GeoConnections Annual Report 2007-2008

Message from the Chair of the GeoConnections Management Board

Now at mid-term in its current five-year mandate, GeoConnections activities during 2007-2008 focused on strategic investments that help to integrate one-of projects and support collaboration amongst partners and stakeholders. Highlights of the Program's accomplishments from the past year appear below.

The Canadian Geospatial Data Infrastructure Interoperability Pilot (CGDI IP) tested the feasibility of using open standards-based technology to improve the management and dissemination of CGDI data. Funded through a cost-shared collaboration between GeoConnections, several provinces, and private geomatics industry partners, the CGDI IP project demonstrated near-operational implementation of two emerging standards. As a result of this project, municipal, provincial, territorial and federal authorities can now confidently use technology based on open geospatial standards to update their data and automatically make it available online in real time to those who need it anywhere across Canada.

At the heart of the CGDI is interoperability, the ability to share and compare information from diverse sources, which is enabled by adherence to national and international standards[1]. This year two new standards that promote interoperability were adopted. As a result of GeoConnections work, nearly two dozen different federal departments and agencies now participate in sharing geospatial data through the CGDI.

The four priority user communities – public health, public safety, environment and sustainable development, and Aborginal communities – who are the focus of this phase of GeoConnections, have enthusiastically embraced the CGDI. Indeed, the Program has already met or exceeded many of its targets for publication of new thematic data sets that are of particular interest to these communities. All these new, specialized data sets present new challenges in terms of interoperability – a challenge that GeoConnections has been addressing over the past year with new initiatives to develop standards for specialized data. For example, work is now ongoing on: standards for management and exchange of wildlife data; the creation of a national infrastructure data model for the public safety community; development of mapping standards for well-water and groundwater quality; and the definition of standards and classifications needed for a framework data layer on land cover.

A key administrative improvement was the development of a single integrated announcement of funding opportunities, which reduced barriers for would-be project proponents. As a result GeoConnections signed contribution agreements with one hundred project proponents[2] in 2007-2008, vastly increasing the number of new partners to the CGDI.

I encourage you to read on and learn more about all the exciting projects and activities undertaken by GeoConnections over the past year.

Chair
GeoConnections Management Board

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1. The concept of interoperability as it applies to the Canadian Geospatial Data Infrastructure is discussed here: http://www.geoconnections.org/publications/tvip/arch_E/CGDI_Architecture_final_E.pdf, page 19

2. Some of the contribution agreements signed during this reporting year will not commence until next fiscal year, which explains the discrepancy between the number of projects listed here, compared to the detailed listing of projects in Annex 1.

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Introduction

GeoConnections is a national program housed within the Earth Sciences Sector (ESS), Natural Resources Canada (NRCan). The Program helps decision-makers use online location-based (or "geospatial") information, such as maps and satellite images, to tackle some of Canada's most pressing challenges. The Program focuses on working with partners in four priority user communities – public health, public safety and security, the environment and sustainable development, Aboriginal communities, and with the private sector to further geomatics technology development[3].

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Program Description

Funding for the Program is distributed through five functional program areas:

- User Capacity, which is responsible for partnering with the priority user communities to apply the CGDI in support of decision-making and policy development;
- Content, which maintains and expands framework[4] and thematic data sets available through the Canadian Geospatial Data Infrastructure (CGDI);
- Standards and Infrastructure, which collaborates with national and international bodies to develop relevant standards, and with Canadian private sector geomatics firms to ensure the technological stability and robustness of the CGDI infrastructure;
- Policy, Coordination and Communications, which is responsible for identifying and developing strategies to address issues related to geospatial data sharing and management, and liaising with the centralized departmental Communications Branch to support the program's outreach initiatives; and
- the Value Management Office (VMO), which oversees administrative and financial matters, including those relating to the administration of contractual relations with stakeholders and partners.

Program History

GeoConnections was launched in 1999 as a 5-year $60 million national program to build and operate the Canadian Geospatial Data Infrastructure (CGDI) – a mechanism for sharing location-based information over the Internet. The system of model partnerships pioneered by this first

3. Source: http://www.geoconnections.org/en/aboutGeo.html

4. Framework data layers are national in scale, and are the set of geospatial data that provides the reference framework for all other CGDI-compliant geodata.

phase of GeoConnections leveraged the initial investment into a total investment of $170 million from all levels of government, the private sector, academia and non-governmental organizations. The result was the creation of the CGDI and strong partnerships that have endured to the present day.

Based on the successes of the first five years, in Budget 2005, the Government of Canada agreed to invest another $60 million over another five years to maintain and expand the use of the CGDI by decision makers.

The focus shifted from building the CGDI to ensuring its usefulness to, and use by, decision-makers in four priority user communities – public health, public safety and security, environment and sustainable development, and matters of importance to Aboriginal communities. This shift in focus has important implications for GeoConnections' relations with existing partners and introduces new stakeholder groups, which the program must understand and engage.

Evaluation Framework

Building on the pioneering work of spatial data infrastructure (SDI) evaluators in the international academic community, GeoConnections established a comprehensive evaluation framework to accurately capture the program's performance, both in terms of outputs and with respect to planned impacts. Much of this evaluation research and development work was undertaken during 2006-2007. The overall evaluation framework was first presented to Treasury Board officers, then accepted by GeoConnections Management Board in November 2007.

Implementing the Performance Evaluation Framework for this Annual Report

This report includes output performance metrics from GeoConnections Results-based Management Accountability Framework (RMAF), as well as performance indicators intended to assess progress towards the immediate and intermediate outcomes on of the Program Logic Model. Two methodologies are applied to assess progress towards outcomes: quantitative metrics derived from program and project activities; and qualitative analysis of selected case studies. A third methodology will be added to the evaluation framework for the 2008-2009 and 2009-2010 annual reports.

Data Collection and Parsing

The majority of data collected for this report derive from GeoConnections project tracking software[5], which has been programmed to produce discrete reports relating to performance metrics. Data entry into the project tracking software has been undertaken by individual project authorities within the program. This has resulted in some unevenness in reporting project metrics. GeoConnections is engaged in an ongoing effort to ensure quality control in all data entry relating to project and program metrics.

5. GeoConnections uses *SmartSimple*, a commercial off-the-shelf (COTS) project tracking software package.

Case study information may also derive from success stories based on interviews with project proponents prepared during the year to augment GeoConnections' outreach activities.

In most cases, the project end date is used to identify which projects are reported in which fiscal year. Exceptions are noted below. Calculations of financial ratios in the performance metrics are based on the full budget of projects recorded, regardless of actual expenditures to date. Program expenditures such as salaries, operations and maintenance are generally excluded from the calculation of performance ratios, such as the geographic and sectoral distribution of funds. The financial statements in Annex 4 record actual expenditures during the reporting period.

External Evaluation

During this reporting period, GeoConnections worked with NRCan's internal evaluation function (Strategic Evaluation) to undertake an assessment of the Program's information and project management systems. A full evaluation is currently underway.

Alignment with NRCan Program Activity Architecture (PAA)

NRCan developed a new Program Activity Architecture for 2007-2008. Under the new PAA, GeoConnections falls under sub-activity 3.2.4.2 – Safety, Security and Governance (Activity 3); Natural Resource Landmass and Knowledge for Canadians (sub-activity 3.2); Basic Infrastructure is Provided to Support the Governing of Canada (sub-activity 3.2.4); Canada's Geographic Foundation (Sub-sub-activity 3.2.4.2).

Management Changes, Reporting and Accountability Structures

At the start of this reporting period a new Program Director was appointed and will serve for the balance of the program, bringing management stability and continuity. A Manager of Policy was also hired for the duration of the Program, bringing new expertise and cohesion to the Program's policy files.

Risk Monitoring and Mitigation

GeoConnections RMAF identified and sought mitigation strategies for the following key risk areas:

- **Governance:** Lack of an effective federal/ provincial/ territorial governance mechanism for geomatics technologies, framework data and policies could result in insufficient coordination and/or communication leading to duplication of effort.

- **Missing Objectives:** Program objectives may be missed due to external organizational factors such as lack of technical access to the infrastructure (e.g. broadband access by users) and lack of stakeholder resources needed to change their business processes.

- **Process Risk:** Risk resulting from inadequate or failed processes including non-compliance

with infrastructure standards, delays in departmental/partner contract processing, partner HR capacity and general lack of awareness of the infrastructure as a beneficial solution.

- **Supplier/Partner:** Risks that actions or inactions taken by partners or suppliers may negatively affect the achievement of objectives, e.g. suppliers misrepresent knowledge of user requirements.

- **Human Behaviour:** Cultural impediments to information sharing and resistance to a user-centred approach could impede the effectiveness of the program in meeting its stated objectives.

The Program continues to engage in informal risk monitoring and mitigation on an ongoing basis. For example, in 2005-06, the development of GeoConnections current governance model specifically took into consideration and sought to mitigate the governance risk. The pre-existing federal coordinating body for geomatics (IACG-InterAgency Committee on Geomatics) and federal/provincial/territorial geomatics coordinating body (CCOG-Canadian Council on Geomatics) were invited to nominate four individuals each to serve on the GeoConnections Management Board. Today, eight of the eighteen seats on the Management Board continue to be held by individuals who are also engaged in either the IACG or CCOG.

In 2006-2007, the program began to experience process delays that represented a risk to achieving funding targets. As a result of in-house analysis, the process for approval of contribution agreements was expedited by 10%. In the current fiscal year, an integrated announcement of funding opportunity process was developed to further mitigate process risks relating to meeting program objectives.

Additionally, human behaviour and supplier/partner risks were specifically considered when GeoConnections developed the criteria for acceptable funding proposals. To be eligible for funding, project proponents must demonstrate that they have undertaken acceptable user needs assessments and incorporated principles of user centred design. Evaluation of project proposals includes consideration of the extent to which project proponents have demonstrated strong and sustainable partnerships.

Program management via project tracking software enables regular monitoring of the extent to which GeoConnections has or will achieve its stated objectives.

Plans and Priorities for 2008-2009

Content priorities for next fiscal year include further work on framework data layers. A data model or standard will be developed for a new municipal boundary framework layer that will also be aligned with boundaries for First Nation's reserves. Another alignment exercise will

combine land-based digital elevation models with underwater bathymetry[6] to create a seamless topographic layer for all of Canada, both on land and underwater.

Next fiscal year will also see significant progress on standards that facilitate the sharing and comparison of thematic data sets. For example, the new National Infrastructure Data Model will be promoted, best practices shared and pilot projects funded, such as a transboundary critical infrastructure project that will involve collaboration between Canadian and American agencies. Work will be undertaken to develop a standardized set of symbols for visualizing incidents, emergency operations, natural hazards and critical infrastructure, which development will significantly enhance the usefulness of the CGDI for emergency management. Another project will work with Canada's Aboriginal communities to scope and develop a new standard describing and sharing the wealth of Traditional Knowledge that resides in these communities.

Priorities for Standards and Technical Infrastructure include plans for significant renewal of core CGDI infrastructure components, including the deployment of the new GeoConnections Discovery Portal. Ten directed innovation projects, addressing key CGDI technology gaps will be initiated during fiscal 2008-2009.

Priorities for the User Capacity program area will focus primarily on coordination and strategic investments to link projects and provide a cohesive component that improves the chances for sustainability of CGDI principles. Additionally, GeoConnections will continue to promote the development and adoption of standards and protocols to enable interoperability between different parties sharing data.

For the Environment and Sustainable Development community, which has already met its program targets, this means developing multi-agency systems to link existing portals, tools and data sets and enable agencies to work together more effectively and efficiently. In particular, GeoConnections will embark on a multi-agency initiative to advance the growth of what will ultimately become a self-sustaining network of integrated landscape management (ILM) practitioners across Canada. This work will improve the understanding and use of CGDI principles and standards within regional decision-making processes.

The Public Health community varies widely in its capacity for implementing geo-referenced information systems. Some public health organizations have emerged as leaders in managing spatial data and awareness of the potential is growing. For example, in September 2007, GeoConnections partnered with the Public Health Agency of Canada (PHAC) to undertake the first national Public Health Geomatics Conference in conjunction with the Canadian Public Health Association conference. This spurred discussion on the use of geomatics in public health amongst both experienced practitioners and neophytes. Two main gaps have been identified for the public health community. Many public health organizations require capacity building, particularly additional information is needed on how to access and use geospatial information, as well as the CGDI, for decision making. Secondly, there is a need to address basic issues

6. Bathymetry is the study of underwater depth, of the third dimension of lake or ocean floors. A bathymetric map or chart usually shows floor relief or terrain as contour lines (called depth contours or isobaths).

regarding data quality, access, standards, and protocols. Addressing these two concerns will be the focus of GeoConnections' work with the community for the next two years. To do so, GeoConnections has defined a three-pronged strategy to develop the geospatial foundation for public health, comprising a User Readiness Guide, a Data Study, and an Analytical Framework.

Within the Aboriginal community advisors and stakeholders identified two areas of high importance: land and resource management/community planning; and geomatics and CGDI awareness leading to increased capacity to use these technologies. These two areas will continue to be the focus of GeoConnections' work with this community. Also, further research and analysis will be undertaken to determine the authoritative, closest-to-source custodians for key data sets identified through data needs assessment. From now till the end of the Program there will be two strategy shifts. First, more emphasis will be placed on geomatics and CGDI awareness. Activities will include funding for a number of geomatics strategic/business planning projects and the development of training and geomatics/CGDI awareness packages. Secondly, opportunities for large-scale regional or provincial strategic initiatives that leverage existing partnerships and investments will be supported.

Within the public safety / security community, GeoConnections is supporting two priorities: Critical Infrastructure[7] Identification and Situational Awareness[8] (Consequence Management). By addressing these issues, GeoConnections will help to ensure that threats and hazards that affect the safety and security of Canadians are mitigated. GeoConnections' work in situational awareness provided a foundation for the Multi-Agency Situational Awareness System project (MASAS). MASAS is an initiative to integrate F/P/T location-based public safety and security incident information sharing. Much of the future work in this community will focus on further development of MASAS, including developing a system architecture, and funding five projects with provincial and territorial emergency management organizations to support the development of geospatial emergency management systems that will connect to the MASAS.

Also during 2008-2009, all members of GeoConnections program elements will be involved in developing an interactive on-line map, using CGDI-endorsed standards, to illustrate the distribution of funded projects.

The program's Policy, Coordination and Communications will be developing three best practice guides, namely government licensing of geospatial data update, privacy protection and an Aboriginal GIS awareness and implementation guide. It will also undertake the translation into French and Inuktituit of a best practices text book which will address the need of Aboriginal communities for a freely accessible resource that introduces the highest quality techniques of data production and sound methodology designed for use and occupancy maps. Furthermore, this

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7. Critical Infrastructure - consists of those physical and information technology facilities, networks, services, and assets which, if disrupted or destroyed, would have a serious impact on the health, safety, security, or economic well-being of Canadians or on the effective functioning of governments in Canada.

8. Situational Awareness - involves being aware of what is happening around you to understand how information, events, and your own actions will impact your goals and objectives, both now and in the near future.

fiscal year's priorities for the program's Policy, Coordination and Communications, will focus on research and analysis on numerous issues, such as economic impacts of the CGDI, national and international imperatives for interoperable digital geospatial information, impacts of innovative mass-market geomatics, and analysis of Federal, Provincial and Territorial Governments geomatics and mapping strategies. This work will inform the development of considerations for the sustainability of the CGDI after the end of the current GeoConnections program in March 2010.

Annex 1: List of Projects Funded in 2007-2008

The following projects were started during 2007-2008. Some will not be completed until after the end of the current reporting period. Further details on many of these projects can be found at: http://www.geoconnections.org/en/aboutGeo/projects. The program area is only indicated for Common projects; projects assigned to a specific thematic area fall within the User Capacity or Content program areas.

PROJECT NAME – ALL PROJECTS INITIATED IN 2007-2008	THEMATIC AREA
Aboriginal Land and Resource Management - Data Needs Assessment	Aboriginal
Aboriginal Mapping Network User Map: Connecting Local Indigenous Knowledge to Crown Land Referral De	Aboriginal
Carrier Sekani Geospatial Toolset	Aboriginal
CSTC Land Referral Process/Systems Workshop	Aboriginal
First Nations Land Referrals Workshop	Aboriginal
Geospatial Portal for Eeyou Istchee - UNA	Aboriginal
Improving Aboriginal Consultations and Information Sharing Through the Development of a Google-based	Aboriginal
Mapping a Brighter Future - Building an Anishinabek Nation Geospatial Application for Inclusive Trad	Aboriginal
Requirements analysis for an integrated work-flow management software and related system components	Aboriginal
Sites Online / Archéo en ligne	Aboriginal
Towards a Fluency in Mapping: Building Mapping Capacity with the Algonquin Nation	Aboriginal
British Columbia's Contribution to CGDI Interoperability Project	Common / Content
Canadian Geospatial Data Infrastructure Interoperability Pilot	Common / Infrastructure
Canadian Geospatial Data Infrastructure Interoperability Pilot- Lisasoft	Common / Infrastructure
Canadian Geospatial Data Infrastructure Interoperability Pilot- Sunertek	Common / Infrastructure
Canadian Geospatial Data Infrastructure Interoperability Pilot-Cubewerx	Common / Infrastructure
Canadian Land Cover Data Project: A New GeoBase Thematic Layer	Common / Content
CEOCat System Upgrade	Common / Content
CGDI Applications Specialist	Common / Infrastructure
CGDI Architect	Common / InfrastructureCopy of geoportal

PROJECT NAME – ALL PROJECTS INITIATED IN 2007-2008	THEMATIC AREA
Free and Open Source Software For Geospatial 2007 (FOSS4G 2007) Conference	Common / Infrastructure
GéoCongrès Conference	Common / UC
GeoConnections Regional-Scale Information Integration Analysis	Common / Content
Geoportal	Common / Infrastructure
GeoWeb 2007	Common / Infrastructure
GIAC 2007-2008 Workshops and Webcasts	Common / Policy
National road network NRNv1 provincial and territorial maintenance pact	Common / Content
National Road Network NRNv2 data layer part I	Common / Content
National Road Network NRNv2 provincial and territorial pact	Common / Content
Nouvelles données d'élévation du Canada 2007-2008	Common / Content
Nova Scotia: Contribution to CGDI Interoperability Project	Common / Content
Ontario GeoNames Web Feature Service Pilot Project	Common / Content
Organizing Space: Enabling Documented Knowledge to Flow	Common / Infrastructure
SensorBay - Integrating and Exposing Sensor Data Through Open Standards	Common / Infrastructure
WMS-WCS Geospatial Data Catalogue	Common / Infrastructure
Alberta Biodiversity Monitoring Program Portal Development Project	Env/Sust/Dev
Biodiversity information needs analysis for the	Env/Sust/Dev
Business Plan for a National Information System for Environmental Assessment	Env/Sust/Dev
Couverture nationale des champs de température de surface de la mer	Env/Sust/Dev
Define Requirements of Users Engaged in the 2010 Biodiversity Challenge for a Geospatial Application	Env/Sust/Dev
Development of best practice guides, capacity building documents and expert approaches for Integrate	Env/Sust/Dev
Environmental Attributes Screening Application	Env/Sust/Dev
Hectares BC – A Collaborative Environmental Analysis System for	Env/Sust/Dev
Integrated Landscape Management Secretariat	Env/Sust/Dev
Newfoundland and Labrador Water Resources Portal	Env/Sust/Dev
Online Archaeological Data Project (OADP)	Env/Sust/Dev
Ottawa-Gatineau Watershed Management Project	Env/Sust/Dev
Publication of Canadian Content Standard Document for Protected Area Data	Env/Sust/Dev
Publishing Bird Biodiversity Information for Decision-making	Env/Sust/Dev

PROJECT NAME – ALL PROJECTS INITIATED IN 2007-2008	THEMATIC AREA
Southern Gulf of St. Lawrence Coalition on Sustainability Strategic	Env/Sust/Dev
Thematic Water Data Standards	Env/Sust/Dev
Water Well Mapping and Analysis Network	Env/Sust/Dev
A Geospatial Application to Report ICES Evidence-Based Disease Surveillance and Population Health Me	Public Health
Alternate Level of Care (ALC) Patient Flow Portal for Decision Support and Community Awareness User Needs Assessment	Public Health
Central Alberta Public Health Surveillance	Public Health
Comprehensive Community Information System	Public Health
Defining the Strategic and Business Plans for an On-Line Mapping Portal to Monitor Neighbourhood Lev	Public Health
Development of a Web Application and Services within the CGDI framework for Community Health Program	Public Health
Developping a Shared Strategic and Business for the Calgary Consortium	Public Health
Establishing Our GIS Infrastructure Requirements	Public Health
Geospatial Mapping of Respiratory and Gastrointestinal Hospital Visit Data through a Regional, Real-	Public Health
Improving Human Health Risk Assessments using CGDI Endorsed Geospatial Technologies	Public Health
Infectious Disease Simulation Tool - A Geospatial Decision Support System - User Needs Assessment	Public Health
National Capital Region Integrated Air Quality Mapping Service	Public Health
Online Injury Atlas for Ontario	Public Health
Ontario Health and Environment Information System	Public Health
Ontario Health Service Provider Maps	Public Health
Public Health Geomatics Conference	Public Health
Strategic Planning for Health GIS Implementation in BC: Focus on Health Surveillance	Public Health
Using Geospatial data to Address Extreme Heat and the Urban Heat Island Effect in the Greater Toront	Public Health
VIHA Enterprise Health Geographic Information System (VEHGIS) Strategic Plan	Public Health
Critical Infrastructure Information Identification Project	Public Safety
Développement d'une infrastructure géomatique Web ouverte en sécurité civile	Public Safety
Downtown Transportation and Emergency Management System	Public Safety
Flood Event Prediction and Monitoring System	Public Safety
GeoInfoExchange	Public Safety
Geo-Spatial Emergency Response System	Public Safety
Grand River Information Network: Phase II	Public Safety
Overcoming Canada`s Public Alerting and Notification Distribution Challenge	Public Safety

PROJECT NAME – ALL PROJECTS INITIATED IN 2007-2008	THEMATIC AREA
Protective Response Interactive Services Management GIS	Public Safety
Public Safety Canada - MASAS Project Management Services 1	Public Safety
Region of Peel Spill Response System - IAO1 SP	Public Safety
Système de cartographie en ligne pour les ouvrages	Public Safety
User Needs Assessment of E2MV (Emergency Event Mapviewer)	Public Safety
Web-based Alberta Wildfire System	Public Safety

Annex 2: RMAF Indicators

Note data in this table are based on projects completed by fiscal year end, March 31, 2008.

Table 2: GeoConnections Performance Framework for Indicator 1 (Outputs)				
Output	**Indicator**	**Annual Target / Program Target**	**2007-2008 Results**	**Cumulative Results to March 31, 2008**
Federal and Inter-provincial infrastructure projects (national extents)[9]	Number / Proportion of projects completed	1 / 5	• Substantial progress was made towards the establishment of multi-agency systems (MASs) for two priority user communities – public safety, and environment and sustainable development. • Public safety advisors identified the need for a Multi-Agency Situational Awareness System. Public Safety Canada agreed to host the system and, with financial support from GeoConnections, hired a project manager. A GeoConnections implementation team was established and a contractor engaged to develop the system architecture. • Public health advisors have opted to devote more resources to foundational and capacity building rather than invest in a national information system. • Environment / SD advisors identified the need for a system to facilitate regional environmental assessments (REA). GeoConnections and Canadian Environmental Assessment Agency co-hosted a workshop with stakeholders to introduce and refine the business case for an NIS for REA. The business case was subsequently finalized and an expert panel of advisors formed. • COIN Atlantic, a project managed by the Atlantic Coastal Zone Information Steering Committee (ACZISC), is becoming a federal-interprovincial multi-agency infrastructure for sharing information about water and coastal zone management throughout Atlantic Canada. ACZICS members include private sector companies, NGOs, federal and provincial government agencies and academia.	
Single agency infra-structure applications	Number of projects completed	12 / 60	Total: 24 projects Breakdown by user community: • environment / SD – 5 projects • public safety – 9 projects • Aboriginal – 4 projects • public health – 5 projects • common – 1 project	Total: 35 projects Breakdown by user community: • environment / SD – 10 projects • public safety – 11 projects • Aboriginal – 6 projects • public health – 5 projects • common – 3 projects

9. This indicator is now taken to refer to the creation of Multi-Agency Systems (MASs) of significant regional or national scope. The name has changed to better reflect the operational reality. GeoConnections defines MASs as: "Large enterprise-wide/multi-agency systems that harvest, analyse, and present geospatial information, from a number of distributed sources, to support decision making within a specific line of national business. MASs include hardware, software applications, and data resources. As components of the Canadian Geospatial Data Infrastructure, MASs are based on standards and support the integration of multiple resources."

Table 2: GeoConnections Performance Framework for Indicator 1 (Outputs)				
Output	**Indicator**	**Annual Target / Program Target**	**2007-2008 Results**	**Cumulative Results to March 31, 2008**
Pre-CGDI user-readiness geomatics projects	Number projects completed	15 / 75	Funded 16 capacity-building and user-needs assessment projects undertaken by stakeholders • Aboriginal – 6 projects • Public health – 1 projects • Public safety – 1 projects • Environment /SD – 5 projects • common – 3 projects	Funded 25 capacity-building and user-needs assessment projects undertaken by stakeholders • Aboriginal – 9 projects • Public health – 3 projects • Public safety – 2 projects • Environment /SD – 7 projects • common – 4 projects
Maintained agreements for existing national framework data sets	National completion of framework data sets	1 / 6	Completion of national framework datasets is an ongoing effort. GeoConnections has successfully negotiated seven (7) maintenance agreements, as follows: • GeoBase National road network NRNv1 provincial and territorial maintenance pact • Maintenance of the Geobase National road network NRNv1 • Digital Elevation Mapping (DEM) of Canada (South) for GeoBase • National Imagery, also for GeoBase • NRNv1 (two agreements, one for financial support to provinces / territories and one agreement with GeoBase) • satellite imagery (one agreement for southern Canada and one for Northern Canada) • DEM (two agreements)	
New framework data sets[10]	Additional data sets integrated	NA / 4	Development of new national framework datasets is a multi-year effort, with significant progress having been made during the reporting period, as follows: • Undertook a UNA and business case study aimed at establishing the desirability and feasibility of a national parcel data system. • National Hydrographic Network – a multi-year agreement ($1.2M) was signed with GeoBase to establish Canada's first national data framework data layer relating to surface water (lakes, rivers, streams). • NRNv2 – an agreement with Statistics Canada enables financial transfers to provinces / territories • Also a UNA was undertaken to establish users needs with respect to establishment of a land cover framework data layer.	
Distributed thematic data sets closest to source	Data sets available through CGDI	4 / 20	Funded 115 distributed thematic data sets • Aboriginal – 1 data sets • Public health – 0 data sets • Public safety – 1 data set • Environment /SD – 113 data sets	Funded 139 distributed thematic data sets • Aboriginal – 1 data sets • Public health – 18 data sets • Public safety – 1 data set • Environment /SD – 119 data sets

10. This target was revised downwards from a total of five new framework layers in the interests of long-term sustainability. In this instance, data are derived from project end dates.

Table 2: GeoConnections Performance Framework for Indicator 1 (Outputs)				
Output	**Indicator**	**Annual Target / Program Target**	**2007-2008 Results**	**Cumulative Results to March 31, 2008**
Highly available core services[11]	Reduced frequency of failed access to Discovery and Geobase portals	Decrease of 20% / Decrease of 95%	Based on the March 2008 ISO report from CTI-Sherbrooke, availability of the GeoBase Portal exceeded 90% during 2007-2008. Discovery Portal (GDP) availability was improved over 2006-07 with the implementation of a high availability environment, providing backup and load balancing capacity. Uptime is estimated to approach 98%, although precise data was not available at the time of this report.	
Directed Innovation Tech-nologies and Tools	Number/ Proportion of projects completed	3 / 15	Five (5) directed innovation projects were completed during 2007-08.	Five (5) directed innovation projects have so far been completed over the life of the GeoConnections Program.
% project leverage including by partners	Ratio of funds leverage to funds invested	1 to 1	Overall ratio – 1 to 1.7 User Capacity – 1 to 1.69 Content – 1 to 2.05 Infrastructure – 1 to 0.99 Policy – 1 to 1.78	Overall ratio – 1 to 1.77 User Capacity – 1 to 1.64 Content – 1 to 2.34 Infrastructure – 1 to 1.1 Policy – 1 to 1.65
Best practice policy guides	Number of guides produced	NA / 3	Work on data licensing continued and the development of a best practices guide for the protection of privacy in geomatics for public health has been initiated.	

Regional and Sectoral Funding Distributions

Data in Tables 3a, 3b and 3c are based on data from projects that had ended by March 31, 2008. In previous reporting years, data in this table were based on projects started during the reporting period, which provided a better indication of program direction when there were few completed projects. To reconcile past annual reports with the present one, a break-down of funding by region and sector is provided for each year of the program so far.

Program expenditures such as salaries, operations and maintenance are excluded from the calculation of performance ratios, such as the geographic and sectoral distribution of funds.

The determination of regional funding is based on the postal address of funds recipients. However the scope of the project may impact beyond the region noted in these funding distributions. For example, the funds received by a project proponent that has a Toronto mailing address will be shown below as part of the total funding for Ontario, even though the project may be of national scope.

11. GeoConnections Infrastructure team is currently exploring the possibility of adding, or possibly substituting, another indicator that would measure the impact of new standards developed during the life of the program.

Table 3a: GeoConnections Performance Framework for Indicator 2 (Regional Funding Distribution Targets)					
Distribution Target (project $, excl. program operations)	**Atlantic**	**Ontario**	**Québec**	**Prairies**	**BC & North**
Target funding across country	10%-15%	20%-40%	10%-20%	10%-20%	20%-30%
2005-2006 Actual funding[12]	17.79%	0%	0%	35.76%	12.49%
2006-2007 Actual funding[13]	8.34%	47.61%	14.52%	0%	26.5%
2007-2008 Actual funding[14]	8.25%	31.45%	16.21%	16.17%	21.78%
Cumulative Total to March 31, 2008	8.33%	33.81%	15.83%	13.72%	22.47%

Note: Table 3b excludes funds directly disbursed to the private sector. These are shown separately in table 3c.

Table 3b: GeoConnections Performance Framework for Indicator 2 (Sectoral Funding Per Cent Distribution Targets)					
Distribution Target (project dollars, excluding program operations)*	**Government**			NGO & Academia	International
	Federal	**P/T**	**Local***		
Target funding across country	10%-20%	10%-20%	5%-10%	10%-20%	1%-5%
2005-2006 funding distribution (%)	0%	0%	35.76%	17.79%	33.97%
2006-2007 funding distribution (%)	19.11%	17.06%	16.76%	14.69%	3.03%
2007-2008 funding distribution (%)	20.2%	23.9%	13%	20.99%	4.76%
Cumulative Total to March 31, 2008	19.88%	22.63%	13.76%	19.96%	4.69%

* Funding to Local organizations includes monies contributed to projects run by municipal and Aboriginal band governments.

12. Note: One project, worth 33.97% ($19,000.00) of total GeoConnections funding, less salaries, operations and management funds, for 2005-2006, went to an organization based outside Canada.

13. Note: One project, worth 3.03% ($38,000.00) of total GeoConnections funding, less salaries, operations and management funds, for 2006-2007, went to an organization based outside Canada.

14. Note: Two projects, worth 4.76% ($309,780.00) and one project worth 1.38% ($90,000.00) of total GeoConnections funding, less salaries, operations and management funds, for 2007-2008, went to organizations based outside Canada of which the later was a private contractor and is captured in Table 3C.

Funding Flowed Through to Private Sector

Project proponents are required to submit financial reports to GeoConnections, the format of which reports requires an explicit notation of funds received from GeoConnections that their projects "flow through to industry". The percentage of "flow through to industry" funds is calculated by dividing the total "flow through" dollars reported by project proponents by the total of dollars GeoConnections contributes to all projects in a given period[15].

GeoConnections' performance targets require:

- that 20%-40% of funding directed to all projects undertaken by proponents at all levels of government (federal / provincial / territorial / local) be flowed through to the private sector; and
- that the private sector receive 50-60% of GeoConnections funding, either directly or from funds flowed to them from project proponents in other sectors[16]. This table illustrates the benefits that accrue to private industry as a result of GeoConnections funding.

In Table 3c, flow through funding is expressed as a percentage of the amount of GeoConnections funding allocated to each sector. However, consistent with the percentages reported in Table 3b, the percentage of GeoConnections funding that is given directly to the private sector is expressed in relation to overall GeoConnections funding given to projects. Similarly, the overall amount of GeoConnections funding allocated to projects for a given period is also used to calculate the total percentage of direct and flow-through funding for the private sector.

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15. This means that annual program budget allocation for salaries, operating and management costs are not included in the calculation of the ratio.

16. Other sectors are: federal government agencies and departments; provincial / territorial agencies and departments; local government, including municipal and Aboriginal; non-governmental organizations and academe; and international organizations.

Table 3c: % GeoConnections Funding by Sector Flowed Through to Private Sector							
Distribution Target (project dollars, excluding program operations)*	**Direct to Private (A)**	**Government (B)**			**NGO & Academia (B)**	**International (B)**	**Direct & Flow-Thru Funding to Private TOTAL (C)**
		Federal	**P/T**	**Local**			
Target funding to industry across country & sectors	**N/A**	**20%-40%**			**N/A**	**N/A**	**50% - 60%**
2005-2006 funding (%)	12.49%	N/A	N/A	0.00%	N/A	N/A	12.49%
2006-2007 funding (%)	29.35%	0.00%	57.82%	71.43%	24.65%	0.00%	54.81%
2007-2008 funding (%)	17.16%	25.39%	23.96%	58.65%	48.99%	51.58%	48.37%
Cumulative Total to March 31, 2008	19.08%	21.48%	28.04%	60.05%	45.81%	43.56%	49.15%

Annex 2: Outcome Indicators

Evaluation via User / Stakeholder Consultations

Baseline data for indicators measured via user and stakeholder consultations derives from the original user needs assessment undertaken by GeoConnections in 2005-2006. A second round of consultations will be undertaken during 2008-2009 to yield mid-term results, and will be reported in the Program annual report for that year. Final results will be obtained from consultations to be undertaken during 2009-2010 and will be reported in the Program annual report for that year.

Evaluation via Case Studies

Three immediate outcomes and one intermediate outcome from the Program Logic Model are assessed using case studies, as follow.

Immediate Logic Model Outcome #5: Agencies cooperate for data production, reducing duplication

York Region Planning Applications for Sustainable Development

This regional atlas project allows the staff in York Region agencies, including nine local York Region municipalities and conservation authorities, to access shared geospatial information relating to planning and sustainable development.

With funding from GeoConnections, York Region Geomatics was able to create interactive geo-processing mapping services by linking to the Canadian Geospatial Data Infrastructure (CGDI) and incorporating CGDI-compatible standards and specifications such as the Open Geospatial Consortium's Web Mapping Services (WMS). The project entailed creating a series of planning applications designed to accomplish specific tasks that bring together data from several agencies.

For example, an on-line property look-up view calls upon several databases that were not previously available to many planning users, and features an address label-maker so officials can more easily send out notices about public meetings and infrastructure projects. In addition to the primary audience of planners, public works staff are also able to use this application. A regulatory lands view enables land planners to easily access all the data about regulations and development restrictions that apply to a particular parcel of land. A simplified public view is tailored to the needs of property owners, developers and real estate professionals. Two other applications enable calculations about the density of particular neighbourhoods, and explore the potential for building new residential units in existing neighbourhoods so as to avoid urban sprawl. The region is now better able to monitor its impact on the environment, using baseline data and comparing these to existing conditions through a specialized environmental monitoring application.

Each of the participating agencies has its own branded website so, although the data all derive from a common source and are processed through common applications, users see the identity of the agency they are visiting. The core software, ArcGIS Server, provides the on-line geoprocessing capability. GeoCortex Essentials provided additional on-line tools and was used to customize the applications for York Region, but these enhancements are now available to all

GeoCortex users. Among the enhancements is a feature that enables functions to be administered for all the linked web sites as one, or for each site to be administered separately.

The Atlas Plus project was designed so data from different agencies can be readily updated, either automatically through WMS where the participating agencies technical capabilities allow, or through automated FTP data transfer.

A key benefit of this project is that it establishes a sophisticated geospatial infrastructure for future collaborative projects in York Region, in addition to the initial views and applications relating to land-use and sustainable development. The Region is committed to using this core geospatial infrastructure for other inter-agency projects, such as in health, transportation, infrastructure, and public safety sectors. To this end, it has adopted an iterative approach that entails ongoing user consultations, and implementation following users' recommendations.

In a multi-jurisdictional environment, nine separate municipalities are cooperating with their regional government to collectively enhance their access to region-wide data, significantly reducing duplication of effort.

Immediate Logic Model Outcome #11: Stakeholders are able to achieve operational efficiencies resulting from use of existing and evolving technical infrastructure services

SensorBay-Integrating and Exposing Sensor Data Through Open Standards

The SensorBay project captures data from sensors in, on, and around Placentia Bay, Newfoundland and Labrador, and makes these data available on the Internet via the SensorBay portal (www.sensorbay.ca). The SensorBay project enables anyone with a stake in the Placentia Bay region to benefit from the applications and the information the sensors offer. For example, if an oil spill occurs in the bay, response personnel can use sensor data to assess in real time the spill's potential impacts on local communities and coastlines.

Maintained by Compusult Limited and the Canadian Centre for Marine Communications, the SensorBay network also provides access to real-time data about the Placentia Bay marine environment. The SensorBay project delivers new web services to the Canadian Geospatial Data Infrastructure (CGDI) using standards-based service interfaces and formats. Compusult hosts SensorBay on a dedicated server on its premises and developed a new Sensor Management module for its Web Enterprise Suite (WES) product. Adding the WES Sensor Management (WSM) module to its portfolio of commercial products will enable Compusult to provide additional off-the-shelf technology for other CGDI users.

SensorBay accesses data from Environment Canada's Sensor Observation Service (SOS), a generic OGC standard for sensors and monitoring information that is used, in this case, to measure water quality. The technology can be used for a variety of on site measurements, including air quality, wind speed, and so forth. SOS augments visualization by allowing direct access to the data, as well as including information about each station, such as who is responsible for maintaining it, and what data the sensor collects. This allows users to access the latest authoritative water quality information.

As a result of the project, the community, defined as regional partners, including environmental non-governmental organizations, local government, businesses and industry, has been engaged and is now more receptive to the potential of this kind of technology. Local municipalities, schools and the private sector have all been able to access this data via the SensorBay portal. Compusult has provided weather stations and computers to four local high schools, who can use the sensor data to support their curricular and extracurricular activities. Local residents can zoom into the portal to find out about water quality in a local lake that might provide drinking water or be used for recreational activities.

Although each water quality sensor costs about $25,000, the initial investment is easily justified because the sensors' ability to automatically transmit information eliminates the need to send technicians out into the field to collect data. Furthermore, data are available on demand, rather than waiting for someone to go collect it and then enter it into the system. Further operational efficiencies are obtained as agencies cooperate to share these data.

Immediate Logic Model Outcome #13: Stakeholders are aware of time, effort and cost savings relative to business transformation using the CGDI approach

Business Case for Improving Canada's Geospatial Information Management Capacity for Regional Environmental Assessment (EA)

This project developed a comprehensive business case to guide the development, deployment, and long-term maintenance of a CGDI-based multi-agency information management system to support environmental assessment in Canada. Contributing geospatial solutions to support a more effective EA regulatory process is a priority issue under the Environment and Sustainable Development theme in GeoConnections.

The Business Case outlines the vision, scope, governance options, and activities associated with improving Canada's geospatial information management capacity in support of EA. Of particular interest is the expected shift from project based EAs that evaluate the impact of individual development projects to regionally based EA (REA). REA is a pro-active, ecosystem-based examination the cumulative environmental effects arising from multiple projects and other developments that exist with a given region.

The Canadian Environment Assessment Agency (CEAA), Canada's lead agency on managing the federal EA process, provided advice and guidance in the development of the Business Case.

Information management is key to improving two key objectives of EAs, adaptive management and cumulative effects management. Both activities require a capacity for a comprehensive, centralized, persistent source of knowledge for a region. The CGDI enables this kind of information management, particularly since it is a distributed system that allows each partner agency to maintain its own data closest to source.

The Business Case is a foundational document from which GeoConnections and CEAA will continue to work cooperatively as the Agency develops a corporate geospatial information management capacity to support EA and REA.

As a result of the Business Case project, and the ongoing cooperation between GeoConnections and Canadian Environmental Assessment Agency, the Agency now has a foundation upon which it can harness geospatial data, CGDI principles, and standards to address their emerging legislative and regulatory requirements.

Intermediate Logic Model Outcome #15: Due to the success and relevance of operational CGDI systems, champions in key priority areas transfer knowledge of the CGDI in their community to encourage take-up (taking ownership)

Northern Appalachian/Acadian Ecoregion Conservation Planning Atlas (NAECPA)

The lack of transboundary environmental information has been a major limitation to conservation planning and sustainable land-use decision making in the Northern Appalachian / Acadian Ecoregion. This regional atlas initiative has created an online atlas, which address this information gap, to assist land manager and planners in maintaining and restoring the ecological integrity and connectivity of this biologically diverse region.

The Northern Appalachian / Acadian Ecoregion Conservation Planning Atlas disseminates the results of four science-based conservation planning studies that provide users with detailed information, such as the diversity of habitats, distribution of human impact on the land and the lands that best contribute to the conservation of biodiversity in the ecoregion. CGDI standards and technologies were used to combine over 30 new data layers from these studies and create a set of thematic interactive maps. Through these maps, Atlas users, with little or no GIS and mapping skills, are now able to navigate and interact with the conservation planning information. The goal of the initiative is support conservation outcomes and suitable land use decision-making, by making conservation information easily assessable to users with little or no access to desktop mapping and GIS Skills and resources.

End-users of the Atlas include members of the Two Countries, One Forest (2C1Forest, www.2c1forest.org) consortium, as well as other non-government organizations, scientists, land trust groups, government land planners, and concerned community groups.

The Beta version of the Atlas, which was very close to a full version, was launched at the 2C1Forest conference titled “Crossing Boundaries and Connecting Landscapes” held in Montréal on 14th to 16th November, 2007. The pre-filmed demonstration lasted approximately 25 minutes and walked the audience through the Atlas web site and the functionality of the mapping application of NAECPA. The project was also presented at GeoCongress 2007 in Québec City, Québec, and to a group of approximately fifty GeoConnections’ stakeholders at an Environmental Assessment National Information System (EA NIS) Workshop in January 2008 in Ottawa.

The project team also worked hard to connect with town and regional land planners. Due to the local scale at which people in these positions work, they are often not attracted to, and do not have the budget to attend larger regional scale meetings. Reaching this community requires local collaborations and targeted communications, such as a meeting in November 2007 between project a team member from Canadian Parks and Wilderness Society, a senior planner with the

Greater Moncton District Planning Commission, and the Forest Management Program Coordinator for the City of Moncton. The meeting was an opportunity to provide the city planners with an overview of the Human Footprint and the other regional mapping projects that are contained in the NAECPA. During this meeting results of the Atlas were presented, along with the science based conservation data sets that are now available to support conservation and land planning.

A series of seven training workshops, attended by 114 people from NGOs, government agencies, land trusts, universities and foundations, was conducted during the first quarter of 2008.

Additional outreach is planned by these project proponents, demonstrating their role as champions of the CGDI who have taken leadership and are showing a strong sense of ownership. Additionally the project proponents have now secured further grant funding to develop the NAECPA further in 2009.

Evaluation via Program / Project Analysis

The background colour of the various outcomes listed below relates to the funded program area responsible for delivering these outcomes, as follows:

User Capacity	Content	Standards & Infrastructure	Policy & Coordination

Evaluation via Program / Project Analysis		
Outcome	**2007-2008 Results**	**Cumulative Results to March 31, 2008**
2. New CGDI systems, portals and applications build awareness in decision-makers and other end-users of the benefits of the CGDI	Forty-two (42) new portals or systems resulted from the 101 projects that commenced during 2007-2008.	Eighty-four (84) new portals or systems resulted from the 161 projects that have been started since the beginning of GeoConnections II.

Evaluation via Program / Project Analysis		
Outcome	**2007-2008 Results**	**Cumulative Results to March 31, 2008**
4. Increased awareness by data producing agencies of standard user centric design methodologies and user data requirements	Sixty-nine (69) of the projects started during this reporting period explicitly incorporated standard user-centred design features. Compared to results from the previous reporting period, this represents an increase from 58.06% of projects to 62.67% of funded projects that undertook user needs assessments.	110 (68.3%) of the 161 projects funded during this phase of GeoConnections explicitly incorporated standard user-centred design features.
7. Users are able to use processes to produce data that is derived from other scales or sources	Twenty-two (22) new guides or technical documents to enable users to use processes were produced by project proponents of projects whose funding commenced during the reporting period. In other words, nearly 22% of projects undertaken this year produced guides, compared to under 10% of the projects funded during 2006-2008.	A total of thirty-five (35) new guides or technical documents to enable users to use processes were produced by all project proponents of projects whose funding commenced prior to the end of the current reporting period. In other words, 21.5% of projects undertaken so far during GeoConnections II have produced a new guide or technical document.
8. Users aware of / are able to use reusable, current and relevant data	The projects commenced during 2007-2008 resulted in 127 new data sets being integrated into CDGI-linked systems. The more strategic approach taken during this reporting year resulted in more emphasis on discovering data gaps and integrating existing data sets, rather than adding new ones.	Fifty-five (55) of the projects funded so far in this phase of GeoConnections have made their data sets available through the CGDI. In total GeoConnections funded publication of 282 new data sets, of which only seven are not available through the CGDI.

Evaluation via Program / Project Analysis		
Outcome	**2007-2008 Results**	**Cumulative Results to March 31, 2008**
10. Users recognize the value of regionally integrated information in addressing numerous inter-jurisdictional issues using the CGDI[17]	Eighteen (18) projects contributing to new regional atlas were funded during the reporting period, including several data integration studies.	Twenty-four (24) projects have been funded so far since the start of GeoConnections II. These have resulted in seven (7) new completed regional atlases, with an eighth (8th) in development.
17. Priority user communities are using relevant, authoritative geospatial data in operational CGDI systems from closest point to source	Twenty-seven (27) of the projects funded during 2007-2008 used closest to source data sets.	Of the 149 projects that commenced between April 1, 2005 and March 31, 2008, fifty-seven (57) used closest to source data sets.
18. Multiple CGDI operational systems access common regionally integrated information, reducing duplication and improving user effectiveness	The 18 projects contributing to new regional atlases funded during the reporting period resulted in 38 new data sets being integrated into the CDGI.	The regional atlas projects funded so far contributed a total of 91 new data sets that are now integrated into the CGDI.

17. This measure relates to the creation of new "regional atlases". GeoConnections defines a regional atlas as a body of integrated information, built by multiple stakeholders, directed by the needs of a fully engaged user community, covering a user-defined, continuous piece of geography that feeds public awareness processes and that communicates issues and solutions with rich, contextual information that is relevant to many users of diverse background.

Annex 3: Acronym Look-Up Table[18]

Acronym	Meaning
ACZISC	Atlantic Coastal Zone Information Steering Committee
ALC	Alternate Level of Care
CA	contribution agreement
CCOG	Canadian Council on Geomatics
CEAA	Canadian Environmental Assessment Agency
CGDI	Canadian Geospatial Data Infrastructure
CGDI IP	Canadian Geospatial Data Infrastructure Interoperability Pilot
CIO	Chief Information Officer
COIN	Coastal and Ocean Information Network
DEM	Digital Elevation Mapping
E2mv	Emergency Event Map-viewer
EA	environmental assessment
ENGO	environmental non-governmental organization
ESS	Earth Sciences Sector
F/P/T	Federal / Provincial / Territorial
FOSS4G 2007	Free and Open Source Software For Geospatial 2007 Conference
FTP	File Transfer Protocol
G&C	grants and contributions
GDP	GeoConnections Discovery Portal
IACG	InterAgency Committee on Geomatics
MAS(s)	Multi-Agency System(s) (formerly referred to as NISs)
MASAS	Multi-Agency Situational Awareness System
NAECPA	Northern Appalachian/Acadian Ecoregion Conservation Planning Atlas

18. A glossary of acronyms relating to GeoConnections and the CGDI can be found on the GeoConnections web site at: http://www.geoconnections.org/en/resourcetool/glossary;jsessionid=EFA0FC9596DACB9600D5D0DED54D1AC1.app1#O

Acronym	Meaning
NGO	non-governmental organization
NHN	National Hydrographic Network
NIS	National Information System (GeoConnections is now using the more accurate term "Multi-Agency System" – MAS)
NRCan	Natural Resources Canada
NRNv1	National Road Network – version 1 (features include type of road surface, number of lanes, name of highway, etc.)
NRNv2	National Road Network – version 2 (all features of version 1, plus improvements to the addressing module – address ranges and civic addressing, as well as point location)
O&M	Operations and Maintenance
OADP	Online Archaeological Data Project
OGC	Open Geospatial Consortium, Inc.
PHAC	Public Health Agency of Canada
PAA	Program Activity Architecture
REA	Regional Environmental Assessment
RMAF	Results-based Management Accountability Framework
SDI	spatial data infrastructure(s)
SOS	Sensor Observation Service
UC	User Capacity (team – one of GeoConnections' four funded program areas)
UC#	UC1, UC2, etc. refer to financial codes for spending by the User Capacity team
UNA	User Needs Assessment
VEHGIS	VIHA Enterprise Health Geographic Information System
VMO	Value Management Office
WES	Web Enterprise Suite
WMS	Web Mapping Services
WSM	WES Sensor Management

Annex 4: 2007-2008 Financial Reports

Amounts in Thousands of Dollars	Year 1 2005-2006	Year 2 2006-2007	Year 3 2007-2008	Year 4 2008-2009	Year 5 2009-2010	Total
Approved by Treasury Board Sec.	$11,000.0	$12,000.0	$12,000.0	$12,000.0	$13,000.0	$60,000.0
Re-profile from Year 1	$7,900.0	$1,500.0	$2,500.0	$3,500.0	$0.0	
Adjustment[19]		$0.0	$42.0			
Budget after re-profiling Year 1	$3,100.0	$13,500.0	$14,542.0	$15,500.0	$13,000.0	
Reprofile 1 from Year 2	-	($6,400.0)	$1,300.0	$2,500.0	$2,600.0	
Budget after re-profiling Year 2	$3,100.0	$7,100.0	$15,842.0	$18,000.0	$15,600.0	
Employee Benefits and Pension (20%)	($165.7)	($169.4)	($172.8)	($182.1)	($182.4)	
Actual Budget	$2,934.3	$6,930.6	$15,669.2	$17,817.9	$15,417.6	
Actual Spending (Year to date)	$2,878.7	$6,806.8[20]	$14,167.2	$5,035.8	$0.0	
Expenditures (Forecast)[21]	-	-	-	$9,502.1		
Lapses	$387.0	$123.8	$1,502.0	$0.0	$0.0	
Non-approved re-profiling - year 4	$0.0	$0.0	$0.0	($3,280.0)	($3,000.0)	
Actual Budget after re-profiling - year 4	-	-	-	$14,537.9	$12,417.6	$57,987.2

Budget 2007-2008

19. Adjustment can include carry-forward from previous years, loans, or money transfers for GeoConnections to administer.

20. The 2006-2007 Annual Report recorded "Actual Spending (year to date)" as $6,421,500. This amount included only spending relating to projects and overhead. This 2007-2008 Annual Report reports all spending amounts, including corporate tax, fund exchange, loan repayments, and funds transferred to Communications Branch and Shared Services, which amounted to $385,300, accounting for the difference between Actual Spending of $6,421,500 reported in 2006-2007 and the $6,806,800 reported for the same period in this publication.

21. Forecast until year-end as of September 26, 2008.

	User Capacity	Content	Infrastructure & Architecture	Policy	Secretariat	TOTAL
O&M (Operations)	$1,940,830	$2,788,660	$2,295,000	$ 275,000	$2,505,710	$9,805,200
Grants & Contributions	$3,105,000	$1,267,000	$ 463,000	$ 165,000	$ 0	$5,000,000
Salary	$ 0	$ 0	$ 0	$ 0	$ 864,000	$864,000
TOTAL	$5,045,830	$4,055,660	$2,758,000	$440,000	$3,369,710	$15,669,200

Expenditure 2007-2008

	User Capacity	Content	Infrastructure & Architecture	Policy	Secretariat	TOTAL
O&M (Operations)	$ 771,239	$2,217,767	$1,907,943	$ 148,881	$ 179,479	$5,225,309
Lapses, Taxes & Losses					$1,902,985	
Grants & Contributions	$3,186,673	$ 944,762	$ 465,945	$ 39,235	$ 0	$4,636,615
Salary	$ 0	$ 0	$ 0	$ 0	$2,402,291	$2,402,291
TOTAL	$3,957,912	$3,162,529	$2,373,888	$188,116	$4,484,755	$14,167,200

Annex 5: GeoConnections Program Logic Model

GeoConnections Program Logic Model