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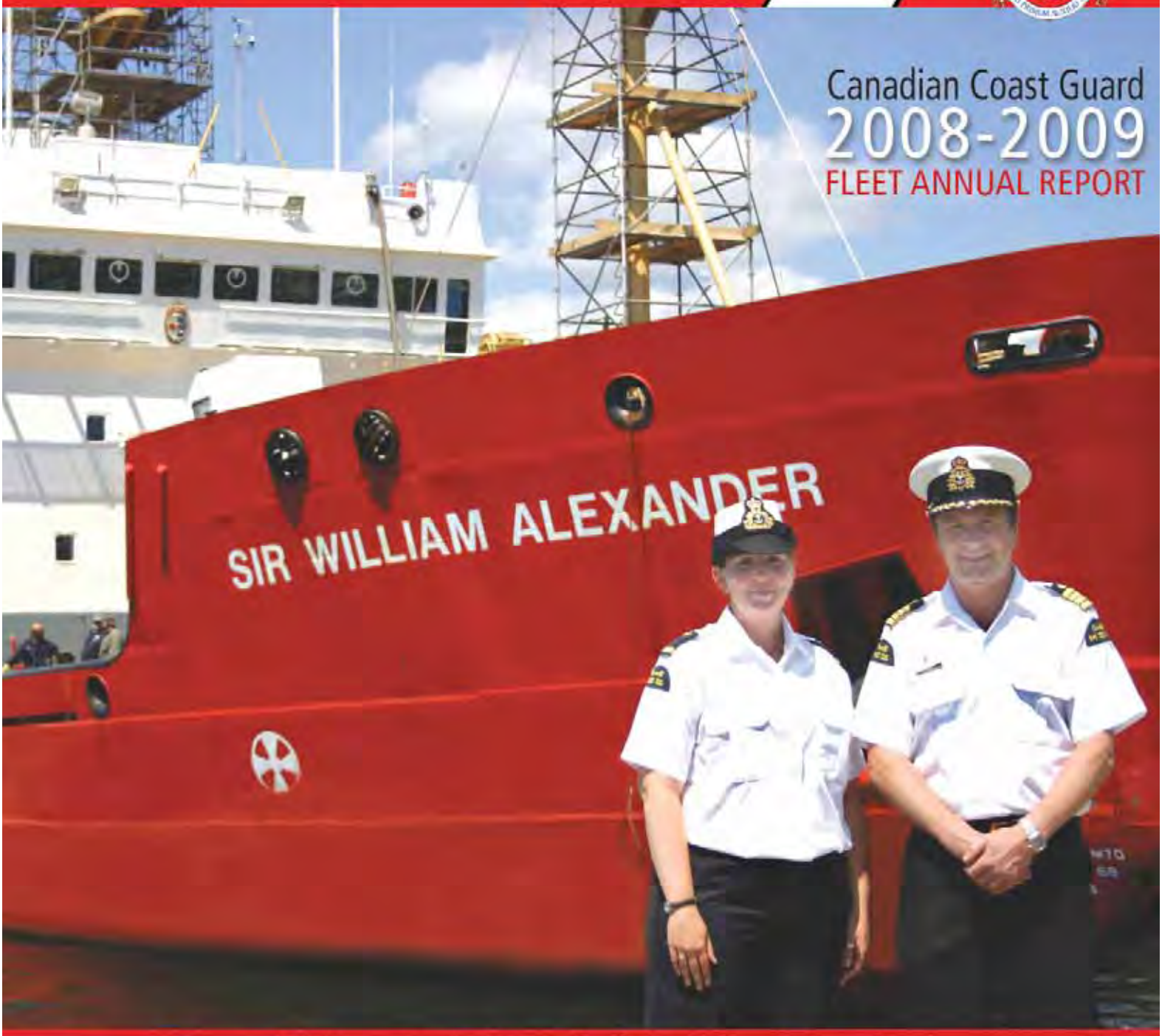
Canadian Coast Guard
Garde côtière canadienne

Canadian Coast Guard 2008-2009 FLEET ANNUAL REPORT



Saluti Primum, Auxilio Semper
Safety First, Service Always

Canada

On the cover: Captain Rob Gray and Megan Carter aboard the *CCGS Sir William Alexander*

Captain Rob Gray went to sea at the age of 17. He joined the Canadian Coast Guard in Maritimes Region as a deckhand on the old *Sir William Alexander* in 1979. He has risen through the ranks and has spent most of the past 10 years serving as Commanding Officer on high endurance multi-tasked vessels. During his time as Commanding Officer, he has sailed from the Arctic to the Gulf of Mexico. He has served in a variety of important shore-based capacities, such as the coordinator of the *CCGS Louis St-Laurent* and *CCGS Terry Fox* transition, and is currently the acting Marine Superintendent in Maritimes Region.

Megan Carter joined the Canadian Coast Guard as an officer-cadet in 2001. She graduated in 2005 and has served most of her time aboard vessels whose primary mission is Science such as the *CCGS Hudson* and *CCGS Matthew*. She also served as Chief Officer aboard the *CCGS Hudson* in 2007. In 2008, she sailed aboard the *CCGS Hudson* during its voyage of discovery in the Bay of Fundy. Using a robotic submarine, this mission collected data on new marine species that will keep the scientific community busy for years. Megan is currently working towards her Canadian Coast Guard Command Certification.

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CCGS Pierre Radisson, Medium Icebreaker, with the *HMCS Toronto* during Operation Nanook 2008, Iqaluit, Nunavut

Photo: Cpl David Cribb, DND Combat Camera

MESSAGE FROM THE DIRECTOR GENERAL, FLEET, CANADIAN COAST GUARD

I am once again very proud to present the Fleet Annual Report for the Canadian Coast Guard (CCG). This report, covering the period from April 1, 2008, to March 31, 2009, is our third opportunity to explain to Canadians, clients, employees and interested parties the role, services and capabilities of the CCG Fleet. In so doing, the report attempts to demonstrate value for money but does not hesitate to address shortcomings, gaps and risks with a view to improving our services and capabilities. Additional information regarding the CCG Business Plan and CCG Strategic Human Resource Plan is available at http://www.ccg-gcc.gc.ca/eng/CCG/Home.

This year's report focuses on change and transition. The past year was a very dynamic and exciting time for the CCG and the Fleet in particular as we continue to make gains on a variety of Fleet renewal, human resources, and management fronts.

Notably, progress is being made on vessel construction with the first of many new units, the *CCG Mamilossa*, a state-of-the-art large air-cushion vehicle (ACV) being delivered to Quebec Region. Substantive progress continues to be made on the replacement of those vessels already funded for replacement in previous federal budgets. In addition, through the Economic Action Plan Federal Budget, CCG has received an additional $175 million over the next two years for vessel life extensions (VLEs), refits, and increased maintenance as well as for the construction of five search and rescue (SAR) lifeboats, three near-shore science vessels, and a large number of small craft. CCG is also self-funding a number of smaller vessels, which are nearing delivery.

Gary B. Sidock
Director General, Fleet
Canadian Coast Guard

In terms of our overall financial situation, Fleet funding continues to be stabilized by the implementation of the Fleet Operational Readiness program and the finalization of service level agreements (SLAs) with the Fisheries and Aquaculture Management (FAM) and Science sectors of the Department of Fisheries and Oceans (DFO). These pilot agreements mean that funding for Fleet services provided to Science and FAM (on the order of $60 million/year) now forms part of the regular Fleet operational funding, in exchange for a clearer and more accountable service delivery framework with these clients. CCG was also successful in obtaining, on a one-time basis, an additional $20 million to

offset high fuel prices in support of continued operational delivery (CCG continues to work with the Department of Finance and Treasury Board on a longer-term solution). These initiatives, coupled with enhanced funding for VLEs, refits, and maintenance, have allowed CCG to stabilize Fleet and other operations, as well as improve planning and service, as we prepare for the arrival of the new builds.

During the past year, CCG has also focused in a serious and structured way on a number of human resources challenges. In the case of Fleet, many employees will retire over the next few years, while at the same time more marine personnel will be needed to sail aboard our newly built vessels. This challenge, combined with an estimated international shortfall of up to 30,000 mariners worldwide, means that we will need to focus on a number of human resources initiatives to attract and retain marine professionals. Such initiatives include finalizing the CCG College Transformational Plan and increasing intake to 64 officer cadets per year beginning in September 2010; creating the Ships' Crew Certification Program; enhancing arrangements with provincial nautical schools; and concluding an essential service agreement with the Union of Canadian Transport Employees. CCG has also targeted recruitment as a priority and, in addition to the creation of the CCG National Labour Force Renewal Group, is creating the Seagoing Personnel Recruitment Program as part of a broader CCG recruitment program.

Why change?

So, why is change necessary? Simply put, change is necessary to survive in a complex environment where risks abound and change constantly. As Canada's civilian fleet, we are a critical part of Canada's marine insurance policy. We are an essential component of on-water service delivery and ensure a viable, flexible and responsive marine capability should situations arise. If we are forward-looking and adaptive, we will not only survive but thrive in this environment.

As mentioned earlier, the focus of this year's report is on change and transition. We cannot really discuss change without a full understanding of our current operating environment and of all the risks inherent in the environment in which we live and work every day. To this end, I would like to break the discussion of change and risk into three parts: strategic and management; operational; and personal.

Strategic and Management Change

Approach: Aggressive

Just a few years ago, CCG faced an aging fleet and was constantly strapped for cash because it was funded through various program streams and mechanisms. Maintenance planning was delinked from operational planning without a viable fleet renewal or long-term capital plan, and management systems and processes were primarily focused on internal rather than external and client requirements.

Spearheaded by the arrival of a new Commissioner and senior management team, coupled with the certitude of an increasingly unreliable asset base, CCG embraced the Auditor General's and CCG A-Base reports and embarked on an aggressive campaign of change management at the strategic and management levels. In a few short years, CCG developed a comprehensive fleet renewal plan (which needs to be revised this year to make it more responsive to the evolving needs and expectations of Canadians); received $1.5 billion for the construction of the first

wave of new vessels; received significant operating funding to stabilize operations and maintenance; revised, updated, fine-tuned or simply discarded a large number of Fleet management systems and processes; and, through SLAs with clients, put in place an entirely new way of conducting business and funding Fleet-delivered programs external to CCG.

CCG decided, quite intentionally, to approach these challenges in a very aggressive manner. Given the age and reliability of the Fleet, coupled with insufficient and uncertain funding and outdated approaches, the risk of not being aggressive was simply too great.

Just to be clear, many challenges remain for the Fleet. It continues to age, although we have stabilized Fleet funding and reliability while making significant progress on the construction of the first wave of new vessels. In terms of our Fleet management and planning systems and practices, it could be argued that CCG now enjoys a leadership position in many of these areas. CCG, and the Fleet in particular, is also extremely well positioned to receive additional external support in the coming years.

Again, in my view, not to have taken this aggressive approach would have been the riskiest thing to do and would have led to the continued decline of the Fleet with a commensurate reduction in service to Canadians.

Operational Change

Approach: Risk Control and Mitigation

The CCG Fleet operates in an intensely risk-based environment 24 hours a day, 7 days a week, 365 days a year. Beginning 10 years ago, CCG began the development of the Fleet's Safety and Security Management System (SSMS). To our knowledge, CCG is the only government fleet of its kind in the world operating to the standards of both the *International Management Code for the Safe Operation of Ships and for Pollution Prevention* (ISM Code) and the *International Ship and Port Facility Security Code* (ISPS Code) standards. Additionally, in response to incidents, changing requirements and technologies, and an operational culture of self-evaluation and improvement, CCG continues to implement a wide variety of initiatives designed to help "Coasties" (as we CCG members call ourselves) manage and mitigate the risks that we face every day so as to protect ourselves and others as well as serve Canadians better.

Some examples of these initiatives include: arguably some of the best rigid hull inflatable operator training anywhere; enhanced training and procedures as well as the best equipment available to support our evolving role in armed maritime security and DFO Conservation and Protection (C&P) Branch enforcement operations; significant enhancements to aviation safety; the development of a mission readiness (and supporting decision-making and reporting) structure; program enhancements to rescue diving, secure communications, e-mail at sea, flight following and vessel tracking; the development of leading-edge respiratory protection and hearing conservation programs; and the continuous development of a wide variety of risk control and mitigation protocols, practices and procedures as well as the continued acquisition of the best personal protective equipment available.

In the context of change and risk, not to have implemented and not to continue to develop these risk control measures, sometimes at the cost of great expense and time, would have led to much greater risks for Coasties and to reduced service for Canadians.

Personal Change

Approach: Self-Determined but Aligned with Organizational Needs

This component of the discussion is clearly focused on Coasties. By personal change, I am referring to the individual and personal aspects of the working life of Fleet employees, both seagoing and ashore. As previously noted, a growing Fleet coupled with an aging demographic profile, means that CCG needs to fully embrace employee renewal in a more structured and systemic way. This report speaks to those initiatives that are already underway as well as those just being developed. But in addition to these requirements, CCG will need to ensure that its substantive knowledge and experience base is transferred to the new generation of Coasties.

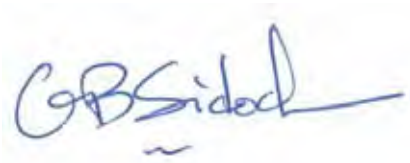
For Coasties nearing the end of their working careers this aspect of change could mean a number of things, including: accepting any of the large number of shore-based assignments currently available; taking on the responsibility of being a mentor; leading or supporting training enhancements, engaging in national or regional project management; leading change and system improvement on board their vessel or in their work unit; or becoming involved in any number of other activities.

For Coasties at the beginning of their careers, I strongly encourage you to attain the highest level of marine or professional certification available; to accept stretch assignments; to take any and all training available; to become a protégé; to ensure that your career includes a blend of both seagoing and shore-based assignments; and to engage in any other number of activities that will put more tools as well as enhanced skills and abilities in your personal toolbox, allowing you to become a better Coastie and leader.

Above all, please remember that every Coastie is a recruiter.

I hope that you will find this third edition of the Fleet Annual Report an informative summary of our activities during this past year.

Sincerely,



Gary B. Sidock
Director General, Fleet
Canadian Coast Guard

CCG Helicopter MBB-105 and an Air Cushion Vehicle.

Photo: P. Dionne, DFO

1 SERVING CANADIANS

Whether it is to support Canada's vital commercial fishing industry, maritime transportation and shipping, tourism, or the country's millions of recreational boaters, CCG is always there and ready to serve. Its distinctive ships, hovercraft, helicopters, and small vessels are strategically positioned across our vast coastal nation, providing services to all Canadians. The professional and dedicated women and men of the Coast Guard are the stewards of Canada's strong maritime tradition and support all federal government maritime priorities. CCG professionals work tirelessly in all conditions, providing a strong federal presence to protect our citizens, our waters, and the natural resources of our marine environment.

CCG's fleet of vessels and helicopters, managed and operated by Fleet Headquarters and Regional Fleet Directorates across Canada, is playing an evolving role in the world's longest coastline, largest freshwater system, and longest inland waterway, including Canada's 3.7-million-km2 exclusive economic zone. The Fleet has the Government of Canada's only ice-capable vessels that can navigate the treacherous ice in the waters of the Arctic, the Newfoundland coasts, the Gulf of St. Lawrence, and the Great Lakes. Our uniformed officers and crew provide Canadians with an immediate sense of security when they arrive on the scene, whether in the course of their regular duties or during an emergency.

CCGS Cap Tourmente, SAR Lifeboat
Photo: P. Dionne, DFO

On any given day, CCG:

- Saves eight lives;
- Assists 55 people in 19 search and rescue (SAR) cases;
- Handles 1,547 marine radio contacts;
- Manages 2,325 commercial ship movements;
- Services 60 aids to navigation;
- Surveys five km of navigation channel bottom;
- Deals with three reported pollution events;
- Escorts four commercial ships through ice;
- Carries out 12 fisheries patrols;
- Supports eight scientific missions; and
- Supports three hydrographic missions.

The Coast Guard's mandate is derived from the *Constitution Act of 1867*, which gives the federal government exclusive authority over navigation, shipping, beacons, buoys, lighthouses, and Sable Island. Although CCG has existed in some form for many decades, the *Oceans Act, 1996* and the *Canada Shipping Act, 2001* confirm its specific mandate. The *Canada Shipping Act* confers on the Minister of Fisheries and Oceans responsibilities, powers, and obligations with respect to aids to navigation, Sable Island, SAR, environmental response (ER), and vessel traffic services. The *Oceans Act* confers on the Minister of Fisheries and Oceans responsibility for services for the safe, economical, and efficient movement of ships in Canadian waters, through the provision of aids to navigation, marine communications and traffic management services, icebreaking and ice management services, and channel maintenance. It also gives the Minister responsibility for SAR, ER, and support of other government departments (OGD), boards, and agencies through the provision of ships, helicopters, and other services.

Set Sail with the Canadian Coast Guard

To mark the 400th-anniversary celebrations in Quebec City, the Department of Fisheries and Oceans (DFO) presented an exhibit on the CCG highlighting its contribution to the provincial capital's history and development. Between June 21 and September 1, 2008, the *Passages* exhibit drew more than 4,000 visitors to the Coast Guard's base at Quebec City. Through artifacts, photographs, and texts, visitors learned of CCG's contribution to the city's growth and the development of navigation along the St. Lawrence River. Theme rooms and an interpretive program also described CCG's current-day activities.

Passages Exhibit
Photo: J. Beardsell, DFO

Nearly a hundred visitors attended a series of free lectures to find out more about CCG. Enthusiastic experts spoke on topics such as life on board a ship, Arctic research, the secrets of the St. Lawrence, ER, electronic navigation, marine traffic management, and SAR.

Without a doubt, Quebec City's 400th anniversary was an excellent opportunity to highlight the Coast Guard's historical significance and promote its career opportunities.

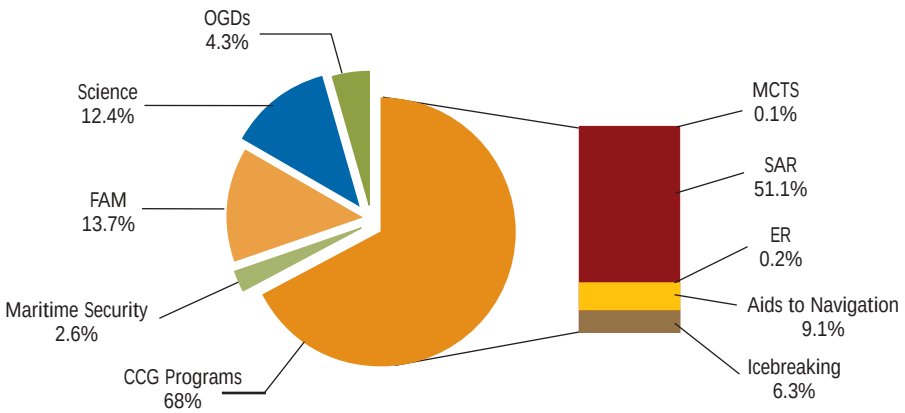
1.1 Our Clients

As owner and operator of the Government of Canada's civilian fleet, the Coast Guard serves clients in all sectors of the Canadian economy: the general public, commercial carriers and shippers, ferry operators, fishers, recreational boaters, coastal communities, and other government departments and agencies. As CCG's on-water delivery agent, the Fleet provides vessels and maritime professionals to:

- Deliver on-water CCG services related to SAR, maritime security, ER, icebreaking, flood control, aids to navigation, and marine communications and traffic services;
- Respond to federal maritime priorities and natural or man-made emergencies as a key player in various activities mandated under the Federal Emergency Response Plan;
- Participate in national and international planning and exercises related to ER and SAR;
- Support DFO science activities and the conservation and protection of fishery resources;
- Support the on-water needs of OGDs such as Natural Resources Canada and Environment Canada; and
- Support the non-military activities of the Department of National Defence (DND), Canadian Border Services Agency, Public Safety and Emergency Preparedness Canada, the Royal Canadian Mounted Police (RCMP), and Transport Canada (TC).

Graph 1 outlines the distribution of Fleet clients in 2008–2009. It shows that 68% of our services are dedicated to CCG programs, the largest being SAR services. Other programs in this category include Marine Communications and Traffic Services (MCTS), ER, Aids to Navigation, and Icebreaking. The other 32% of our services are dedicated to Fisheries and Aquaculture Management (FAM), Science, OGDs, and Maritime Security.

Graph 1: Distribution of Fleet Clients, 2008-2009 (% of Total Operational Days)



Transforming a Relationship: Implementing Service Level Agreements

The Fleet manages its client relationships using interdepartmental memoranda of understanding or internal service level agreements (SLA). This year, the Fleet focused on finalizing SLAs with DFO's Science and FAM sectors, allowing for a renewed and sound approach to our business relationships. These agreements better outline our service commitments to our clients and provide a common understanding of responsibilities, funding, governance and accountability, services, priorities, risks, and performance measures.

2008–2009 Results

- Signed two SLAs with the Fleet's core clients, DFO Science and FAM, in April 2009
- Stabilized $60 million in funding per year for Fleet services

These SLAs, in effect until March 2012, are the cornerstone of the Fleet's Operational Readiness Business Model. Operational readiness ensures that CCG has the resources, decision-making support, and capacity to meet the on-water and marine-related needs of its clients both now and in the future.

Hosting the World: Vancouver 2010 Winter Games

Canada is preparing to host the world in Vancouver, BC, during the 2010 Olympic and Paralympic Winter Games in February and March of 2010. Because the 2010 Winter Games involve venues and celebration sites along Vancouver's waterfront, the Coast Guard, under the RCMP's leadership, is involved in collaborative planning with OGDs to ensure the safety and security of those who will attend this global event.

Contingency planning began in 2007 to ensure that CCG can adapt to changing conditions prior to and during the Vancouver 2010 Olympic and Paralympic Winter Games. The Olympic Marine Operations Centre has been created in Pacific Region to coordinate efforts. At Headquarters, CCG and DFO have also created Fisheries and Oceans' Coordinated Olympic Support Centre (FOCOS). The FOCOS will be the prime point of contact with the Government Operations Centre for Olympic issues related to the DFO. It will provide daily briefings on Olympic-related operations and will be a conduit for information and decision support.

In the spring of 2008, CCG participated in Exercise Silver, which tested various response scenarios should a natural disaster or security event occur during the 2010 Winter Games. We will also participate in Exercise Gold, which will be held in the fall of 2009 and will combine best practices and lessons learned from previous exercises to confirm response plans, thereby contributing to the Government's overall readiness to provide a safe and secure environment for this important event.

vancouver 2010 vancouver 2010 PARALYMPIC GAMES JEUX PARALYMPIQUES CANADA Host Country Pays hôte

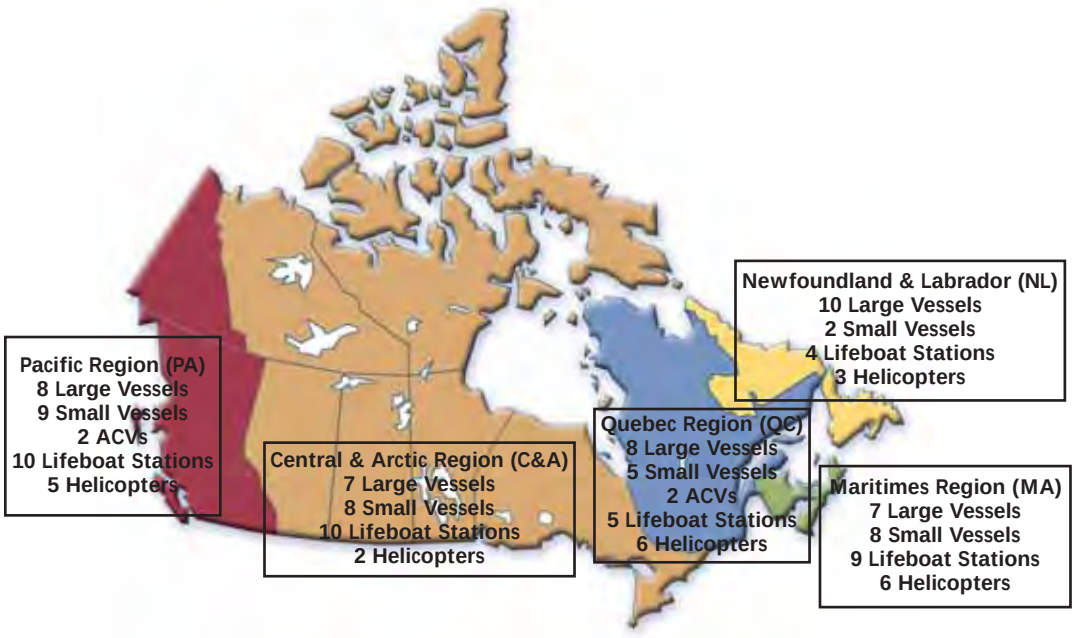
1.2 Our Operations

As Canada's only federal civilian fleet, the Coast Guard must always be ready to undertake marine missions in the service of the people and Government of Canada, often in some of the most hostile weather conditions on the planet. Over the course of a year, the personnel can face many challenges including:

- Air temperatures ranging from –40°C to +40°C;
- Water temperatures ranging from –2°C to +30°C;
- A wide variety of ice conditions;;
- Gale- or hurricane-force winds;
- Waves that can exceed 20 m in height; and
- Operations in remote locations and uncharted areas.

The Fleet fulfills its diverse responsibilities by being versatile, proactive, and highly adaptable. It operates out of five regions, with each Regional Operations Centre (ROC) tasking and deploying vessels according to the Fleet Operations Plan so as to fulfill our service commitments and mandated obligations. The Coast Guard National Coordination Centre (NCC) at Headquarters in Ottawa not only facilitates national coordination but also provides a mechanism for an integrated national response when needed. Graph 2 shows the distribution of vessels by region in 2008–2009.

Graph 2: Distribution of Vessels by Region, 2008–2009



Ice Accumulation on the *CCGS George R. Pearkes* - High-endurance Multi-tasked Vessel/Light Icebreaker
Photo: Captain Banton, NL Region

From Operational Transformation to Mission Readiness

Canadians expect the federal government to respond quickly and effectively in the event of a natural or man-made disaster, national emergency or threat to their security or the environment. When the unthinkable happens on the water, the Coast Guard is usually the first point of contact and everyone expects a quick response from the Fleet.

Centralized coordination is crucial to the Fleet's quick response during unforeseen events, to help ensure the safety of our personnel and of others who may be at risk. Prompt and accurate information, clear guidelines and established operating procedures are essential decision-making support that often affect the outcome of such situations.

Developed in the wake of our Hurricane Katrina relief efforts in 2004–2005, the Fleet's Mission Readiness Framework allows us to respond in a more systematic way to unpredictable events or unplanned requests for urgent support. The framework provides strategies and protocols to deal with changes in normal operating circumstances, whether environmental (storms, ice conditions, floods, etc.), hardware-related (technical breakdowns, accidents, etc.) or human (security threats, public health emergencies, illnesses, etc.).

As part of the Mission Readiness Framework, daily briefings to senior management at CCG Headquarters and readiness response profiles help the Fleet plan for a faster, better-coordinated response. These activities ensure that mission readiness and the culture of safety are codified and remain core principles of the Fleet.

2008–2009 Results

- Identified and prioritized high-probability and high-risk events
- Began developing preliminary response action plans
- Incorporated readiness training and exercises into the Fleet Operations Plan
- Formalized a four-year review process to ensure continuous improvement

While we take every precaution to ensure the safety and security of our personnel, our clients, and Canadians, incidents can occur while the Coast Guard is operating in high-risk situations. When incidents do happen, we undertake a thorough analysis of events in order to continually improve our service delivery.

In January 2009, CCG released its safety investigation report into the rollover of the CCG Auxiliary fishing vessel *Sea Urchin* following a training exercise on November 4, 2007. Additionally, following the tragic events of March 28, 2008, when the fishing vessel *L'Acadien II* capsized while under tow by a CCG icebreaker, CCG formed a dedicated team to support the investigation and analyze the recommendations offered in all investigations into this incident. CCG will implement an action plan to further improve safety and reduce risk in its operations.

Assistance to Law Enforcement Operations Conference

While CCG does not have a law enforcement mandate, we have been, in line with our legislated mandate, supporting our partners in fisheries, and domestic law enforcement and national security operations for many years. In keeping with other areas of operations, it is essential to ensure that we conduct our operations as safely, effectively, and efficiently as possible.

This conference, held on October 21 and 22, 2008, in Ottawa, included CCG, RCMP, and DFO Conservation and Protection (C&P) personnel from Headquarters and the Regions, and focused on issues that affect the safety of our employees during these types of operations.

The conference also looked at the lessons learned from previous activities, such as the *Farley Mowat* incident, with a view to improving operations, policies, and procedures for future support efforts.

CCGS Pierre Radisson, a Medium Icebreaker, participating in a SAR/ER exercise with Denmark, the United States, and Iceland.
Photo: NL Region

Changes on the International Front: Beyond Our Borders

Canada is a member country of both the North Pacific Coast Guard Forum (NPCGF) and the North Atlantic Coast Guard Forum (NACGF). CCG leads Canada's participation in both these international organizations. Other Canadian participants include the RCMP, the Canada Border Services Agency, TC, and DFO's C&P Branch.

The NPCGF, which also includes Russia, China, Japan, Republic of Korea, and the U.S., was created in 2000 to share information and best practices, identify opportunities to improve cooperation on common fronts, and organize joint training and exercises. Working groups meet to address mutual priority areas, such as fishery enforcement, maritime security, and illegal drug trafficking.

The NACGF, modeled after the NPCGF, was formed in 2007 and is composed of the coast guard agencies of 20 countries, all of which share maritime interests in the North Atlantic Ocean.

2008–2009 Results

Hosted a successful NPCGF exercise based on a natural disaster humanitarian assistance scenario, in July 2008

Attended the March 2009 NPCGF Experts' Meeting in Seoul, Republic of Korea, which focused on operational management and the development of a virtual operations centre

The CCGS *Pierre Radisson* took part in a joint SAR/ER exercise with Denmark, the U.S., and Iceland at the September 2008 Summit in Greenland

1.3 Our Environment

The Fleet operates in a dynamic environment that is influenced by a variety of economic, environmental, and social factors. The Fleet is also aware that its clients' environment is constantly changing and that various internal and external elements can therefore impact their service needs or priorities. These elements include such factors as economic upturns causing an increase in maritime traffic, increased global interest in the marine habitat and marine environmental protection, and technological advancements in areas such as vessel tracking or positioning systems. Climate change impacts, such as fluctuating water levels, increasing ice variability, and extended shipping seasons, also place increased demands on our services. We must therefore determine how best to meet the needs and expectations of Canadians, mariners, clients, and stakeholders within available finances and resources.

These environmental factors, or drivers of change, cause the Fleet to undergo internal transitions which include the following:

- Our heightened role in maritime security means that we need to train and equip (including policy development) our personnel to effectively perform an increasing operational support role in maritime security;

CCGS Isle Rouge - Mid-Shore Patrol Vessel near the Coast Guard Base in Prescott, Ontario
Photo: Department of Fisheries and Oceans

CCGS Henry Larsen - Medium Icebreaker at Kugaaruk, Nunavut
Photo: NL Region

- Enhanced awareness of environmental issues means that we need to implement energy efficiency measures and embrace responsible environmental stewardship in our own operations;
- A highly competitive market for skilled, qualified, and certificated mariners means that we need to step up our recruitment and retention efforts while encouraging a more culturally representative workforce. By 2012, almost 24% of our marine personnel will be eligible to retire; and
- Increasing maritime traffic in all sectors (recreational and commercial) and in all areas, including the Arctic, means that we need to invest more in ensuring reliable and available vessels to meet current and future client and program demand.

In a maritime nation such as ours, the CCG must be able to rely on an effective, efficient, adaptable, and mission-ready fleet of vessels and helicopters. The initiatives outlined in this report will help address challenges and continue to improve our performance. Providing more support to our maritime professionals to help them respond with confidence to incidents and crises and provide increased quality services to our clients, partners, and all Canadians is a Fleet priority.

2 OUR PEOPLE

The Coast Guard's competitive advantage is rooted in its professional and dedicated workforce. The Fleet's marine personnel and staff ashore are critical to the delivery of quality services to our clients. They are also the reason that Canadians trust the Coast Guard to be there when they need it.

More than half (56%) of CCG's 4,554 employees work on vessels as ships' officers (SO), ships' crew (SC), or hovercraft pilots and navigators (General Technical group, or GT). The remaining 44% work in shore-based operations or support. Each day, ROC employees monitor vessel locations, task vessels to programs and geographic areas, and engage with clients and management to ensure the optimal use of resources. Other tasks performed by shore-based staff include planning, budgeting, policy development, safety and security support, human resources, and information management.

Due to the dynamic nature of fleet operations, the total number of seagoing employees on strength varies over the course of the year (i.e. through seasonal, term and casual employment). Table 1 provides a snapshot of the distribution of marine personnel by employment type.

Table 1: Distribution of Marine Personnel by Employment Type, as of March 2009

	NL[1]	MA	C&A	QC	PA	Nationally
SHIPS' OFFICERS						
On strength (FTE[2])	192	222	104	169	163	850
On Strength (Term)	3	2	6	3	16	30
Total SOs on strength	**195**	**224**	**110**	**172**	**179**	**880**
SHIPS' CREW						
On Strength (FTE)	297	328	141	218	269	1,253
On Strength (Term)	115	88	40	47	106	396
Total SCs on strength	**450**	**426**	**168**	**254**	**365**	**1,663**
HOVERCRAFT PILOTS AND NAVIGATORS						
On strength (FTE)	-	-	-	5	14	19
On strength (term)	-	-	-	1	0	1
Total GTs on strength	**-**	**-**	**-**	**6**	**14**	**20**
Total	**645**	**650**	**278**	**432**	**558**	**2543**

[1] NL, Newfoundland and Labrador Region; MA, Maritimes Region; C&A, Central and Arctic Region; QC, Quebec Region; PA, Pacific Region

[2] FTE, full-time equivalent

Glen James Blumberg, Engine Room Assistant of the *CCGS Griffon*
Photo: Marie-Pier Malboeuf

2.1 Collective Agreements: Improving Labour Relations

The Coast Guard places a great deal of importance on maintaining effective communications and working relationships with the bargaining agents representing its employees. Its diversified workforce is represented by seven bargaining agents, two of which, the Canadian Merchant Services Guild (CMSG) and the Public Service Alliance of Canada (PSAC) through the Union of Canadian Transportation Employees, represent our SOs and SCs respectively.

Through continued and open discussions with the Union of Canadian Transportation Employees, we have negotiated an agreement recognizing the Fleet as an essential service in support of continued mission readiness.

2008–2009 Results

Concluded collective agreements with Treasury Board Secretariat and the unions (the CSMG and PSAC)

Established a single rate of pay for officers irrespective of the crewing system to which they are deployed, allowing for easier movement between various crewing systems, shore-based assignments and training

An aerial view of the Canadian Coast Guard College in Sydney, Nova Scotia

Photo: DND

The Canadian Coast Guard College: A Unique Experience

For more than 40 years, the College has offered an education unlike any other and has built a solid reputation for top-notch maritime training. Over 1,000 officer cadets have graduated from the institution, taking their acquired skills across Canada and around the globe, many ultimately becoming Executives in the Public Service or leaders in Canada's marine industry.

What's Does the College Offer?

Graduates of the four-year CCG Officer Training Program receive commercial certification in either marine engineering or marine navigation, a Bachelor of Technology in Nautical Sciences degree from Cape Breton University, and a diploma from the CCG College.

The College also offers other programs:

- A nine-month basic training program in marine traffic regulating procedures and radiocommunications;
- Marine maintenance and equipment courses to prepare electronic technologists to maintain and repair all marine equipment used on ships and technical equipment used on shore to assist navigation;
- ER courses for government departments and private sector individuals involved in oil spill response; and
- Specialized SAR programs exclusively for CCG and the DND personnel assigned to Joint Rescue Coordination Centers, Marine Rescue Sub-Centers or at Mobile Facilities (SAR Units).

More than an Education

While students master navigational systems and ships' engines and control systems, they also learn some important values. The College is a residential facility that instills a sense of family and teamwork, an important preparation for shipboard life. In exchange for their tuition-free education, room and board monthly allowances, graduates commit to working on board Coast Guard vessels as navigation or marine engineering officers for four years. After this period, many opt for a lifelong career with CCG.

How to Apply

The College accepts applications for enrolment in the CCG Officer Training Program from September until January for the following academic year, which begins in September. Potential recruits should contact the College either by calling 902-567-3208 or by visiting the Web site at **http://www.cgc.gc.ca**.

2.2 Recruitment: Revitalizing Our Workforce

Working for CCG means working for an exciting organization committed to service to Canadians. Few careers present such a variety of challenging opportunities, both ashore and at sea, in almost every region of the country.

The Canadian Coast Guard College has been providing training and development since 1965. This bilingual institution delivers the CCG Officer Training Program, the primary source for recruitment of SOs. It also provides career programs in MCTS and highly specialized training in SAR, ER, marine equipment maintenance, and electronic equipment operation.

Leonella Mae Powell, Cook/Steward preparing lunch for the crew of the *CCGS Griffon*

Photo: Marie-Pier Malboeuf

CCGS Louis S. St-Laurent - Safety First, Service Always

Photo: Carolina Bookless

2008–2009 Results

Began planning, based on projected attrition rates and the need to crew five additional ships, to meet the requirement of 325 SCs members and 250 SOs by 2012,

Provided a $1-million permanent contribution to the CCG College to help stabilize the Officer Training Program

Identified the need for 69 new seagoing and shore-based positions to address increasing vessel maintenance requirements

2.3 Understanding Our Workforce: Managing Succession

Succession planning is an important element of human resource planning. For the management of our marine personnel, succession planning is a key success factor and we need to predict our needs in terms of SOs well in advance. For the most part, certification is a four-year process and Canada does not have a large merchant marine component from which to lure already-certificated personnel. Table 2 shows how the marine personnel members on strength are distributed by age category.

Table 2: Distribution of Marine Personnel by Age Category, as of March 2009

	NF	MA	C&A	QC	PA	Nationally
SHIPS' OFFICERS						
Average age (FTEs)	45	48	43	44	46	45
Less than 45	75	55	53	75	78	336
Aged 45 to 54	98	121	44	80	71	414
Aged 55 to 59	16	31	12	15	21	95
Aged 60 or greater	6	17	1	2	9	35
Total SO's on-strength	**195**	**224**	**110**	**172**	**179**	**880**
SHIPS' CREWS						
Average age (FTEs)	48	50	46	49	46	48
Less than 45	216	150	85	92	209	752
Aged 45 to 54	153	194	64	108	105	624
Aged 55 to 59	50	59	16	44	38	207
Aged 60 or greater	31	23	3	10	13	80
Total SC's on-strength	**450**	**426**	**168**	**254**	**365**	**1,663**
HOVERCRAFT PILOTS AND NAVIGATORS						
Average age (FTEs)	-	-	-	41	41	41
Less than 45	-	-	-	3	7	10
Aged 45 to 54	-	-	-	3	7	10
Aged 55 to 59	-	-	-	-	-	-
Aged 60 or greater	-	-	-	-	-	-
Total GT's on-strength	**-**	**-**	**-**	**6**	**14**	**20**

These statistics indicate that only 38% of our SOs and 45% of SCs are less than 45 years old, reaffirming the need to put in place effective succession planning, particularly for certificated personnel. Succession planning practices include the development of ships' competency (crewing) profiles, which outline the required professional competency, certification, technical training, and experience required to perform duties in accordance with the Safe Manning Regulations found in the *Canada Shipping Act, 2001*. In addition to their regulatory function, these profiles help SOs and SCs align their career paths with Fleet management's succession planning requirements.

2008–2009 Results

- Completed ships' competency (crewing) profiles for all Fleet units
- Finalized crewing standards for self-maintenance, refit or seasonal lay-up
- Implemented rotational assignments for regional staff in the National Coordination Centre and for project management at Headquarters
- Established regional developmental positions for marine personnel

Operations Officer Des Mpenza at work in the National Coordination Centre in Ottawa

Photo: Paul Lefebvre

National Labour Force Renewal Directorate

The National Labour Force Renewal Directorate was created in February 2009 to lead the charge on CCG's outreach, recruitment, and learning activities. Under the Commissioner's direction, the Directorate has a two-year mandate to bring focus and coordination to CCG's outreach, recruitment, knowledge transfer, and succession planning efforts. It will also act as a focal point for cross-regional and agency-wide discussions on ideas and best practices; for activities that will advance workforce renewal; and help integrate diversity in every aspect of the human resources renewal activities. This Directorate will lead succession planning activities for five at-risk groups: SCs, SOs, radio operators, engineers and electronics officers.

2.4 Training and Development: Improving Skills

The Coast Guard is committed to continuous improvement, growth, and development of its employees. Training and development is vital to fulfilling our evolving mandate while respecting our culture of safety and service. Investing in people to maintain a skilled and professional workforce ensures that programs and services are delivered to the high standards that Canadians expect.

While employees must take ownership of their professional growth and be committed to the continuous improvement of our service, there is a joint employee-management responsibility to assess current competencies and future development needs in order to ensure full operational and mission readiness. CCG already makes significant investments in required technical training for marine personnel, and in mandatory Public Service courses and skills development, to ensure that

CCGS Martha L. Black - High-Endurance Multi-Tasked Vessel/Light Icebreaker servicing aids to navigation in the St. Lawrence River
Photo: N. Letendre, QC Region

employees have the skills required to fulfill the organization's mandate.

To mitigate risks associated with upcoming retirements and an increasingly competitive labour market, CCG will continue to focus on increased recruitment to the Officer Training Program at the College, as well as support our ongoing technical training, learning, and career development initiatives. These initiatives will help us build and maintain a skilled, well-trained, knowledgeable, and professional workforce.

At present, CCG offers numerous training opportunities and the College provides core national educational programs. The national learning and development framework will ensure consistent educational standards, maximize the use of common national training resources, and leverage best practices across the country. The framework will assist CCG in becoming a learning organization and will bolster the College's role in the delivery of ongoing and specialized training.

2008–2009 Results

Completed individual learning plans for 95% of shore-based employees and 81% of marine personnel

Consulted with employees and bargaining agents on the national learning and development framework and proposed action plan

Inshore Rescue Boat Program: Not Your Average Summer Job

Want to spend an exciting summer patrolling Canada's waterways and participating in SAR missions? Then the Coast Guard may have the job for you. CCG hires and trains Canadian post-secondary students in SAR operations each summer through its Inshore Rescue Boat (IRB) program. Selected candidates are trained by regional staff and, following successful completion of training, are assigned as crew members to one of 24 IRB stations located in five regions in Canada:

- Newfoundland and Labrador: Notre Dame Bay, Conception Bay, Bonavista Bay
- Maritimes: Shediac, Charlottetown, Pictou, Saint John, Mahone Bay, Halifax
- Quebec: Valleyfield, Oka, Beaconsfield, Longueuil, Sorel, Trois-Rivieres
- Central and Arctic: Britt on Gereaux Island, Honey Harbour, Port Lambton, Long Point, Hill Island, Thames River
- Pacific: Nootka Island, Telegraph Cove, Cortes Island

Working on the water during the summer as an IRB crew member is challenging and rewarding work. The job comes with serious responsibilities, since SAR operations can occur at any time of the day or night during all types of weather and sea conditions, with lives potentially at risk. Each station is equipped with a 6 to 8-m fast rescue craft capable of operating at speeds in excess of 24 knots. IRB crews respond and provide assistance to mariners in distress or need of assistance through Joint Rescue Coordination Centre or Maritime Rescue Sub-Centre taskings. They also provide public education on boating safety.

The IRB program is open to full-time post secondary students in accredited institutions who are returning to full-time studies in the next academic term. For more information or to apply, go to **http://jobs-emplois.gc.ca/fswep-pfete/index-eng.htm**.

2.5 Employment Equity: Increasing Diversity

The Coast Guard is committed to becoming a more representative organization. Our efforts to build a respectful and welcoming workplace that employs people as diverse as the population that we serve are continuous. The implementation of employment equity initiatives does more than meet targets. It makes good business sense to attract and employ the best talent available.

2008–2009 Results

Supported managers in improving the participation of Aboriginal peoples, persons with disabilities, visible minorities, and women in the workforce

Launched the Operational Women's Network to better understand the challenges that women face in their seagoing careers

Expanded CCG's participation in the Partners for Workplace Inclusion Program in Vancouver, Winnipeg, and St. John's

CCG Offers a Career for Everyone

The Coast Guard provides:

- A variety of ship and shore-based positions;
- An opportunity to work in all regions of Canada;
- A variety of work schedules, from 28 days of work followed by 28 days of leave to a more familiar, 9-to-5 schedule;
- An increasingly diverse workforce that continually strives to attract more women, Aboriginal peoples, persons with disabilities, and visible minorities;
- Its own bilingual training institution, the CCG College, which is instrumental in developing highly professional marine personnel to satisfy program and service requirements;
- Competitive salaries;
- Excellent benefits such as pension, health and dental plans;
- Professional development and advancement;
- Employment stability; and
- **Job satisfaction second to none**.

Captain Norm Thomas and Shannon Vollema in front of the *CCGS Sir Wilfrid Laurier* - High-endurance Multi-tasked Vessel/Light Icebreaker

Photo: PA Region

3 OUR VESSELS AND HELICOPTERS

The Fleet is responsible for providing appropriate, cost-effective vessels and aircraft to help our clients carry out their responsibilities in keeping with their operational mandates, business plan commitments, and funding. The Fleet's assets include ships, with range in size from large icebreakers to small lifeboats, as well as air-cushion vehicles (ACVs) and helicopters.

In 2008–2009, the Fleet operated 114 vessels and 22 helicopters (see Table 3 for class breakdown). Many of these assets are equipped to "multitask," or support two or more simultaneous operations, allowing them to more efficiently meet the needs of multiple clients during a single mission. Other assets have specialized capabilities to satisfy a particular client or a specific program requirement, such as FAM's armed boarding fisheries enforcement requirements.

What Is in a Name?

CCG's ship-naming policy presents a nationally consistent and logical approach to naming CCG vessels. Our new vessels are named using set criteria that promote Canadian sovereignty, culture, geography, and history. Selected names should also raise the profile of vessels and the work that they do by honouring people and places of regional and national significance.

Table 3: Number of Operational Vessels and Helicopters by Class, 2008-2009

Class	Number
Polar icebreaker	0
Heavy icebreaker	2
Medium icebreaker	4
High-endurance multitasked vessel / Light icebreaker	7
Medium-endurance multitasked vessel	5
Offshore patrol vessel	4
Midshore patrol vessel	7
Offshore oceanographic science vessel	2
Offshore fishery science vessel	4
ACV	4
Special navigational aids vessel	4
SAR lifeboat	38
Hydrographic survey vessel	5
Channel survey and sounding vessel	2
Near-shore fishery research vessel	6
Specialty vessel	20
Vessel Total	**114**
Helicopter Total	**22**

3.1 An Aged Fleet: In Transition

CCG prides itself on having an adaptable fleet that can deliver a variety of services in a safe, secure, effective, and efficient manner. As we continue our transformation to a more flexible and mission-ready fleet, CCG has developed the Fleet Renewal Plan to address urgent investment requirements stemming from a chronically low reinvestment rate. The plan takes into account the government's evolving priorities and service demands, and allows for flexibility in responding to clients' needs in a complex and changing environment. The Fleet Renewal Plan will help ensure the CCG has the vessel capacity to deliver cost-effective and reliable on-water services to Canadians well into the future. Given the scope of the investment necessary, a renewed fleet requires funding external to CCG as internal departmental funding is insufficient to make this a reality. Table 4 shows the age of vessels by size in 2008–2009.

Deployment of the *CCGS Cap Percé* to Kegaska on Quebec's Lower North Shore

On January 19th, 2009, Minister of Fisheries and Oceans Gail Shea announced that Kegaska, on Quebec's Lower North Shore, would be the site of a new lifeboat station that will include the *CCGS Cap Percé*, a state-of-the-art vessel.

This additional resource on the Lower North Shore will enable CCG to continue consolidating its SAR coverage in this critical sector of the Gulf of St. Lawrence, which is characterized by intensive commercial fishing activity and significant pleasure boat and ship traffic.

CCGS Cap Percé, a SAR Lifeboat
Photo: MA Region

Table 4: Age of Vessels, 2008-2009

Vessels	Number	Vessels Over 25 Years Old	Vessels 15 to 24 Years Old	Vessels Under 14 Years Old
LARGE VESSEL FLEET				
Large Ships (over 88 m) Design Life - 30 years	6	5	1	0
Medium Ships (48 to 87 m) Design Life – 30 years	28	13	15	0
Smaller Ships (33 to 47 m) Design Life – 15 to 20 years	6	5	1	0
TOTAL Large Fleet	40	23	17	0
SMALL VESSEL FLEET				
Small Vessels and ACVs (up to 33 m) Design Life – 15 to 20 years	36	15	14	7
SAR Lifeboats (14 m) Design Life – 15 years	38	0	2	36
TOTAL Small Fleet	74	15	16	43
TOTAL FLEET	**114**	**38**	**33**	**43**

Opening of CCG Station Shippagan, Home of the *CCGS Cap Breton*

On July 9, 2008, we opened the new CCG Station Shippagan in New Brunswick, and its assigned lifeboat *CCGS Cap Breton* is at the ready. These important maritime SAR resources will help crews support local recreational boaters, fishing vessels, commercial traffic, and marine tourists. CCG Station Shippagan is one of nine stations in Maritimes Region and will provide logistics, crew, maintenance, and accommodations support to the *CCGS Cap Breton*.

CCGS Cap Breton, a SAR Lifeboat
Photo: MA Region

3.2 Internal Long-Term Capital Planning: Replacing Small Vessels

The Fleet's Long-Term Capital Plan is the only means of internal funding available for investment in our vessels, hovercraft, and helicopters, and other Fleet-managed capital assets. The plan is updated every year to ensure its relevancy and allocates funds across a five-year window based on such factors as the condition of the asset and the results of regulatory inspections. The Fleet is maximizing the use of these annual nominal capital funds (currently $91.5 million/year) that are used to replace smaller vessels and refit larger ones, over half of which are in the second half of their lifespan. During fiscal year 2008–2009, the Fleet was able to replace an old ACV, the *CCG Wabanaki*, with a new one, the *CCG Mamilossa* using its own internal capital funds.

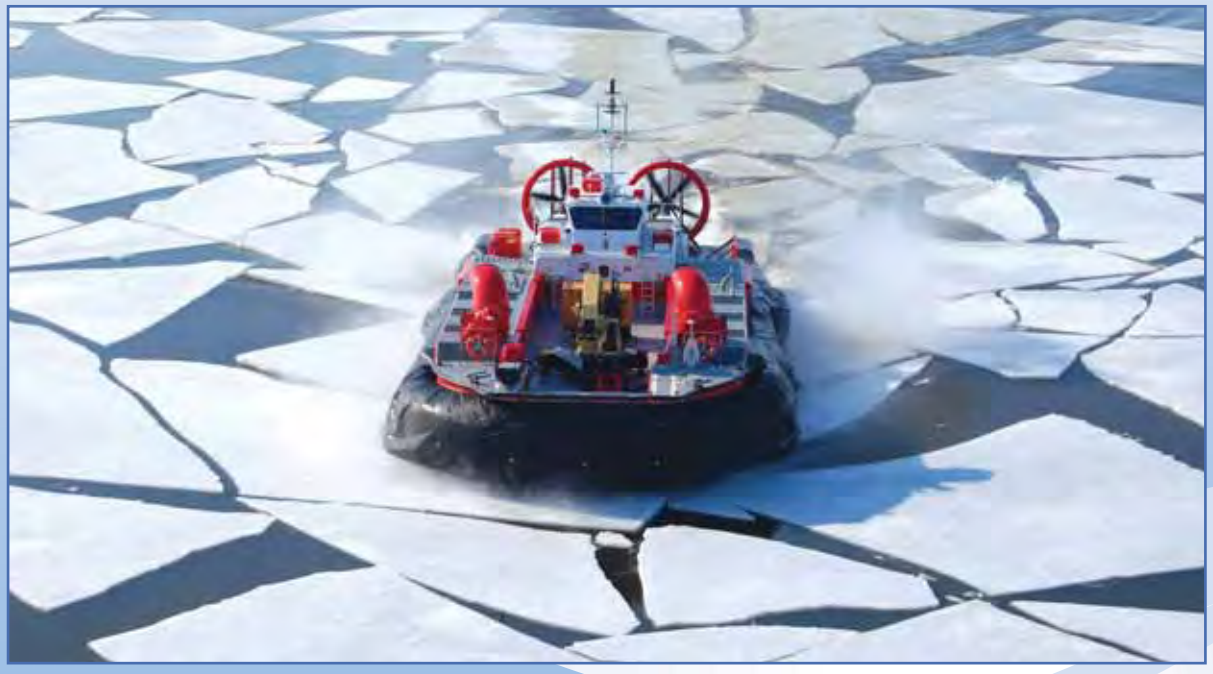
In addition, internal capital funds from the Long-Term Capital Plan will be used to refit older, larger vessels, as well as to build small vessels, as indicated in Table 5.

New *CCG Mamilossa* for Quebec Region

On Friday, March 6, 2009, in Bécancour, Quebec, CCG welcomed a new ACV to its fleet, the *CCG Mamilossa.* In Abenaki, *mamilossa* means "he who walks from the shore onto the water."

Equipped with an extra-strong crane that will enable it to load and unload heavy buoys, the *Mamilossa* was designed to meet CCG's operational needs in a multitasked environment. This amphibious craft will play a critical role for SAR operations and in preventing floods by breaking up river and foreshore ice on the St. Lawrence River in areas where conventional icebreakers cannot go.

This ACV will also transport wheeled vehicles and load them directly on deck with a bow ramp. This feature makes it particularly effective for ER operations.



CCG Mamilossa, New Air Cushion Vehicle
Photo: Benoît Filion, QC Region

Table 5: Small Vessel Replacement				
Description	**Quantity**	**Size**	**Location**	**Expected Delivery**
Near-shore fishery research vessel	2	18 m	ON and NB	2011
Specialty vessel	2	18 m	BC and PEI	2012

The total capital funding envelope, however, remains below what is needed to ensure continued operation of aging assets. Three key strategies have been employed by CCG to mitigate this below-average reinvestment rate.

The first strategy was implemented in 2007, when CCG received Treasury Board approval to establish a separate refit program for vessels and helicopters under the major capital allotment. By combining the refit and capital budgets, the decision process for the maintenance and refit of the fleet became integrated and provided additional oversight, transparency, and consistency of funding to be used for refit and maintenance only. Secondly, we integrated the refit planning into the Fleet operational planning process. This step improved the planned execution of refits within the vessels' program activity and ensured that time was set aside in the Fleet Operations Plan for necessary maintenance and refurbishment. Thirdly, responsibility for vessel life extension (VLE) funding was assumed by the Government freeing up CCG internal funding needed for critical maintenance and the construction of small vessels.

These three key strategies have resulted in more effective use of funding. The Long-Term Capital Plan, recent Government investments, and the phased implementation of the 30-year Fleet Renewal Plan are enabling the CCG to maintain Fleet assets in an improved operational condition as compared to previous years, and are assisting in the much needed replacement of aging assets.

CCGS Calanus II - Near-shore Fishery Research Vessel

Photo: Provincial Airlines

2008–2009 Results

Delivered the ACV *CCG Mamilossa*

Developed an enhanced Fleet planning process that integrates operational, technical, and major capital planning, so as to ensure a better alignment with the business planning cycle

Integrated capital-intensive VLE funding into the Fleet Renewal Plan

CCGS John G. Diefenbaker A Strong Arctic Presence

On August 27, 2008, Prime Minister Stephen Harper announced that Canada's new symbol of Arctic sovereignty – a new polar icebreaker – would be named after former Prime Minister John G. Diefenbaker, one of Canada's champions of developing and protecting the Canadian North. This ship will replace CCG's most capable icebreaker, the *CCGS Louis S. St-Laurent*, and is expected to be in service in 2017, at a construction cost of $720 million.

This Polar Icebreaker, the first of its kind for the Fleet, will be approximately 140 m in length and capable of sustained operations in the Arctic Archipelago to break ice for commercial vessels and provide a stable platform for scientific research in the high Arctic. This new vessel will operate up North for extended periods (over nine months per year) in very difficult ice conditions. It will have the ability to continuously break ice up to 2.5 m thick and will carry a crew of approximately 60 with accommodations for an additional 50 people. The icebreaker will be multitaskable, have a large cargo carrying capacity, and also be able to accommodate two helicopters.

Concept of the new Polar Icebreaker, *CCGS John G. Diefenbaker*

Photo: NCC

3.3 External Capital Replacement Plan: Replacing Large Vessels

Recognizing CCG's capital funding challenge, combined with its aging fleet of vessels and helicopters, the Government of Canada approved the first wave of the Fleet Renewal Plan that allows for a number of larger vessels to be built for service-critical programs. The total initiative recapitalization now stands at $1.4 billion for the building of:

- Nine mid-shore patrol vessels;
- Three offshore fishery science vessels;
- One offshore oceanographic vessel; and
- One polar icebreaker.

Table 6 describes the new builds related to the Fleet Renewal Plan initiative:

Table 6: Large Vessel Replacement				
Description	**Quantity**	**Size**	**Location**	**Expected Delivery**
Mid-shore patrol vessel	9	43 m	Nationally	2011 – 2013
Offshore fishery science vessel	3	67 m	MA, NL, PA	2013 – 2016
Offshore oceanographic science vessel	1	90 m	MA	2016
Polar icebreaker	1	140 m	TBD[1]	2017

[1] TBD, to be determined.

While these replacement vessels are being built, CCG still faces significant challenges stemming from the advanced age of many of its current operating vessels, particularly those for which funding for replacement has yet to be addressed. For example, our icebreakers, which were constructed decades ago, will soon reach the end of their useful lives. These vessels are expensive to maintain due to maintenance and repair requirements that make them at times unavailable for service, in turn reducing the Fleet's overall capacity.

In addition, marine regulations have become more stringent in areas such as sewage treatment, asbestos handling, and pollution prevention. TC regularly examines and certifies the compliance of vessels to the highest degree to ensure that equipment is safe and safely operated. At times, these mandatory inspections result in repairs and delays to programs while vessels undergo maintenance.

CCGS Teleost, Offshore Fisheries Science Vessel
Photo: NL Region

CCGS Terry Fox, Heavy Icebreaker

Photo: MA Region

3.4 Government of Canada's Economic Action Plan: Building a More Sustainable Fleet

On January 27, 2009, the Government of Canada released Budget 2009, entitled *Canada's Economic Action Plan*. The federal budget included $175 million in stimulus funding for CCG, to be allocated over a two-year period beginning in fiscal year 2009–2010. This funding will enable the implementation of previously unaffordable projects and will result in a more sustainable fleet, while also directly benefiting local economies. This brings the amount provided in federal budgets since 2005 to the Coast Guard for vessel construction and maintenance to $1.7 billion.

The funds allocated to CCG in the January 2009 federal budget provides for VLEs of five key vessels, much needed refit funds to fix larger vessels, and for the procurement of 98 new small vessels, lifeboats, barges, and small craft (see Table 7). Procurement of these new small boats and small vessels will enable CCG to continue to provide services such as SAR, ER and Aids to Navigation.

Table 7: Budget 2009 Economic Action Plan for CCG (Stimulus Budget)

Project	Description	Quantity	Size	Location
VLE	*CCGS Bartlett*	1	64 m	PA
	CCGS Tracy	1	55 m	QC
	CCGS Limnos	1	45 m	C&A
	CCGS Cape Roger	1	63 m	NL
	CCGS Tanu	1	55 m	PA
Refit	Targeted vessels	35	Various	All regions
Acquisition	Near-shore fisheries research vessel	3	18 to 24 m	MA and QC
	SAR lifeboat	5	14 m	PA, C&A, QC, MA
	ER barge	30	Various	National
	Small craft	60	Various	National

Combining Environmental Performance with Vessel Life Extensions and Refits

Each VLE or refit presents an opportunity to increase vessel fuel efficiency, improve how we meet new environmental regulations, or make changes that will improve the environmental performance of vessels. For example, we are replacing Halon–an ozone-depleting substance–with more environmentally friendly fire suppression systems onboard CCG vessels.

The age and condition of a vessel's main engine may make total engine and generator replacement more cost-effective than a minor refurbishment. New engines with modern technologies, control and fuel management systems are more fuel-efficient and less polluting. Even when engines are not replaced, a major overhaul of the original machinery combined with a renewed and cleaned hull coating can significantly reduce fuel consumption.

Black and grey water (sewage and used wash water) management, ballast water control, and noise reduction strategies also offer opportunities to improve the environmental performance of our vessels.

CCGS Cape Roger, an Offshore Patrol Vessel, showing the effects of sustained at-sea operations during heavy weather.
Photo: NL Region

4 OUR SERVICES

The following subsections outline the services provided to each client in terms of planned and actual days provided. These planned days of service for clients are part of an annual planning cycle culminating in the development of the Fleet Operational Plan which outlines the schedule for each vessel, client program and mission requirements, and other details. It is important to note that the number of operational days planned and delivered is a function of various factors, including availability, budget, breakdowns, priority overrides, weather conditions, and unforeseen events.

The information represents the support provided to these clients by the Fleet only and should not be interpreted as representative of the entire suite of services that a particular client receives.

For example, in some cases it is more efficient for aids and waterways services to be delivered by contractors and these services are not included in the information provided here. The planned and delivered days contained in this report reflect the use of Fleet assets only. It is also important to note that client program effectiveness information is not included, as this is a program performance function.

Finally, none of our programs and services would be possible without the dedicated professional women and men who work behind the scenes to maintain our equipment and provide the administrative and planning support that enables front-line staff members to do their jobs.

SAR exercise simulation in Québec Region
Photo: N. Letendre, DFO

4.1 Search and Rescue Services

Canada's SAR Program is a cooperative effort of federal, provincial, territorial, and municipal governments. It is responsible for approximately 5.3 million km^2 of coastal territory, beginning 800 miles offshore in the Pacific, extending 1,000 nautical miles in the Atlantic, and stretching all the way from the Canada-U.S. border to the North Pole.

CCG teamwork amongst on-shore and at-sea personnel, DND, and CCG Auxiliary saves about 2,900 lives at risk in the marine environment each year. CCG SAR is delivered by vessels and maritime professionals positioned at various locations across Canada that are dedicated to this purpose. Primary SAR vessels are specially designed to meet the rigorous demands inherent to providing capabilities and response in Canadian waters. In addition, all other CCG vessels and aircraft are available to provide SAR response in addition to their other duties.

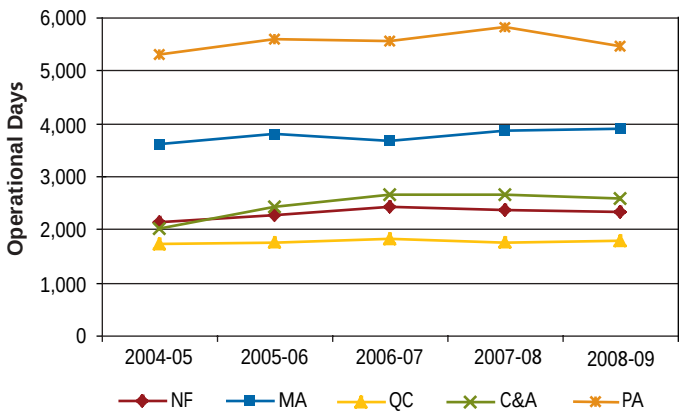
Key SAR tasks conducted by Fleet personnel include:

- Conducting visual and electronic searches for vessels and survivors, day and night, by sea and by air, in various weather conditions;
- Providing a platform for rescue personnel and vessels on scene and allowing search operations to be conducted;
- Managing complex searches and acting as on-scene coordinators;
- Recovering survivors and providing shelter, amenities, and advanced first aid;
- Providing radiocommunications facilities for emergency operations to enable vessels to communicate with shore-based radio stations, other vessels, and rescue craft; and
- Providing towing or other services to vessels in need of assistance when life is at risk.

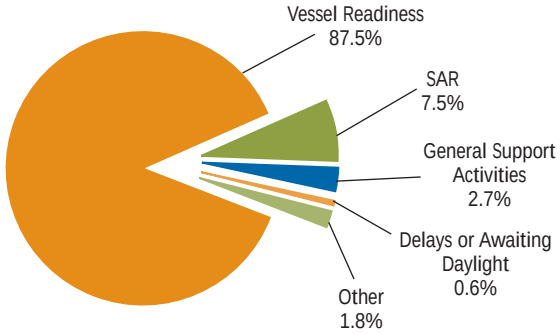
Fleet Performance

In 2008–2009, 16,047 days were delivered to SAR, a slight decrease from the previous year. With its year-long boating and ice-free season, Pacific Region requires by far the greatest SAR service (see Graph 3). Of the 16,047 days, 7.5% (1,206 days) were spent responding to incidents or patrolling. Graph 4 shows that 87.5% of the total days were allotted to vessel readiness, where, much like a fire or ambulance service, vessels are not responding to an incident or exercising, but are ready to respond at a moment's notice to calls for assistance.

Graph 3: Service to SAR per Region, 2004-2005 to 2008-2009 (# of Operational Days)



Graph 4: Service per SAR Activity, 2008-2009 (% of Total Operational Days)



Dramatic Rescue off Newfoundland

Twenty-two foreign sailors owe their lives to the Coast Guard after they were rescued from the frigid waters off the coast of Newfoundland by the crew of the *CCGS Leonard J. Cowley*. The crew members aboard the *Monte Galineiro*, a Spanish fishing trawler, escaped their rapidly sinking vessel after a pair of explosions destroyed the ship's engine room in the early hours of February 22, 2009. Fortunately, the *CCGS Leonard J. Cowley* was patrolling nearby, received the distress call, and was on scene in 10 minutes.

Canadian Coast Guard during a SAR exercise (SAREX 2008)

Photo: CF Photo by Corporal Kevin Sauvé

4.2 Maritime Security Services

A key aspect of our increased role in supporting the federal maritime security agenda is the Fleet's enhanced participation in the joint RCMP-CCG Marine Security Enforcement Team (MSET) program in the St. Lawrence–Great Lakes region. Four of our vessels, including the newly reactivated *CCGS Isle Rouge*, patrol the St. Lawrence and the Great Lakes. Their crews assist with border security in waters where ships naturally cross the border between Canada and the U.S. as many as 23 times during their voyage from Beauharnois, Quebec to Sault Ste. Marie, Ontario.

Fleet crews work in close proximity with armed law enforcement personnel, which means that our personnel are exposed to risks and hazards not experienced in traditional programs. To mitigate risks, Fleet employees assigned to MSET vessels receive additional personal protective equipment, law enforcement familiarization, and police defensive tactics training. The training helps improve employee safety and boosts the on-water effectiveness of MSET through enhanced onboard integration of CCG and law enforcement personnel.

CCG personnel members also support maritime security services by:

- Observing, reporting, and recording maritime security events and organized crime activities;
- Monitoring and patrolling the Great Lakes, the St. Lawrence Seaway, and vast areas of ocean, including coastal and international waters, deterring threats and illegal activities;
- Patrolling boundary areas and conducting inspections at sea with our partners to ensure compliance with regulations;
- Serving as a command platform and secure communications hub for officers in charge of any marine enforcement activity;
- Conducting routine boarding of vessels from rigid hull inflatable boats carried on board; and
- Providing an operationally ready response capability for maritime security incidents.

2008–2009 Results

Conducted an in-depth tasks and hazards analysis of enforcement operations
Conducted a personnel and infrastructure gap analysis
Worked with RCMP and C&P to improve enforcement procedures and equipment
Organized an operations enforcement conference to share best practices with our law enforcement partners

Fleet Performance

In 2008–2009, vessels sailed 33,761 nautical miles in the performance of MSET duties. Some 80% of the planned days were delivered; the shortfall was due in part to a three-month delay in bringing the *CCGS Isle Rouge* back into service which needed significant repair due to its condition and age. The addition of the *CCGS Isle Rouge* increased our program commitment to four vessels while we await the arrival, beginning in 2011, of the first of four new mid-shore patrol vessels dedicated to maritime security. Table 8 shows the number of days of activities allocated to maritime security in 2008–2009.

Government of Canada Takes Enforcement Action Against the Farley Mowat:

In April 2008, the Fleet participated in monitoring and enforcement action against the Sea Shepherd Conservation Society vessel *Farley Mowat* for violations of the *Marine Mammal Regulations*, which are offences under the *Fisheries Act*. The *Farley Mowat* was boarded in the Gulf of St-Lawrence in Canadian fisheries waters as part of a joint enforcement operation conducted by the RCMP, DFO fishery officers, and CCG. The vessel had failed to respond to repeated warnings to exit and remain out of Canadian waters as well as posed a hazard to Canadian sealers.

Farley Mowat
Photo: MA Region

Table 8: Maritime Security Activities, 2008–2009 (# of Operational Days)

Maritime security assistance activities	450.25
Vessel readiness	241.24
Other (e.g. inspection, transit)	49.84
General support activities	27.86
CCG delays	21.22
Client delays	19.87
Preparedness training and exercises	10.82
Total operational days	821.10

4.3 Environmental Response Services

CCG is the lead federal agency for all ship-source and mystery pollution spills in waters under Canadian jurisdiction. In addition, Canada may be asked to provide clean-up assistance by other countries according to the International Convention on Oil Pollution Preparedness Response Cooperation. Its objectives are to minimize the environmental, economic, and public safety impacts of marine pollution incidents.

In Canada, south of 60°N latitude, the private sector is responsible for ER, while CCG provides federal monitoring, oversight, and inspection. If CCG deems the private sector response inadequate, it will assume control, coordinate the response, and, if necessary, conduct actual containment and recovery operations. North of 60°N latitude, CCG is the primary responder.

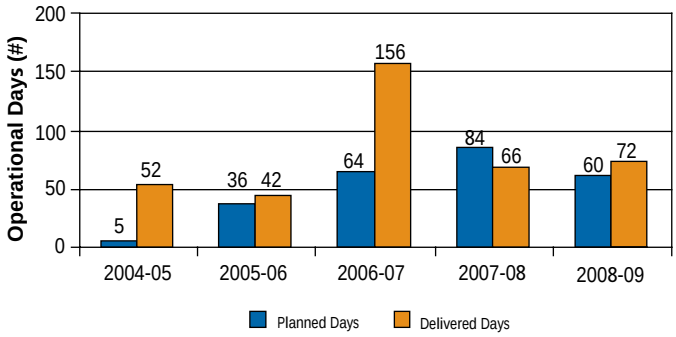
Fleet Performance

Service planned for ER includes days for training and exercising to prepare for an eventual response to incidents or emergencies. Actual days delivered include those for training and exercising plus other days dictated by unplanned events such as oil spills. This year's report includes small craft activities, as they provide a large part of ER support services.

In 2008–2009, while CCG had planned for 60 days of service, 72 days were actually delivered. Of those 72 days, 30 were spent on ER activities and 42 on emergency preparedness. Graph 5 shows the planned versus actual days of service for all ships, including small craft, for the past five years.

In 2008–2009, the Fleet participated in key incidents that included cleanup efforts following the sinking of the Second World War heritage tug *La Lumière* at its dock in Britannia Beach, 45 km north of Vancouver. CCG also partnered with Atlantic Coastal Action Program Humber Arm in May 2008 to offer oil-spill prevention and response training to recreational boaters. Recreational boating in North America contributes up to 1 billion litres of hydrocarbon and oil pollution in coastal waters each year.

Graph 5: Service to Environmental Response, 2004-2005 to 2008-2009 (# of Operational Days)



CCGS Provo Wallis - Medium-Endurance Multi-tasked Vessel
Photo: Department of Fisheries and Oceans

4.4 Aids to Navigation and Waterways Services

The Aids to Navigation and Waterways Services programs ensure that our shipping channels are safe and viable, and protect the public's right to navigation. The Aids to Navigation program provides more than 17,000 short-range marine aids, including visual aids (lighthouses and buoys), sound aids (fog horns), radar aids (reflectors and beacons), and long-range marine aids such as the Differential Global Positioning System (GPS). The Waterways Management program sustains navigable channels in the Great Lakes and St. Lawrence Seaway, reduces marine navigation risks, and supports environmental protection. The program monitors channel bathymetry (water depth) and contributes to the international control of water levels.

The Fleet supports these programs by placing, lifting, checking, and maintaining an extensive system of floating and fixed aids to navigation, both on water and on shore, and by carrying out surveying operations. A variety of large and small multitasked vessels and helicopters maintain this network. Some aids are required year-round, while seasonal aids are lifted out of the water for the winter season to prevent ice damage. They are then repositioned at the beginning of the navigational season.

The Fleet must be able to:

- Reach aids in restricted, shallow, and ice-infested waters;
- Serve as a platform for carrying and servicing buoys and related equipment as well as constructing navigational aids; and
- Supply air capability to reach aids not accessible by boat or road, especially in remote areas, particularly in Arctic.

Success is highly dependent on competent maritime professionals. Accurate navigation is key, as placing aids often requires the vessel to manoeuvre close to shoals, rocks, and reefs. For this reason, extensive local knowledge and specific training are required. Marine personnel members also deploy, recover, and maintain aids, verify the position and operation of floating aids, keep records of operations, update data on positions and characteristics of aids as required, and conduct maintenance on fixed and floating aids.

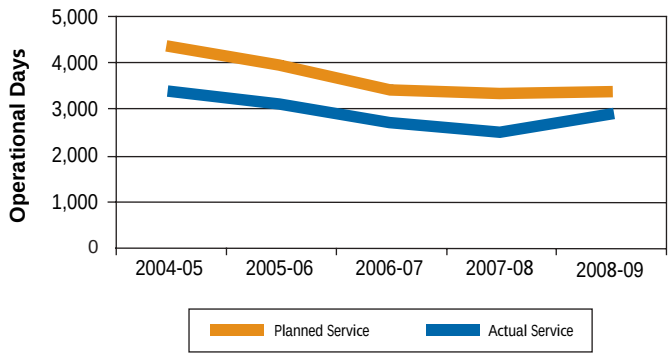
CCGS Ann Harvey, High-Endurance Multi-tasked Vessel/Light Icebreaker doing buoy work

Photo: NL Region

Fleet Performance

The Aids to Navigation program is generally a seasonal based program, with aids installed or exchanged (winter buoys replaced by summer buoys) in the spring and removed or replaced (by winter buoys) in the fall. The Great Lakes are also affected by Seaway locks closure and opening dates. In other regions, aids are serviced almost year round, with duties that include maintaining shore lights, checking the location, mooring, and function of buoys, and supplying lighthouses with fuel. Service delivered to Aids to Navigation has decreased 29% over the last five fiscal years (see Graph 6) mostly due to changing program requirements and advancing technology.

Graph 6: Service Planned versus Delivered to Aids to Navigation, 2004-2005 to 2008-2009 (# of Operational Days)



A Link to the Mainland for Sable Island

Sable Island, located approximately 300 km southeast of Halifax, is a unique place. Its windswept beaches and sand dunes provide shelter and sustenance for several migratory bird species, wild horses, and large populations of grey and harbour seals. Discovered in the 16th century, Sable Island has long served as a lifesaving station for sailors shipwrecked in the area, known as the "Graveyard of the Atlantic." The warning flags and beach patrols of that time have been replaced by light stations, GPS, accurate navigation charts, and SAR vessels.

The women and men who live and work on Sable Island not only collect weather data for the benefit of the Meteorological Service of Canada but also support Canada's sovereignty, security, conservation, and heritage preservation activities. CCG facilities on the island include lighthouses, seasonally occupied buildings for researchers, two helicopter landing pads, and a navigation beacon.

CCG plays a vital role in resupply operations: personnel, fresh food, and mail are delivered to the island twice a month by plane or helicopter. Fuel and larger supplies are brought ashore once a year. In 2009, the *CCGS Sir William Alexander* will deliver 90,000 litres of diesel, 2,000 litres of aviation fuel, 500 litres of gasoline and enough supplies to fill the entire foredeck of the ship. The Fleet is proud to help the women and men who live and work on Sable Island fulfill their duties as stewards of this fragile national treasure.

CCGS Sir William Alexander - High-Endurance Multi-tasked Vessel/Light Icebreaker delivering supplies to Sable Island

Photo: Department of Fisheries and Oceans

CCGS Des Groseilliers, Medium Icebreaker
Photo: QC Region

4.5 Icebreaking Services

CCG provides icebreaking and related services for flood control and to facilitate the safe and timely movement of maritime traffic through ice-covered and ice-infested Canadian waters, which is crucial to industry and the Canadian economy.

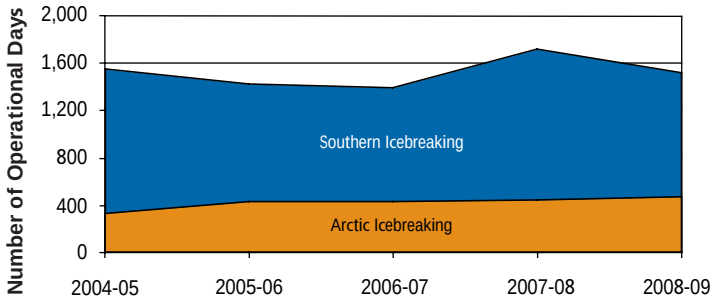
The Fleet provides crews trained to operate specially designed vessels in support of this vital service. Icebreakers escort ships through ice-covered waters, free vessels trapped in ice, allow access to ice-infested harbours, provide ice information, and reduce the risk of flooding by both monitoring and breaking up ice jams. Icebreakers also carry helicopters that conduct ice reconnaissance flights, locate open water, and lead effective icebreaking operations.

Canada has two icebreaking seasons: from December to April in the south, from the Great Lakes to the coasts of Newfoundland and Labrador, including the St. Lawrence Seaway and the Gulf of St. Lawrence; and from June to November in both the western and eastern Arctic. At the beginning of June, after completing their winter season operations, seven icebreakers are deployed from the southern regions to the Arctic for the summer season.

Fleet Performance

The total number of days of service dedicated to icebreaking has decreased slightly in 2008–2009. Graph 7 indicates that the service for Arctic icebreaking increased by 10% since 2005–2006, while the service for icebreaking in the South varies year to year. In 2008–2009, the icebreaking program devoted 60% of service days to route assistance (escorts and channel maintenance), 18% to Arctic issues, 12% for facilities and port maintenance, 9% to flood control, and 1% to ice routing and information.

Graph 7: Service to Southern and Arctic Icebreaking, 2004-2005 to 2008-2009 (# of Operational Days)



Searching for *Erebus* and *Terror*

In August 2008, the Government of Canada announced that it would embark on the most extensive search yet for the fabled British shipwrecks *Erebus and Terror*. These two ships were lost in the Canadian Arctic in the 1840s during the ill-fated Franklin Expedition. Believed to lie in waters off King William Island, the ships were under the command of legendary Arctic explorer Sir John Franklin when they became locked in heavy ice that doomed the entire crew of 129 men.

HMS *"Erebus"* and *"Terror"* leaving for a discovery of North-West Passage
Photo: Super Stock

The icebreaker *CCGS Sir Wilfrid Laurier* has been given the honour of leading this exciting mission. If successful, findings could be used to reinforce Canada's Arctic sovereignty claims, to be presented to the United Nations in 2013. During the first six-week search of what could be a three-year project, the *Sir Wilfrid Laurier* covered the southern waters of Victoria Strait and the eastern part of the Queen Maud Gulf, including O'Reilly and Kirkwall islands north of the mainland Nunavut coast. As with all good mysteries, the search for clues continues.

"Mighty Ship" *CCGS Henry Larsen*

Viewers tuning into the Discovery Channel's "Mighty Ships" in August 2008 got a glimpse of life aboard the icebreaker *CCGS Henry Larsen* on what proved to be a particularly stormy tour. Hurricane-force winds and heavy snowfalls in areas along the northeast coast made for great television, which included footage of a rare avalanche on Fogo Island.

The snow build-up created challenges for the *Henry Larsen*. As the ship broke through thick and rafting ice, it also had to plough through heavy snow that had accumulated in a thick mat on top of the ice. The crew members used the ship's power, propeller wash and bubbler systems, and their in-depth knowledge of the prevailing winds and currents, to disperse the ice and continue on their journey.

The ship demonstrated Canada's pioneering role in icebreaking technology. "Mighty Ships" highlighted the prototype ice hazard radar system being tested on the *Henry Larsen* for its capability to detect smaller ice forms such as growlers and bergy bits in varying sea conditions, as well as for its potential application in SAR. The program also examined the effectiveness of the hull design, the bubbler and heeling systems in icebreaking.

When asked how his film crew felt about its experience, Discovery Channel's Karl Jason said: "From the stormy night we first boarded the *Henry Larsen* to the crisp, sunny day we left the ship at the dock, the film team felt warm hospitality. It came from everyone, from the captain to the cadets. We were immediately impressed and understood the meaning of 'ship-shape.'"

CCGS Henry Larsen, Medium Icebreaker
Photo: NL Region

4.6 Marine Communications and Traffic Services

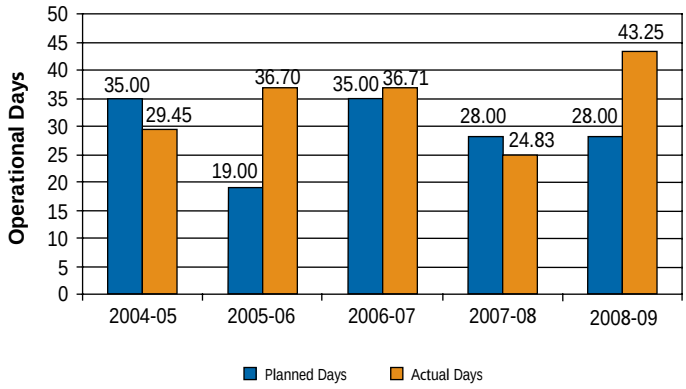
The MCTS program enables maritime distress and safety communications, conducts vessel screenings, regulates vessel traffic movement, and provides information systems and public correspondence on a 24/7 basis. This service is delivered through a network of 22 centres and supporting communications towers across Canada.

Fleet Performance

In 2008–2009, MCTS activities were solely conducted in Pacific Region, where ships and helicopters are used to reach areas in the Queen Charlotte Islands and central coastal areas. Pacific Region delivered 22 days of service or 80% of its planned days. Although service to MCTS had not been planned elsewhere in Canada, 21 days were delivered in Quebec Region and Central and Arctic Region, where ships were called upon to maintain coast radio stations. This added an additional 21 days of service and brought our percentage of service delivered compared to days planned to 154%. Graph 8 shows the planned versus actual service to MCTS.

Rigid Hull Inflatable Boat
Photo: C&A Region

Graph 8: Service to MCTS, 2004-2005 to 2008-2009 (# of Operational Days)



4.7 Department of Fisheries and Oceans

4.7.1 At-Sea Science

The Fleet supports the DFO At-Sea Science Program, providing trained crews on board both specialized and multitasked vessels such as research trawlers, fishing vessels, hydrographic survey vessels, oceanographic vessels, and icebreakers. For example, Coast Guard icebreakers, such as the flagship *CCGS Louis S. St-Laurent*, support Canadian and Canadian-led international marine research projects in the Arctic. These tasks are carried out during CCG's regular annual Arctic deployment in support of icebreaking for commercial shipping and northern resupply. The icebreaker *CCGS Amundsen* also worked in the Arctic in support of the ArcticNet science mission led by Université Laval researchers, reverting to its standard icebreaking duties in the estuary and the Gulf of St. Lawrence in the winter months.

The crews support scientists and technicians in a variety of specialized areas such as:

- Fishing for research purposes for a variety of commercial species;
- Conducting surveys on acoustics, hydrography, geophysics, marine species stock assessment, and benthic habitats and organisms;
- Conducting marine mammal and seabird enumeration, identification, tracking, and bioassessment;
- Collecting plankton, larvae, and phytoplankton;
- Collecting water samples for marine chemistry studies;
- Taking bottom sediment samples and coring;
- Collecting data verifying empirical models for water mass structure and circulation as well as currents and tidal propagation and prediction; and
- Conducting remote camera studies of benthic habitats and organisms.

CCG and the Bedford Institute of Oceanography: A Solid Partnership

CCG is in the process of relocating the Maritimes Region's fleet of large vessels to the Bedford Institute of Oceanography (BIO). The movement of CCG ships to BIO, to be completed before the end of fiscal year 2009–2010, marks a significant milestone in the history of Fleet in Maritimes Region and is representative of the successful adaptation that we have made to serve our evolving list of clients.

Canada's largest centre for ocean research, BIO has been at the vanguard of multi-disciplinary ocean science since 1962. Its research helps the federal government make critical decisions on a broad range of ocean issues, including sovereignty, safety, security, environmental protection, and the sustainable use of Canada's natural resources.

CCGS Wilfred Templeman, Offshore Fisheries Science Vessel
Photo: HQ & NCC

Fleet Performance

Graph 9 shows the Fleet's delivery of services to Science to be on target for the third year in a row. In 2008–2009, the Fleet delivered 3,910 days of service to Science, or 99.5% of service planned. Graph 10 demonstrates the distribution of activities between fisheries and oceans science, hydrography, waterways management, habitat management, and environmental science.

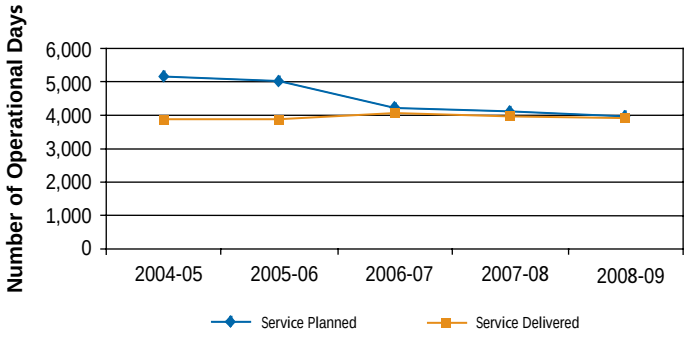
4.7.2 Fisheries and Aquaculture Management

The Fleet supports FAM by carrying out enforcement and surveillance activities in Canadian waters for the C&P Program. The Fleet also provides an enhanced presence at sea in the regulatory areas of the Northwest Atlantic Fisheries Organization (NAFO) in order to help stop illegal fishing by foreign fleets in the 282,500 km^2 of the Grand Banks of Newfoundland and in international waters.

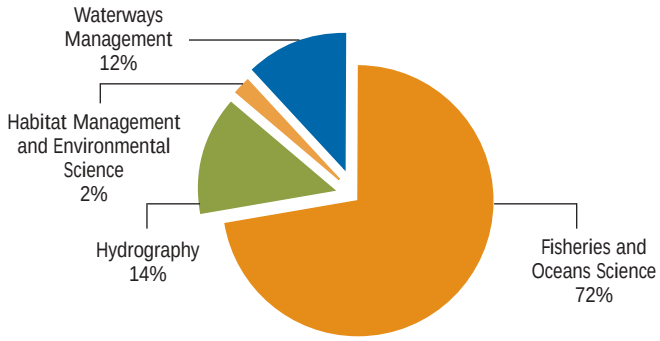
Specialized fisheries patrol vessels, including armed vessels with armed CCG and DFO personnel, are used in the near-shore and offshore areas of Canada. Multitasked vessels with helicopter support are provided as required. CCG maritime professionals support fisheries officers in performing enforcement duties, including:

- Monitoring and patrolling vast areas of coastline, providing a federal presence in Canadian waters, and thereby deterring threats and illegal activities;
- Helping ensuring compliance with Canadian laws in Canadian jurisdictions;
- Supporting fisheries interdiction activities;
- Patrolling closed and boundary areas and conducting inspections at sea;
- Serving as a command platform and secure communications hub for C&P enforcement activity;

Graph 9: Service to Science, 2004-2005 to 2008-2009 (# of Operational Days)



Graph 10: Service to Science per Activity, 2008-2009 (% of Total Operational Days)



- Conducting general and covert surveillance and monitoring various fisheries;
- Recovering, seizing, storing, and transporting illegal fishing gear; and
- Checking licences, logbooks, catch, and gear, including inspections of fixed and mobile gear types, and disclosure of poaching or other means of illegal fishing.

Fleet Performance

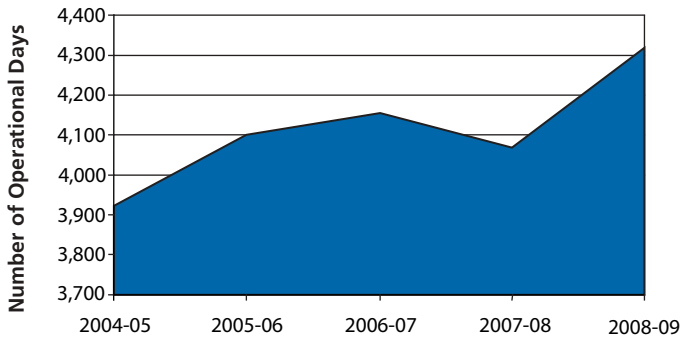
Table 9 indicates the various patrols undertaken in 2008–2009, mostly in Canadian waters and in NAFO regulatory areas. In all, 92% of service planned for FAM was delivered for a total of 4,318 days of service, a 10% increase from 2004–2005 (see Graph 11). Of the total number of days of service, 57% were spent patrolling Canadian waters and 32% were spent on NAFO patrols. The administrative category includes time taken for the preparation of court actions and testimony. Administrative activities include data compilation, production of enforcement patrol reports, written communications with crown counsel, and court preparation and appearances.

Table 9: FAM Activities, 2008–2009

	Number of Operational Days (#)	Percentage of Total Operational Days (%)
Patrolling in Canadian waters	2478.89	57.4%
NAFO patrols	1407.26	32.6%
Resource management	185.62	4.3%
Other patrolling	190.93	4.4%
Administrative	44.63	1.0%
Patrolling in international waters*	7.89	0.2%
Aboriginal fisheries	2.96	0.1%
Total	**4318.18**	**100.0%**

* Patrols off the Pacific and Maritime coasts

Graph 11: Service to FAM, 2004-2005 to 2008-2009 (# of Operational Days)



CCGS Leonard J. Cowley - Offshore Patrol Vessel

Photo: Provincial Airlines

4.8 Other Government Departments and Agencies

The Fleet is also responsible for on-water operations (vessels, helicopters, expertise, personnel, and infrastructure) on behalf of, or in support of, OGDs for the achievement of their specific maritime priorities. These OGDs include: Natural Sciences and Engineering Research Council, Environment Canada, Natural Resources Canada, DND, Department of Foreign Affairs and International Trade, and TC.

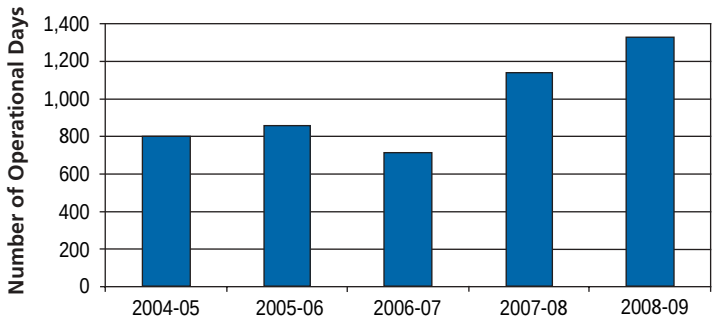
Client requirements, missions, and operational profiles dictate the type of support needed. For example, Environment Canada, the Natural Sciences and Engineering Research Council, and Natural Resources Canada need specifically designed scientific vessels to support their activities.

Fleet Performance

In 2008–2009, 1,356 operational days were used in support of OGDs. Service delivered reached 127% of the planned days. The majority of the increase from 2004–2005 (see Graph 12) stems from the seismic and bathymetric surveys conducted in the Arctic to provide documentation in support of Canada's submission to the United Nations Commission on the Limits of the Continental Shelf. More days were delivered than planned as the ice and weather conditions were more favourable than expected and will offset the requirement for more days next summer in the Arctic in support of the United Nations Convention on the Limits of the Continental Shelf (UNCLOS).

The ultimate objective of these surveys is to delineate the outer limits of the sovereign rights of Canada beyond its exclusive economic zone in accordance with the UNCLOS. Fleet icebreakers were also involved in the International Polar Year (IPY) scientific research program focused on the Arctic and Antarctic regions.

Graph 12: Service to OGDs, 2004-2005 to 2008-2009 (# of Operational Days)



Operation NANOOK 08

CCG proved to be a major contributor in Operation NANOOK 08, Canada's latest sovereignty exercise in the Arctic. Seventy-five CCG personnel, from *CCGS Pierre Radisson*, ER, MCTS, Iqaluit, and the Central and Arctic ROC, joined hundreds of Canadian Forces Personnel for this DND-led operation in and around Iqaluit, Nunavut.

The exercise provided an excellent opportunity for military and civilian partners to practice working together for the protection and defence of these remote locations. They were able to practice inter-agency communication in the North and turn theoretical knowledge and skills into valuable experience.

Michelle Choquette, the nurse from *CCGS Pierre Radisson*, and Leading Seaman Morgan Lalond, a medic from *HMCS Toronto*, prepare a casuality for evacuation, as part of the mass casualty exercise for Operation Nanook 2008.

Photo: Cpl David Cribb, DND Combat Camera

4.8.1 Arctic Sovereignty

The Coast Guard is playing an expanding role in Canada's Arctic region, delivering a wide variety of maritime services and strengthening Canada's sovereignty in this region through its services capability and presence. During 2008–2009, on-water support to IPY activities and UNCLOS research continued to be a priority.

From late June to mid-November, the Fleet operates seven icebreakers in the Arctic. They are generally the first vessels to arrive in the region and the last to leave. Icebreakers escort commercial ships; breakout harbours; conduct SAR missions; respond to environmental concerns; manage aids to navigation; activate and de-activate communication towers; and support research, maritime security, and Canadian sovereignty efforts. The Fleet's vessels and helicopters are often the only Government of Canada marine presence for thousands of miles. As such, they can be called upon to answer any pressing need in this challenging and often harsh environment.

As the signs of climate change in the Arctic become more apparent, with measurable shrinkage in the multi-year ice cover, shifting ice formations, reduced summer ice, and increased interseasonal variability, demands for CCG services in the Arctic are increasing and becoming more diverse.

United Nations Convention on the Law of the Sea

The UNCLOS was adopted in 1982 and is often referred to as the "Constitution of the Seas." It entered into force in 1994 after ratification by 60 countries, with Canada signing on in 2003. The UNCLOS recognizes coastal states' sovereign rights to the water column and seabed up to 200 nautical miles from shore and, under special circumstances, to the seabed beyond. This is known as the exclusive economic zone. Any claim to these rights must be supported by scientific data and made within 10 years of ratification.

Using the *CCGS Louis S. St-Laurent* as a primary platform, Canada is conducting seismic and bathymetric surveys in the Arctic to support its claim that Canadian sovereignty should extend well beyond the current 200-nautical-mile limit. Analysis of this field work must be completed by 2012 to meet the November 2013 submission deadline. The consequences of this initiative for Canada are expected to be significant.

The *CCGS Amundsen* Goes Home

October 2008 marked the end of a 15-month continuous Arctic expedition for the icebreaker *CCGS Amundsen*, in support of the IPY's biggest project. The journey took the icebreaker and its scientists and supernumeraries through Hudson Bay, across the Northwest Passage and into the Beaufort Sea, where it spent the winter. The $40-million mission provided some 200 crew members and scientists with front-row seats in the fastest-changing ecosystem on Earth. Quickly changing ice conditions provided a few close calls for the *Amundsen*. More multi-year Arctic ice is breaking up into ice floes, clogging passages and making for dangerous navigating conditions.

CCGS Amundsen - Medium Icebreaker conducting IPY Science activities in the Arctic

Photo: HQ & NCC

5 MEASURING PERFORMANCE

Whether supporting CCG, DFO, or OGDs, or protecting broader Canadian interests, The Fleet's goal is to provide services in a safe, secure, effective, and efficient manner.

While Section 4 examined services by client, Section 5 looks at the Fleet's accountability and overall performance, with measures endorsed by the Fleet Executive Board. This board is the Fleet's management and governance board, consisting of the Headquarters' Fleet Directors and the Regional Directors, Fleet, and is led by the Director General, Fleet.

As new evaluation criteria and factors are required, performance measures will evolve to ensure that the Fleet has meaningful, timely and accurate information on which to base decisions and report to Canadians.

5.1 ACCOUNTABILITY

Accountability to CCG Senior Management

The Fleet is managed through a clear national accountability structure based on the principles of openness, transparency and national consistency. The Fleet Executive Board, a national body led by the Director General, Fleet, is accountable for promoting national consistency and leadership in the management of the Fleet and its personnel in such matters as safety, security, planning, financial management, people management and development, performance and the operation of vessels and helicopters. The Fleet Executive Board meets regularly to make decisions and recommendations regarding consistent operations, policy setting and planning (strategic, business, capital, financial, and human resources), and to resolve national Fleet issues.

The Regional Directors, Fleet, reporting to their respective regional Assistant Commissioners, who in turn report to the Commissioner, are accountable for the day-to-day operations, program delivery and associated financial management, safety and security, and operational management of the Fleet and its personnel on a regional basis.

2008–2009 Results

Enhanced Fleet Executive Board planning and integration with Fleet Superintendents

Completed all the Fleet commitments contained in the CCG Business Plan, including the delivery of all support to clients within budget

Accountability to Program Clients

The Fleet is accountable to its clients for the ongoing provision of services primarily through the execution and delivery of the Fleet Operations Plan. More generally, accountability for the Fleet's overall management is governed by the Coast Guard's comprehensive three-year Business Plan, which includes accountability for delivery on the priorities of CCG in its efforts to enhance its services, support its people and maximize its efficiency. The CCG Business Plan is available at http://www.ccg-gcc.gc.ca/eng/CCG/Home.

CCGS Griffon - High-Endurance Multi-Tasked Vessel/Light Icebreaker on flood control operations
Photo: C&A Region

Accountability to Canadians

Table 10 sets out the outcomes of the Fleet's 2008–2009 commitments in the CCG 2007–2010 Business Plan. The table outlines the priorities identified in the Business Plan as well as the activities conducted throughout the year in support of these priorities. This information is also reported in the 2008–2009 Business Plan Mid-Year Review and Year-End Reports. These reports are available at: http://www.ccg-gcc.gc.ca/eng/CCG/Publications.

Table 10: The Fleet's Commitments and Achievements, 2008–2009

Commitment	What was Achieved
CCG Business Plan Priority: Support for Canada's Maritime Security Agenda	
Continue to provide expertise in the delivery of on-water support to security as part of the Government of Canada security agenda	Four vessels on the Great Lakes–St. Lawrence Seaway System are providing the planned interim MSET on-water program delivery. Law enforcement familiarization training was provided during the winter. The Fleet participated in the successful joint operation NANOOK 08 in the Arctic led by DND.
CCG Business Plan Priority: Fleet Renewal	
Implement mission readiness for the Fleet	Mission readiness was implemented including the establishment of standard operating procedures and readiness response profiles to maximize successful Fleet operations in the event of unplanned events.
Implement improved SLAs with internal non–Coast Guard clients based on new funding and charging models	SLAs based on new funding and charging models have been put in place with DFO Science and FAM. These will be implemented on a "pilot" basis for the next three years and will include the development of a joint performance management framework.
CCG Business Plan Priority: Continued Implementation of Modernization Initiatives	
Assess internal options for increasing the number of marine engineers both on vessels and on shore	Six areas of shortcomings were established and a decision was taken to add 69 positions, in support of fleet maintenance activities. The emphasis was on the addition of marine engineering expertise. The new positions will be added over a three-year period.
CCG Business Plan Priority: Effective Management of Our Workforce and Workplace	
Implement the pilot Seagoing Personnel Career Development Initiative	The project has been successfully implemented and integrated into routine operations.
Launch a network of women who represent SOs and SCs	The network has been established and will continue to evolve. Regional coordinators are in place and engaged.

Legend

- The project or deliverables were completed as planned and/or decision/approval was obtained by April 30, 2008.
- The project or deliverables were not completed as planned due to external factors, or substantial progress has been made but the project or deliverables were not fully completed by April 30, 2008.
- The project or deliverables are substantially incomplete.

All ongoing Fleet commitments for fiscal year 2008–2009 are covered in the CCG 2008–2011 Business Plan at http://www.ccg-gcc.gc.ca/eng/CCG/Home.

5.2 Safe and Secure Delivery

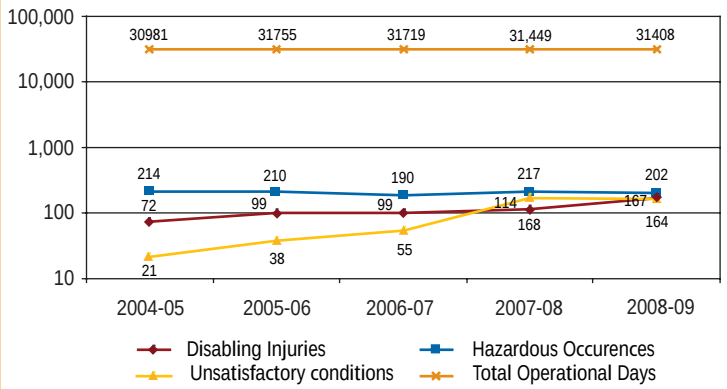
The Fleet operates in a significantly risk-based maritime environment where our vessels, ACVs, helicopters and small boats conduct operations in some of the world's most remote locations under extreme environmental conditions. We remain committed to safety, security and environmental protection in the delivery of quality services to our clients. The safety and security of our seagoing personnel, supernumeraries, support staff and scientists is paramount.

The Fleet manages risk through the SSMS. A total of 25 full-time employees work with seagoing and shore-based Fleet personnel to promote a culture that puts safety and security first on a daily basis. These employees promote a culture of safety and ensure safe and secure delivery of services through a rigorous system of audits conducted on board all Fleet vessels.

In 2008–2009, 127 audits were completed and 37 new ship security officers were certified under the SSMS. Fleet Safety and Security also tracked each reported shipboard incident. Overall, the number of reported incidents continued to increase in 2008–2009. This increase can be attributed to an organizational culture change in which openly reporting incidents is considered an exercise in prevention and an opportunity to share best practices and lessons learned.

In 2007–2008, we reported net increases in unsatisfactory conditions and hazardous occurrences. This was attributed to increased awareness and the integration of the small fleet into the system. This year, the number of unsatisfactory conditions and hazardous occurrences has stabilized, with evidence pointing to a slight downward trend (see Graph 13). This trend can be attributed to employees' being more proactive in dealing with safety issues.

Graph 13: Trend of Reported Incidents, 2004-2005 to 2008-2009



Unfortunately, the number of disabling injuries has continued to rise in 2008–2009. A careful analysis of the statistical data has revealed that the marine workforce is aging (see Table 2 in Section 2.3) and that marine employees' susceptibility to injury is therefore increasing. This increase in disabling injuries has also increased the total number of hazardous occurrences overall for 2008–2009.

CCG MBB-105 helicopter

Photo: Cpl David Cribb, DND Combat Camera

2008–2009 Results

Continued the implementation of the National Respiratory Protection Program, based on the Canadian Standards Association standard, to reduce exposure to contaminants through improved ventilation, enclosure or isolation, or by substituting a less-hazardous process or material, and providing personal protective respiratory gear when needed

Increased the awareness of proper lifting techniques

Continued to work closely with Integrated Technical Services to ensure that Fleet requirements are fulfilled in the CCG Fall Protection Program

In the fall of 2008, an employee survey was developed and distributed to assess the effectiveness of Fleet's SSMS. A preliminary analysis of the 1042 survey responses (31%) that were returned reveals that 77% of respondents believe they work within a "safety culture." The full report is expected to be published in the fall of 2009.

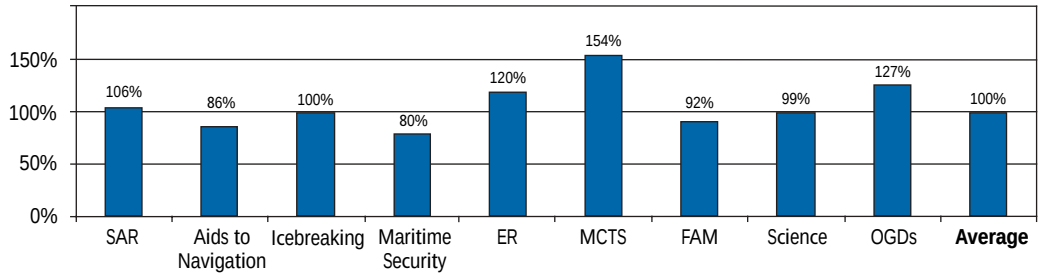
5.3 Effective Delivery

Effectiveness is a concept used to assess the extent to which an organization is meeting its expected results. The Fleet has developed various measures to assess its effectiveness, including service planned versus service delivered, as well as operational delays.

By comparing the service delivered to what had been planned for 2008–2009, we gain an appreciation of the effectiveness of our service delivery (see Graph 14). Where values exceed 100%, service demands were actually higher than we had anticipated and consequently more operational days were delivered. Where values are below 100%, fewer operational days were delivered than had been planned. The normal tolerance range is plus or minus 10%, given operational, environmental, and program fluidity.

As Graph 14 shows, the Fleet achieved an overall service delivery average of 100% in 2008–2009, although some variability by program is apparent. As in previous years, despite significant planning of our vessel operations, adjustments had to be made throughout the year to accommodate the evolving needs of our clients. When extraneous requests for services are made during the year, the Fleet does its utmost to fulfill them. These figures are as much about clients providing accurate estimates of their need for services (planned days) at the beginning of the year and the fact that many maritime priorities cannot be forecasted, as they are about the actual execution of the Fleet Operations Plan during the year in question (delivered days).

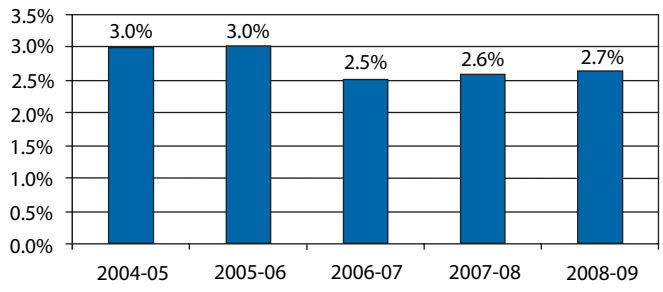
Graph 14: Service Delivered versus Service Planned by Fleet Clients, 2008-2009 (%)



Another means of assessing fleet effectiveness is measuring operational delays. This is based on the time a vessel is available but experiencing delays due to such factors as weather, the need to wait for equipment or personnel, equipment breakdown or for administrative reasons.

In 2008–2009, 834 days, or 2.7% of total vessel activities, were lost due to delays. As Graph 15 shows, this statistic has remained relatively stable over the past five years. Of all the services that the Fleet delivers, delays most often affect the FAM (34.1% of delays) and Science (23.5% of delays) programs; although the reasons for these delays are somewhat interpretative, some are driven by the physical condition of these vessels which are generally older then the rest of the fleet. However, the vast majority of delays were due to weather, difficult ice conditions, or the need to wait for a favourable tide.

Graph 15: Percentage of Service Time Lost Due to Delays, 2004-2005 to 2008-2009 (% of Total Operational Days)



5.4 Efficient Delivery

The Fleet uses vessel availability and multitasking as performance measures to gauge its efficiency in delivering services to its clients. A vessel is available when it is ready to be assigned to a mission or client, and it is unavailable when in winterization, lay-up, or in extended planned or unplanned maintenance. Vessels in winterization are essentially

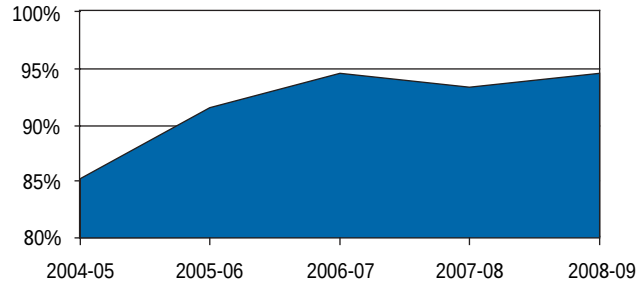
Fast Rescue Craft

Photo: Department of Fisheries and Oceans

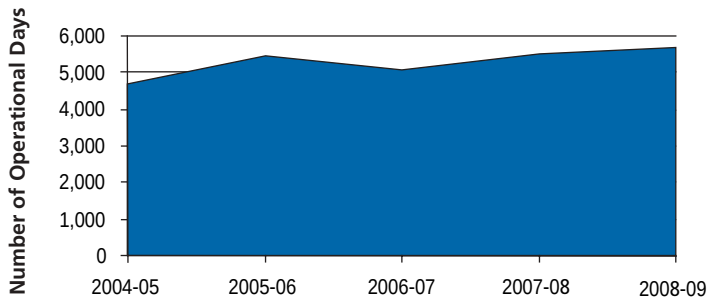
unavailable for use by clients due to the seasonal nature of the program. This does not mean that the Fleet is restricting client access to the vessel but rather reflects the inherent nature of operations in a northern climate. Similarly, planned and unplanned maintenance is arranged in consultation with program client needs and also serves to instill confidence in the client that vessels are maintained to the best of CCG's ability, given competing requirements for scarce resources.

In 2008–2009, the Fleet utilized 95% of its vessel availability to provide client services. This is an increase over the 92% average for the past five years (see Graph 16). The remaining 5% of the time, vessels were mostly in lay-up or winterization, in scheduled maintenance, or undergoing refit. While Graph 16 shows the utilization of operational vessels, Graph 17 focuses on the amount of time all vessels were not available due to maintenance and refit. For 2008-2009, operational vessels spent a total of 5,689 days undergoing maintenance and refit. This is an increase of approximately 600 days since 2006-2007. This trend is expected to continue due to the advanced age if of our vessels and their requirements for extensive maintenance periods. In fact, CCG has dedicated significantly more resources and planned maintenance to its most at-risk vessels and will continue to do so to stabilize current availability levels.

Graph 16: Utilization of Operational Vessels for Client Service, 2004-2005 to 2008-2009 (%)



Graph 17: Vessels Not Available Time Due to Maintenance/Refit, 2004-2005 to 2008-2009 (# of Operational Days)



The second relative measure of efficiency is multitasking – when a vessel performs two or more tasks simultaneously. Icebreakers, for example, can provide a number of other services while icebreaking. These include providing SAR coverage, performing observe, report, and record functions, supporting maritime security, and conducting environmental monitoring and response. Simultaneous missions can therefore often be conducted with one vessel, within the constraints of geography, time, availability, and capability.

In 2008–2009, 11.7% of days delivered were multitasked. While the Fleet's ultimate goal for multitasking is 15%, we have had to revise this target due to the continued dedicated assignments of the *CCGS Louis S. St-Laurent* to UNCLOS and of the *CCGS Amundsen* to IPY research. These activities do not allow for multitasking. Table 11 gives a five-year trend of multitasking.

Table 11: Multitasking Trend, 2004-2005 to 2008-2009 (%)

2004-2005	13.3%
2005-2006	13.9%
2006-2007	13.8%
2007-2008	12.3%
2008-2009	11.7%

5.5 Financial Resources: Transition to Transparency of Costs

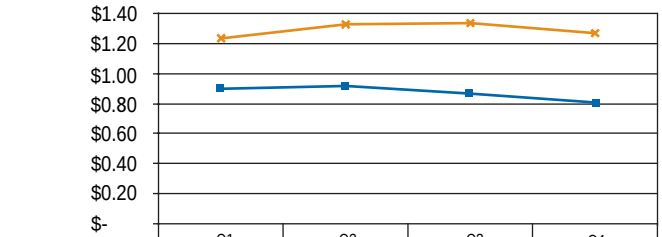
Significant investments in the Coast Guard over the past few years have enabled it to maintain its level of service to Canadians, and recent Government financial assistance has allowed the Fleet to make important asset re-investments. However, in regards to its year-over-year operating funds, the Fleet is becoming less able to respond to the same level as in previous years. As is the case with all organizations operating on a fixed budget, inflation impacts on our ability to meet client expectations, with fluctuating fuel costs as major consideration.

The establishment of the Fleet Operational Readiness Program within the Department's Program Activity Architecture in 2007–2008 has more firmly stabilized the operating finances of the Fleet for 2008–2009. Without this stability and clear understanding of the amount of funds expended for operation, refit, and procurement, CCG would not have been able to present a strong business case to the federal government agencies that the Fleet was running low on funds for purchasing fuel due to unprecedented fuel price increases.

Of all the Operations and Maintenance (O&M) funds expended by the Fleet, fuel is the largest commodity purchased. Also, because of its volatility, fuel price is identified as one of the national financial risks accepted by the Fleet on behalf of all clients. The Fleet carefully monitors the consumption and price of fuel throughout the year to determine whether additional funds are required. Fuel represents a significant financial pressure for all CCG, especially when prices rise quickly, as was experienced during 2008–2009, which was one of the most volatile periods for fuel prices in recent history. **Just a $0.01 increase in fuel per litre prices means a $630,000.00 increase in the Fleet's fuel bill at the end of the year.**

As indicated in Graph 18, throughout 2008–2009, the price of fuel consistently exceeded the budget. This increase represented a $20-million pressure for the Fleet, and in October, a fuel business case was presented to government central agencies to solicit additional funds from Treasury Board's management reserve. Without this emergency funding, the Fleet would have been forced to suspend some operations to avoid exceeding the budget—a difficult proposition for any service delivery organization.

Graph 18: Average Quarterly Diesel Price per Liter, 2008-2009



	Q1	Q2	Q3	Q4
Original Plan	$0.89	$0.91	$0.87	$0.80
Fuel Update	$1.23	$1.33	$1.33	$1.27

CCG Mamilossa, New Air Cushion Vehicle
Photo: :Benoît Filion, QC Region

To help manage fuel price volatility, the Fleet has developed the Fuel Management Policy, fuel forecasting tools, and a national fuel budget. These tools are now figuring more prominently in Fleet management planning and decision-making processes. CCG continues to work with Central Agencies to develop a long-term solution to fluctuating fuel prices.

This was the second year that the new Fleet Financial Plan structure was used. This plan and process allow for clarity of the expenditures related to the execution of the Fleet Operations Plan in each region and for each program. Many decisions had to be taken by the Fleet Executive and CCG Management Boards. Difficult choices are made and all were guided by the Fleet Financial Framework principles of openness, transparency, and accountability. The triad of the Fleet Operations Plan, the Fleet Financial Framework, and the resulting Fleet Financial Plan in support of operations, ensures that the Fleet manages and controls its expenditures both ashore and afloat as economically as possible. The Fleet operates 114 vessels and 22 helicopters throughout the country, including the management and support personnel ashore, with an expenditure of approximately $280 million per year. Table 12 indicates the Fleet National Budget in 2008–2009.

2008–2009 Results

With the establishment of SLAs with Science and FAM, the National Fleet Costing Model became the official means by which we cost our services to clients

Presented a fuel business case to government agencies for additional funding in support of Fleet vessel operations

Followed through with the Fleet Financial and Operational Plans, on budget and on program, to ensure the most economical and effective operation of the Fleet for 2008–2009 for all clients

Table 12: Fleet National Budget 2008-2009 ($000)

	Salaries	O&M	Fuel	Sub Total	Minor Capital	Total
Fleet	159,418	28,180	59,945	247,543	398	247,941
Helicopters	-	10,841	-	10,841	-	10,841
Sub Total	159,418	39,021	59,945	258,384	398	258,782
Shore	19,793	5,191	-	24,984	22	25,006
Total	179,211	44,212	59,945	283,368	420	283,788

CCG MBB-105 helicopter

Photo: Cpl David Cribb, DND Combat Camera

6 LOOKING FORWARD

The Canadian Coast Guard has made solid progress in the past year as it secured its reputation as a strong national maritime institution dedicated to its motto of "Safety First, Service Always." With the Fleet at the forefront, CCG has been very effective in delivering its programs and services to Canadians. It has also seen much needed investments—particularly within the Fleet—that will help it do its job better both now and into the future.

The Fleet—and CCG as a whole—anticipates an increase in demand for its services in the coming years. Increases in maritime traffic, recreational boating, fishing, and related commercial activity; the challenges of climate change; and heightened requirements for offshore oil and gas exploration are creating a greater demand for the Fleet's services. Combined with our enhanced role in maritime security and in the Government of Canada's activities in the Arctic, these factors are raising CCG's profile as a steadfast federal presence on Canada's waterways, most noticeably in the North. The Fleet must therefore focus on providing a modern, reliable, and cost-effective mix of vessels, ACVs, and helicopters to respond to increasingly discriminating demands from the Canadian public, federal department and agency clients, and the national and international marine industry.

The Fleet will continue to respond to its clients' evolving needs in the professional, efficient, and adaptable manner they have come to expect. This response will require ships, vessels, and helicopters that will be highly adaptable and can multitask as they serve a wide variety of clients. It will also require solid partnerships across the government as well as with public and private institutions. Furthermore, as we work to build our fleet of the future, we must ensure that the women and men who serve their country proudly as Coast Guard employees remain the cornerstone of our operations, are given every opportunity to develop their skills, and thrive as individuals and professionals.

We recognize that our role as Canada's civilian maritime on-water service provider has never been more important, or more demanding. Every day our women and men dedicate themselves to serving our clients and Canadians to the best of their ability.

Should you have comments regarding this publication, please contact any of the persons named in Section 7.

We welcome your suggestions.

Visit us on the Web at: http://www.ccg-gcc.gc.ca

Newfoundland Scenery with *CCGS Cape Roger* - Offshore Patrol Vessel

Photo: NL Region

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List of Acronyms

ACV	Air Cushion Vehicle	NACGF	North Atlantic Coast Guard Forum
BIO	Bedford Institute of Oceanography	NCC	National Coordination Center
C&A	Central and Arctic Region	NPCGF	North Pacific Coast Guard Forum
CCG	Canadian Coast Guard	OGD	Other Government Departments and Agencies
CCGS	CCG Ship	O&M	Operations and Management
CMSG	Canadian Merchant Services Guild	PA	Pacific Region
C&P	Conservation and Protection	PSAC	Public Service Alliance of Canada
DFO	Department of Fisheries and Oceans	QC	Quebec Region
DND	Department of National Defence	RCMP	Royal Canadian Mounted Police
ER	Environmental Response	ROC	Regional Operations Centre
FOCOS	Fisheries and Oceans' Coordinated Olympic Support Centre	SAR	Search and Rescue
FAM	Fisheries and Aquaculture Management	SC	Ships' Crews
FTE	Full-Time Equivalent	SLA	Service Level Agreement
GPS	Global Positioning System	SO	Ships' Officers
GT	General Technical	SSMS	Safety and Security Management System
IPY	International Polar Year	STCW	Standard of Training, Certification and Watchkeeping
IRB	Inshore Rescue Boat	TBD	To Be Determined
MA	Maritimes Region	TC	Transport Canada
MCTS	Marine Communications and Traffic Services	UNCLOS	United Nations Convention on the Law of the Sea
MSET	Marine Security Enforcement Team	U.S.	United States
NAFO	Northwest Atlantic Fisheries Organization	VLE	Vessel Life Extension
NL	Newfoundland and Labrador Region		

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