	Least Bittern Count on Department of National Defence Lands in Nicolet – Phase II	Que.	\$24,000	Least Bittern
2005–2006	Survey	Count and Identification of Spiny Softshell Spawning Sites on Department of National Defence Lands in Nicolet	Que.	\$11,000	Spiny Softshell
2005–2006	Survey	Species at Risk Survey of Canadian Forces Base Moose Jaw	Sask.	\$9,500	Burrowing Owl Loggerhead Shrike <i>excubitorides</i> subsp. Sprague's Pipit
2006–2007	Recovery	Protection of Oregon Spotted Frog (<i>Rana pretiosa</i>) Population at Maintenance Detachment Aldergrove	B.C.	\$32,500	Oregon Spotted Frog
2006–2007	Recovery	Sharp-tailed Snake Inventory and Habitat Use Assessment	B.C.	\$22,570	Sharp-tailed Snake
2006–2007	Recovery	American Ginseng Conservation on Federal Land in Quebec: Addition of a Priority Intervention Site	Que.	\$13,325	American Ginseng
2006–2007	Survey	Least Bittern Count on Department of National Defence Lands in Nicolet – Phase III	Que.	\$18,000	Least Bittern
2006–2007	Survey	Gophersnake Utilization of Agricultural Habitat at the Vernon Military Camp	B.C.	\$17,000	Great Basin Gophersnake
2007–2008	Recovery	Habitat Restoration and Monitoring for Ord's Kangaroo Rats	Alta.	\$25,000	Ord's Kangaroo Rat
2007–2008	Recovery	Sharp-tailed Snake Inventory and Habitat Use Assessment	B.C.	\$20,000	Sharp-tailed Snake
2007–2008	Recovery	Great Basin Spadefoot Breeding Habitat Enhancement at the Vernon Military Camp	B.C.	\$15,800	Great Basin Spadefoot
2007–2008	Recovery	Protection of Oregon Spotted Frog (<i>Rana pretiosa</i>) Population at Maintenance Detachment Aldergrove	B.C.	\$51,600	Oregon Spotted Frog
2007–2008	Recovery	Gophersnake Utilization of Agricultural Habitat at the Vernon Military Camp	B.C.	\$10,800	Great Basin Gophersnake
2007–2008	Survey	Survey for Plant Species at Risk in the National Defence, Suffield National Wildlife Area, Alberta	Alta.	\$50,000	Small-flowered Sand-verbena Smooth Goosefoot Tiny Cryptantha
2007–2008	Survey	Survey for Plant Species at Risk on National Defence, Canadian Forces Base Shilo, Manitoba	Man.	\$30,000	Hairy Prairie-clover Smooth Goosefoot Western Spiderwort
2007–2008	Survey	Survey for Plant Species at Risk on National Defence, 17 Wing Detachment Dundurn, Saskatchewan	Sask.	\$30,000	Hairy Prairie-clover Smooth Goosefoot Western Spiderwort
Sub-total				\$1,017,078	
National Research Council Canada					

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Five-year Report (2003–2004 to 2007–2008)

Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2004–2005	Recovery	Integrated Species at Risk and Biodiversity Conservation Planning for the White Lake Grasslands, British Columbia	B.C.	\$15,000	American Badger <i>jeffersonii</i> subsp. Great Basin Gophersnake Great Basin Spadefoot Nightsnake Pallid Bat Sage Thrasher Tiger Salamander (Southern Mountain pop.) Western Screech-Owl <i>macfarlanei</i> subsp. White-headed Woodpecker
2004–2005	Survey	Survey for Endangered Species in a Mixed Garry Oak and Coniferous Ecosystem	B.C.	\$15,000	Phantom Orchid Purple Sanicle Rigid Apple Moss Yellow Montane Violet <i>praemorsa</i> subsp.
2005–2006	Recovery	Integrated Species at Risk and Biodiversity Conservation Planning and Implementation in the White Lake Grasslands, British Columbia	B.C.	\$17,000	American Badger <i>jeffersonii</i> subsp. Burrowing Owl Great Basin Gophersnake Great Basin Spadefoot Nightsnake Pallid Bat Sage Thrasher Tiger Salamander (Southern Mountain pop.) Western Screech-Owl <i>macfarlanei</i> subsp. White-headed Woodpecker
2006–2007	Survey	Species at Risk Surveys on National Research Council Property in the White Lake Grasslands	B.C.	\$9,172	Alkaline Winged-nerved Moss Rusty Cord-moss Showy Phlox
2007–2008	Survey	Half-moon Hairstreak and Showy Phlox Surveys	B.C.	\$8,000	Half-moon Hairstreak Showy Phlox
Sub-total				\$64,172	
Natural Resources Canada					
2003–2004	Recovery	Restoration of Ginseng in the Ottawa Valley	Ont.	\$12,500	American Ginseng
2003–2004	Recovery	Garry Oak Endangered Species Demography	B.C.	\$59,000	Bear's-foot Sanicle Dwarf Sandwort Purple Sanicle Seaside Bird's-foot Trefoil White-top Aster Several other plant species associated with Garry Oak ecosystems
2003–2004	Recovery	Proposal to Control Exotic Species in Garry Oak Ecosystems Occurring on Federal Land	B.C.	\$62,600	Non-specific (plant species associated with Garry Oak ecosystems)
2003–2004	Recovery	Recovering Newfoundland Marten in Newfoundland's National Parks and Canadian Heritage River Areas (Year 2 of 3)	N.L.	\$70,300	American Marten (Newfoundland pop.)
2003–2004	Recovery	Identification of Critical Habitat for Piping Plovers in Southeastern New Brunswick	N.B.	\$50,000	Piping Plover <i>melodus</i> subsp.
2003–2004	Recovery	Remote Sensing for Mapping Snow and Habitat of Peary Caribou	Nun.	\$50,000	Peary Caribou
2003–2004	Recovery	Food Supply of the Banff Springs Snails	Alta.	\$26,000	Banff Springs Snail
2003–2004	Recovery	Identify Species at Risk and Endangered Ecosystems and Critical Habitat of the Dominion Coal Blocks	B.C.	\$15,000	American Badger <i>jeffersonii</i> subsp. Peregrine Falcon <i>anatum</i> subsp.

Interdepartmental Recovery Fund for Species at Risk

Five-year Report (2003–2004 to 2007–2008)

Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
					Woodland Caribou (Southern Mountains pop.)
2004–2005	SARA Compliance	SARA Compliance Project: Complying with SARA	Non-specific	\$60,000	Non-specific
2004–2005	Recovery	Food Supply of the Banff Springs Snail	Alta.	\$26,000	Banff Springs Snail
2004–2005	Recovery	Garry Oak Endangered Species Demography and Critical Habitat Mapping and Description	B.C.	\$70,000	Golden Paintbrush Seaside Bird's-foot Trefoil Coastal Scouler's Catchfly Snake-root Sanicle Purple Sanicle White-top Aster Dwarf Sandwort Rosy Owl-clover Dense-flowered Lupine
2004–2005	Recovery	Identifying Critical Habitat of Greater Sage Grouse (<i>Centrocercus urophasianus</i>) in Southern Saskatchewan Using the Integration of Field and Remote Sensing Data	Sask.	\$25,000	Greater Sage-Grouse <i>Urophasianus</i> subpop.
2004–2005	Recovery	Adaptive Management of Species at Risk in the Garry Oak Ecosystems – Year 1	B.C.	\$25,000	Bear's-foot Sanicle Dense-flowered Lupine Purple Sanicle Seaside Birds-foot Lotus White-top Aster
2004–2005	Recovery	Identification of Critical Habitat for Piping Plovers in Southeastern New Brunswick	N.B.	\$30,000	Piping Plover <i>melodus</i> subsp.
2004–2005	Recovery	Remote Sensing for Mapping Snow and Habitat of Peary Caribou	Nun.	\$20,000	Peary Caribou
2004–2005	Survey	Dominion Coal Blocks: Inventory of Species at Risk, Endangered Ecosystems and Critical Habitat	B.C.	\$44,200	American Badger <i>jacksoni</i> subsp. Rocky Mountain Tailed Frog
2004–2005	Survey	Species at Risk Surveys on National Defence Land in Southeastern British Columbia	B.C.	\$35,000	Deltoid Balsamroot Oregon Forestsnail Pacific Water Shrew Rigid Apple Moss
2005–2006	SARA Compliance	Complying with SARA	Non-specific	\$20,000	Non-specific
2005–2006	Recovery	Garry Oak Species at Risk Site Stewardship and Population Restoration	B.C.	\$33,000	Coastal Scouler's Catchfly Bearded Owl-clover Coastal Silverpuffs Dense-flowered Lupine Golden Paintbrush Macoun's Meadowfoam Purple Sanicle Seaside Bird's-foot Trefoil Snake-root Sanicle White Meconella Yellow Montane Violet
2005–2006	Recovery	Adaptive Management of Species at Risk in the Garry Oak Ecosystems – Year 2	B.C.	\$36,500	Bear's-foot Sanicle Dense-flowered Lupine Purple Sanicle Seaside Birds-foot Lotus White-top Aster

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2005–2006	Survey	Survey for Species at Risk on National Defence Lands on Vancouver Island	B.C.	\$10,450	Purple Sanicle Water-plantain Buttercup Yellow Montane Violet <i>praemorsa</i> subsp.
2006–2007	Recovery	Garry Oak Species at Risk Site Stewardship and Population Restoration	B.C.	\$30,600	Coastal Scouler's Catchfly Bearded Owl-clover Coastal Silverpuffs Dense-flowered Lupine Golden Paintbrush Macoun's Meadowfoam Purple Sanicle Seaside Bird's-foot Trefoil Snake-root Sanicle White Meconella Yellow Montane Violet
2006–2007	Recovery	Adaptive Management of Species at Risk in the Garry Oak Ecosystems – Year 3	B.C.	\$29,150	Bear's-foot Sanicle Dense-flowered Lupine Purple Sanicle Seaside Birds-foot Lotus White-top Aster
2006–2007	Recovery	White Meconella on Little Saanich Mountain (National Research Council): Recovery via Understanding of Habitat, Phenology and Bottlenecks	B.C.	\$8,775	White Meconella
2006–2007	Survey	Distribution and Health of the Butternut (<i>Juglans cinerea</i>) on Federal Land in Quebec	Que.	\$66,000	Butternut
2007–2008	Recovery	Taylor's Checkerspot on Little Saanich Mountain (NRC): Restoration for Reintroduction	B.C.	\$6,000	Taylor's Checkerspot
2007–2008	Recovery	White Meconella on Little Saanich Mountain (National Research Council): Recovery via Understanding of Habitat, Phenology and Bottlenecks	B.C.	\$8,775	White Meconella
2007–2008	Recovery	Garry Oak Species at Risk Site Stewardship and Population Restoration	B.C.	\$30,000	Coastal Scouler's Catchfly Bearded Owl-clover Coastal Silverpuffs Dense-flowered Lupine Golden Paintbrush Macoun's Meadowfoam Purple Sanicle Seaside Bird's-foot Trefoil Snake-root Sanicle White Meconella Yellow Montane Violet
2007–2008	Survey	Distribution and Health of the Butternut on Federal Land in Quebec (Continuation and Conclusion)	Que.	\$33,750	Butternut
2007–2008	Survey	Survey for the Blue-grey Taildropper Slug on Federal Properties on Southern Vancouver Island	B.C.	\$12,000	Blue-grey Taildropper Slug
2007–2008	Survey	Desktop Survey of Species at Risk Inventory on Natural Resources Canada-owned Lands	Alta., Man., N.B., N.W.T., Ont., Que.	\$5,000	Non-specific
Sub-total				\$1,010,600	

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Five-year Report (2003–2004 to 2007–2008)

Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
Parks Canada Agency					
2003–2004	Recovery	East Kootenay Badger Project	B.C.	\$12,000	American Badger <i>jeffersonii</i> subsp.
2003–2004	Recovery	Massasauga Viability Analyses to Inform Recovery Actions: Phase II	Ont.	\$8,000	Massasauga
2003–2004	Recovery	Modelling Oceanic Currents to Understand Dispersal of Northern Abalone Larvae	B.C.	\$25,500	Northern Abalone
2003–2004	Recovery	Analysis of Critical Marine Foraging Habitats of Marbled Murrelets in Pacific Rim National Park Reserve of Canada	B.C.	\$55,000	Marbled Murrelet
2003–2004	Recovery	Sharp-tailed Snake Habitat Suitability and Monitoring	B.C.	\$22,000	Sharp-tailed Snake
2003–2004	Recovery	Fire History and Ecology of Garry Oak Ecosystems	B.C.	\$45,000	Non-specific (species associated with Garry Oak ecosystems)
2003–2004	Recovery	South Jasper Woodland Caribou Habitat Mapping	Alta.	\$40,000	Woodland Caribou (Southern Mountains pop.)
2003–2004	Recovery	Risk Sensitivity Model of the Threat of Oil Spills to British Columbia Sea Otter Populations	B.C.	\$31,500	Sea Otter
2003–2004	Recovery	Developing Techniques for the Restoration of <i>Braya fernaldii</i> at Port au Choix National Historic Site of Canada	N.L.	\$20,000	Fernald's Braya
2003–2004	Recovery	Black Rat Snake Habitat Enhancement and Public Outreach	Ont.	\$12,650	Gray Ratsnake (Great Lakes/St. Lawrence and Carolinian pops.)
2003–2004	Recovery	Thermal Ecology and Critical Habitat of the Eastern Massasauga Rattlesnake	Ont.	\$16,000	Massasauga
2003–2004	Recovery	Sage Grouse Habitat Mapping	Sask.	\$75,000	Greater Sage-Grouse <i>Urophasianus</i> subpop.
2004–2005	Recovery	South Jasper Woodland Caribou Habitat Mapping	Alta.	\$40,000	Woodland Caribou (Southern Mountains pop.)
2004–2005	Recovery	East Kootenay Badger Project	B.C.	\$9,000	American Badger <i>jeffersonii</i> subsp.
2004–2005	Recovery	Development of a Monitoring Program for the Whooping Crane's Breeding Environment	N.W.T.	\$5,000	Whooping Crane
2004–2005	Recovery	Analysis of Critical Marine Foraging Habitats of Marbled Murrelets in Pacific Rim National Park Reserve of Canada	B.C.	\$30,000	Marbled Murrelet
2004–2005	Recovery	Propagation and Re-introductions of Deerberry (<i>Vaccinium stamineum</i>)	Ont.	\$10,000	Deerberry
2004–2005	Recovery	Proposal to Control Exotic Species in Garry Oak Ecosystems Occurring on Federal Land	B.C.	\$19,100	Non-specific (species associated with Garry Oak ecosystems)
2004–2005	Recovery	Black Ratsnake Critical Habitat Identification and Population Monitoring	Ont.	\$20,000	Gray Ratsnake (Great Lakes/St. Lawrence and Carolinian pops.)
2004–2005	Recovery	Fire History and Paleoecology of Garry Oak Related Ecosystems	B.C.	\$20,000	Non-specific (species associated with Garry Oak ecosystems)
2004–2005	Recovery	Eastern Ratsnake Habitat Enhancement and Public Outreach	Ont.	\$7,500	Gray Ratsnake (Great Lakes/St. Lawrence and Carolinian pops.)
2004–2005	Recovery	Critical Habitat Mapping – Eastern Massasauga Rattlesnake	Ont.	\$15,000	Massasauga
2004–2005	Recovery	Risk Sensitivity Model of the Threat of Oil Spills to British Columbia Sea Otter Populations	B.C.	\$48,500	Sea Otter
2004–2005	Recovery	Developing Techniques for the Restoration of <i>Braya fernaldii</i> at Port au Choix National Historic Site of Canada	N.L.	\$20,000	Fernald's Braya
2004–2005	Recovery	Peregrine Falcon <i>Anatum</i> : To Be or Not to Be a Subspecies	Alta.	\$20,000	Peregrine Falcon <i>anatum</i> subsp.
2004–2005	Recovery	Recovery Patterns of Peary Caribou in Quttinirpaaq National Park of Canada, Northern Ellesmere Island	Nun.	\$35,000	Peary Caribou
2004–2005	Recovery	Eastern Massasauga Rattlesnake Population Monitoring Protocol Development	Ont.	\$10,000	Massasauga
2005–2006	Recovery	Eastern Ratsnake Habitat Enhancement	Ont.	\$5,000	Gray Ratsnake (Great Lakes/St. Lawrence and Carolinian pops.)
2005–2006	Recovery	Propagation and Re-introductions of Deerberry (<i>Vaccinium stamineum</i>)	Ont.	\$4,750	Deerberry
2005–2006	Recovery	South Jasper Woodland Caribou Habitat Mapping	Alta.	\$50,000	Woodland Caribou (Southern Mountains pop.)
2005–2006	Recovery	Developing a Monitoring Program for the Whooping Crane's Breeding Habitat	N.W.T.	\$27,950	Whooping Crane

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
2005–2006	Recovery	Black Ratsnake Critical Habitat Identification and Population Monitoring – Year 2	Ont.	\$27,000	Gray Ratsnake (Great Lakes/St. Lawrence and Carolinian pops.)
2005–2006	Recovery	Critical Habitat Mapping – Eastern Massasauga Rattlesnake	Ont.	\$25,000	Massasauga
2005–2006	Recovery	Fire History and Paleoecology of Garry Oak Related Ecosystems	B.C.	\$22,500	Non-specific (species associated with Garry Oak ecosystems)
2005–2006	Survey	Lake Superior Peregrine Falcon Survey	Ont.	\$10,000	Peregrine Falcon <i>anatum</i> subsp.
2006–2007	Recovery	Developing a Prey Monitoring Program for the Whooping Crane Breeding Area	N.W.T.	\$12,850	Whooping Crane
2006–2007	Recovery	Propagation and Re-introductions of Deerberry (<i>Vaccinium stamineum</i>)	Ont.	\$6,500	Deerberry
2006–2007	Recovery	Restoration and Protection of <i>Braya fernaldii</i> at Port au Choix National Historic Site of Canada	N.L.	\$10,000	Fernald's Braya
2006–2007	Recovery	Delineation of Potential Critical Habitat for Garry Oak Ecosystems Plant Species at Risk on Federal Lands	B.C.	\$40,000	Bear's-foot Sanicle Bearded Owl-clover Coastal Scouler's Catchfly Deltoid Balsamroot Dense-flowered Lupine Dwarf Sandwort Golden Paintbrush Prairie Lupine Purple Sanicle Rigid Apple Moss Rosy Owl-clover Seaside Birds-foot Lotus Water Plantain Buttercup White-top Aster White Meconella Yellow Montane Violet
2006–2007	Survey	Critical Habitat Mapping – Eastern Massasauga Rattlesnake	Ont.	\$15,000	Massasauga
2007–2008	Recovery	Delineation of Potential Critical Habitat for Garry Oak Ecosystems Plant Species at Risk on Federal Lands	B.C.	\$36,000	Bear's-foot Sanicle Bearded Owl-clover Coastal Scouler's Catchfly Deltoid Balsamroot Dense-flowered Lupine Dwarf Sandwort Golden Paintbrush Prairie Lupine Purple Sanicle Rigid Apple Moss Rosy Owl-clover Seaside Birds-foot Lotus Water Plantain Buttercup White-top Aster White Meconella Yellow Montane Violet
2007–2008	Recovery	North Jasper National Park Caribou Recovery and Monitoring Project	Alta.	\$20,000	Woodland Caribou (Boreal pop. – Alberta)
2007–2008	Survey	Golden-winged Warbler Survey for Riding Mountain National Park	Man.	\$10,000	Golden-winged Warbler
Sub-total				\$994,300	

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Fiscal Year	Project Category	Title	Location of Study	Funding	Species at Risk
Public Works and Government Services Canada					
2004–2005	SARA compliance	Electronic Directory of Species at Risk on Crown Land	Que.	\$60,000	Non-specific
2004–2005	SARA compliance	Electronic Directory of Species at Risk on Crown Land Targeting Several Other Federal Departments	Que.	\$20,000	Non-specific
2004–2005	Survey	SARA Inventories on PWGSC-owned (Federal) Lands	Ont.	\$10,000	Non-specific
2004–2005	Survey	Electronic Directory of Species at Risk on Crown Land	Que.	\$54,500	Non-specific
2006–2007	Recovery	Recovery of Various Species at Risk on Crown Property	Que.	\$7,000	American Ginseng
2006–2007	Survey	Species at Risk Inventories on PWGSC-owned (Federal) Properties in Ontario	Ont.	\$25,000	Blanding's Turtle Butler's Gartersnake Eastern Foxsnake Queensnake Red Mulberry Round Pigtoe Spiny Softshell
2007–2008	Survey	Species at Risk Inventory and Management Plan of PWGSC Site at Old Welland Canal, Thorold, Ontario	Ont.	\$6,766	Acadian Flycatcher Butternut Eastern Hog-nosed Snake Hooded Warbler Red Mulberry
2007–2008	Survey	Species at Risk Inventories of PWGSC Properties Pacific Region	B.C.	\$5,000	Wood Bison
Sub-total				\$188,266	
Transport Canada					
2007–2008	Recovery	Impact of Grazing and Competing Vegetation on a Population of the Threatened Yellow Montane Violet on TC Lands on Salt Spring Island	B.C.	\$20,000	Yellow Montane Violet
Sub-total				\$20,000	
Overall Total				\$9,925,432	

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