Marine Expertise and Services

Public Works and Government Services
Canada

Presented by:
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Presentation Outline

- Our Mission
- Our Clients
- Our Services and Expertise
- Partnerships
- Future
- Realizations
Our Mission

To work in partnership with our clients to provide quality, cost-effective and timely engineering, project management and technical services
Implementing its client service strategy, PWGSC delivers high-quality services and programs that meet the needs of federal organizations and ensure sound stewardship on behalf of Canadians.

PWGSC provides marine structural engineering expertise for federal departments and agencies, including Fisheries and Oceans (DFO), Transport Canada (TC), the Parks Canada Agency (PCA) and other branches of Public Works and Government Services Canada (PWGSC).

### Annual volume of national projects (M$) and federal client departments

<table>
<thead>
<tr>
<th>YEARS</th>
<th>DFO</th>
<th>TC</th>
<th>CPA</th>
<th>PWGSC</th>
<th>OTHERS</th>
<th>NATIONAL TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011/12</td>
<td>93.32</td>
<td>23.43</td>
<td>1.03</td>
<td>4.71</td>
<td>5.25</td>
<td>127.74 M$</td>
</tr>
<tr>
<td>2012/13</td>
<td>56.02</td>
<td>16.25</td>
<td>3.27</td>
<td>3.22</td>
<td>12.84</td>
<td>91.60 M$</td>
</tr>
<tr>
<td>2013/14</td>
<td>47.96</td>
<td>28.80</td>
<td>13.75</td>
<td>6.84</td>
<td>4.55</td>
<td>101.90 M$</td>
</tr>
</tbody>
</table>
Our Services

- Studies and planning
  - Coastal engineering
  - Marine structure studies and design
  - Marine environmental expertise
  - Dredging and hydraulic surveying expertise
- Conceptualization and design
- Design drafting and construction
- Project management
Our Services (cont’d)

• Strategic Advice for custodian and managers
• Direct access to the following:

Business segment : National Network of Marine Engineering Specialists PWGSC :
  - Sharing of expertise and tools
  - Integration of services
  - Provide leadership in the field

Environmental Services:
  - Assessments of the environmental impact of marine projects;
  - Management of dredging operations and contaminated sediment;
  - Management and monitoring of aquatic habitats;
  - Ecological characterization of marine habitats.

Hydrographic Services:
  - New technology is making it possible to produce detailed images of the seabed and of infrastructure.
Hydrographic Survey Services

Warf face, sheet pile (left) and flat face (right) scour purple color, 2011

Identification of a wreck that had never been spotted by anyone Canadian Coast Guard Base in Quebec City
Our Services (cont’d)

- Direct access to the following:
  - Procurement services: Contracting Authority
    - Standing Offer Agreements
    - Supply Arrangements
    - Request of proposal
  - Security services for implementation of PWGSC’s Integrity Framework:
    - ...established in 2012, increases due diligence, reduces the opportunity for fraud and manages the reputational risk to department. The framework enables the Department to cease business or to refuse to do business with companies and individuals convicted of offences that are linked to a high risk to the integrity of government procurement and real property processes.
  - Office of Small and Medium Enterprises (OSME) services:
    - Determining optimum action to be taken to meet market conditions
  - Claims resolution services
  - Occupational health and safety services
Technicians, Project Managers and a Procurement Advisor work together as a team to carry out the following:

- **Variety of structure**: dams, wharves, floats, retaining walls, navigational locks, bridges, graving docks, shore protection installations, river channel control structures, breakwaters, and other civil engineering works such as forts, lighthouses and buildings.

- **Activities**:
  - Recapitalization studies and design briefs;
  - Analysis and design;
  - Tender-ready specifications and drawings for construction projects;
  - Indicative and substantive cost estimates, including evaluations of asset replacement costs;
  - Peer review of consultant reports and project-related tender packages;
  - Procurement strategic and management of consultant services;
  - Surveying work, including hydrographic surveys;
  - Environmental studies
  - Project management in accordance with the National Project Management System (NPMS);
  - Construction supervision and quality control;
  - Financial management;
  - Risk management planning;
  - Project occupational health and safety reviews;
  - Dredging projects
Partnerships

- Hydrographic: partnership with the Canadian Hydrographic Service (CHS) to provide services Hydrographic Surveys.
- Under the Government Related Initiatives Program in Earth Observation (EO) of the Canadian Space Agency, PWGSC wants to develop and integrate EO technologies in the maritime domain:
  1. Monitoring the effects dispersion under dredging and ocean disposal of sediments.
- Office of Small and Medium Enterprises (BMSY): Canadian Program for Marketing Innovations (CICP)
- University: Supporting developments Graduate Studies
- National research Council Canada
Future

- **Challenge**: human resources, maintenance of expert internal capacity and ensure succession.

- **Degradation of structures**: Maintenance of marine structures to maintain and enhance the Canadian economy Government Priority.

- **PWGSC business model**: maintain an internal expert ability to ensure the quality assurance role (Oversight) while maximizing private sector participation.
RECENT PROJECTS

From West Coast to East Coast
Esquimalt Graving Dock
(Esquimalt Harbour, British Columbia)
Esquimalt Graving Dock (cont’d)
Latchford Dam Replacement Project (Ontario)
Latchford Dam Replacement Project (cont’d)

Cartographie des habitats aquatiques
Sault Ste-Marie Lock, National Historic Site of Canada

SSM Lock Reconstruction, 1997

SSM Valve Repairs, 2010
Rebuilt Cap-aux-Meules Breakwater (Québec)

Laboratoire small-scale model
Pictou Landing Harbour Developpement
(New Brunswick)
Thanks!