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Canada



## Federal Contaminated Sites Accelerated Action Plan

# DFO Expert Support Annual Progress Report

2003-2004



Canada



The mandate of the Fish Habitat Management Program is to conserve and protect fish habitat with a view to ensuring the sustainability of Canada's marine and freshwater fisheries resources.

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## **TABLE OF CONTENTS**

EXECUTIVE SUMMARY .....	1
1. INTRODUCTION .....	3
2. BACKGROUND .....	5
3. DFO EXPERT SUPPORT ACTIVITIES .....	8
2003-04 DFO FCSAAP Expert Support Activities and Outputs .....	8
FCSAAP Expert Support – Governance and Delivery .....	12
DFO Roles and Responsibilities .....	13
Regional Reports .....	15
4. REPORTING BY REGION .....	16
Newfoundland and Labrador Region .....	16
Maritimes Region .....	18
Gulf Region .....	19
Québec Region .....	19
Central and Arctic Region .....	21
Pacific and Yukon Region .....	27
5. FINANCIAL REPORT .....	31
6. NEXT STEPS FOR FY 2004-05 .....	32
7. CONCLUSIONS .....	33

### **List of Tables**

Table 1 - Federal Sites by Region Receiving DFO Expert Support in 2003-04 .....	11
Table 2 - DFO Expert Support Activities and Outputs under FCSAAP .....	14
Table 3 - Federal Contaminated Sites in Newfoundland and Labrador Region .....	16
Table 4 - Federal Contaminated Sites in Maritimes Region .....	18
Table 5 - Federal Contaminated Sites in Québec Region .....	20
Table 6 - Federal Contaminated Sites in Central & Arctic Region .....	22
Table 7 - Federal Contaminated Sites in Pacific & Yukon Region .....	27
Table 8 - Planned vs. Actual 2003-04 Expenditures .....	31
Table 9 - FCSAAP DFO Person-Year Allocations, 2003-04 .....	32

### **List of Figures**

Figure 1- High Priority Federal Contaminated Sites .....	12
Figure 2 - Regional Distribution of Federal Contaminated Sites funded under FCSAAP in 2003-04 .....	15
Figure 3 - Regional Distribution of Federal Contaminated Sites submitted for Priority list ranking in 2003-04 .....	15



## **EXECUTIVE SUMMARY**

This report covers the activities undertaken by the Department of Fisheries and Oceans (DFO) Expert Support under the Federal Contaminated Sites Accelerated Action Plan (FCSAAP) program during the fiscal year 2003-2004. In 2003-04, the federal government established the FCSAAP to address federal liability at the highest risk federal contaminated sites. The FCSAAP program is coordinated by a Secretariat at Environment Canada (EC). EC, Health Canada (HC) and DFO provide a technical and science-based Expert Support component within the program. The program requires annual reporting to Treasury Board (TB) by the Secretariat on program activities throughout each year and the results of those activities.

One of DFO's roles in the FCSAAP is advisory; applied guidance from the Department helps custodial departments in assessing, managing and reducing the risks associated with fish and fish habitat at their contaminated sites; the FCSAAP Secretariat annually establishes, with the assistance of Expert Support departments, which high risk sites are to be given priority for funding. The 2003-04 FCSAAP funding for Expert Support provided DFO with resources to:

- Begin implementing an Expert Support program within Department's Habitat Management Directorate;
- Delineate departmental Expert Support responsibilities and develop an internal network of HQ and regional specialist practitioners;
- Develop an action plan, including priorities for subsequent years; and,
- Review and report on activities in the key areas identified.

In 2003-04, the first year of the FCSAAP program, DFO provided expert support in the form of scientific and technical advice on risks to fish and fish habitat at 19 federal contaminated sites funded under the program. When requested, DFO also provided expert support for unfunded sites and related activities. Advice was provided directly to Departments with custodial responsibility for highest-risk federal contaminated sites or presented through the Contaminated Sites Management Working Group (CSMWG). Staff in all regions provided expert support to five federal custodial departments, under the 2003-04 FCSAAP program, on ongoing remediation, assessment, or risk management activities. The nature of the risks, and the type of support and advice provided varied with the geographic location of sites, their historical use and the specific nature of the contaminants.

In this first year DFO provided Expert Support to the FCSAAP Secretariat, in part, to help establish the new program, and towards developing or improving tools to assess and rank environmental risks (specifically in regards to fish and fish habitat concerns) at federal contaminated sites. This included reviewing, assessing, and identifying gaps in the existing Canadian Council of Ministers of the Environment (CCME) National Classification System (NCS) and developing a better FCSAAP system for ranking the highest risk sites. DFO was instrumental in the application of the newly created ranking tools to custodial departments' priority sites, resulting in a more transparent assessment and ranking, by the Secretariat, of the federal contaminated sites selected for remediation and risk management consideration, in 2004 - 2005.

## 2003-04 ANNUAL REPORT DFO EXPERT SUPPORT TO FCSAAP

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Historically DFO has been actively engaged in providing contaminated sites advice to custodial departments and others (e.g. Sydney Tar Ponds), in order to reduce further risks to fish and fish habitat in Canada. The FCSAAP program and its Expert Support funding enables DFO to focus attention on federal contaminated sites and to develop better tools for assessing the risks that these sites pose to fish and fish habitat. This first year of the program culminated in the implementation of an expert advisory role under the FCSAAP through the combined efforts of DFO regions and national headquarters to ensure that the goals of the FCSAAP program were met, as well, as DFO's objectives to conserve or improve fish habitat.

In 2003-04, DFO received \$1.32 million and 8 FTEs (Full-time Employees) from TB to implement a Departmental Expert Support role under the FCSAAP program.



*Cut in Faro Dam*



*Faro Dam Cut Reconstruction*

## **1. INTRODUCTION**

The purpose of the 2003-2004 Annual Progress Report is to present an accounting of Fisheries and Oceans' performance in establishing an Expert Support function during the inception year of the Federal Contaminated Sites Accelerated Action Plan (FCSAAP) program. The reporting process is a key program requirement which adds value by noting milestones and achievements that aid as reference points against which DFO Expert Support will continue to assess its contribution to the program and future changes to improve DFO's specialist supporting role. The report provides a good summary of DFO's program objectives and how these were met in 2003-2004 as Expert Support departments focused on implementing their programs.

The Department of Fisheries and Oceans has the mandate for the management and conservation of Canadian marine and freshwater aquatic resources and their habitat. This mandate necessitates the transfer of technical knowledge and advice to management and regulatory agencies inside and outside the Department in order to provide adequate protection measures for these resources. Although the Department's main focus under the *Fisheries Act* is regulatory, in order to achieve its goals in protecting fish and fish habitat, DFO employs stewardship, enters into partnerships and provides strategic and technical advice to resource users.

DFO's (1986) *Policy for the Management of Fish Habitat* (the policy), established the goals and strategies for fish habitat protection and conservation and whenever possible the restoration and improvement of fish habitat that has been degraded. The policy provides guidance and information on how DFO manages the fish habitat resource in terms of the demands placed on it by legitimate water resource users. DFO's objectives are to prevent, as much as possible, habitat losses and balance out unavoidable habitat damage or loss through equivalent or better habitat replacement (compensation) leading ultimately to a "net gain" of habitat. DFO encourages habitat improvement as part of the habitat management process.

These legislative and policy requirements are particularly relevant to sites where contaminants or the risk of contaminants impact on fish or fish habitat. Canada now has a legacy of contaminated sites, many of which affect or have the potential to affect fish habitat. The potential concern at federal contaminated sites is that fish habitat may already have become too contaminated to be useable. Many sites already exhibit a reduced habitat capacity for supporting fish and fisheries. Further DFO concerns encompass the proposed clean-up of these sites since the reclamation activities themselves may have the potential to further affect already damaged fish habitat or reduce the productive capacity of unaffected habitat.

In the inception of the FCSAAP program it was recognized that federal departments (custodial departments) accountable under the program for managing their contaminated sites would require assistance in areas where the expertise and regulatory control of resources rested outside those departments. This assistance would need to take the form of specialist support by science and regulatory based departments. The support would have to be nationally consistent.

DFO is a member of the Expert Support Team of scientific and technical advisory departments along with EC and HC, all collegially responsible for providing specialist assistance to custodial federal departments whose contaminated sites are

## 2003-04 ANNUAL REPORT DFO EXPERT SUPPORT TO FCSAAP

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funded under the FCSAAP program. In its role as an Expert Support department, DFO is involved in the assessment of risks to fish and fish habitat at these sites. Information and data on risks to fish and fish habitat for each contaminated site (or sites) submitted with each custodial department's proposals for funding under FCSAAP, are reviewed, assessed, scored and ranked by DFO specialist staff. These scores become part of the environmental risk profile of a federal contaminated site which custodial departments put forward for funding eligibility under the FCSAAP Program. Federal custodial departments, whose contaminated sites are ultimately funded under the program, then choose to engage Expert Support departments as they progress through the reclamation or maintenance choices respective of each site.

The initial FCSAAP funding in 2003-04 provided DFO with salary and operational funds to establish an Expert Support function within the Habitat Management Directorate; to assign responsibilities and to develop an internal network of HQ and regional contaminated sites practitioners; to develop a multi-year action plan for delivering expert support now and in subsequent years, and to increase these activities in key areas or change them throughout the course of the program's first year, as needed.



*Mount Nansen Tailings Outlet*

## 2. BACKGROUND

### **Fish Habitat Management**

The Policy for the Management of Fish Habitat (the Habitat Policy), which was tabled in Parliament in 1986, and later supporting operational policies developed by the Habitat Management Directorate, provides a comprehensive framework for the administration and enforcement of the habitat protection and pollution prevention provisions of the *Fisheries Act* consistent with the goal of sustainable development.

The Habitat Policy has an overall objective to "increase the natural productive capacity of habitat for the nation's fisheries resources" through the Policy's three goals of conservation, restoration, and development of fish habitat.

The Habitat Policy recognizes that habitat objectives must be linked and integrated with fish production objectives and with other sectors of the economy that make legitimate demands on water resources. The Habitat Policy also identifies the need for integrated planning for habitat management as an approach to ensuring the conservation and protection of fish habitat that sustain fish production while providing for other uses.

The objective and goals of the Habitat Policy are expected to be achieved through eight implementation strategies that include Protection and Compliance; Integrated Resource Planning; Scientific Research; Public Consultation; Public Information and Education; Cooperative Action; and Habitat Improvement and Habitat Monitoring.

A key element of the Habitat Policy is the guiding principle of "no net loss of the productive capacity of fish habitat". This principle, which supports the conservation goal, is applied when proposed works and undertakings may result in a harmful alteration, disruption or destruction (HADD) of fish habitat. Before issuing an authorization under subsection 35(2) the *Fisheries Act*, allowing the destruction or harm to fish habitat, DFO applies a "no net loss" guiding principle, so that unavoidable habitat losses as a result of development projects are balanced by an addition of newly-created or restored fish habitat.

If unacceptable losses of fish habitat cannot be prevented, the Habitat Policy requires that an authorization not be issued. Where deleterious substances are introduced into aquatic systems (a section of the *Fisheries Act* under the administration of Environment Canada), resulting in harm to fish or damage to fish habitat, no authorization can be issued; the release of that substance or substances must be stopped immediately.

### **The Federal Contaminated Sites Accelerated Action Plan**

The Federal Contaminated Sites Accelerated Action Plan (FCSAAP), approved by TB Ministers in June 2003, is a comprehensive, 10-year long-term (Expert Support is funded for 5 years from 2003 to 2008) program to reduce human health and ecological risks and federal financial liabilities of high-risk contaminated sites under the custodianship of federal departments. The FCSAAP program provides funds to departments with eligible sites to assess the condition of suspected sites, maintain or clean up these sites. Federal departments with suspected sites must meet a set of eligibility criteria set by Treasury Board and defined under the FCSAAP program.

Departments after conducting human health screening level risk assessments and ecological risk evaluations in consultation with Expert Support Departments, and preparing level 1 ecological risk scores for their highest risk sites, submit proposals and supporting documentation to the FCSAAP Secretariat. Eligible projects are prioritized using a ranking methodology and the selection process established under the FCSAAP program.

Funding is provided based on the eligibility requirements and a shared funding formula.

TBS ensures consistency with TB policies on the management of federal real property, including federal contaminated sites, reviews financial aspects of proposals, assesses department's reallocation capacity, administers the Fund and advises EC on the monitoring of government-wide progress in addressing federal contaminated sites funded under the FCSAAP.

Health Canada, Environment Canada and Fisheries and Oceans Canada provide expert support services and are required to report on these activities annually.

### **Delivery of Expert Support**

As part of its contribution, DFO in the FY 2003-2004, provided support and specialist advice to the FCSAAP Secretariat in managing the program and to custodial departments and to other stakeholders to ensure the reduction or elimination of existing or potential fish and fish habitat impacts from contaminants at priority high-risk federal sites.

In its daily activities, DFO continues to assist and provide information and advice to federal and provincial agencies and the private sector, encouraging adherence to the Habitat Policy and provisions of the *Fisheries Act*. Under the new FCSAAP program, DFO continues to provide the technical, science-based advice, as it always has to its clients. A key change is that the FCSAAP funding now enables the Department to give priority to federal contaminated sites and to engage with other government departments earlier in a consultative partnership before any thought is given to a regulatory or possibly enforcement role. Trained, specialist staff now have a better picture of the risks and complexity presented by federal contaminated sites and can tailor their advice accordingly.

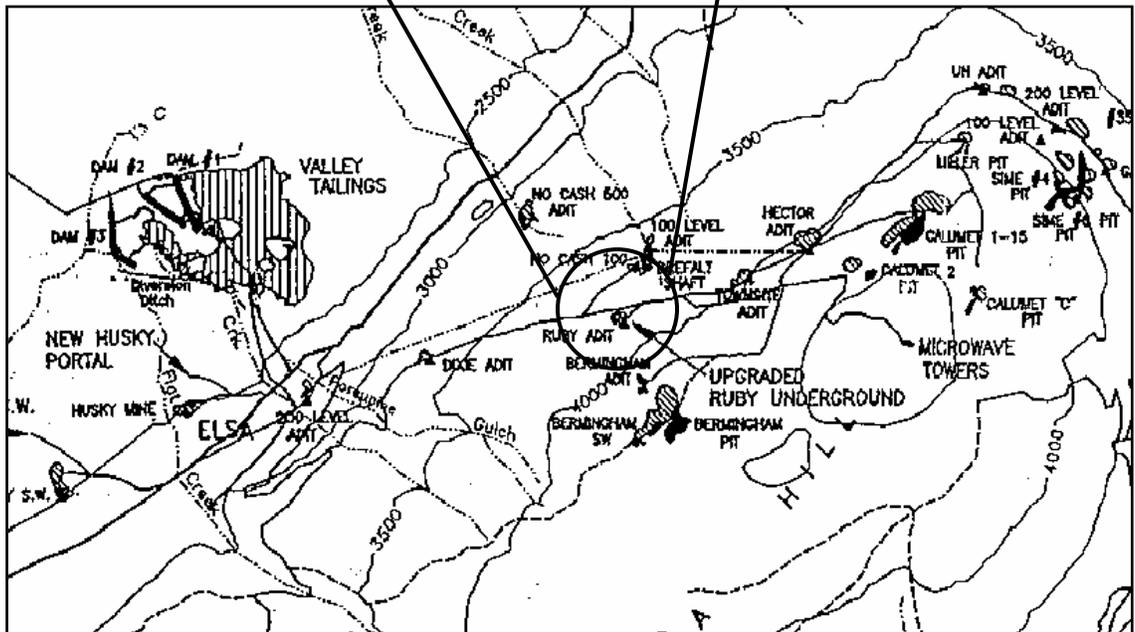
With a national network of specialized staff, located regionally, DFO will have the ability to deliver specialist advice on environmental risk assessments and reclamation activities to custodial departments with greater national consistency. It should be noted however, that although the *Fisheries Act* provides broad powers to enforce the conservation and protect of fish and fish habitat, FCSAAP Expert Support staff do not enforce the *Fisheries Act*, a job left to other sectors of the Department; the DFO specialist's role, however, does involve using a stewardship approach and encouraging regulatory compliance by custodial departments through early consultation with DFO.

The work performed by DFO Expert Support practitioners and program managers is an integrated approach. For practical purposes DFO Expert Support is housed in the Habitat Management Branch, however the advice is drawn from the Department's Science, Fish Management, Finance, Sectors and involves biologists,

engineers, Fishery Officers, and support staff. The approach is truly multi- and inter-disciplinary.



United Keno Hill Mine



### **3. DFO EXPERT SUPPORT ACTIVITIES**

#### **2003-04 DFO FCSAAP Expert Support Activities and Outputs**

In 2003-04, Fisheries and Oceans Canada began implementing its Expert Support function. Despite getting off to a late start due to a delay in the transfer of TB funds, DFO did manage to rollout a basic Expert Support program late in the FY.

Outputs included:

- Development of a draft RMAF (Results based Management Accountability Framework) for DFO's Expert Support function and complementary to the FCSAAP Secretariat's RMAF;
- Establishment of the Expert Support role within DFO's existing Habitat Management Framework;
- Completion of the staffing of three Expert Support positions (Term) for the National Headquarters (NHQ) region;
- Development of an Expert Support Framework document to guide program activities;
- Provision of guidance and guidance materials to newly appointed DFO Expert Support practitioners;
- Provision of training and guidance to staff relative to integrating the Expert Support function with other related DFO functions under other legislated mandates (the *Species at Risk Act*, the *Canadian Environmental Assessment Act* etc.)
- The production of a detailed National Work Plan to prioritize program activities and establish milestones and objectives;
- First steps in establishing a NHQ led DFO Regional Expert Support network tied in to the Interdepartmental Regional Working Groups in each of EC's regions; and,
- Laying the groundwork with HR to establish DFO Expert Support positions and position descriptions.

Key Activities included:

- Supporting the Secretariat in the creation of environmental risk-ranking criteria, communications and other parts of the expert support process;
- Exploring DFO Expert Support RMAF linkages with the Department's Habitat Management program and communications with regions to foster these and implementing the DFO Expert Support program;
- Inputting to Memorandum to Cabinet and Treasury Board submissions to secure current and future funding for DFO Expert Support through 2003-04 and for 2004-05 to 2007-08;
- Contributing to and commenting on the FCSAAP Secretariat's Guidance Handbook and on the drafting of the FCSAAP Site Classification process;
- Completing environmental site investigations on environmental risk assessments, including peer reviews; a review of remediation options and associated costs; field trials of remediation techniques; and a preliminary risk management plan for 27 sites;
- Participating in several training sessions and on Interdepartmental Regional Working Groups (IRWGs) that are coordinated by EC regions across Canada.

## **National Headquarters**

Specific activities included:

- Working with the interdepartmental *Contaminated Sites Management Working Groups* (CSMWG);
- Contributing to the CSMWG FCSAAP subcommittee to establish risk-ranking tools;
- Contributing to EC's Risk-ranking Expert Support Workshop in Montreal; addressing national consistency in developing a priority listing of the "*Highest Risk Federal Contaminated Sites*."
- Providing input and advice crucial to the development of the following key program documents:
  - Scientific methodology to assess and rank federal contaminated sites.
  - Screening-level Ecological Risk Evaluation (ERE) tools needed for risk ranking of sites.
  - FCSAAP program RMAF.
  - Memorandum to Cabinet and two TB submissions.
- Travel to regions (B.C. and Pacific, Central and Arctic) and contaminated site visits - to understand challenges of Expert Support program and to communicate FCSAAP process and its implementation to regional staff.
- Organizing an internal DFO Expert Support network of regional staff tasked to deliver FCSAAP advice.
- Participating on a Technical Review Committee, of experts from EC, HC and DFO in April, 2003 to review project submissions for remediation funding and ranking the sites as high, medium or low priority sites.
- Staffing two positions at the BI-02 and PC-04 levels, respectively; a third position also staffed at NHQ was administered by the Office of Environmental Coordination (OEC) to provide internal Expert Support to DFO's own contaminated sites. Delays in the fall supplementary estimates combined with DFO's inability to cash-manage reduced DFO Expert Support's hiring opportunities to three months until the 2003-2004 FY end.
- Contributing DFO Expert Support at NHQ and in the regions to Secretariat projects managed by outside consultants (i.e. Franz Environmental Inc., Cantox, Stratos and others) to assess existing (CCME) tools and develop new ones for environmental risk evaluation, program management (e.g. RMAF) and the management of program information and communications.
- Attending an October 2004 Health Canada training course on human health risk assessment, which emphasized probabilistic risk analysis methods for contaminated sites in Canada (both NHQ and regional DFO staff attended).

## **Regions**

DFO Expert Support staff provided advisory services across six DFO regions relative to 19\* FCSAAP sites funded under the program in the FY 2003-2004; advice was provided to all custodial departments with federal sites where fish or fish habitat concerns were identified during risk assessments, ranking exercises or by the federal departments, themselves.

Funded sites in 2003-04 were located in only four of the six regions (Newfoundland and Labrador, Québec, Central and Arctic, Pacific and Yukon). In most regions, expert support was also provided for federal contaminated sites that remained unfunded in the program's first year and federal sites that had been an ongoing concern to DFO but were not yet ranked.

In several cases, DFO staff provided Expert Support prior to the FCSAAP initiative, to federal departments and continued to do so whether these were funded or not (see the "Regional" reporting section). The Faro and Giant mines are two examples of contaminated sites which received DFO prior support and will continue to do so within the framework of FCSAAP.

Key regional activities included:

- Participation in IRWGs;
- The review and provision of expert technical and scientific advice on 2004-05 submission;
- Risk-scoring of federal sites;
- Ongoing provision of advice on sites funded in 2003-04 as well as for those sites not funded under FCSAAP including:
  - Peer review of site plans with respect to fish and fish habitat;
  - Review of projects under CEAA; and
  - Promotion of regulatory compliance.

Some specific examples of DFO's regional activities for 2003-04 include:

- The Department of National Defense (DND) is custodian to two FCSAAP-funded projects in Newfoundland. DFO's Newfoundland and Labrador Region provided support to DND for both sites. The Region also provided advice to Transport Canada (TC) and DND on seven contaminated but unfunded (2003-04 FY) federal sites;
- Québec Region offered specialist advice on one DND site. In addition the Region provided Expert Support to seven unfunded sites for which Transport Canada (TC) and DFO are the custodial departments;
- In DFO's Pacific and Yukon Region, the two departments, Indian Affairs and Northern Development (INAC) and EC, are custodians of five funded sites. The Region also provided expert advice on 29 unfunded sites for DND, TC, Parks Canada and DFO.

\* DFO, in reality, advised on 19 eligible sites in FY 2003-04. Initially 18 sites were funded but in mid-year INAC substituted one site for a previously unfunded one, resulting in 19 being reviewed but only 18 reported as funded (see also **Table 1**).

- Specialist advice from Central and Arctic Region was provided on eleven funded sites belonging to INAC, DND, DFO and Health Canada (HC). The region also provided support to these and other departments for sites that were not funded this FY under FCSAAP;
- The Maritimes Region in the FY 2003-04 provided expert support for four ongoing but unfunded federal sites; No funded FCSAAP were located in the region; and
- Likewise Gulf Region had no funded sites present in 2003-04 for which custodial departments could have requested specialist advice.

**Table 1** provides a summary of the total number of federal contaminated sites for which DFO was requested to provide Expert Support in FY 2003-04.

**Table 1 - Federal Sites by Region Receiving DFO Expert Support in 2003-04**

Region	Sites with 2003-04 FCSAAP project funding	Sites Risk-Ranked for Priority List	Other sites with Expert Support Provided	Total Number of Sites
Newfoundland and Labrador	2	8	3	12
Maritimes	0	1	3	4
Gulf	0	0		0
Quebec	1	8		8
Central and Arctic	10	48		48
Pacific and Yukon	5	30		30
<b>Totals</b>	<b>18*</b>	<b>95</b>	<b>6</b>	<b>102</b>

\*DFO, in reality, advised on 19 eligible sites in FY 2003-04. Initially 18 sites were funded but in mid-year, INAC substituted one site for a previously unfunded one, resulting in 19 being reviewed but only 18 reported as funded (see **Figure 1**).

The funded sites noted above, along with 95 additional sites, identified by custodial departments as highest risk, were ranked to create a *Priority List of Highest Risk Federal Contaminated Sites*, based on risk to human health and the environment. Several regions reported delivering expert support for federal contaminated sites beyond those identified for action under the FCSAAP program. Expert Support on 102 federal contaminated sites is explained in the Regional Reports section.

Figure 1- High Priority Federal Contaminated Sites



**FCSAAP Expert Support – Governance and Delivery**

The FCSAAP program is administered jointly by Environment Canada and the Treasury Board Secretariat as the FCSAAP Secretariat. The program’s working level committee, the Contaminated Sites Management Working Group (CSMWG), functions as a forum for interdepartmental discussion and consultation. In the regions, DFO has membership on these committees administered by EC. The top level forum for the FCSAAP program is the ADM (Assistant Deputy Minister) Steering Committee where strategies and options presented by the Secretariat are subject to broad decisions on FCSAAP processes and funding.

Responsibility for the assessment, reclamation and management of the contaminated sites (including related administrative functions) lies with each respective custodial federal department after having its proposals risk evaluated, ranked and considered eligible for program funding. The responsibility of the

Expert Support departments is to provide specialist advisory services within the FCSAAP program primarily to the program Secretariat and to custodial departments. Consultations and co-operation between custodial and Expert Support departments (EC, DFO, HC), regarding the means whereby sites will be managed, can take place directly, on a one on one basis, or through the IRWGs.

For a brief introduction to the IRWG role and contaminated sites under review see:

[http://www.ec.gc.ca/etad/csmwg/pub/taking\\_action/en/c10\\_e.html](http://www.ec.gc.ca/etad/csmwg/pub/taking_action/en/c10_e.html)

Expert Support departments have reporting and accountability obligations under the FCSAAP Secretariat as well as internally to their respective responsible ADMs on the Steering Committee under the FCSAAP program.

At DFO NHQ, the Expert Support role is managed through a Departmental Federal Contaminated Sites Manager in the Habitat Program Services Branch (HPSB). The Manager is accountable to the Director of HPSB who in turn is accountable to the Director General, Habitat Management and ADM Oceans and Habitat Directorate. For FCSAAP purposes the Manager and Director maintain a functional relationship with Habitat Program managers and directors in the six DFO regions through the Senior Habitat Management Committee. DFO Regional Habitat Managers participate on the IRWGs, coordinated by EC for the FCSAAP Secretariat.

### **DFO Roles and Responsibilities**

The objectives and responsible sectors for Expert Support to the FCSAAP program are defined in the 2003-04 RMAF produced by the FCSAAP Program Secretariat. The RMAF connects the activities and outputs of Expert Support Departments to key program objectives; and defines the structure and processes of program delivery and accountability to meet FCSAAP program objectives, DFO Expert Support elected to develop its own RMAF and assigned responsibility for specific activities and outputs to ensure delivery of the Expert Support program.

The responsibility for the delivery of fish habitat programs rests with the Habitat Management Directorate within the Oceans and Habitat Management Sector of the Department. The Habitat Management Directorate at NHQ provides national policy and coordination of regional deliverables and key activities under the Habitat Management program. DFO's Expert Support program is housed within in the Habitat Management Directorate.

**Table 2** lists DFO's Expert Support activities and outputs under the FCSAAP program.

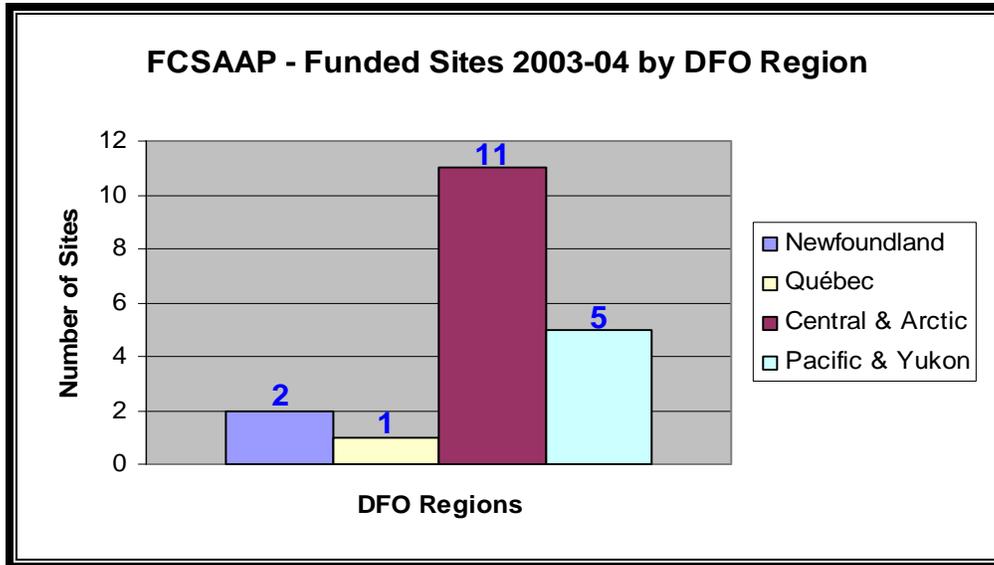
**Table 2 - DFO Expert Support Activities and Outputs under FCSAAP**

<b>DFO EXPERT SUPPORT FCSAAP ACTIVITIES</b>
<b>Scientific and Technical support to Custodial Departments</b>
<ul style="list-style-type: none"> <li>▪ Participate in regional interdepartmental working groups</li> <li>▪ Provision of training in risk assessment and risk communication</li> <li>▪ Provide expert peer review of risk assessments</li> <li>▪ Provide expert advice to departments about best practices and options for risk management/remediation and monitoring of sites</li> <li>▪ Provide advice in public outreach and risk communications</li> <li>▪ Provide specialist advice for environmental screenings and assessments</li> <li>▪ Promote regulatory and policy compliance at sites</li> <li>▪ Liaison between federal departments, provincial and territorial Ministries and aboriginal peoples</li> <li>▪ Review project proposals to provide expert department input as required under CEAA or comparable EA processes in the north</li> </ul> <p style="margin-left: 20px;">Provide custodial departments with advice, as requested in developing terms of reference and reviewing proposals for risk assessments</p>
<b>Scientific and Technical support to the FCSAAP Program</b>
<ul style="list-style-type: none"> <li>▪ Participate in regional interdepartmental working groups</li> <li>▪ Provide Secretariat with expert advice regarding scientifically defensible, nationally-consistent relative ranking system</li> <li>▪ Develop standardized approaches, guidance materials and training in assessing risk to fish, fish habitat and safe waters at federal contaminated sites</li> <li>▪ Provide expert advice regarding screening level risk assessments and risk scoring at high risk sites</li> <li>▪ Promote regulatory and policy compliance at sites</li> <li>▪ Provide advice in public outreach and risk communications for the program</li> <li>▪ Liaison between federal departments, provincial and territorial Ministries and aboriginal peoples</li> <li>▪ Review project proposals to provide expert department input as required under CEAA or comparable EA processes in the north</li> </ul>
<b>DFO EXPERT SUPPORT FCSAAP OUTPUTS</b>
<ul style="list-style-type: none"> <li>▪ Assessment protocols/ranking tools for human health and ecological risk</li> <li>▪ Ecological risk assessment and ranking of federal sites</li> <li>▪ Guidance, training materials, and training workshops</li> <li>▪ Risk communication and public outreach materials</li> <li>▪ Reports on expert review of health and environmental risk assessments</li> <li>▪ Reports on progress of site remediation/risk management</li> <li>▪ Reports on expert review and concurrence with site closure/completion reports</li> </ul>

## Regional Reports

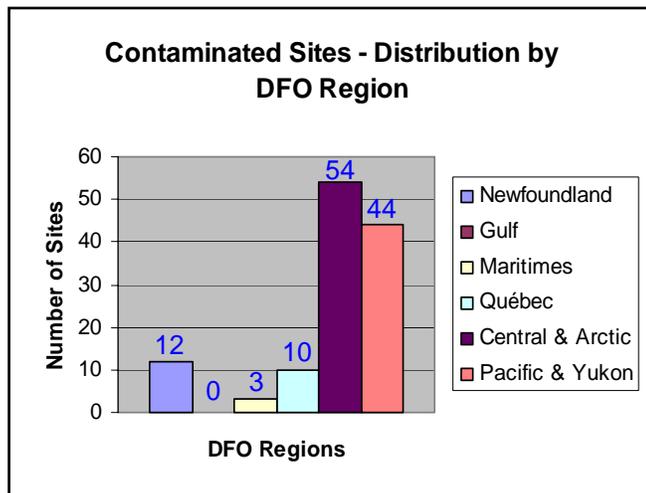
In 2003-04, DFO Expert Support provided advice to custodial departments on the 19 highest risk federal sites (only 18 sites were eventually funded) eligible for remediation or risk management. Figure 2 shows the distribution of these sites across DFO's regions.

**Figure 2 - Regional Distribution of Federal Contaminated Sites funded under FCSAAP in 2003-04**



Expert Support was also provided for the risk scoring of projects submitted for 2004-05 funding through the creation of a *Priority List of Highest Risk Federal Contaminated Sites*. **Figure 3** shows the regional distribution of the 124 federal contaminated sites that were ranked for risks to human health and to the environment. Recommendations to the ADM's Steering Committee for 2004-05 funding allocations were based on this ranking.

**Figure 3 - Regional Distribution of Federal Contaminated Sites submitted for Priority list ranking in 2003-04**



#### 4. REPORTING BY REGION

##### Newfoundland and Labrador Region

**Table 3 - Federal Contaminated Sites in Newfoundland and Labrador Region**

	Department
Saglek	DND
CFS St. John's Southside Tank Farm	DND
<b>Total Sites in NFLD with Project Funding: 2</b>	
<b>Priority List Sites</b>	
Saglek PCB	DND
Newfoundland Dockyard	TC
Remote Radar Site 59 (Gander)	TC
Survival Tank Farm (Goose Bay)	DND
Upper Tank Farm (Goose Bay)	DND
14 Wing Greenwood (NSLZB)	DND
5 Wing Goose Bay	DND
MARLANT Shea Heights/Southside	DND
<b>Total Sites Ranked for Priority List: 8</b>	
<b>Other Federal Contaminated Sites</b>	
Stephenville	TC
Raleigh	DND
Argentia	DND
<b>Other federal sites with Expert Support provided: 3</b>	
	<b>Total Sites: 12</b>

In fiscal year 2003-04, the Newfoundland and Labrador Region provided FCSAAP specialist advice to DND, TC and Public Works and Government Services Canada (PWGSC). The types of contaminated sites that were addressed were mainly those associated with marine dockyards, military installations and bases, and underwater sites.

In Newfoundland and Labrador, the Class 1 federal contaminated sites funded for assessment, remediation or risk management under the FCSAAP program, represent a broad range of contaminants normally associated with docks; aviation; military installations and housing; and submerged military vessels. Contaminants generally included munitions, poly chlorinated biphenyls (PCBs), various heavy metals, polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPH) or a combination of all the foregoing.

Class 2 sites in this region were not funded under FCSAAP in 2003-04, however, expert support was provided for sites receiving FCSAAP risk assessment funds.

These Class 2 sites included coastal installations such as light stations, docks and slipways for which TC and DFO are the custodians.

Newfoundland and Labrador Region also has submerged sites of sunken military vessels such as the *Raleigh*, a World War I naval vessel still containing both contaminants and unexploded ordnance. Although not funded in 2003-04, the *Raleigh* project has received DFO expertise over the past few years. This advice includes guidance on managing underwater explosions and explosives use in order to avoid fish-kills.

Remediation projects at sites not funded under FCSAAP include the former military base at Argentia. The \$81M Argentia Environmental Remediation Project began in the fall of 1996 and includes the removal of 16 underground fuel tanks; remediation of several contaminated ponds; construction of a secure landfill to house hazardous materials and installation of a seawall to address potential leachate concerns. Because of the project's proximity to both freshwater and marine water bodies, DFO has been involved in providing considerable expert advice. This project is in its final stages of completion.

The provision of advice regarding federal remediation projects, along with the site monitoring done by DFO, is an ongoing activity. Although the FCSAAP program is accelerating work on federal sites, the Newfoundland and Labrador Region has been providing ongoing expertise and advice over the last 15 years on many high-risk sites that are now funded or are likely to be funded under the FCSAAP.

**Site- Specific FCSAAP Expert Support Activities 2003-04 in the Newfoundland and Labrador Region:**

- Remediation of DND sites at Canadian Forces bases and in the St. John's harbour;
- The Saglek Remediation Project, begun in 1997, involves 2,500 cubic meters of debris and approximately 20,000 cubic meters of stockpiled PCB-contaminated soil that was barged out of Labrador for decontamination. The environmental risks and reclamation of large amounts of contaminants which had leached into Saglek Bay are now being addressed; and
- CFS St. John's Southside Tank Farm, a DND site.

Risk ranking of 2004-05 sites was completed and included ERE II work for:

- Five DND sites at St. John's, Gander, Saglek and Goose Bay; and
- One TC site at the Newfoundland Dockyard in St. John's harbour.

DND Goose Bay is a major remediation project in its initial stage. The Goose Bay property includes over 26 suspected contaminated sites. Preliminary data suggests that there are between 500,000 to 3,200,000 liters of free-phase hydrocarbons, 200,000 cubic meters of contaminated soil and 1,000,000 liters of hydrocarbon-impacted groundwater. In addition, 2 underground tanks at a former dry cleaning plant contain 20,000 liters of tetrachloroethylene, dichloroethylene, and water contaminated with vinyl chloride. Because of the close proximity of these projects to both fresh and marine waters, DFO has an ongoing involvement in advising on the fish and fish habitat aspects of the clean-up.

## **Maritimes Region**

In fiscal year 2003-04, DND was the only custodial department in the Maritimes requesting specialist advice under the FCSAAP program. Advisory assistance was provided for contaminated sites associated with dockyards, military installations and bases; and some freshwater sites.

**Table 4 - Federal Contaminated Sites in Maritimes Region**

<b>Priority List Sites</b>	<b>Dept</b>	<b># of Sites</b>
14 Wing Greenwood	DND	1
<b>Total sites risk-ranked for Priority List: 1</b>		
<b>Other federal contaminated sites</b>		
Gagetown	DND	1
Cape Breton Highlands NP Marrach Landfill	PCA	1
Sydney tar ponds and former coke ovens	Fed-Prov	1
<b>Other federal sites with Expert Support provided: 3</b>		
<b>Total sites: 4</b>		

In 2003 – 2004, in the Maritimes Region, there were no Class 1 federal contaminated sites funded for assessment, remediation or risk management under the FCSAAP program.

Class 2 sites in this region were not funded under FCSAAP in 2003-04, however, expert support was provided on various occasions. Two Class 2 sites included work at two military bases in Nova Scotia and New Brunswick.

The operation of DND's Greenwood and Gagetown bases over decades, resulted in the accumulation of contaminants which affected local fish habitat; these sites, though unfunded in 2003-04, necessitated DFO specialist advice regarding remediation activities. DFO provided guidance and advice at both sites to prevent further habitat degradation and in support of DND's remediation efforts. In both cases, work was done in an effort to evaluate potential risks and possible approaches to stabilize and plan for successful remediation. DFO's Expert Support role was generally guidance on an applied management approach to prevent habitat degradation and recommendations to DND on fish habitat improvements. The experience and capacity building in this case will serve well for similar sites when FCSAAP funds are made available.

The provision of advice regarding federal remediation projects, along with the site monitoring done by DFO, is an ongoing activity. Although the FCSAAP program is accelerating work on federal sites, it should be noted that the Maritimes region has been providing ongoing expertise and advice over the last 15 years for several federal high risk sites which, it is anticipated, will receive future FCSAAP funding.

### **Other Site-Specific Expert Support Activities 2003-04**

#### **Sydney Tar Ponds**

- Chemical waste products including polychlorinated biphenyls (PCBs) and heavy metals such as lead and arsenic are the result of processing and refining coal, turning it into coke, benzene, kerosene, naphthalene, and other coal-based products; and

- The wastes found their way into a local estuary and creek, which leads to Sydney Harbour. Since 1999, DFO has provided advisory assistance on Sydney's inner harbour and out to South Bar on the effects of metals like cadmium, mercury, copper, lead, silver and zinc and other toxics on marine life and fish habitat. The contaminated area however is not considered a federal site and was not directly funded under the FCSAAP program.

### **Gulf Region**

Not having any FCSAAP funded federal contaminated sites in the region, Gulf Region staff spent the FY 2003-04 learning and getting up to speed with the program. Capacity building in order to be able to deliver specialist advice on future funded FCSAAP projects in the region or elsewhere was the main objective this FY. The Gulf Region also contributed to NHQ efforts to develop a national Expert Support network of DFO specialists.

In November 2003, Gulf Region staff attended a two-day workshop on ERE scoring in Montreal. Regional staff also attended related workshops and presentations coordinated by the EC Atlantic IRWG, throughout the year in order to gain a better appreciation for the extent of contamination of dredged materials in Gulf Region harbours.

In the short term, Gulf Region expects to see several projects submitted by their Small Craft Harbours Division to remediate contamination found at wharfs, in containment cells, and in dredged sediments. Other sites with the potential for FCSAAP funding include DFO light stations and some land-based sites that are the responsibility of other federal departments or agencies. Gulf Region will continue to network with departments and agencies in order to get a clearer picture of the number of federal and other contaminated sites in the region. This will better prepare Gulf Region to assess and score sites with projects submitted for funding in the future.

### **Québec Region**

In 2003-04, the Department of National Defence (DND) and the Department of Fisheries and Oceans (DFO), submitted seven projects with sites located in Quebec to the FCSAAP Secretariat for funding. The project proposals were reviewed and the risks assessments were carried out. Of the projects submitted, only one site, Valcartier, received funding under the program in 2003-2004.

Table 5 - Federal Contaminated Sites in Québec Region

		Department
<b>Sites with FCSAAP Project Funding 2003-04</b>		
Valcartier		DND
<b>Total Sites in Québec with Project Funding: 1</b>		
<b>Priority List Sites</b>		
Valcartier		DND
Cap de la Tête-de-Chien		DFO
Rocher aux Oiseaux		DFO
Cap au Saumon		DFO
Île Brion		DFO
Pointe Heath		DFO
Pointe de l'Ouest		DFO
Nitchequon		TC
<b>Total sites risk-ranked for Priority List: 8</b>		
<b>Total Sites</b>		<b>8</b>

#### Other Site-Specific Expert Support Activities 2003-04

In the 1950s, the Canadian military began extensive use of trichloroethylene (TCE), a toxic solvent used to remove grease, in Valcartier. Following the detection in 1997 of TCE in the groundwater and the drinking water at the Valcartier Garrison, DND conducted several hydro geological studies to identify the source areas of contamination and the extent of the contaminated groundwater plume. For the most part, the contamination plume is moving toward the Jacques Cartier River in the west and the Neelson River in the east. A contamination problem was also discovered in a test area at a residual hazardous materials site. The TCE present in the groundwater is susceptible to transformation to produce degradation by-products. These by-products include vinyl chloride, trans-1,2-dichloroethylene (trans-DCE), and cis-1,2-dichloroethylene (cis-DCE), which have been detected in the groundwater, in some cases at concentrations of several tens of µg/L (vinyl chloride and cis-DCE). TCE is classified as "Probably Carcinogenic to Humans," and vinyl chloride is considered "Carcinogenic to Humans." It is believed that the impact on fish has always been negligible and that, in this respect, section 36 of the *Fisheries Act* has not been contravened.

The other Class 1 sites submitted in 2003-04 were reviewed and risk assessments were conducted. The following sites are the custodial responsibility of DFO QR, and the Department of Transport (TC):

- Cap de la Tête du Chien (DFO) and Cap au Saumon (DFO). These are shoreline sites in the Saguenay-St. Lawrence Marine Park – IUCN Category Ia – Strict Nature Reserve. Both sites are contaminated with heavy metals – lead, mercury, zinc, cadmium, nickel, chromium and

- copper; petroleum products – heating oil, diesel; and PAHs – methyl-naphthalene, benzo(a)pyrene, benzo(b,j,k)fluoranthene;
- Rocher aux Oiseaux (DFO). This site is a migratory bird sanctuary (IUCN Category Ia – Nature Reserve). It is contaminated with heavy metals – lead, mercury, zinc, chromium and copper; petroleum products – heating oil, diesel, and methyl-2-naphthalene;
  - Île Brion (DFO). Île Brion is an ecological reserve (IUCN Category Ia – Strict Nature Reserve). This site is contaminated with lead, mercury, zinc, cadmium, copper, and petroleum products (heating oil and diesel);
  - Pointe Heath (DFO). This site lies within an ecological reserve (IUCN Category Ia – Strict Nature Reserve). Anticosti Island is a wildlife habitat (IUCN Category IV – Habitat/Species Management Area). Contamination is from heavy metals and petroleum products – C<sub>10</sub>-C<sub>50</sub>;
  - Pointe de l'Ouest (DFO). Anticosti Island is a wildlife habitat (IUCN Category IV – Habitat/Species Management Area). Contamination is from heavy metals and petroleum products – C<sub>10</sub>-C<sub>50</sub>; and
  - Nitchequon (DT). Remediation project at the former Nitchequon weather station. The site is classified as Category 3 land under the James Bay and Northern Quebec Agreement (JBNQA). The soil is contaminated with hydrocarbons (C<sub>10</sub>-C<sub>50</sub>), the groundwater is contaminated with metals (Ag, Pb, Cu, Zn), ethylbenzene and xylene, and the surface water is contaminated with Pb, Ni and Ag. This is a Class 1 site.

Scientific-based and technical support was provided to the custodial departments and the FCSAAP program. Regulatory-related advice or advice relating to a field of expertise was provided as required. Quebec Region Expert Support also participated in the activities of the IRWG; provided specialist peer review of risk assessments; advised the Secretariat concerning a nationally consistent and scientifically defensible ranking system; participated in the development of standardized approaches and of various documents; provided advice on risk rating; promoted compliance with policies and regulations; and prepared requested reports.

### **Central and Arctic Region**

Within Central and Arctic Region, there were 10 federal contaminated sites with projects funded under FCSAAP in 2003-04. As part of the risk ranking process, support was provided to the FCSAAP Secretariat in the production of a national *Priority List of Highest-Risk Federal Contaminated Sites*. A total of 48 federal sites were ranked for risk to fish and fish habitat. Sites are listed in **Table 6** and information on 2003-04 activities is presented separately for each of the region's following four geographic areas:

- Eastern Arctic;
- Western Arctic;
- Prairies, and; and
- Ontario - Great Lakes.

**Table 6 - Federal Contaminated Sites in Central & Arctic Region**

	Department	Province
<b>Sites with FCSAAP Project Funding 2003-04</b>		
Goodfish Lake (AB)	INAC (IIAP)	AB
Harvey Barracks	DND	AB
Suffield EPG	DND	AB
FOX-M LRR (DEW line)	DND	NU
PIN-4 (DEW line)	DND	NU
Resolution Island	INAC NAP	NU
Colomac Mine	INAC NAP	NWT
Giant Mine	INAC NAP	NWT
Weagamow Lake	HC	ON
SCH Belleville	DFO	ON
<b>Total Sites in C&amp;A with Project Funding: 10</b>		
<b>Priority List Sites</b>		
Banff National Park	PCA	AB
Harvey Barracks	DND	AB
Goodfish Lake (AB)	INAC (IIAP)	AB
Suffield EPG	DND	AB
Bowden Fuel Depot Site	CSC	AB
Barren Lands (Brochet)	INAC(IIAP)	MB
Barrenlands Former DOT Site	INAC IIABL	MB
Barrenlands/Brochet Frontier School Tankfarm	INAC IIABL	MB
Former Berens River Pumphouse Tankfarm	INAC IIABL	MB
Former God's Lake School Tankfarm	INAC IIABL	MB
Former Northlands School Tankfarm	INAC IIABL	MB
Former Red Sucker Lake School Tankfarm	INAC IIABL	MB
God's Lake Band Tankfarm	INAC IIABL	MB
Mathias Colomb Area 5B	INAC IIABL	MB
Oxford House	INAC (IIAP)	MB
BAR D - Atkinson Point	INAC NAP	NT
Port Radium Mine	INAC NAP	NT
BAF 5 - Resolution Island	INAC NAP	NU
CAM F - Sarcpa Lake	INAC NAP	NU
CAM-1 Jenny Lind Island	DND	NU
CAM-2 Gladman Point	DND	NU
CAM-3 Shepherd Bay	DND	NU
CAM-4 Pelly Bay	DND	NU

	<b>Department</b>	<b>Province</b>
CAM-5 Mackar Inlet	DND	NU
Cape Christian	INAC NAP	NU
Dye-M Cape Dyer	DND	NU
FOX - M Hall Beach	DND	NU
FOX C - Ekalugad Fiord	INAC NAP	NU
FOX-5 Broughton Island	DND	NU
Padloping Island	INAC NAP	NU
PIN B - Clifton Point	INAC NAP	NU
PIN-3 Lady Franklin Point	DND	NU
PIN-4 Byron Bay	DND	NU
Radio Island	INAC NAP	NU
Resolution Island	INAC NAP	NU
Roberts Bay Mine	INAC NAP	NU
Axe Point	INAC NAP	NWT
Discovery Mine	INAC NAP	NWT
Silver Bear Mines	INAC NAP	NWT
Tundra-Taucanis Mine	INAC NAP	NWT
Colomac Mine	INAC NAP	NWT
Giant Mine	INAC NAP	NWT
Belleville Small Craft Harbour	DFO	ON
Kasabonika	HC	ON
Kingfisher Lake Omahama Store	INAC (IIAP)	ON
Lansdowne House	HC	ON
Weagamow Lake	HC	ON
Moose Factory Hospital	HC	ON
Bushell Public Port Facility	TC	SK
<b>Total sites risk-ranked for Priority List: 48</b>		
<b>Total Sites: 48</b>		

**Eastern Arctic Area**

In FY 2003-04, the custodial departments receiving expert support under FCSAAP included DND and INAC. Most of the sites are associated with distant early warning (DEW) line sites and abandoned cold-war military bases.

<b>Federal Contaminated Sites in Eastern Arctic Area</b>		
<b>Sites with FCSAAP funding in 2003-04**</b>	<b>Dept</b>	<b># of sites</b>
Resolution Island	INAC	1
FOX-M LRR (DEW Line)	DND	1
PIN-4 (DEW line)	DND	1
<b>Total sites with project funding: 3</b>		

**2003-04 ANNUAL REPORT  
DFO EXPERT SUPPORT TO FCSAAP**

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In addition to the above noted sites, expert support was also provided on a number of other unfunded DEW line site remediation projects the same year including, CAM-2, Fox-5, CAM-4, DYE-M and Fox-2. The advice provided for these unfunded sites mirrored closely the advice for DEW line sites eligible for FCSAAP funding.

In the start-up year of 2003-04, provision of advice under FCSAAP was limited to custodial departments and other interested parties (such as the Nunavut Impact Review Board and Nunavut Water Board), as well as attendance at meetings related to clean-up activities for FCSAAP sites noted in **Table 6**. No visits to contaminated sites in Central and Arctic Region were undertaken in 2003-04.

**Western Arctic Area**

In fiscal year 2003-04, advice under FCSAAP was provided to INAC for two abandoned gold mines with contaminated sites funding. Advice was also provided for a number of INAC's Northern mine sites (abandoned or in receivership) that were not being funded under FCSAAP in 2003-04.

<b>Federal Contaminated Sites in Central and Arctic - Western Arctic Area</b>		
<b>Sites with FCSAAP funding in 2003-04</b>	<b>Dept</b>	<b># of Sites</b>
Colomac Mine, NWT	INAC	1
Giant Mine, NWT	INAC	1
<b>Total sites with project funding: 2</b>		

In the Western Arctic Area, Class 1 federal contaminated sites demonstrate a broad range of fish habitat degradation and contamination scenarios as would be expected at abandoned mines sites.

No Class 2 sites in this region were funded under FCSAAP in 2003-04, however, expert support was provided for sites receiving FCSAAP funding for site assessments. Risk ranking of sites to be considered for 2004-05 funding and creation of a *Priority List* included ERE II work for six INAC abandoned mine sites: Silver Bear Mines, Tundra-Turcanis Mine, Discovery Mine, Atkinson Point, Axe Point, and Port Radium Mine.

DFO's specialist advisory role on federal remediation projects, along with the site monitoring, is an ongoing activity, started well before the inception of the FCSAAP program in 2003-04 when program funding for their reclamation was made available to federal custodial departments. The expertise and advice provided by DFO at an earlier time for many high risk sites that will shortly become eligible for FCSAAP funding will have served the Department well.

**Site-Specific FCSAAP Expert Support Activities 2003-04 in the Western Arctic:**

INAC site at Giant Mine, NWT: The Giant Mine, located just north of Yellowknife, Northwest Territories, produced gold from 1948 until 1999, and gold ore for offsite processing from 2000 until 2004. Gold in the Giant Mine ore is associated with an arsenic-bearing mineral known as arsenopyrite. The roasting process used to liberate the gold from the arsenopyrite led to production of arsenic-rich gases, which were captured in the form of arsenic trioxide dust. Approximately 237,000 tonnes of the dust is currently stored underground. The dust is approximately 60% soluble arsenic, which is hazardous to both people and the environment. Baker Creek flows through the

mine site in a channel that has been heavily altered to accommodate mining, ore processing, and highway construction, and both its water and sediments are contaminated with arsenic. DFO issued a *Fisheries Act* authorization for the harmful alteration, disruption or destruction of fish habitat, and provided expert advice twice for Giant Mine remediation and risk management works.

**Prairies Area**

In fiscal year 2003-04, advice and support was provided to the Department of DND (DND) and Indian and Northern Affairs (INAC), for two military installations and bases, and a former dry cleaning plant. Contaminants include munitions, PCBs, heavy metals, PAHs or a combination of the foregoing.

<b>Federal Contaminated Sites in Central and Arctic – Prairies Area</b>		
<b>Sites with FCSAAP funding in 2003-04</b>	Dept	# of Sites
Harvey Barracks – Alberta	DND	1
Suffield EPG – Alberta	DND	1
Goodfish Lake – Alberta	INAC	1
<b>Total sites with project funding: 3</b>		

The provision of advice regarding federal remediation projects, along with the site monitoring conducted by DFO in the Prairies Area is an evolving and ongoing activity. Although the FCSAAP program is accelerating work on federal sites, the Prairies Area has over the last 15 years provided ongoing expertise and advice for higher risk federal sites such as the former Saskatchewan uranium mines (confine contaminants) and in Manitoba decommissioning the AECL Whiteshell laboratories (remediate sediments). FCSAAP funding was unavailable to these sites in 2003-04.

**Site-Specific FCSAAP Expert Support Activities 2003-04:**

DND, Harvey Barracks – Alberta: This project is a two stage proposal with expected completion in 2005. Contaminants at Harvey Barracks include instream munitions and affected riparian areas to fish bearing waters; PCB's and heavy metal soil contamination and PAH's in upland areas. DFO, Habitat Management is involved in providing ongoing advice regarding potential impacts to the fisheries resource of affected surface water including recovery of munitions and use of explosives during site remediation for contaminants.

DND, Suffield Environmental Proving Ground (EPG) – Alberta: DFO, Habitat Management will likely have increased involvement in providing expert advice as this remediation project develops due to the proximity of fish habitat in the South Saskatchewan River and potential ground water contamination from residual toxins (mustard, VS, arsenic etc.) from chemical and biological weapons. The assessment, delineation, and remediation of low risk sites are ongoing and the development of field operating procedures for high-risk sites was initiated.

INAC, Goodfish Lake – Alberta: DFO Expert Support reviewed this project but established that there were no potential fish or fish habitat concerns associated with the reclamation of this site.

**2003-04 ANNUAL REPORT  
DFO EXPERT SUPPORT TO FCSAAP**

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In FY 2003-04 DFO, Expert Support specialists, working together with Habitat Management staff engaged in the FCSAAP program exercise of risk-ranking sites for consideration for the 2004-05 FY funding. These included:

- Two ongoing Alberta DND sites - Harvey Barracks and Suffield EPG;
- Several Locations in Banff National Park, Alberta; and
- Two Manitoba INAC sites - First Nations communities at Oxford House and Barren Lands (Brochet).

**Ontario-Great Lakes Area**

In 2003-04, OGLA provided Ecological Risk Evaluation (ERE) II scores to the FCSAAP Secretariat as part of the creation of a *Priority List of Highest Risk Federal Contaminated Sites*. A total of four contaminated sites submitted under the FCSAAP program in Ontario, two of which (Belleville SCH and Weagamow Lake), received FCSAAP funding in 2003-04. These sites represent disparate contaminants associated with harbours and First Nation communities nursing stations. The range of contaminants includes petroleum hydrocarbons, heavy metals and PAHs.

Federal Contaminated Sites Central and Arctic – Ontario-Great Lakes Area		
<b>Sites with FCSAAP funding in 2003-04</b>	Dept	# of Sites
Belleville Small Craft Harbour	DFO	1
Weagamow Lake	HC	1
<b>Total sites with project funding: 2</b>		

During December 2003, OGLA staff participated in the Expert Support Workshop coordinated in Montreal by the FCSAAP Secretariat. In January 2004, OGLA staff attended a workshop on Human Health Risk Assessment convened by HC. OGLA also engaged in discussions regarding the formation of a Regional Interdepartmental Working Group in Ontario, coordinated by EC Expert Support staff.

Beyond the FCSAAP program, OGLA staff continued to participate in the clean-up planning of various federal contaminated sites not identified for current funding under FCSAAP.



*SCH Belleville*

### Pacific and Yukon Region

In the Pacific and Yukon Region, overall regional administration of FCSAAP is provided through regional headquarters (RHQ) in Vancouver, however, technical reviews and expert support on specific projects and to custodial departments is provided through both Whitehorse (Yukon and Transboundary Area sites) and RHQ-Vancouver (BC sites). Accordingly, FCSAAP activities in the two areas are discussed separately, below.

**Table 7 - Federal Contaminated Sites in Pacific & Yukon Region**

	Department	Province
<b>Sites with FCSAAP Funding 2003-04</b>		
BC-1	Environment Canada	BC
Clinton Creek Mine	INAC NAP	YU
Faro Mine	INAC NAP	YU
Mount Nansen Mine	INAC NAP	YU
United Keno Hill Mine	INAC (IIAP)	YU
<b>Total Sites in P&amp;Y with Project Funding: 5</b>		
<b>Priority List Sites</b>		
Cape Beale	DFO	BC
Cape Mudge	DFO	BC
Carmanah Point	DFO	BC

**2003-04 ANNUAL REPORT  
DFO EXPERT SUPPORT TO FC SAAP**

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	Department	Province
Chatham Point	DFO	BC
Chrome Island Range	DFO	BC
Colwood Aggregate	DND	BC
Egg Island	DFO	BC
Entrance Island	DFO	BC
Estevan Point	DFO	BC
Glacier National Park	PCA	BC
Green Island	DFO	BC
Ivory Island	DFO	BC
Langara Island	DFO	BC
Lennard Island	DFO	BC
McInnes Island	DFO	BC
Merry Island	DFO	BC
Nootka Island	DFO	BC
Pachena Point	DFO	BC
Pine Island	DFO	BC
Quatsino (Kains Island)	DFO	BC
Rock Bay	TC Canada	BC
Scarlett Point	DFO	BC
Trial Islands	DFO	BC
Active Pass	DFO	BC
Addenbroke Island	DFO	BC
Ballenas Island	DFO	BC
Boat Bluff	DFO	BC
Bonilla Island Sector	DFO	BC
CFB Esquimalt DY-4 Shops	DND	BC
Pleasant Camp Border Crossing	Canadian Border Services Agency	BC
<b>Total sites risk-ranked for Priority List: 30</b>		
	<b>Total Sites</b>	<b>30</b>

**Yukon and Transboundary Area**

In 2003-04, the types of sites addressed in the Yukon included four high-profile Northern insolvent mine sites with which DFO staff have been involved for a long period of time and were already familiar. At these abandoned mine sites, key concerns around fish and fish habitat include potential scenarios involving the loss of containment of tailings at dams and retention ponds. The resulting contamination of waters downstream could affect fish habitats and the international and local aboriginal, subsistence, commercial and sports fisheries that depend on the fish produced in those waters.

Fish and fish habitat concerns include the risk of short-term release of contaminants due to catastrophic failure of containment structures and the long term release of liquid effluents and seepage from the mine sites. Contaminants associated with these sites include metals and, to a lesser extent, process chemicals and hydrocarbons. It is of prime importance that local and First Nation governments are satisfied that fisheries are not negatively affected by remediation or risk-management measures taken at the contaminated site.

Experience with the Yukon Land Claims Umbrella Final Agreement and Northern governance devolution is key to the effectiveness of FCSAAP Expert Support staff in the Yukon because these instruments and agreements define the administrative environment for the territory.

Longstanding working relationships with DFO's counterparts at EC and colleagues at INAC, positioned DFO to deliver the FCSAAP program and provide ongoing advice on funded and emerging high-risk sites or areas of concern. This existing capacity proved to be an asset when rolling out the Expert Support program in 2003-04 and is the foundation for the working relationships within the Interdepartmental Regional Working Group.

In 2003-04, work included the completion of ERE II scoring for 30 projects submitted for 2004-05 project funding.

### **BC Area**

In the fiscal year 2003-04 DFO provided expert support and advice to custodial Departments with high risk federal contaminated sites, including PCA, DND, TC, INAC, EC and DFO. In addition to federal sites submitted for FCSAAP funding, DFO Pacific Region was involved in reviewing a number of federal contaminated sites not funded under the program, including an authorization for TC to relocate a stream as part of removing contaminated soils at the Tofino Airport (TC); the Black Bridge (INAC), Airport Creek (TC, DND) and Seal Cove (DFO).

The risk-ranking of sites to be considered for 2004-05 funding was completed by DFO staff and include ERE II scoring. As part of this peer review process, DFO met with custodial departments or their consultants. Sites evaluated for ecological risk included: Rock Bay (TC), Colwood Aggregates (DND), BC-01 (EC), Victoria Coast Guard Base (DFO-CCG); Glacier National Park Maintenance Compound (PCA). In addition, in conjunction with EC, DFO Pacific Region co-funded a contractor to complete the ERE II scoring for risks to fish and fish habitat at 32 manned West Coast light stations. In specific cases, DFO was involved in reviewing certain light stations, for example Pt. Atkinson, in more depth than others.

During FY 2003-04, Pacific and Yukon Region were active in the development of the FCSAAP Regional Inter-departmental Working Group (RIWG) chaired regionally by EC Expert Support. The Region participated fully in meetings, outlining DFO's expert support role and the expertise available to custodial Departments, in the design and implementation of their site remediation and risk assessment strategies.

The provision of specialist advice regarding both federal and non-federal contaminated site remediation is an ongoing activity, which predates the FCSAAP

program. Traditionally, the Habitat and Enhancement Branch in Pacific and Yukon Region has worked closely with EC to promote a coordinated federal approach to remediation at sites with potential impacts to fish and fish habitat. Over the last 15 years, workload associated with assessment and remediation of contaminated sites has steadily increased in Pacific Region. In many cases, the Region has already had significant ongoing involvement with federal contaminated sites that were not funded initially under FCSAAP in 2003-04, such as the Esquimalt Harbour projects. At Esquimalt for example, site remediation was advanced by a *Fisheries Act* authorization to relocate a fueling jetty at the (CFB) Colwood site.

Both Victoria Harbour, managed by TC, and Esquimalt Harbour, managed by DND and PWGSC, are complex remediation challenges because they involve multiple properties and sites, and a variety of contaminants such as PCBs; metals, copper, zinc, tributyl tin; PAHs and various petroleum hydrocarbons. The sources of contamination at these sites are also diverse, involving military operations (fuel handling, metal plating); municipal storm water discharges, gasification plants, municipal and industrial landfills. For example, the Rock Bay area in Victoria's Upper Harbour has historically been the site of commercial and industrial development, including coal gasification, tanning, saw mill operations, dumping and infilling. These operations resulted in contamination of soils and groundwater around Rock Bay, as well as sediment within the bay itself. The principal components of concern at the site include ammonia, cyanide, hydrocarbon fuels (e.g. mineral oil and grease, light and heavy extractable petroleum hydrocarbons), heavy metals, sulphate, polycyclic aromatic hydrocarbons (PAHs) and PCBs. DFO, together with EC and the province of British Columbia have been involved in the Rock Bay site since the mid-1990's. Recent remediation activities include the removal and disposal of contaminated upland soils, and of coal tar impacted sediments at the head of the Bay. Following a review of a proposal to alter fish habitat, in April 2004, DFO granted a *Fisheries Act* authorization to TC Canada and BC Hydro and Power Authority to permit the harmful alteration, disruption and destruction of fish habitat related to remediation of inter-tidal and shallow sub-tidal substrates within Rock Bay. Further assessment and provision of expert advice by DFO will continue at this and other federal sites within both Victoria and Esquimalt harbours.



*Mount Nansen – Grum, Vangorda pits*

## 5. FINANCIAL REPORT

**Table 8** provides a financial summary for fiscal year 2003-04. In this year, DFO received \$1.322M in funding for 8 FTEs and program roll-out.

**Table 8 - Planned vs. Actual 2003-04 Expenditures**

	Planned	Actual
<b>Salaries</b>	560,000	271,016
<b>EBP</b>	112,000	54,203
<b>O&amp;M</b>	577,200	279,891
<b>DFO Sub-Total</b>	1,249,200	605,110
<b>PWGSC Accommodation</b>	72,800	72,800
<b>EBP Adjustment</b>		57,797
<b>End of Year Lapse<sup>1</sup></b>		36,504
<b>In-Program reallocation<sup>2</sup></b>		<b>549,789</b>
<b>Expert Support Total</b>	<b>1,322,000</b>	<b>1,322,000</b>

Notes

<sup>1</sup> End of year lapse due to funds being provided late in the fiscal year

<sup>2</sup> Funds reallocated within the FCSAAP program by ADM Steering Committee Dec. 18th 2003 - Reallocated funds were sent to DND and EC through Supps B

### Surplus Funds Reallocated

At the end of the first year of the program, \$549,789 in DFO Expert Support funds were internally reallocated within the FCSAAP program. Using the Supplementary Estimates B, these unused funds were transferred to the DND and to EC for remediation work at the Harvey Barracks and at the BC#1 sites. As a result, the Harvey Barracks was remediated in 2003-04, and stayed on schedule according to DND's internal priorities. Work at the BC#1 site was advanced as well.

**Human Resources Summary for 2003-04**

The allocation of person year resources is shown in **Table 9**.

**Table 9 - FCSAAP DFO Person-Year Allocations, 2003-04**

<b>FTEs</b>	<b>HQ</b>	<b>REGIONS</b>	<b>Totals</b>
Funded	2	6	8
Staffed	1	1.2	2.2

In 2003-04, Fisheries and Oceans Canada began implementing its Expert Support function. However the transfer of TB funds to DFO occurred very late in the FY resulting in a late start to bring staffing to capacity. Northern more remote locations proved difficult to staff on the short-term as well as finding qualified specialists on short notice. Hence actual staffing for the 2003-04 FY was curtailed by these factors as reflected in the low number of positions actually staffed.

**6. NEXT STEPS FOR FY 2004-05**

The preceding review of progress during the 2003-04 has provided a realistic assessment of the initial year of DFO expert support to the FCSAAP. Based on this review, the following priorities have been identified with the objective of strengthening the program during 2004-05:

- Prepare Guidance Material for the integration of Fisheries considerations into the assessment and maintenance and remediation of contaminated sites;
- Develop Results-based Management and Accountability Framework (RMAF) for DFO's contaminated sites expert support program;
- Establish a DFO National Federal Contaminated Sites Management Committee.
- Deliver a DFO National Federal Contaminated Sites Workshop;
- Develop a Multi-Year Work Plan for DFO Federal Contaminated Sites (2005-2008); and
- Provide staffing opportunities and appropriate training.



*Faro Mine*

## 7. CONCLUSIONS

DFO has been involved in providing expert support and specialist advice to federal departments related to contaminated sites for many years before the inception of the FCSAAP program. However the establishment of this long-term program has provided a better framework for coordinating these efforts, and will provide a more secure and stable source of funding over a longer period of time. As a result, the department is able to:

- Support the development of tools for the relative risk ranking of sites in a nationally consistent manner;
- Assist in the development of a priority list of highest risk federal contaminated sites; and,
- Promote the consideration of fish and fish habitat in the ranking tools for identification of highest risk sites for funding.

While many of the expert support activities were carried out prior to FCSAAP, they were delivered in an ad hoc manner. With the provision of adequate resources for the expert support function and coordination of expert support activities across the country, the department has been able to provide a more nationally consistent approach in addressing the fish and fish habitat concerns associated with many of Canada's high risk federal contaminated sites.

By the end of FY 2003-04, DFO's regional Expert Support network was in place; they had a better understanding of the FCSAAP program and related reporting requirements and are well on the way to developing an interdepartmental network of contaminated sites experts. Benefits are already evident in terms of a positive public reaction to an anticipated reduction in the liability of federal contaminated sites in Canada and a choice for healthier aquatic ecosystems.

