GLYNN GOMES, M.Sc.



Web: www.gomesconsulting.com E-mail: glynn@gomesconsulting.com Linked in profile Tel: +1 (416) 993-7039

EXECUTIVE SUMMARY

- Over 25 years of experience working on multidisciplinary and collaborative environmental projects
- Strong scientific, analytical and technical background
- Progressive understanding of socio-economic and policy issues
- Experienced with working with multiple agencies and stakeholders
- Completed over 100 environmental projects

AREAS OF SPECIALIZATION

- Natural & Water Resources Management
- Contaminants in the Environment: Management, Research & Analysis
- Scientific & Socio-Economic Research
- **Environmental & Social Impact Assessment**
- Public, Government, Industry & Stakeholder Consultation & Liaison
- Jurisdictional Review

EDUCATION

M.Sc. Geography/Institute for Environmental Studies, University of Toronto

Research: Modeling organic contamination from urban runoff in stormwater detention ponds

Course Work: Water Resources Management, Environmental Management, Environmental Impact

Assessment, Environmental Decision-making, Contaminants in the Environment

B.Sc. Environmental Management (Major) and Biology (Specialist/Major), University of Toronto Course Work:

People and the Environment, Environmental Management, Economics, Environmental

Modeling, Marine and Freshwater Biology, Groundwater Hydrology, Limnology

LANGUAGES

- English Mother tongue, fluent with all forms of communication: writing, reading, verbal
- French Fair working knowledge with all forms of communication

OVERVIEW OF CV

- Page 1 and 2 of my CV provide an: overview of my qualifications; and, employment summary.
- The remaining pages provide details of my project experiences, organized into the following categories:
 - Natural and Water Resources Management;
 - Stakeholder Engagement;

- Socio-economic Studies; and,
- Review, Editing and Publishing



EMPLOYMENT SUMMARY

1999	Director,	Gomes Consulting Enterprises Ltd. (Oakville)
to Date	Owner	 Download the company's Advantages Slideshow, <u>here</u>. Consulting firm specializing in environmental management issues:
		- Sustainability & Natural Resources Management
		- Socio-economic & Scientific Studies
		- Public Consultation & Communications
		 Glynn has done 100 environmental projects in numerous sectors and cross-cutting issues. He also conducts all business development and marketing activities.
		 Note: Glynn operated the company as a sole proprietorship from February 1999 to January 2013. He incorporated the consulting practice in January 2013.
2013	Creative	Special Creativity Inc. (Oakville)
to Date	Director, Owner	 Special Creativity Inc. services academic publishers (copy/developmental editing, subject matter expertise, question writing, etc.), and develops fiction and art.
1997	Environmental	Self-employed freelance consultant (Toronto/Oakville)
to 1999	Consultant	Conducted independent environmental consulting projects
1996	Research	Environment Canada: Atmospheric Environment Service (Toronto)
to 1997	Associate	Researched atmospheric change impacts to biodiversity
1996	Research and	University of Toronto: Institute for Environmental Studies (Toronto/Mississauga)
	Teaching Assistant	 Researched socio-economic patterns in municipal water use, including international urban water conservation technologies, strategies and policies
		 Acted as a teaching assistant for a second year university course: Resource and Environmental Management
1994	Bill Collector	FCA International Ltd. (Mississauga)
to 1995		 Identified issues associated with non-payment, resolved conflict, and negotiated payment from clients of past-due accounts for Rogers Cable and Bell Mobility
1994	Wetlands	Ontario Ministry of Natural Resources (Maple)
	Resource Technologist	Conducted field work for wetlands protection, and assisted in wetland surveys
	recilliologist	 Assisted in public awareness promotion of urban fisheries for recreational use, fish species surveys, Canada goose relocation to alleviate over-population pressures
1994	Fisheries Research Assistant	University of Toronto: Department of Biology (Mississauga)
		 Conducted field investigations of fish feeding behaviour in two lakes; built, placed, and retrieved monitoring devices; compiled field data and analyzed survey video
1990	Customer	Toronto-Dominion Bank (TD; Toronto/Mississauga)
to 1992		 Worked first as a CSR for Shared Services to fill in for staff shortages from western Toronto to Hamilton/Waterdown; later, worked for Hurontario & King Branch.



PROJECT EXPERIENCE

NATURAL AND WATER RESOURCES MANAGEMENT

Jan. to Metro
April Vancouver
2023;
Oct.
2023
to
April
2024

(est.)

Water Quality Index Assessment for Receiving Environments of Wastewater Discharges (Year 1; Year 2)

- Glynn assisted with the development of Water Quality Indices for ambient conditions of three waterbodies (Fraser River, Burrard Inlet, Sturgeon Bank) that are influenced by Metro Vancouver's Greater Vancouver Sewerage and Drainage District waste water treatment plants.
- Glynn played key roles in reviewing relevant water quality guidelines and site-specific objectives, which were used by other team members in running monitoring data through the model used for calculating indices. He was also involved in discussions related to adapting the model for use with the data, conducting some QA review of model outputs, as well as integrating model results into the report. Glynn was also involved in: developing work methodology; preparing the report outline; writing parts of the report, or integrating other team members' inputs into the report, and providing overall report review to help finalize the report.
- The Year 1 final deliverables included a 51-page report and data describing the results of numerous modelling runs. The project has just been extended to add the current year of monitoring data to the assessment.
- This project is a joint venture between Glynn's company, Gomes Consulting Enterprises Limited, and ENNREGS Environmental Limited.

April to July 2021 Environment and Climate Change Canada: Great Lakes Ecosystem Management

Analysis of Great Lakes Public Health Unit Information for the State of the Great Lakes Beach Advisories Sub-indicator

- Glynn implemented the pilot State of the Great Lakes Beach Advisories reporting model. This is a Microsoft Excel model.
- Glynn revised the model organization and calculations, and populated it with Ontario Public Health information to characterize and update the Great Lakes Beach Advisories Sub-indicator for the Canadian side of the Great Lakes.
- Glynn prepared analysis and reports on each Canadian Great Lakes (Lake Ontario, Lake Erie, Lake Huron and Lake Superior) as well as the Canadian Great Lakes as a whole. The pilot model will allow for more robust assessment of Canadian Great Lakes beaches, and information produced will be reported through the 2020 State of the Great Lakes binational reports.

2020 to Feb. 2021 Environment and Climate Change Canada: Great Lakes Ecosystem Management

Improving the Approach to Track and Report on Recreational Beach Water Quality Health Through a Science-based Indicator

- Glynn conducted an international jurisdictional review of recreational beach water quality health indicators (e.g., Canada, Ontario, United States, Europe and Australia). He summarized this information and compared it to the indicator used in the Canadian side of the Great Lakes and analyzed the potential for proposing simplified metrics for a science-based health indicator report (mainly based on *E. coli* concentrations).
- Glynn prepared a 76-page report on the jurisdictional review that discussed: the state of the Canadian and U.S. Great Lakes Beach Advisories Sub-indicator; and, beach water quality assessment approaches in Canada (nationally and



Ontario), United States (nationally, Great Lakes states, other locations), and internationally (World Health Organization, European Union, Australia). He provided 11 recommendations on: annual status, trends, and standards; data sources; sampling and other methods; and, graphics used for reporting.

- Glynn analyzed a large dataset of new and historical water quality and beach
 advisory data, which included comparing it to recent changes in provincial water
 quality guidelines. This work involved extracting data received from Public Health
 Units across Ontario, consolidating the information into a master Excel
 spreadsheet, and displaying the data with tables and graphs. The dataset
 included data from 12 Public Health Units, nearly 200 beaches per year, the
 swimming seasons from 10 years, and sampling results from monitoring
 frequencies ranging from daily to monthly.
- Glynn also developed pivot tables (Microsoft Excel 365) to assist in understanding, analyzing and displaying the data. The pivot tables allowed users to easily summarize the data by year, lake, Public Health Unit and beach.
- Glynn provided a 23-page draft indicator report on two subsets of the data for Canadian beaches on the Great Lakes: all beaches from 2010; and, all beaches from the jurisdiction of one Public Health Unit from 2010 to 2019. This included assessing status for each data subset, assessing the trend (for the 10-year subset), and exploring better ways to graphically report the results.
- Glynn updated a 19-page Standard Operating Procedure to ensure ECCC staff know how to: organize and integrate new data as it becomes available; work with the master spreadsheet; and, update draft sub-indicator reports over future reporting cycles.

July to Aug. 2020 International
Union for the
Conservation of
Nature, Global
Marine and
Polar
Programme

Draft a Terms of Reference for a Consultancy to Reduce Plastic Waste in Small Island Developing States

- Glynn prepared draft terms of reference for a proposed consultancy for conducting a policy analysis and developing policy recommendations to reduce plastic waste in small island developing states in the Caribbean and Pacific Regions.
- Included in the above, Glynn prepared an assessment of key components needed for policy scoping and gap analysis for the plastics waste reduction initiative encompassing islands in these two regions.

Aug. to Dec. 2019 Fisheries & Oceans Canada (DFO)

Development of a Report on Transition to the New Arctic Region

- The Government of Canada is developing a seventh DFO administrative region (DFO Arctic Region) in addition to the other six DFO regions across Canada. This new region will play a role in fostering healthier northern communities, respecting the rights and interests of Indigenous people, and protecting the environment.
- Glynn assisted DFO by writing portions of a Vision Report. This report described what will be required to fully implement the DFO Arctic Region (e.g., regional boundaries, modern treaty obligations, current and projected socio-economic value of the Arctic Fisheries, etc.).
- Glynn assembled and interpreted: internal/external perspective DFO received on how best to support and deliver the DFO Arctic Regional Programs; and, other information that must be reviewed in order to finalize recommendations in the Vision Report.



Jan. to May 2019 Environment and Climate Change Canada: Great Lakes Ecosystem Management

Development of a Management Framework for the Western Lake Ontario Landto-Lake Initiative

- Glynn reviewed documentation detailing workshops and recent progress towards developing a partnership initiative amongst federal, provincial, regional and municipal governments to assist in work to promote water quality and ecosystem objectives in the western region of Lake Ontario.
- Glynn conducted a jurisdictional review of collaborative initiatives to describe best practices and lessons learned to promote collaborative working relationships.
- Glynn conducted interviews with key stakeholders who have expressed interest
 in participating in an Advisory Committee to manage this initiative. Further liaison
 with stakeholders was also conducted to gain their perspectives, understand their
 priorities, and learn about relevant initiatives.
- The goals were to gain perspective from these reviews and interviews to develop and build consensus for:
 - a. A Terms of Reference/Management Framework for the partnership to work together; and,
 - b. A Demonstration Project to demonstrate and refine the partnership.
- The final deliverable was a report that described the Terms of Reference/Management Framework, as well as the proposed Demonstration Project and related tasks and timing to implement it.

Jan to March 2019 Environment and Climate Change Canada: Great Lakes National Program Office

Assessment of Wastewater Treatment for the Canadian Side of the Great Lakes, Ontario

- Glynn conducted research, providing an overview of key issues, and discussing current or proposed solutions to minimize or mitigate impacts.
- Glynn completed a jurisdictional review of current instruments to deal with these issues, such as federal, provincial and multi-jurisdictional legislation, regulations, programs, funding and other instruments.
- He also described options to mitigate environmental impacts of CSOs and sewer bypasses in Ontario and in the Great Lakes basin.
- Glynn prepared a report detailing the findings.

May to June 2018 Office of the Chief Science Advisor of Canada

Report of Canadian Aquaculture Reviews and Panels

- Glynn reviewed documentation that provided formal advice and recommendations on finfish and shellfish aquaculture in Canada. This work supported the work of Canada's Chief Science Adviser who was leading an independent expert panel on aquaculture science. The panel's purpose was to advise Government of Canada on: consideration of scientific evidence in risk-based aquaculture decision-making; priority setting for DFO's aquaculture science work; and, how to improve communication of aquaculture science findings and decisions to Canadians.
- Prepared a 43-page report that summarized the information in tabular format organized by theme, recommendations relating to aquaculture, jurisdictional management response, timeline of responses, region of applicability, and information source.
- Summarized 71 recommendations and reported government jurisdiction



management responses. Key themes considered included:

- a. Fish Health and Fitness
- b. Escapement
- c. Environmental Effects / Ecosystem Health
- d. Risk-based Decision-making
- e. Enforcement and Compliance
- f. Governance / Program Administration
- g. Pubic Engagement / Consultation

Feb. Fisheries & to Oceans
March Canada:
2018 Oceans and
Sciences Sector

Assessment of the 2016 Draft Nunavut Land Use Plan (Draft NLUP) Against Operational Guidance for Identifying 'Other Effective Area-Based Conservation Measures' (OEABCMs) in Canada's Marine Environment

- DFO and ECCC have a mandate to conserve 10 percent of Canada's marine and coastal areas by 2020. As of December 2017, Canada has announced it has achieved 7.53 percent protection of the marine and coastal areas.
- Glynn's assessed the Draft NLUP to determine how much area the prohibitions contained therein would contribute to Canada's marine and coastal area protection goal if the Draft NLUP were finalized in its current state. Glynn reviewed these prohibitions and compared them to five criteria in DFO's operational guidance, which describe how to determine the amount of area being protected in OEABCMs. This resulted in an estimate of the area the Draft NLUP would contribute to Canada's marine and coastal area protection goal.
- The final deliverable was an 11-page report that provided rationale for the estimated area contribution. In addition, there were two appendices. The first provided a summary of legislation relevant to the Draft NLUP or the OEABCM criteria. The second appendix included a map depicting the locations and area contributions of the Draft NLUP to marine protection. The map was produced by DFO's in-house GIS expert, with direction from Glynn.

Jan. to Environment
March and Climate
2018 Change
Canada: Great
Lakes
Ecosystem
Management

Section

Great Lakes Citizen Science – Baseline Engagement Study

- Glynn analyzed the current level of level of public engagement in citizen science programs throughout the Canadian side of the Great Lakes Basin. This provided baseline information on these programs to help Environment and Climate Change Canada to support Government of Canada's commitment under the Great Lakes Water Quality Agreement (GLWQA) to facilitate public participation in activities that help achieve GLWQA objectives.
- Glynn reviewed over 150 potential programs. He also conducted a consultation of key organizations leading citizen science programs to collect information on the scale and scope of their programs. He summarized data on 28 programs.
- Deliverables included a 32-page report, with data represented in tables, graphs and maps, plus an Inventory of Citizen Science Programs in Microsoft Excel format.

Nov. Fisheries & 2017 Oceans to Canada: March Aquaculture 2018 Management Directorate (on

Phase 1: DFO Investigation of Canadian Aquaculture Business Risk Management Strategies

 Glynn updated the Canadian aquaculture risk profile to facilitate improvements in business risk management practices used in the Canadian marine and freshwater finfish, and shellfish, aquaculture industry. He conducted a consultation of key aquaculture stakeholders from the West coast, Central



behalf of LinHR Consulting Inc.)

Canada, and the East coast, who provided important perspective on these sectors. Glynn described the main business risk management strategies used in Canada in each of the noted regions.

- Glynn also described a range of business risk management programs from Europe, the United States, Chile and Asia, and a multinational aquaculture company. This included a review of various private, public or mixed strategies.
- Glynn summarized available historical information on aquaculture insurance premiums and payouts. He also summarized compensations through various government programs (e.g., payments made by the Canadian Food Inspection Agency, the Disaster Relief Fund, and the East Coast Salmon Aquaculture Compensation Association).
- He described Agriculture and Agri-Food Canada business risk management programming and its applicability to Canadian aquaculture. This included review of Growing Forward 2 (AgriInsurance, AgriInvest, AgriRecovery, AgriRisk Initiatives, AgriStability), and its successor Canadian Agricultural Partnership (2018–2023), Advance Payments Program, Farm Income Stabilization Insurance (Québec), Dairy Livestock Insurance Program and Poultry Insurance Plan (Nova Scotia).
- He offered several recommendations on aquaculture business risk management options and trade implications.
- The final deliverable is a 46-page report, plus an appendix that describes aquaculture risks identified during information sharing sessions with the aquaculture industry in 2005.

Jan. to Fisheries & May Oceans 2016 Canada: Policy Regulatory Initiatives, Aquaculture Management Directorate

Cooperation on Farmed and Wild Fish Interaction for Canada and United States of America

- Developed a report to support DFO's and the National Oceanic and Atmospheric Administration's (NOAA's; in the United States) collaboration on the management of interactions between farmed and wild fish relating to genetic interactions and pathogen transfer
- Conducted interviews of key government and industry stakeholders in Canada and the United States to collect information and perspective on relevant issues
- Compared and assessed legislations, regulations policies and other instruments used to manage genetic, pathogen and pest interactions between farmed and wild fish in Canada and the United States
- Considered the feasibility of developing a joint message statement on equivalence of Canadian and American marine net pen aquaculture regulatory programs
- Explored areas for cooperation on escape management and codes of containment to identify potential areas of regulatory alignment on management of farmed and wild fish interactions for senior management consideration at DFO and NOAA
- Focused on the following jurisdictions:
 - h. Canada federal, British Columbia, New Brunswick, Newfoundland and Labrador, and Nova Scotia
 - United States federal, and primarily Maine and Washington, but also Hawaii
- The final deliverable was an 85-page report (plus two appendices).



Aug. 2015 to Mar 2016 International Joint Commission, subcontracted under The Innovolve Group

Climate Change and Adaptation in the Great Lakes

- The project team assessed how Canadian and United States jurisdictions are able to address potential climate change impacts on water quality in the Great Lakes watershed. This involved conducting a governmental jurisdictional analysis, gap analysis, and analysis of other non-governmental roles. The focus was on what can be done under the current regulatory regime in Canada and the United States, without having to wait for new legislation to be developed.
- Glynn assisted in the identification of relevant contacts in the Canadian and United States jurisdictions, conducted interviews to collect information and perspective, and provided a review/quality control function for the gap analysis. He was also involved in identifying relevant players for the non-governmental analysis, as well as conducting some of the related interviews and analysis.
- The final deliverable was a 61-page report (plus appendix). Glynn provided substantial input into the drafting and development of *Chapter 4: Other Actors and Sectors The Role of Local Governments, Quasi-government Organizations, Tribes, Métis, First Nations, and Others.*

Follow-up Program for the Keeyask Hydroelectric Generation Project

- Developed a Follow-up Program for construction and operation phases of a hydro-electric generation project (Keeyask Generation Project) on the Nelson River in Manitoba (Canada)
- Reviewed categories of concern/Valued Ecosystem Components, impacts
 predicted by the environmental assessment, proponent commitments, regulatory
 requirements, monitoring and reporting requirements, and responsible agencies
 to develop the Follow-up Program
- Conducted a consultation with key government stakeholders/federal agencies (including Environment Canada, Natural Resources Canada, Major Projects Management Office, Transport Canada, Aboriginal Affairs and Northern Development Canada, Canadian Environmental Assessment Agency and Health Canada) to solicit feedback on the Follow-up Program
- The purpose of the Follow-up Program is to: verify predictions of project impacts; determine how effective mitigation measures applied are; assess monitoring results; and, identify adaptive management approaches that may be needed to address unanticipated adverse impacts
- The final deliverable was an 86-page report describing the Follow-up Program.

Jan. to Environment
Mar Canada: Great
2013 Lakes Issue
Management
and Reporting
Section

Climate Change and Water Quality in the Great Lakes Basin

- Researched recent information to help Environment Canada to develop perspective on climate change impacts to the Canadian Great Lakes basin ecosystem, and to help guide future work projects. The study focused on how projected climate change is expected to affect water quality in the Canadian side of the Great Lakes basin. The study considered relevant information from the United States side of the Basin and other areas.
- Investigated how various changes in water quality could result from these
 projected climate changes. This included identifying which of the 10 Great Lakes
 Water Quality Agreement (2012) Annexes were associated with each water
 quality impact. This was done to assist Annex leads to quickly identify which
 sections of the report were applicable to their management focus. Where
 possible, actual observed climate trends or changes were compared to projected
 climate change impacts. Summaries of the status of various water quality



- indicators were also provided. A gap analysis was done to identify gaps in climate change data and research.
- Deliverables included a 57-page report, a fact sheet, and an electronic inventory of Great Lakes climate change research and data.

Feb. to Mar 2013 Environment Canada: Great Lakes Issue Management and Reporting Section, subcontracted under Ehl-Harrison Consulting Inc.

Lake Ontario Nutrients Assessment and Information Gap Analysis

- Characterized nutrient issues in the Canadian side of Lake Ontario by reviewing recent reports and data to describe nutrient-related aquatic research, water quality monitoring activities, and associated results. Findings related to phosphorous, algae, dissolved oxygen, and ecosystem impacts on aquatic habitats and species (especially, fish communities). Research results were grouped into various categories (e.g., program type, including Lakewide Management Plans, Remedial Action Plans and others; duration of activities; jurisdiction responsibility; type of chemical; and, subject area) to assist decision-makers to focus on activities of interest. Information gaps and science/monitoring priorities for the lake were also assessed. The work was done to define nutrient-related science research priorities and to help achieve objectives of the Great Lakes Water Quality Agreement (2012).
- Provided strategic recommendations to assist in addressing current pressures impacting Lake Ontario's aquatic environment. Recommendations were associated with: phosphorus and nitrogen; total phosphorus and soluble reactive phosphorus; Dreissenid mussels; spatial and temporal watershed characterization; climate change; inter-agency coordination; and, other management initiatives.
- Final deliverables: an 80-page report, a PowerPoint presentation, and an annotated bibliography.

Dec. 2011 to Mar 2012 Environment Canada: Environmental Stewardship Branch (Environmental Protection Operations)

Project 2: Canadian 2010 Chemical Milestones Coordination for Lake Superior Basin

- Provided assistance to the Lake Superior Lakewide Management Plan Chemical Committee in drafting the 2010 Chemical Milestones status report. This report provides a 5-year update on the status ecosystem objectives for the Lake Superior Basin, which includes both Canada and the United States.
- Worked with the United States co-chair of the Chemical Committee, Glynn focused on writing the Canadian perspective, incorporating information from the Canadian emission inventory, and also reviewing sections of the report written by the U.S. co-chair and committee members. Work activities included coordination and collection of information between various government contacts, and inventory trend/gap analysis.
- Chemicals reported on include mercury, dioxin, PCBs, pesticides, hexachlorobenzene, and chemicals of emerging concern.
- The final report is 118 pages long, plus appendices. Download <u>Lake Superior Lakewide Management Plan: 1990-2010 Critical Chemical Reduction Milestones</u> (main body and appendices A through F) from the United States Environmental Protection agency website in PDF format.

Nov. 2010 to Mar 2011 Environment Canada: Environmental Stewardship Branch (Environmental

Project 1: Canadian 2010 Chemical Milestones Coordination for Lake Superior Basin

- As noted in Project 1 above.
- Glynn Gomes was designated as the Canadian Co-chair of the Chemical



Protection Operations)

Committee for this project.

Jan to March 2010 Fisheries &
Oceans
Canada: Habitat
Protection
Division (Habitat
& Species at
Risk Branch)

International Review of Marine Finfish Aquaculture Benthic Fish Habitat Monitoring Programs

- Researched and prepared a 53-page report that summarized Canadian (Newfoundland & Labrador Region, Pacific Region and Maritimes Region) and international (Scotland; Norway; Maine, United States; and Southern Australia, Australia) methodology for benthic fish habitat monitoring associated with marine finfish aquaculture operations.
- The purpose of the study was to help update and revise the Newfoundland Region Finfish Aquaculture Fish Habitat Monitoring Program.

Download the <u>full report</u>, Review of Marine Finfish Aquaculture Benthic Fish Habitat Monitoring Programs, in PDF format.

Nov. 2009 to Mar 2010 Environment
Canada: Water,
Science and
Technology
(Water Quality
Monitoring and
Surveillance)

Upstream / Downstream Water Monitoring of Organic Pollutants and Mercury in the St. Clair – Detroit River Corridor, 2001 to 2006

- Reviewed and analyzed two contaminants level surveys: 2001 to 2004 St. Clair –
 Detroit River Corridor Study; and, 2006 Persistent Organic Pollutants study that
 included surveys of sites in the St. Clair Detroit River Corridor as well as sites
 in tributaries flowing into the Corridor.
- Identified contaminants of concern, characterized upstream/downstream and U.S./Canada concentration differences
- Chemicals reported on include mercury, organochlorine substances, dioxin-like substances, and other organics.
- Described compliance with water quality guidelines, values, criteria or objectives (i.e., Great Lakes Water Quality Agreement, United States Environmental Protection Agency, Michigan Department of Environmental Quality, Canadian Council of Ministers for the Environment, and Ontario Ministry of the Environment).
- Produced a 91-page report, *Upstream / Downstream Water Monitoring of Organic Pollutants and Mercury in the St. Clair Detroit River Corridor, 2001 to 2006*, including seven appendices.

Nov. to Dec. 2008 Fisheries &
Oceans
Canada:
Biotechnology
and Aquatic
Animal Health
Science
(Aquaculture
Science Branch)

Review of Aquatic Animal Health Activities at Fisheries and Oceans Canada

- This study responded to a request from the National Science Directors Committee to review all aquatic animal health diagnostic testing and research activities in all six Fisheries and Oceans Canada (DFO) Regions (Pacific, Central & Arctic, Quebec, Gulf, Maritimes, and Newfoundland & Labrador), and provide background and scope for an internal DFO committee.
- The project clarified all aquatic animal health work conducted within DFO to enable more-integrated delivery of aquatic animal health services.
- Prepared a 32-page report that:
 - a. (Current Needs) Prioritized 62 aquatic animal health activities for the National Aquatic Animal Health Program (NAAHP), and described associated human resources. Also, 33 other projects were identified that were not NAAHP priorities.
 - b. (Future Needs) Described future needs (e.g., anticipated activities, staffing and laboratory needs) associated with the three core National Aquatic Animal



- Health Laboratory System laboratories: Pacific Region Pacific Biological Station; Central and Arctic Region Freshwater Institute; and, Gulf Region Gulf Fisheries Centre.
- c. Summarized existing pressures or issues affecting priority activities (including human resources and operating expenditures), outlined the governance structure of aquatic animal health activities, and identified key information gaps and next steps.

Oct. to Fisheries &
Dec. Oceans
2008 Canada: Habitat
Management

Directorate

Administering the Fish Habitat Protection Provisions of the *Fisheries Act* in Relation to Open-Water Finfish and Shellfish Aquaculture Operations

- Conducted an internal consultation of Habitat Management officials from regional and national headquarters, and reviewed associated documentation, to prepare an internal report summarizing and comparing current approaches to administering the fish habitat protection provisions of the *Fisheries Act* in relation to new and existing open-water finfish and shellfish aquaculture operations in all six Fisheries and Oceans Canada Regions.
- The report described the approaches used in each Region for the following:
 - Baseline information requirements that proponents must provide for site proposals;
 - b. Decision criteria used to make fish habitat decisions;
 - c. Regulatory tools used to indicate Habitat Management approval and/or impose fish habitat conditions on operators; and,
 - d. Monitoring protocols and information requirements, and mechanisms used to ensure monitoring is completed.
- The report identified common and significantly dissimilar practices among the Regions. The interview process also explored the rationale for noted differences in practices. The study included analysis of how each regional approach linked to respective provincial regulatory processes.
- Deliverables: a comprehensive 40-page report and slide show summarizing findings.

June Fisheries &
2008 Oceans
Canada: Habitat
Management

Program

Report on the Status of the Federal Contaminated Sites Action Plan (FCSAP) in Central & Arctic Region

- Prepared an annual report (Fiscal Year 2007-2008) on the status of FCSAP in Central & Arctic Region in support of program reporting requirements to DFO National Headquarters
- Prepared a summary of program challenges and recommendations to assist with the FCSAP Expert Support Role program in Central and Arctic (C&A) Region.

May 2008 to Aug. 2013 City of Toronto, subcontracted under Ehl Harrison Consulting Inc.

Cleaning Up Our Waterways: The Don River and Central Waterfront Project

- Involved in an extensive multi-year stakeholder consultation program to collect and analyze perspective, document issues, and inform Agencies, City Councillors, stakeholders and the public about the City's sewer infrastructure project to improve water quality in the Don River and Central Waterfront of Toronto. The work supported the environmental assessment for this project to improve the management of the water resources in the city.
- Collected, analyzed and summarized information from stakeholder engagement



into many reports.

Provided support for various consultation and communication activities, including stakeholder liaison

May 2006 Public Works to Oct. Department, 2009 subcontracted under Ehl-Harrison Consulting Inc.

West Harbour Waterfront Recreation Master Plan

Prepared summary reports of key discussion points and outcomes for meetings
of the Waterfront Advisory Group, which sought to clarify and consider current
and future challenges in the west harbour waterfront, and provide
recommendations to develop the area

May to Fisheries & July Oceans 2007 Canada: Habitat Management Program

Preparation of a Summary Report for the 2007 National Habitat Management Working Group on Aquaculture

- The report summarized the engagement (at a workshop in Montréal) of DFO's National Habitat Management Working Group on Aquaculture and representatives from Aquaculture Management Directorate and the Centre for Integrated Aquaculture Science in strategic discussion and work-planning related to Habitat Management Program's regulatory role in aquaculture.
- The workshop involved DFO Regions: National Headquarters; Pacific; Central & Arctic; Maritimes; Gulf; and, Newfoundland & Labrador.
- The 28-page report included the following outputs:
 - a. A synthesis of Habitat Management Program's current state of knowledge and practices associated with the regulatory review of Canadian aquaculture.
 - b. An identification of the gaps and areas requiring improvement of effectiveness, efficiency and coherence of HMP regulatory practices.
 - c. A work plan for the Working Group to: improve Habitat Management Program's tools and approaches with respect to aquaculture management; and, build on successes and current knowledge as well as address challenges and gaps.

Mar to May 2007

Fisheries & Oceans Canada: Aquaculture Management Directorate

Administering the Fish Habitat Protection Provisions of the *Fisheries Act* in Relation to Open-water Marine Finfish Aquaculture Operations

- Researched and prepared a 36-page report that summarized current approaches in three DFO Regions (Pacific, Maritimes, Newfoundland and Labrador) to administering the fish habitat protection provisions of the *Fisheries Act* in relation to new and existing open-water marine finfish aquaculture operations.
- Described: siting criteria to avoid negative effects to fish and fish habitat; tools or methods to predict the effects to fish and fish habitat; mitigation of potential fish habitat effects; monitoring; and, relevant regulatory and administrative tools.
- The work also includes an exploration of similarities and a rational for differences among Regions.

Apr. 2007

Ontario Power Authority, subcontracted under Hardy Stevenson & Associated Ltd.

Project 2: Integrated Power System Plan Preparation of Rationale and Alternatives for Electricity Projects

 The project conducted a high level environmental analysis (strategic environmental assessment) of numerous proposed transmission projects and numerous associated study areas



- Identified project rationale, developed evaluation criteria and alternatives, researched and inventoried baseline features, and analyzed GIS mapping
- While the entire project analyzed the impacts to the socio-economic and natural environment associated with large-scale corridor alternatives for transmission lines, Glynn's role focused on the issues associated with the natural environment.

Feb. to Mar 2007 Fisheries &
Oceans
Canada: Habitat
Management
Program

Report on the Status of the Federal Contaminated Sites Action Plan (FCSAP) in Central & Arctic Region

- Prepared a midterm report and annual report (Fiscal Year 2006-2007) on the status of FCSAP in Central & Arctic Region in support of program reporting requirements to DFO National Headquarters
- Prepared a regional annual summary report that described status and highlighted priority issues and recommendations for managing the FCSAP program in Central & Arctic Region.

Nov. to Dec. 2006 Environment
Canada:
Northern
Ecosystem
Initiative
(Strategic Policy
Branch),
subcontracted
under ECocreate
Solutions

Scan of Current and Emerging Environmental, Social, Cultural & Economic Issues across Canada's North

- Conducted research to characterize and document current/emerging environmental, social and economic issues that overlap with Environment Canada's mandate, the mandate of Northern Ecosystem Initiative and common or shared priorities of northern Canadian residents and organizations
- The study investigated climate change (e.g., permafrost changes, water regimes and hydrology, sea ice changes, increases to fires), contaminants (e.g., longrange sources, contaminated sites, increased mobilization, arctic haze), and resource use (e.g., community growth and development, mining development, oil & gas development).
- The report assisted the Northern Ecosystem Initiative to reaffirm and/or revise its strategic priorities.
- Download the final report from the Gomes Consulting Enterprises Ltd. website, here.

Aug. to Oct. 2006 Ontario Power Authority, subcontracted under Hardy Stevenson & Associated Ltd.

Project 1: Integrated Power System Plan Preparation of Rationale and Alternatives for Electricity Projects

See description of Project 2 above.

Dec. 2003 to Mar 2004 Environment Canada: Environmental Protection Branch (Integrated Programs Division)

Updated Analysis of the Great Lakes Binational Toxics Strategy (GLBTS) Level II Substances

- Clarified sources, fate, transport, exposure pathways, effects and risk
 management associated with the Level II substances of the GLBTS (a CanadaUnited States strategy that works to reduce or virtually eliminate persistent,
 especially toxic, substances from the Great Lakes Basin)
- Included linkages to atmospheric sources, and contamination in environmental media (e.g., sediment and biota)
- Produced a 71-page report, Updated Analysis of Great Lakes Binational Toxics Strategy Level II Substances, a supporting 4-page spreadsheet and an information CD.



Feb. Fisheries and 2001 Oceans to Canada: Fish Feb. Habitat 2002 Management Branch and Environment Canada: Great Lakes and Corporate Affairs Branch (Environmental Policy, Planning and Assessment Division)

Analysis of Effectiveness of Mitigation Measures Associated with Stormwater Management Ponds

- Identified, analyzed and ranked mitigation measures, and identified and described regulatory monitoring requirements (i.e., for temperature, groundwater quality and stream morphological impacts); related to Sections 35 and 36 of the Fisheries Act
- Summarized biotic communities utilizing stormwater pond facilities
- Reviewed mitigation measures and monitoring used for Southern Ontario stormwater management projects
- Prepared a 74-page report, Effectiveness of Mitigation Measures Associated with Stormwater Management Facilities, which summarized all findings, and made recommendations for: temperature and groundwater mitigation measures monitoring; and, temperature, groundwater quality, and physical fish habitat mitigation measures.

Sept. Region of Peel, to Oct. subcontracted 2001 under Hardy Stevenson & Associated Ltd.

Odour Issues Associated with Lakeview Wastewater Treatment Facility

- Assisted in development of a communications strategy to inform residents of initiatives undertaken to resolve odours coming from the Treatment Facility
- Conducted telephone interviews with residents who expressed concern over odour

Jan. to Fisheries and Mar Oceans 2001 Canada: Fish Habitat Management Branch

Gap Analysis: Identifying Information Availability to Address Research and Information Needs

- Reviewed guideline documents, and investigated and identified information sources that provide required information to staff biologists
- Defined focus of resources for remaining priority research
- Summarized findings in a draft (working) report that provided:
 - a. Discussion of what information has been collected or described internally:
 - b. Additional information on general topics related to priority issues;
 - c. Overview of information available and gaps needing to be filled and procedural recommendations on how to conduct studies required to fill information gaps.

Aug. 2000 to Mar 2001 Fisheries and Oceans Canada: Fish Habitat Management Branch

Priority Setting for Fisheries and Habitat Management's Science Research

- Analyzed the needs of Fish Habitat Management biologists across Ontario and prepared an 80-page report and a 3-page fact sheet on science research priorities required to be addressed and developed recommendations for further strategy development
- Collected information via telephone, email and other with Fish Habitat Management staff, and from breakout sessions at an all-staff meeting
- Identified 28 priority research issues, including 15 high, eight medium and five low priority issues and organized them into five categories:
 - a. Assessment Tools for Fish habitat Management;
 - b. Physical Habitat Alteration;
 - c. Buffer Zones and Compensation/Mitigation Measures;



- d. Human-made Structures; and,
- e. Barriers/Surface and Groundwater Hydrology.

May to	Hardy
Sept.	Stevenson &
2000	Associated Ltd.

Carbon Sequestration Project for Ontario Power Generation and Eastern Ontario Model Forest

Co-ordinated preliminary development of a carbon sequestration initiative

Aug. Elizabeth 2000 Haydon (bestselling author)

Destiny: Child of the Sky

 Conducted a hydrogeological review of a section in this novel published by Tor SF and Fantasy (2001)

Aug. Region of 2000 Halton, subcontracted under LURA Consulting

Water Quality, Taste & Odour Information Program

 Conducted research on how municipalities/governments have addressed water quality (taste and odour) issues, and prepared a 19-page summary report of findings.

May John Wiley & 2000 Sons Ltd. (United Kingdom) Earth & Environmental Science

Encyclopedia of Global Environmental Change

- Authored a biography article on Jacques Cousteau in the encyclopedia:
 - G. Gomes. 2002. "Cousteau, Jacques" in *Volume 5, Social and Economic Dimensions of Global Environmental Change* (Edited by: Peter Timmerman) in *Encyclopedia of Global Environmental Change* (Editor-in-Chief: Ted Munn). John Wiley & Sons: Chichester. pp. 209–210.

July to	Environment
Aug.	Canada:
1999	National Water
	Issues Branch

Towards a Freshwater Strategy

 Drafted a document describing the Canadian Federal Government's role in freshwater Research & Development

June Region of York, to July subcontracted 1999 under Hardy Stevenson & Associated Ltd.

York Water Pipeline

 Conducted site surveys, involved in route and site selection, assisted with the public consultation process and provided summary reports for a water supply pipeline in Region of York

May Ontario Ministry 1999 of the Environment, subcontracted under University of Toronto

Emerging Environmental Issues in Ontario

- Member of organizing committee for workshop on emerging environmental issues
- Authored a report describing emerging environmental issues in Ontario since 1950:
 - Gomes, G. 1999. "Emerging Environmental Issues in Ontario since 1950" in *Environmental Monograph No.15: Emerging Environmental Issues in Ontario* (R. E. Munn, ed.). Institute for Environmental Studies, University of Toronto. 74 pp. Download the report here.

Aug. Ontario Hydro, 1998 subcontracted under Hardy Stevenson & Associated Ltd.

Three Gorges Dam (China)

 Researched and prepared an information brief describing socio-economic impacts associated with the Three Gorges Dam for a senior Hydro staff's business development visit to the region



Feb. to Mar 1998	Fisheries and Oceans Canada: Marine Ecosystems Conservation Branch
	Branon

Analysis of National Oceanic and Atmospheric Administration (U.S.A.) National Coastal Zone Management Programs for Estuary and Coastal Wetland Protection

- Authored a Surprises since 1950" (Box) in Global Environment Outlook 2000 (Robin Clarke, ed.). Earthscan sharing, conflict resolution strategies, lessons learned and informative case studies
- This report can be downloaded <u>here</u>.

Apr. to United Nations Sept. Environment 1997 Programme/ Scientific Committee on Problems of the Environment

Global Environment Outlook 2000

- Investigated how environmental issues evolved into global issues of concern since 1950
- Co-authored a report for the "Future Perspectives" chapter of the publication:
 - Kalhok, S. and G. Gomes. 1999. "Environmental Surprises since 1950" (Box) in *Global Environment Outlook 2000* (Robin Clarke, ed.). Earthscan Publications, London. p. 336.

Feb. Freelance 1997

A Simple Model of Multimedia Chemical Fate in a Wet Detention Pond Presented to Central Canadian Symposium on Water Pollution Research

 Presented a lecture on organic contamination in stormwater ponds based on a Level II fugacity model

Oct. Environment 1996 Canada: to Mar Atmospheric 1997 Environment Service (Adaptation and Impacts Research Group)

Atmospheric Change and Biodiversity in the Toronto-Niagara Region

- Assessed (at the regional scale) atmospheric change and biodiversity impacts in the Toronto-Niagara Region, water resources, changes in hydrological regimes, and coastal areas of Lake Ontario
- Prepared a 31-page report, Atmospheric Change and Biodiversity in the Toronto-Niagara Region, which considered impacts from climate change, increased ultraviolet radiation (UV-B) and stratospheric ozone depletion, and air pollutants.
- This position was a short-term employee contract.

May to University of Sept. Toronto: 1996 Institute for Environmental Studies

Socio-economic Patterns in Municipal Water Use

- Researched urban water conservation technologies, strategies and policies
- Research Assistant: This was a short-term employment contract.

May Central Park 1996 Lodge

Guest Lecture on Oil Spills and Remediation

 Presented a lecture to the Senior Citizen's Nature Group on oil spills and various technologies employed for remediation

Apr. to University of Sept. Toronto (MSc 1996 Research Project)

University of Toronto: Geography Department – Modeling the Fate of Organic Contaminants in Urban Stormwater Detention Ponds (Level II Fugacity Modeling) – Master of Science Research

- Planned and conducted a mathematical modeling project that modeled organic contamination (i.e., benzene, toluene and hexachlorobenzene) from urban runoff in stormwater detention ponds.
- Research included a risk assessment-based approach, characterizing the fate of



- organic contaminants in various media associated with stormwater ponds: water, atmosphere, suspended sediment, bottom sediment, and soil.
- A fugacity model considers specific physical-chemical properties of both the contaminants of concern and the environmental media. Modeling also required research and comprehension of parameters associated with stormwater pond design, composition and function.
- Master of Science research paper:
 - Gomes, G. 1996. *Modeling the Fate of Organic Contaminants in Urban Stormwater Detention Ponds*. University of Toronto. 75 pp.

Jan. to	University of
May	Toronto:
1996	Institute for
	Environmental
	Studies

University of Toronto: Institute for Environmental Studies

- Provided teaching assistant duties, such as assigning and marking assignments, for a second year university course (Resource and Environmental Management)
- Teaching Assistant: This was a short-term employment contract.

July University of 1995 Toronto: Department of Geography

Investigation of Nitrogen Leaching in a Forested Wetland

Assisted in delineation and demarcation of the wetland field test area

June Ontario Ministry to of Natural Sept. Resources 1994

Wetlands Protection

- Conducted field work for wetlands protection, delineation and evaluation surveys, promoted urban fisheries for recreational use, assisted in fish species surveys (involving electro-fishing) and participated in a Canada geese relocation project
- Wetlands Resource Technologist: This was a short-term employment contract.

May to University of June Toronto 1994 (Fisheries Research Assistant, shortterm employment

contract)

University of Toronto: Department of Biology – Comparison of Fisheries in Two Lakes

- Assisted in a study of fish feeding activity at complex and open sites in two similar lakes, Ranger and Mouse Lakes (Ontario) and investigated reasons for the observed differences in fish behaviour in each lake.
- The lab component involved studying video tapes of fish at various sites, recording data relevant to fish traffic and entering it into a spread sheet for statistical and graphical analysis. The team also built "tether timers" which were devices designed to record how long it took for fish to find and attack bait. These devices provided spatial and temporal indications of fish feeding habits.
- The field component involved conducting a series of experiments in these two lakes. This included: deploying and retrieving tether timers in the epilittoral zone and at one-metre depths; and, setting up camera, portable generators and other field equipment important to the experiments. Data was analyzed as they were collected, and then experiments were modified.

STAKEHOLDER ENGAGEMENT (Various Topics)

Natural Resource Management and Land Use Planning

Feb. to City of Toronto, Mar subcontracted 2001 under LURA Consulting

Environmental Assessment for the 2008 Toronto Olympic Bid

 Produced summary documentation for a Neighbourhood Working Group public consultation meeting on how the proposed Olympic Games would impact sailing and



waterfront recreation communities

Oct.
2001

City of Toronto

Oak Ridges Moraine Development and Protection Public Meeting

- Produced a summary of meeting proceedings to discuss development on and protection of the moraine, including expressed comments and questions, to City staff.
- Issues discussed included: aggregate industry issues (e.g., restrictions on extraction activities, monitoring and guidance for rehabilitation); protection of land; urban sprawl and development; legislation; comparison to the Niagara Escarpment Plan; issues associated with land use designations; water and watershed
- For the summary of the public meeting, *Toronto's Position on the Future of the Oak Ridges Moraine*, see Attachment 1 (page 33) of *Oak Ridges Moraine Response to Province of Ontario's Draft Strategy* posted on the City of Toronto's <u>website</u>.

Feb. 2001

City of Toronto

Stewardship Forum – Partnership Working Group

 Took detailed notes and provided a summary report of a workshop to increase the efficiency of volunteer organizations in achieving environmental stewardship goals by involving partners

Aug. Environment to Oct. Canada: 2000 Canada Wildlife Service, subcontracted under LURA

Protection of Species at Risk Public Information Sessions

- Acted as project administrator to organize three public information sessions describing Canada's proposed legislation, the Species at Risk Act, to protect endangered species
- Co-ordinated logistics with local co-ordinators in three cities (i.e., Sault Ste. Marie, Guelph and Kingston)

July 1998

Hardy Stevenson & Associated Ltd.

Consulting

Lands for Life Project (on behalf of Hardy Stevenson & Associates Ltd.)

- Organized and consolidated stakeholder consultation results for the regional land use plan.
- "Lands for Life" was a planning and public consultation process that led to Ontario's Living Legacy Land Use Strategy. The Strategy focussed on: improving the system of parks and protected areas in Ontario; recognizing land use needs associated with the resource-based tourism industry; increased land use certainty for forest, mining and resource industries; and, enhanced Crown land recreation activities.

Energy (Electricity and Nuclear Power)

July to Oct. 2007 Hydro One Networks Inc., subcontracted under Haussmann Consulting Inc

Stakeholder Involvement Plans for Transmission and Distribution Rate Applications to the Ontario Energy Board

- Part of the consultation team to prepare, implement, and document a stakeholder involvement program supporting Hydro One's 2008 Electricity Distribution Rate submissions to the Ontario Energy Board
- Prepared summary reports to document several stakeholder workshops



Dec.	Hydro One
2006	Networks Inc.,
	subcontracted
	under
	Haussmann
	Consulting Inc

Enfield Transformer Station Class Environmental Assessment Public Consultation Program

 Prepared summary notes for a meeting with local stakeholders for this proposed transformer station that was needed to meet growing electricity demand in northern Durham Region

Apr. to Hydro One July Networks Inc., 2006 subcontracted under Haussmann Consulting Inc.

Stakeholder Involvement Plans for Transmission and Distribution Rate Applications to the Ontario Energy Board

- Part of the consultation team to prepare, implement, and document a stakeholder involvement program supporting Hydro One's 2007/2008 Transmission Rate submissions to the Ontario Energy Board
- Prepared summary reports to document several stakeholder workshops

Jan. to Canadian Feb. Nuclear Safety 2006 Commission, subcontracted under Haussmann Consulting Inc.

Public Consultation Session on the Bruce A Refurbishment for Life Extension and Continued Operations Project Draft Environmental Assessment Screening Report

Acted as rapporteur and prepared proceedings of the public consultation

Apr. to Hydro One Oct. Networks Inc., 2005 subcontracted under Haussmann Consulting Inc.

Stakeholder Involvement Plans for Transmission and Distribution Rate Applications to the Ontario Energy Board

- Part of the consultation team to prepare, implement, and document a stakeholder involvement program supporting Hydro One's 2006 Electricity Distribution Rate submissions to the Ontario Energy Board
- Prepared summary reports to document several stakeholder workshops

Nov. Ontario Ministry 2004 of the Environment, subcontracted under Haussmann Consulting Inc.

Energy Stakeholder Workshop

- This workshop solicited input on how to improve Ontario's environmental assessment and approvals process.
- Prepared a summary report of the stakeholder workshop

Dec. Ontario Power 2000 Generation, subcontracted under Hardy Stevenson & Associated Ltd.

Public Information and Consultation for Implementation of Selective Catalytic Reduction Technology

 Assisted in the development of public consultation strategy for the installation of emission reduction technology at the Lambton and Nanticoke generating stations, preliminary display panels for public information centres, and preliminary stakeholder correspondence/contact lists

Dec. Ontario Energy 1998 Board, to Feb. subcontracted 1999 under Hardy Stevenson & Associated Ltd.

Electricity Sector Restructuring

- Organized several facilitated internal workshops and meetings (in Sudbury, Kingston and Toronto)
- Co-ordinated activities among the public consultation project team
- Produced summary reports and other associated documentation between the Ontario Energy Board and electrical utilities for the purpose of discussing rates and licensing issues pertaining to electricity sector deregulation



Nov. Pickering Power 1998 Plant.

Plant, subcontracted under Hardy Stevenson &

Associated Ltd.

Various Public Consultations on Environmental Concerns

Assisted in nuclear power public consultation processes and organized stakeholder concerns

Sept. Pickering Power 1998 Plant,

subcontracted under SENES Consultants Ltd.

Public Consultation on Environmental Concerns

Assisted in organization for a nuclear power public consultation workshop

Waste Management (Radioactive and Municipal)

May Region of
2006 Durham,
subcontracted
under
Haussmann
Consulting Inc.

Brock Township Landfill Meeting

 Prepared a summary report to document the township meeting, which gave local residents an opportunity to voice their questions regarding the Brock Township Landfill.

Jan. Nuclear Waste
2005 Management
Organization,
subcontracted
under Hardy
Stevenson &
Associated Ltd.

Stakeholder Liaison for Dialogue Sessions

 Contacted stakeholders to inform and invite them to participate in three dialogue sessions (National, Ontario and New Brunswick) designed to solicit stakeholder input on three management options for long-term management of used nuclear fuel (i.e., deep geological repository, reactor site storage, and centralized storage) and to gain feedback on the decision-making process

Oct. Atomic Energy
2002 of Canada
to Limited: Low
Dec. Level
2005 Radioactive
Waste
Management
Office,

under

subcontracted

Consulting Inc.

Haussmann

Public Consultation Services for Long-Term Low-Level Radioactive Waste Management Facilities at Port Hope and Port Granby, Ontario

- Worked on the public consultation and stakeholder communications team; provided comprehensive workshop proceeding reports; reviewed and edited information panels and other documentation; and, assisted with public consultation activities and federal agency/responsible authority working sessions
- Issues dealt with: radiation, dust, noise and vibration exposure; construction/project vehicular/truck traffic and routing; valued ecosystem components; socioeconomic elements; climate change; First Nations concerns; concerns for property values, etc.
- Activities were part of a class environmental assessment under the Canadian Environmental Assessment Act for development of two long-term low-level radioactive waste management facilities in Port Hope and Port Granby.

Transportation

Apr. Toronto Transit
2010 Commission,
to subcontracted
Nov. under Ehl
2014 Harrison
Consulting Inc.

Stakeholder Consultation Services for Legacy LRV Project

 Involved in a public consultation program to inform and seek input from transit user community and relevant TTC departments regarding introduction of new streetcars (light rail vehicles; LRVs). Input received from a variety of innovative activities (e.g., meetings, public event, focus groups, survey and an interactive website, http://lrv.ttc.ca/default.aspx) was to be used to guide vehicle design aspects and refine operational policies.



- · Reports prepared included:
 - A report on public input received from the website on various topics, including: description of Toronto's character; exterior design; interior design (including accessibility, bicycles, safety and security, ventilation, windows, view, display panels or signals, payment system, cleanliness, colour/patterns/lighting, comfort and convenience, standing/seating/aisle/location and quantity, and others)
 - o A report on questions submitted by website survey respondents
 - A report on public input received through the website survey on what to name the new LRV names (over 900 suggestions received).

May Region of York, 2009 subcontracted under Hardy Stevenson & Associated Ltd.

Leslie Street Road Improvements Class Environmental Assessment

 Facilitated a meeting between the Region of York and members of the local community to discuss the expansion of Leslie Street between Wellington Street and Mulock Drive (Newmarket).

June Toronto Transit to Commission, Sept. subcontracted 2007 under Ehl Harrison Consulting Inc.

Transfer to the Future

- Involved in an extensive public consultation program to inform transit users of TTC's
 plans to replace the current aging fleet of streetcars (light rail vehicles; LRVs) with
 new LRVs and introduce improved service by building new dedicated LRV lines. The
 program also solicited comments on street car design via a website, and hardcopy
 surveys distributed at four open house consultation venues across Toronto. After the
 survey was completed, another open house was provided at the 2007 Canadian
 National Exhibition over the full 18-day duration. The open house featured two fullscale models of modern streetcars.
- Prepared a report which analyzed survey data (several thousand responses), staffed all five public consultation events and provided input to the project video.

July City of Toronto, 2000 subcontracted to Feb. under LURA 2001 Consulting

Gardiner Dismantling Project

 Produced summary documentation for the public consultation process. The consultations addressed expressway demolition, noise, water and ground contamination, health and safety, and traffic issues.

Nov. City of Toronto, 2000 subcontracted under LURA Consulting

Environmental Assessment for 2008 Olympic Bid

 Produced summary documentation for a public consultation meeting regarding the proposed transportation master plan for the 2008 Olympic bid in Toronto

Strategy Development

Feb. to Environment
Apr. Canada:
2003 National Office
of Pollution
Prevention
(Base Metals
Sector),
subcontracted
under
Haussmann
Consulting Inc.

Workshop on the Development of Environmental Performance Standards – Feb. 2003

- Part of a team to facilitate one-and-a-half-day multi-stakeholder workshops in Ottawa/Hull to review issues related to the development of Environmental Performance Standards for the Base Metals Smelting Sector
- Acted as rapporteur, and developed a summary/analysis report of each workshop proceedings



Mar 2002 Environment Canada: National Office of Pollution Prevention (Base Metals Sector), subcontracted under Haussmann Consulting Inc.

Workshop on the Development of Environmental Performance Standards

- Part of a team to facilitate one-and-a-half-day multi-stakeholder workshops in Ottawa/Hull to review issues related to the development of Environmental Performance Standards for the Base Metals Smelting Sector
- Acted as rapporteur, and developed a summary/analysis report of each workshop proceedings

Dec. 2000 to Feb. 2001 Environment
Canada:
National Office
of Pollution
Prevention
(Base Metals
Sector),
subcontracted
under
Haussmann
Consulting Inc.

Workshop on the Development of Environmental Performance Standards

- Part of a team to facilitate one-and-a-half-day multi-stakeholder workshops in Ottawa/Hull to review issues related to the development of Environmental Performance Standards for the Base Metals Smelting Sector
- Acted as rapporteur, and developed a summary/analysis report of each workshop proceedings

Mar 2000 Region of Halton, subcontracted under LURA Consulting

Choices for Health: Halton Healthy Homes, Healthy Families Project

- Assisted in the development of an approach needed to evaluate the public awareness/consultation pilot program in Halton Region
- Analyzed responses from focus groups, and provided recommendations and options for various elements of the program
- This program focused on helping women to promote healthy family living by improving diet, increasing physical activity, managing stress and creating a smokefree home

Aug. to Oct. 1997 Indian and Northern Affairs Canada, subcontracted to Resource Futures International

Sustainable Development Strategy

 Developed a synthesis document that comprehensively integrated First Nations' concerns expressed during national workshops between Indian and Northern Affairs Canada and 17 First Nation groups across Canada

Site Remediation

Sept. to Dec. 2000 Environment Canada, subcontracted

under LURA Consulting

Manson Factory Site Decommissioning and Remediation Project

- Involved in the public consultation process for the factory site decommissioning and produced consultation summary documentation
- The consultations addressed building demolition, health and safety, and clean-up of asbestos and other hazardous materials from the site.

Environmental Training



July 1998 Canadian
International
Development
Agency,
subcontracted
under University
of Toronto:
Institute for
Environmental
Studies

VIETPRO 2020 Environmental Training in Vietnam Project

- Organized, assisted in statistical analysis, and summarized response data from questionnaires filled out by participants of an environmental training course in Vietnam:
 - A. P. Lino Grima (with the assistance of Glynn Gomes, Richard Koo and Romila Verma). 1998. A Review of Training Activities and Participants' Evaluation.
 Prepared for the VIETPRO 2020 Environmental Training in Vietnam Project. University of Toronto. 54 pp.

SOCIO-ECONOMIC STUDIES (e.g., Contaminants, Industrial Chemicals, Wastes, Market Research, Industry-Government-Stakeholder Research, etc.)

Feb. Environment 2014 Canada:

Canada: Industrial Sectors, Chemicals and Waste Directorate, subcontracted under ToxEcology Environmental Consultants

Evaluating Chemicals in Textile Products in the North American Market

- Conducted market and product research in the textile products sector on boroncontaining compounds and companies supplying these products.
- Information collected included company overview/description of company activities, overview of products manufactured or sold, and specific details on glass textiles products (including product names and end uses).
- Researched approximately 650 companies.

Jan. to Environment Mar Canada: 2013 Industrial

Canada: Industrial Sectors, Chemicals and Waste Directorate, subcontracted under ToxEcology Environmental Consultants

Technical Background Study of Lead Sheeting in the Construction Sector

- Conducted interviews, and implemented a survey, with industry stakeholders in various parts of Canada to collect information on how lead sheeting is used in the construction industry
- The project assisted Environment Canada risk managers consider and develop appropriate risk management in this sector.

Jan. 2012 Environment
Canada:
Industrial
Sectors,
Chemicals and
Waste
Directorate,
subcontracted
under
ToxEcology
Environmental
Consultants

Technical Background Study of Electronic and Electrical Equipment Sector

- Conducted research to identify how priority substances are used (including concentrations used) in electronic and electrical equipment
- Research included information on metals, refrigerants, solvents/cleaners, flame retardants, and other persistent organic chemicals. Substances are used in various components of electronic and electrical equipment, including plastics, wire coating, insulation, foams, etc., or in associated processes (e.g., manufacturing, cleaning, etc.)
- The project assisted Environment Canada risk managers consider and develop appropriate risk management in this sector.



May to July 2006 Environment
Canada:
Industrial
Sectors,
Chemicals and
Waste
Directorate,
subcontracted
under
ToxEcology
Environmental
Consultants

Technical and Socio-Economic Study on Personal Care, Household, and Automotive Aftermarket Products

- Assisted Environment Canada in developing regulations setting volatile organic compounds (VOC) content limits in personal care, household, and automotive aftermarket products by collecting information on socio-economic factors (e.g., sales, market, costs, etc.)
- Conducted industry market research to assist with data gaps associated with the noted product categories, including obtaining information on VOC content information, compliance options, reformulation possibilities, and other aspects of reformulation.
- Work included assisting in the design of a survey instrument and conducting a survey exercise with industry representatives

Feb. to Mar 2013

Canada:
Industrial
Sectors,
Chemicals and
Waste
Directorate,
subcontracted
under
Environmental
Health
Strategies

Environment

Collection and Analysis of Import, Manufacture and Industrial Use Information on Certain Substances in the Chemicals Management Plan

- Analyzed data on selected substances and their industrial users and importers within
 various industrial sectors. Work also included research for related product or
 background information, review of relevant regulations and/or industry
 liaison/surveys. The analysis assisted Environment Canada risk managers
 determine, develop and conduct appropriate risk management to control various
 substances within those sectors.
- Adhesives & Sealants, Cleaning Products, and Personal Care Products Sectors: Boron-containing Substance Grouping boric acid (H₃BO₃; CAS 10043-35-3); borax (B₄Na₂O₇.10H₂O; CAS 1303-96-4); boron sodium oxide (B₄Na₂O₇; CAS 1330-43-4); boron oxide (B₂O₃; CAS 1303-86-2); boric acid, zinc salt (CAS 1332-07-6); cobalt, borate neodecanoate complexes (CAS 68457-13-6); boric acid (CAS 11113-50-1); boron zinc oxide (B₆Zn₂O₁₁; CAS 12767-90-7); boric acid (H₃BO₃), sodium salt (CAS 13840-56-7); perboric acid (HBO(O₂)), sodium salt (CAS 7632-04-4); perboric acid, sodium salt (CAS 11138-47-9); boron lithium oxide (B₄Li₂O₇; CAS 12007-60-2); ammonium boron oxide ((NH₄)B₅O₈; CAS 12007-89-5; boron silver oxide (B₄Ag₂O₇; CAS 12271-95-3); and, boric acid (HBO₂), lithium salt (CAS 13453-69-5).

Jan. to Mar 2011 Environment
Canada:
Industrial
Sectors,
Chemicals and
Waste
Directorate,
subcontracted
under
Environmental
Health
Strategies

Collection and Analysis of Import, Manufacture and Industrial Use Information on Certain Substances in the Chemicals Management Plan

- Analyzed data on selected substances and their industrial users and importers within various industrial sectors. Work also included research for related product or background information, review of relevant regulations and/or industry liaison/surveys. The analysis assisted Environment Canada risk managers determine, develop and conduct appropriate risk management to control various substances within those sectors.
- Plastics Sector: Technical and Economic Report on the Import and Use of Phenol, 2,6-Bis(1,1-Dimethylethyl)-4-(1-Me thylpropyl) (DTBSBP; CAS 17540-75-9) in the Plastics Sector in Canada

Oct. to Nov. 2010

Environment Canada: Industrial Sectors, Chemicals and Waste Directorate, subcontracted

Background Study and Use Pattern for the Cleaning Products Sector

- Analyzed data on 10 substances and their users and importers within the Cleaning Products Sector (CPS), in order to prepare substance profile reports.
- Contacted industry representatives and implemented a survey to obtain additional information on how these substances are used in the CPS.
- Also assisted in the preparation of a sector profile report of the CPS.



under Environmental Health Strategies The analysis assisted Environment Canada risk managers determine, develop and conduct appropriate risk management to control these substances within the CPS.

Feb. to Mar 2010 Environment
Canada:
Industrial
Sectors,
Chemicals and
Waste
Directorate,
subcontracted
under
Environmental
Health
Strategies

Collection and Analysis of Import, Manufacture and Industrial Use Information on Certain Substances in the Chemicals Management Plan

- Analyzed data on selected substances and their industrial users and importers within various industrial sectors. Work also included research for related product or background information, review of relevant regulations and/or industry liaison/surveys. The analysis assisted Environment Canada risk managers determine, develop and conduct appropriate risk management to control various substances within those sectors.
- Adhesives & Sealants Sector substances: 2-nitropropane(CAS 79-46-9); 2-butanone oxime (CAS 96-29-7); ethanol, 2-chloro-, phosphate (3:1) (TCEP; CAS 115-96-8); Oxirane (butoxymethyl) (CAS 2426-08-6); oxirane, 2,2',2",2"'-[1,2-thanediylidenetetrakis (4,1-phenyleneoxymethylene)] tetrakis-(TGOPE; CAS 7328-97-4)

Jan. to Mar 2009 Environment
Canada:
Industrial
Sectors,
Chemicals and
Waste
Directorate,
subcontracted
under
Environmental
Health
Strategies

Collection and Analysis of Import, Manufacture and Industrial Use Information on Certain Substances in the Chemicals Management Plan

- Analyzed data on selected substances and their industrial users and importers within various industrial sectors. Work also included research for related product or background information, review of relevant regulations and/or industry liaison/surveys. The analysis assisted Environment Canada risk managers determine, develop and conduct appropriate risk management to control various substances within those sectors.
- Adhesives & Sealants and Cleaning Products Sectors Batch 11 & 12 substances:
 - Adhesives & Sealants and Cleaning Products Sectors hexanedioic acid, bis(2-ethylhexyl) ester (DEHA; CAS 103-23-1); trisiloxane, octamethyl- (MDM; CAS 107-51-7); quartz (CAS 14808-60-7); and,
 - b. Adhesives & Sealants Sector trisiloxane, 1,1,1,5,5,5-hexamethyl-3,3-bis[(trimethylsilyl)oxy]- (M4Q; CAS 3555-47-3); silanamine, 1,1,1-trimethyl-n-(trimethylsilyl)-, reaction products with ammonia, octamethylcyclotetrasiloxane and silica (OMSSA; CAS 68937-51-9)

Jan. to Mar 2008 Environment
Canada:
Industrial
Sectors,
Chemicals and
Waste
Directorate,
subcontracted
under
Environmental
Health
Strategies

Collection and Analysis of Import, Manufacture and Industrial Use Information on Certain Substances in the Chemicals Management Plan

 Analyzed data on selected substances and their industrial users and importers within various industrial sectors. Work also included research for related product or background information, review of relevant regulations and/or industry

liaison/surveys. The analysis assisted Environment Canada risk managers determine, develop and conduct appropriate risk management to control various substances within those sectors.

Various Sectors (e.g., plastics, rubber, cleaning products, etc.), Batch 2 substances: thiourea (CAS 62-56-6); 1,3-butadiene, 2-methyl- (isoprene; CAS 78-79-5); phenol, 4,4 -(1-methylethylidene)bis- (Bisphenol A; CAS 80-05-7); oxirane, (chloromethyl)- (epichlorohydrin) (CAS 106-89-8); acetic acid ethenyl ester (vinyl acetate; CAS 108-05-4); decamethylcyclopentasiloxane (D5; CAS 541-02-6); dodecamethylcyclohexasiloxane (D6; CAS 540-97-6); phenol, 2,4,6-tris(1,1-



dimethylethyl)-(2,4,6-tri-tert-butylphenol), or 2,4,6-tri-tert-butylphenol (CAS 732-26-3); C.I. Pigment Yellow 34 (CAS 1344-37-2); benzenesulfonic acid, 3,3'-[(9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)diimino]bis[2,4,6-trimethyl-, disodium salt (Acid Blue 80; CAS 4474-24-2); and, C.I. Pigment Red 104 (CAS 12656-85-8).

Dec. 2006 Lyondell
Chemical
Company,
subcontracted
under
Environmental
Health
Strategies

Clarification of the Volatile Organ Carbon Exemption Process Relating to Tert-Butyl Acetate (t-BAC)

• Conducted preliminary investigation (including liaison with government contacts) to clarify the process for adding tert-butyl acetate to the list of volatile organic carbon exemptions under *Canadian Environmental Protection Act* (1999).

Mar to Apr. 2003 Environment Canada: Environmental Stewardship Branch, subcontracted under Environmental Health Strategies

Inventory Update for Release of Selected Toxic Substances from Secondary Metal Production in Ontario

- Conducted industry research to obtain data on facility operations, furnace types, testing, input, output, pollution controls, etc. This data was used by other members of the consultant team to estimate toxic facility and sector emissions (e.g., via emission factors).
- This included conducting information interviews and surveys with industry representatives.

Nov. 2002 to Mar 2003 Environment Canada: Transboundary Movement Branch, subcontracted under Environmental Health Strategies

Background Study of Potential Impacts Associated with Changes to Corrosivity Criteria of Hazardous Wastes and Hazardous Recycling Materials

- Conducted industry market research to investigate potential impacts to changing the corrosivity criteria for the classification of hazardous wastes and hazardous recycling materials to match Organization for Economic Cooperation and Development (OECD) guidelines.
- This included information interviews with provincial and industry representatives, and internet research.

Sept. to Oct. 2002 Environment Canada: Transboundary Movement Branch, subcontracted under Cleghorn and Associates

Follow-up Study on the Technical and Socio-Economic Aspects Related to the Management of Used Crankcase Oil (UCO) in Canada

- Conducted industry market research to develop a market model for UCO (using a mass-balance approach) and provided a life cycle assessment.
- This included conducting information interviews with provincial and industry representatives, internet research.

Mar to Apr. 2002 Health Canada: Environmental Contaminants Bureau, subcontracted under Cantox Environmental Inc.

Background Study of Use Patterns and Economics of 2-Ethoxyethanol

- Conducted industry market research to characterize use (e.g., identify: producers, importers, distributors; current users, use patterns, and technical/economic issues; chemical synonyms; and, alternatives)
- This included conducting information interviews with industry representatives, and library/internet research.

Feb. to Environment Mar Canada:

Background Study on the Technical and Socio-Economic Aspects Related to the Management of Waste Crankcase Oil (WCO) in Canada



2002	Transboundary
	Movement
	Branch,
	subcontracted
	under Cleghorn
	and Associates

- Conducted industry market research to characterize a historical and current use profile, describe the process life cycle of WCO (and identify major areas of concern); and identify substitutes and other alternatives.
- This included conducting information interviews with industry representatives, and library/internet research.

Feb. to Environment Mar Canada: 2001 Administrative Directorate (Material Management Branch), subcontracted under Claude Davis & Associates

Inventory of and Technical Study on Pentachlorobenzene (QCB) and Tetrachlorobenzenes (TeCB)

- Conducted research to help estimate demand patterns and characterizing sources of QCB and TeCB (including products containing these chemicals) in Canada
- Conducted research and information interviews to identify analytical laboratories with the capability to test for these chemicals in various environmental media
- Reviewed organohalogens identified by the Groundwater Directive National Advisory Group and Environment Agency National Centre in the United Kingdom as being potentially able to pollute groundwater, and identified which of these were found on the Domestic Substance List
- Reviewed environmental controls including comparison of controls in Canada, U.S., Europe, etc.

Apr. to Town of May Oakville, 2000 subcontracted under Hardy Stevenson & Associates Ltd.

Dorval Road Extension Socio-Economic Assessment

 Conducted a site survey, supported by photography, to characterize vehicular and pedestrian traffic that needed consideration when planning and constructing the road extension

Feb. to Environment Mar Canada: Smog 2000 Program (Transboundary Air Issues Branch), subcontracted under Claude Davis & Associates

Tracking Implementation of the Canadian Council of Ministers of the Environment (CCME) Management Plan for NOx and VOCs

 This project assessed the effectiveness of the implementation of the 1990 CCME Management Plan for NOx and VOCs. Glynn conducted telephone and in-person interviews with industry representatives in Eastern Canada to learn how effectively they have incorporated initiatives, guidelines and other products resulting from the Management Plan into their business practices.

Mar Canadian 1999 Environmental Assessment Agency, subcontracted under SENES Consultants Ltd.

Canadian Environmental Assessment Agency 5-Year Review

 Conducted telephone, email and fax surveys/interviews to determine stakeholder/industry participation in environmental assessment screenings and comprehensive studies, and their opinion about the federal environmental assessment Public Registry and Environmental Assessment Index

Oct. Environment 1998 Canada: to Mar Environmental 1999 Standards and Reference Materials

Environmental Standards and Reference Materials (ESRM) Studies

- Designed, conducted and evaluated (qualitatively and quantitatively) in-person, telephone, fax and email questionnaires/interviews. Co-authored four technical reports, determined:
 - a. Laboratory capabilities and program details of laboratories and organizations that contribute analytical data to a federal government program (i.e., Northern Contaminants Program). This report profiled the organizations, their areas of



expertise, analytical capabilities, services provided and their involvement in Quality Assurance (QA) programs.

- Stokker, Y.D. and G. Gomes. 1999. Summary report on the analytical programs and capabilities of laboratories and organizations that contribute measurement data to the Northern Contaminants Program. Environment Canada, National Water Research Institute, Burlington/Saskatoon, NWRI Contribution No. 99-302. 48pp.
- b. Availability and suitability of external national and international QA programs pertinent to the Northern Contaminants Program. This report also recommended specific QA programs for particular analytical programs and described the need for development of a new QA program.
 - Stokker, Y.D. and G. Gomes. 1999. Summary report on the availability and suitability of external national and international quality assurance programs pertinent to the Northern Contaminants Program. Environment Canada, National Water Research Institute, Burlington/Saskatoon, NWRI Contribution No. 99-301. 146pp.
- c. Demand for a proposed organic interlaboratory QA program from Environment Canada's regional and research laboratories, and assessed specific QA elements needed to be addressed by such a program.
 - Stokker, Y.D. and G. Gomes. 1999. Survey of Environment Canada's Regional and Research Laboratories for their Organic QA/QC Needs. Environment Canada, National Water Research Institute, Burlington.
- d. The needs of distributors of ESRM's products such as "Reference Materials" and "Certified Reference Materials". This report assisted ESRM maximize product sales and cost recovery.
 - Stokker, Y.D. and G. Gomes. 1999. Survey of Environment Standards and Reference Materials' Current Distributors of Reference Materials and Certified Reference Materials for Customer Needs. Environment Canada, National Water Research Institute, Burlington.

June Department of to National Aug. Defence 1998 (Canada), subcontracted under SENES Consultants Ltd.

Downsview Lands Development Plan (on behalf of SENES Consultants)

Reviewed relevant documentation and prepared sections of an environmental assessment report

Mar Hardy 1998 Stevenson & Associated Ltd.

Millennium Eco Project: - Dawn to Lake Erie Pipeline

 Conducted research for a socio-economic impact assessment of a natural gas pipeline development project in south-western Ontario

REVIEW, EDITING AND PUBLISHING

Dec. Tighe Publishing 2017 Services, Inc. to March 2018

Florida Grade K-2 Math

 Reviewed (developmental edited) several Grades 1 and 2 teacher edition modules



Oct. 2014	Nelson Higher Education	Subject Matter Expert Contributor for a Biology Textbook
		 Wrote eight chapter summaries in Life Matters: Connecting Biology with Your World (1st Ed.)
		 Chapters summarized: 1. Biology in Your Life; 12. Species; 12. Evolution; 19. Animals; 22. Support and Locomotion; 28. Reproduction and Development; 29. Population Ecology; and, 32. Behaviour
Jan. to	McGraw-Hill Ryerson	ScienceFocus 10 Computerized Assessment Bank
Feb. 2014		 Wrote 500 questions for an Alberta science textbook, called ScienceFocus10, for Grade 10 high school students: "Unit 4: Energy Flow in Global Systems," and specifically the following chapters:
		 Chapter 10 Solar Energy and Climates;
		- Chapter 11 Climate and Biomes; and,
		- Chapter 12 Climate Change and Humans.
		 The questions populated a computerized assessment bank to be used by teachers to prepare quizzes or exams.
Oct.	Nelson Higher	Subject Matter Expert for a Biology E-book
2013	Education	Acted as a biology subject matter expert
		 Organized pre-existing media assets (e.g., animations, animated figures and video) and associated data, and suggested appropriate locations for the assets in a university biology text book (e-book).
Nov.	McGraw-Hill	Biology 11 College Preparation Computer Assessment Bank
2012 to Jan. 2013	Ryerson	 Used ExamView software to prepare 150 computer assessment bank questions for each chapter listed below. Question types included true/false, modified true/false, multiple choice, multiple response, completion, matching, short answer, and essay.
		 Unit 1 Cellular Biology – Chapter 1: Molecules in Cells: Building Blocks of Life; and, Chapter 2: The Cell Up Close: Processes That Sustain Life
		 Unit 4 Anatomy of Mammals – Chapter 8: Body Systems and Circulation; and, Chapter 10: The Digestive System (worked on this unit under a subcontract to 1546680 Ontario Inc.)
		 Unit 5 Plants in the Natural Environment – Chapter 11: The Role of Plants in Ecosystems; and, Chapter 12: The Biology of Plants
Jan. to June	McGraw-Hill Ryerson	Alberta Senior Biology Student Text – <i>Unit A: Energy and Matter Exchange in the Biosphere</i>
2005		Conducted developmental editing of both chapters in this unit.
Jan. to	McGraw-Hill Ryerson	Grade 12 Biology Teacher's Resource
May 2002		Unit 1: Metabolic Processes:
		 Reviewed and edited the Chapter 3: Cellular Energy manuscript and black-line masters (BLMs); Chapter 1: The Chemistry of Life and Chapter 2: Enzymes and Energy pass pages, including BLMs; and, other Unit 1 materials

Provided suggested revisions to the Chapter 3 student text



• **Unit 5: Population Dynamics:** Conducted technical review, developmental editing and copy editing of manuscript, pass pages and BLMs for three chapters (Chapter 13: *Ecological Principles*, Chapter 14: *Population Ecology*, and Chapter 15: *Human Ecology*), as well as other Unit 5 materials.

Aug. 2002 Canadian
International
Development
Agency/ Gov't of
Jamaica
subcontracted
under Claude
Davis &
Associates

Technical Support Document for the Regulatory Impact Analysis for Air Quality Regulations Developed by the National Environment and Planning Agency

 Edited a 100-page draft document on Regulatory Impact Analysis (air quality) in Jamaica