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Employment

GIS Analyst, Software Developer, President, Feaver's Lane Enterprises Inc., 2010-; Independent, 1993-1998 (<http://feaverslane.com/>)

Ecosystem-based Automated Range (EBAR) Technical Coordinator, NatureServe Canada, Ottawa, ON, 2019-

Tracking Data Analyst, Fisheries and Oceans Canada, Victoria, BC, 2019-

GIS and Cartography Consultant, Sustainable Forestry Initiative, Ottawa, ON, 2018

Facilitator, World Wildlife Fund Canada, St. John's, NL, 2017-

GIS Consultant, Municipalities Newfoundland and Labrador, St. John's, NL, 2017-2019

GIS Consultant, Canadian Parks and Wilderness Society (CPAWS), Halifax, NS, 2017-

GIS Consultant, International Model Forest Network, Ottawa, ON, 2016

Information Systems Consultant, Nunatsiavut Government, Nain, NL, 2015-

GIS Developer, Conservation Biology Institute, Corvallis, OR, 2015-2017

GIS Contractor, Canadian Boreal Forest Agreement (CBFA), Corner Brook, NL, 2013-2017

GIS Contractor and Developer, Nature Conservancy of Canada (NCC), St. John's, NL, Ottawa, ON and Fredericton, NB, 2013-2019

GIS Consultant, Northeast Avalon Atlantic Coastal Action Plan, St. John's, NL, 2013-2018

Cartographer, Pippy Park Commission, St. John's, NL, 2011-2014

GIS Developer, Islands Trust, Victoria, BC, 2010-2018

Cartographer, East Coast Trail Association, St. John's, NL, 2010-2011

Business Planning Consultant, Tickle View Farms, St. John's, NL, 1998

Systems Analyst, Database Developer, InfoNav/SoftChart, St. John's, NL, 1995

Business and Technology Consultant, How Does Your Garden Grow?, St. John's, NL, 1994-1998

Business Software Consultant, Archer Industrial, Mount Pearl, NL, 1994

Business Software Consultant, C&W Industrial, Bay Bulls, NL, 1993-1998

Senior Information Systems Analyst, Too Big To Ignore project, Memorial University of Newfoundland, St. John's, NL, 2013-2015 (part time) (<http://www.toobigtoignore.net/>)

Geography Lecturer (Cartography), Memorial University of Newfoundland, St. John's, NL, 2011- (part time)

GIS and Conservation Planning Analyst, Nature Conservancy of Canada (NCC), St. John's, NL, 2010-2013 (<http://www.natureconservancy.ca/>)

MSc Intern, Natural Resources Canada (Canadian Forest Service), Corner Brook, NL, 2009

Software Engineering Team Leader, International Communications and Navigation Ltd. (ICAN, now CNS Systems), Mount Pearl, NL, 2005-2008

Systems Engineering Manager, Information Systems Manager, Technical Services Manager, International Communications and Navigation Ltd. (ICAN, now CNS Systems), St. John's, NL, 1998-2005

Systems Analyst, Programmer/Analyst, Newtel Information Solutions Limited (previously Newfoundland and Labrador Computer Services; subsequently xwave; now Bell), St. John's, NL, 1991-1998

Commerce Work Term, Newfoundland and Labrador Computer Services, St. John's, NL, 1990

Commerce Work Term, Department of Fisheries and Oceans, St. John's, NL, 1989

Commerce Work Term, Allied Irish Bank, Dublin, Ireland, 1989

Activity Coordinator and Monitor, English Language Summer School, Memorial University of Newfoundland, St. John's, NL, 1988

Delivery Driver, F.J. Wadden Limited, St. John's, NL, 1987

Painter, Brush-up Limited, St. John's, NL, 1986

Dish Washer, Beaver Foods Limited, Memorial University of Newfoundland, St. John's, NL, 1984-1985

Researcher/Writer, CameraMUN, Memorial University of Newfoundland, St. John's, NL, 1983

Education

Master of Science (Geography), Memorial University of Newfoundland, St. John's, NL, 2008-2010

Geography and Math undergraduate courses, Memorial University of Newfoundland, St. John's, NL, 2004-2005 (part time)

Bachelor of Commerce (Co-operative) Honours, Memorial University of Newfoundland, St. John's, NL, 1985-1991

French Language Summer School, College Saint Charles-Garnier, Quebec City, QC, 1985

(University transcript available upon request)

Brother Rice High School, St. John's, NL, 1982-1985

St. Bonaventure's School, St. John's, NL, 1972-1982

Professional Projects

NASP 2020 Review of Ecosystem Representation – lead author and project manager for a rapid scientific assessment for the Canadian Parks and Wilderness Society of the provincial Natural Areas Systems Plan for the Island of Newfoundland.

Labrador Coastal Characterization – technical project manager and mentor for digitization of an assessment of the coastal character (geomorphology classification) of the southern half of Labrador, including risk indices for erosion and petroleum spill vulnerability, supported by the WWF Canada Coastal Restoration project (see below).

Ecosystem-based Automated Range (EBAR) – technical coordinator with NatureServe Canada, developing and deploying an ArcGIS Enterprise geodatabase server (on an Azure cloud-based virtual computer), geoprocessing tools, workflows and supporting materials for species range mapping from observation data and web-based expert review of results in support of the international Key Biodiversity Areas initiative and other conservation planning and wildlife management efforts.

Resource Harvest Areas of Coastal Labrador – project manager with Nunatsiavut Government (NG) for a project to digitize this 1982 paper-based, large-format atlas of species presence and harvest into vector GIS polygons with detailed attributes for use in NG's marine protected area planning initiatives.

Marbled Murrelet Tracking – data analyst and mentor for processing Fisheries and Oceans Canada and Environment and Climate Change Canada Marbled Murrelet tracking data in support of scientific publication. Activities included satellite transmitter tag raw data processing and error correction, kernel density estimation, generalized seasonal movement mapping, migration distance measurement and mapping, and environmental conditions mapping.

Forestry Certification Mapping – contract project manager with Sustainable Forestry Initiative (<http://www.sfiprogram.org/>) for a project to map Canadian certified forest tenures for deployment on the organization's web site.

NCC Freshwater Connectivity Tools – ArcGIS Python developer for geoprocessing tools to calculate various metrics for barriers to aquatic connectivity, then combine those metrics in a weighted sum to help prioritize conservation actions such as dam decommissioning and culvert improvements.

CBS Climate Change Mitigation and Adaptation Planning – as part of the Coastal Restoration Fund project (see below), participated in the Town of Conception Bay South multi-stage climate change planning initiative.

Coastal Restoration Fund – contract facilitator with World Wildlife Fund Canada (<http://www.wwf.ca/>) using GIS-based multi-criteria decision analysis to help prioritize potential sites for coastal restoration and enhancement in Newfoundland and Labrador. The process incorporated data from a broad group of partners and stakeholders as well as traditional, local and other expert knowledge on priority aquatic species (Capelin, Atlantic salmon, Arctic char), other biotic features (birds, vegetation, invasive species, etc.), existing degradation (pollution, inappropriate use, etc.), threats (erosion, transportation, urbanization, oil spills, sea-level rise, etc.) and other factors. Custom spatial tools for public surveys, data import and visualization were developed to support the initiative.

NCC Artic Marine Protected Area Planning – conservation planning and GIS contractor for rapid biodiversity and threat assessments of the Tallurutiup Imanga (Lancaster Sound) and Beaufort Sea areas. The set the stage for working with communities and negotiating relinquishment of oil and gas rights, all in support of establishment of federal marine protected areas.

Building Asset Management in Newfoundland and Labrador (BAM!NL) – GIS consultant providing spatial data management advice to this Municipalities Newfoundland and Labrador initiative working to increase capacity for effective full life cycle asset management in the province.

CPAWS Island of Newfoundland Large Intact Landscapes Assessment – GIS consultant with this national environmental non-profit (<http://cpaws.org/>) for an analysis of the provincial government's Large Intact

Landscapes component of its Sustainable Forest Management Strategy, with a focus on overlaps with other types of protection and various features of conservation interest. Project outputs included illustrative maps and descriptive statistics.

NCC Eeyou Istchee (Cree Territory) Conservation Planning – GIS consultant for the preparation of spatial data and the development, running and communication of Marxan models to inform conservation planning and prioritization for NCC and the Cree Nation government in the James Bay region of Quebec. This includes finding, interviewing, hiring and mentoring a conservation GIS analyst, as well as designing, developing, documenting and testing a custom geoprocessing tool to flexibly calculate human footprint from vector and raster inputs representing anthropogenic disturbance.

Linkage Mapper Connectivity Tools v2 – ArcGIS Python tool developer enhancing the Linkage Mapper tools (<http://www.circuitscape.org/linkagemapper>) for use by the Conservation Biology Institute (<http://consbio.org/>). Managers in locations including the Sierra Nevada, Mojave and Sacramento Valley regions of California used the tools to help identify and prioritize corridors connecting existing nature reserves. The results informed conservation action as well as siting of wind and solar energy infrastructure. Tool enhancements incorporate differences in climate change predictions between existing reserves, as well as custom inputs and expert opinion for reserve and corridor priorities.

NCC Boreal Plains Conservation Atlas – GIS consultant for the preparation of spatial data and the development, running and communication of models to inform conservation planning and prioritization for NCC and partner organizations in the Boreal Plains ecozone of western Canada. Analyses included landform elements, human footprint, species distribution and climate change, as well as overall coarse-filter and fine-filter prioritization using developed and acquired datasets in Marxan. Several custom geoprocessing tools were built to support the process.

International Model Forest Network (IMFN) Data Publishing Tools – GIS contractor for the design, development and testing of tools built in Python, gdal and arcpy to facilitate publishing of multi-scale, high-resolution forest cover and other data for rapid display in a KML-based web map viewer.

Tsate Hydroelectric Project Socioeconomic Assessments – cartographer and aerial photo analyst in support of socioeconomic impact assessment for the proposed hydroelectric reservoir and generation infrastructure in rural Mozambique.

NatureTour App – business startup investigator for a mobile trail mapping and citizen science platform. Activities included potential customer identification and validation, technology research and prototype development. The idea was to aggregate existing observations and photographs of nature for outdoor enthusiasts and professionals to use in tour planning, touring and field work, as well as facilitate capture of new observations for social network sharing and optional submission for citizen science or environmental monitoring. Potential customers included tourism destinations (with tourists and community members as the end users) and environmental non-profits (with volunteers, donors and field staff as the end users).

Nunatsiavut Government (NG) Information Systems Scoping – information systems consultant for an enterprise systems scoping report for NG's Lands and Natural Resources Department, including an inventory of existing and needed business functions, data and applications, and an evaluation of technical architecture options for an integrated information system. The architecture incorporated existing studies and future opportunities for traditional, local and other expert knowledge.

Linkage Mapper Connectivity Tools – ArcGIS Python tool developer enhancing the Linkage Mapper tools (<http://www.circuitscape.org/linkagemapper>) for use by the Conservation Biology Institute (<http://consbio.org/>) and their client Sonoma County Agricultural Preservation and Open Space District.

Model outputs helped identify preferred locations for conservation action, such as easements on private lands, to facilitate movement of biodiversity between existing nature reserves.

CBFA Newfoundland Regional Working Group (NRWG) Protected Areas Planning – GIS contractor for the implementation on the Island of Newfoundland of this historic nation-wide agreement between forest companies and environmental organizations (<http://cbfa-efbc.ca/>). The role involved using input from the NRWG, as well local, traditional and other expert knowledge, to design, develop and run a series of multi-scale GIS-based models using BEACONS and other tools for conservation prioritization. Model outputs helped identify opportunities for Corner Brook Pulp and Paper Limited to contribute to conservation from forests under their control, and resulted in long-term protection from forest harvesting in numerous areas of high ecological value.

Too Big To Ignore – Senior Information Systems Analyst for this international research network and knowledge mobilization partnership to promote and revitalize small-scale fisheries. The role involved design, development and staff/contractor management for the web-based Information System on Small-scale Fisheries (<http://issf.toobigtoignore.net>), which features crowdsourced data collection, interactive mapping and querying/reporting tools. The development stack includes PostGIS, Django and Leaflet.

NAACAP Regional Watershed Management and Drinking Water Quality – GIS and remote sensing consultant for this Northeast Avalon Atlantic Coastal Action Plan (<http://www.naacap.ca/>) project to assist municipalities integrate best practices related to drinking water. The work covered the entire 1000 km² region and included supervision of a remote sensing analyst. Analyses included generating watershed boundaries at multiple scales, assessing landscape intactness, and delineating land cover. Mapping also included hydrology, protected water supplies areas, municipal boundaries, elevation and high-resolution aerial photography.

NCC Labrador Conservation Blueprint – GIS analyst for the development of a Labrador-wide high-level conservation plan and the publication of the Labrador Nature Atlas ([Volume 1](#), [Volume 2](#)). Subcomponents included ecological land units (enduring features) classification, human-footprint analysis and land-cover data consolidation. Data integration and scenario analysis were performed at multiple scales and included identification and prioritization of large potential protected areas using R-based BEACONS tools (<http://www.beaconsproject.ca/>), gap analysis for representation of key ecological attributes to drive identification and prioritization of mid-sized potential protected areas, and identification of smaller sites containing rare communities or other special features.

Newfoundland and Labrador Nature Atlas – GIS analyst for the creation of web-based GIS tools for sharing the work of NCC's Labrador Conservation Blueprint. This involved coordinating a Request for Proposals to select a web-based GIS development partner (resulting in the selection of Integrated Informatics), exploring opportunities for system hosting (resulting in a partnership with the Environmental Policy Institute of Memorial University's Grenfell Campus), and drafting, uploading and styling GIS data and textual content for the site.

Islands Trust Regional Conservation Plan – GIS analyst and software developer for the development of a long-term conservation plan for Islands Trust (<http://islandstrust.bc.ca>). Approach based on the Landscape Decision Support Tools (<http://landscapecollaborative.org/>) with ArcGIS geoprocessing customized using ModelBuilder and Python scripting.

NCC/CPAWS Intact Landscapes and Woodland Caribou Habitat Study – GIS analyst and report co-author for a study to derive intactness from Newfoundland forest and landscape classification data, characterize it across various natural and administrative regions, compare it with other available intactness datasets, and compare it with Woodland Caribou occupancy data.

NCC Central Newfoundland Natural Area Conservation Plan – GIS analyst for the development of a 5-year regional plan to identify biodiversity targets and threats, and prioritize NCC’s property acquisition and stewardship actions.

NCC Property Mapping – cartographer supporting all aspects of property acquisition and management, including prospect investigation, boundary identification (surveyed and estimated), fund raising, stewardship and field work.

Pippy Park Wall Maps and Guide Book Maps – cartographer for the development and production of various maps for large-format wall printing and for inclusion in a new park guide (<http://www.pippypark.com/>).

NCC Grassy Place Expedition – team member, photographer and cartographer for a 2-week wilderness expedition to undertake biological inventorying of a remote, newly-acquired ~4000-acre NCC property in Southwest Newfoundland.

NCC Land Securement in *The Gully, Torbay* – conservation representative for the development and execution of a land-owner contact program leading to acquisition of ecologically-sensitive property in this municipal wetland.

“Biscan Cove Path”, “The Cobbler Path” and “Middle Cove Path” Hiking Trail Maps – map technician for production of 1:25,000 maps of these upgraded sections of the East Coast Trail (<http://eastcoasttrail.ca>). The maps were professionally printed on a waterproof material, and included historical and cultural site names and descriptions, and elevation profiles.

ICAN Report Server – project manager and lead software engineer for an integrated product that provides formatted reports of data collected and stored by ICAN’s other products (<http://www.icanmarine.com>). It consists of a Windows application used by ICAN staff or expert end-users to create report templates, and a Web application for end-users to select a report, specify search criteria, and view/save/print the output. Tools included C# and DevExpress XtraReports.

ICAN DLP – project manager and lead software engineer for Data Logging and Playback within ICAN's next generation suite of products. DLP is a central component of Automatic Identification System (AIS) infrastructure, providing recording, search and replay of recorded surveillance data. It also facilitates reports and statistics on the state of the AIS network and marine traffic. Activities included requirements analysis, database design (with initial deployment on SQL Server and architecture to support other databases including Oracle and MySQL), and C# programming.

ICAN Chart Server – project manager and lead software engineer for a server-based product that accepts XML requests for navigation charts over TCP, and returns the charts as images with corresponding metadata.

ICAN Demonstration Plotter – C# developer for a demonstration 2D and 3D chart/plotter product using ICAN's next generation technology. Responsible for a variety of components, including multi-scale raster chart display engine (initially implemented with NASA's blue marble dataset), points of interest, place names, communications management, settings management and user interface.

ICAN Foundation Classes – ongoing research and foundation class development in support of ICAN's next generation software. This was a significant milestone for ICAN as it was the base for development using new tools (Visual Studio .NET) and a new language (C#).

ICAN Georeferencing Utility – designed and developed a utility for customers to georeference and transform any digital image into a raster map that can be used with ICAN’s electronic charting systems. Tools included C# and the gdal library.

S-57 Encoding Guide – analysis, design and development of a database to assist electronic chart production teams in the US and Europe communicate and implement encoding standards. Tools included Microsoft Access, Visual Studio .NET and Crystal Reports.

ICAN Regulus and Aldebaran Electronic Charting Systems – senior member of the team responsible for requirements and design for ICAN's marine navigation software products. They are used as a bridge display system for general navigation including route planning/monitoring, situation awareness and collision avoidance. They also provide operational support for surveillance, fishing, buoy tending, surveying and many other marine duties. Projects include customer-specific enhancements and general product improvements.

ICAN AIS Router – project manager for the design and development of this cross-platform networking software, which is typically used to move navigation and safety information from AIS shore stations to vessel traffic centres, port authorities, remote owners/managers, and monitoring agencies. Originally developed as a customer-specific solution, this technology formed the base of ICAN's DataSwitch product.

ICAN Relocation – coordinator for ICAN's premises move with responsibility for real estate search, landlord negotiations, architectural specifications and legal agreements; vendor relations for renovations, furniture, communication systems and moving.

ICAN Investor Business Plan – major contributor and document editor/coordinator for ICAN's business plan, which resulted in a seven-figure capital infusion.

ICAN GAPP – project manager for enhancements to GAPP, a software product used by Canadian Coast Guard for statistical recording and analysis of the position information generated by Canada's Differential Global Positioning System (DGPS) infrastructure.

ICAN Nav Aids Module – process analyst and project manager for the investigation and design of this product add-on that facilitates management and accurate placement of marine aids to navigation, while replacing paper-based recordkeeping systems.

ICAN Accounting Systems – business process analyst for the selection, rollout and training for a multi-user accounting system using QuickBooks Pro.

Canadian Coast Guard Y2K Readiness – systems analyst and Microsoft Access tracking database developer for the initiative to ensure smooth year 2000 calendar rollover of all shipboard and shore-based computers and electronics.

ICAN Integrated Information Systems – manager of the team responsible for design, development and administration of ICAN's business information systems and computer network. Supported business functions included Timekeeping, Inventory Management, Product Management, Bug Tracking, Customer Support, Product Development, Software Package Production and Human Resource Management, among others. Keys tools include SQL Server, Exchange, Visual Basic, Access and Outlook.

Tickle View Farms Business Plan – consultant and financial model developer for a business plan to farm, process and market peppermint tea.

Equipment Maintenance System – senior technical analyst responsible for design, development and enhancement of a Visual Basic 5 three-tier object-oriented framework for database applications. The framework aided code standardization, re-use and ease of maintenance.

Highway Maintenance Management System – systems analyst responsible for design, development and implementation of the system to standardize, plan and monitor maintenance of Newfoundland's highways. Tools included Citrix Winframe, Visual Basic, Access, Crystal Reports and EasyER.

Street Guide – Visual Basic programmer for an application to manage the location of telephone numbers, customers and telecommunications infrastructure.

Tourism Destination Management System – senior programmer on this call centre and reservations application. Also served as Systems Analyst for maintenance and enhancements after implementation. Tools included Oracle, SQLWindows, Visual Basic, Crystal Reports, Internet Information Server and Active Server Pages.

Out of Province Claims System – database designer and SQLWindows programmer for the financial system that controls accounts receivable and accounts payable for healthcare services that are provided outside the patient's home province.

SoftChart Production Management – Access database designer and developer for an application to help manage workflow, staff and data in the production of electronic marine navigation charts.

Healthcare Financial Collection and Editing – application developer for a system that collects, checks, aggregates and reports monthly financial details for all healthcare facilities in the province. Complex batch edit checks were programmed using a combination of procedural code and SQL.

Communicable Disease Control Application – SQLWindows programmer and Building Blocks class library expert for system to register, cross-reference and report on all known cases of communicable diseases. Included substantial security and confidentiality requirements.

How Does Your Garden Grow? Accounting Systems – systems analyst for the selection, rollout and training for an integrated accounting system using QuickBooks Pro.

C&W Industrial Quotation and Invoicing Application – analyst and developer for a Lotus Approach database application to augment existing accounting and financial information system.

Personal Care Homes System – dBase IV programmer responsible for enhancements to a data collection and reporting application used in the management of subsidized seniors' homes.

Facility Profile Application – SQLWindows programmer and SQLBase database administrator for a client/server application that provides basic information and summary statistics about all healthcare facilities in the province.

Mineral Rights System – Clipper programmer for a major enhancement of an application that registers claims and monitors expenditure requirements for mineral exploration claim blocks.

Education Facilities Planning – SAS developer for a financial analysis model for school capital improvements and/or replacement.

Academic Projects

Addressing Accessibility Challenges of GIS-based Multiple Criteria Decision Analysis for Integrated Land Management: Case study in the Humber region of Newfoundland, Canada – MSc thesis project investigating information support for land management decisions using Geographic Information Systems

(GIS) and Multiple Criteria Decision Analysis (MCDA). A case study group of Humber region land managers representing various perspectives was assembled and GIS data representing their concerns was collected. The Multiple Criteria Decision Analysis System software tool was developed and integrated to support the exploration, structuring, and evaluation of decision scenarios (<http://research.library.mun.ca/9520/>).

GIS-based Multiple Criteria Decision Analysis: State of the field – Geography 6002 term report

Case Study Methodology: Annotated bibliography – Geography 6001 report

Forest Biomass Estimation using GIS and Geographically Weighted Regression – Geography 6120 term project

Trace the Fact: Spatial autocorrelation – Geography 6000 report

Comparative DEM Analysis and Boolean MCE Analysis in GIS – Geography 3260 term project

Migration and Colonization: Newfoundland's Population in 1768 – Geography 3620 term project

Simulation of an ATM Queue for making service recommendations – Business 7400 term project

Options and Futures Analysis – Business 7170 term project

Business Plan for a Golf Course and Real Estate Development – Business 7030 term project

Integer Programming Optimization Application – Business 6400 term project

Investment Game – Business 6140 term project

Investigation of Cooperation Opportunities for Irish and Newfoundland Oil and Gas Companies – Business work term report.

Conference and Workshop Attendance

Esri Regional User Conference, St. John's, NL, November 2019, 2017, 2016, 2012, 2011, 2010, 2009, 2007

The Road to Zero Waste in Newfoundland, Zero Waste Canada (NL Chapter) and Memorial University, St. John's, NL, October 2019

Newleef Green Economy Conference, Newfoundland and Labrador Environmental Industries Association, St. John's, NL, October 2019, 2017, 2015

Decarbonize NL, St. John's, NL, July 2019

Climate Change Actions Workshop, Town of Conception Bay South, NL, March 2019

Caribbean Business Opportunities Seminar, TradeNL and Newfoundland and Labrador Environmental Industries Association, St. John's, NL, June 2019

Funding Opportunities through Innovative Solutions Canada, Newfoundland and Labrador Environmental Industries Association, St. John's, NL, April 2019

CleanTech Coworking Day, Newfoundland and Labrador Environmental Industries Association, St. John's, NL, April 2019

Tech Transformation Summit, Newfoundland and Labrador Alliance of Technology Industries, St. John's, NL, April 2019

Salmon Habitat Restoration Workshop, World Wildlife Fund Canada, St. John's, NL, March 2019

Climate Change Risks Workshop, Town of Conception Bay South, NL, March 2019

Climate Change Impacts Workshop, Town of Conception Bay South, NL, December 2018

Beaufort Sea Partnership, Inuvik, NT, October 2018

Arctic Shipping Forum, St. John's, NL, October 2018

Ocean Frontier Institute Strategy Consultation, St. John's, NL, October 2018

Coastal Zones Canada, St. John's, NL, July 2018

Aquatic Habitat Planning Workshop, Department of Fisheries and Oceans and Marine Institute, Clarenville, NL, March 2018

Canadian Institute of Geomatics NL Annual General Meeting, St. John's, NL, April 2018, November 2016, September 2015

Aquatic Habitat Restoration Workshop, ACAP Humber Arm, St. John's, NL, March 2018

Geomatics Atlantic, St. John's, NL, November 2017

Canadian Institute of Geomatics Conservation GIS Workshop, St. John's, NL, June 2017

Esri Geodesign Summit, Redlands, CA, January 2017

Canadian Boreal Forest Agreement Newfoundland Regional Working Group, Corner Brook, NL, December 2016, November 2016, October 2016, May 2016, April 2016, March 2016, February 2016, January 2016, November 2015, September 2015, June 2015, April 2015, February 2015, October 2014, June 2014, January 2014, November 2013, October 2013, July 2013

International Marine Conservation Congress, St. John's, NL, July 2016.

Citizen Science Focus Group, <http://nlnature.com/>, St. John's, NL, September 2015

Protected Areas Forum, Canadian Parks and Wilderness Society, St. John's, NL, May 2015

StartupNL Pitch Events, St. John's, NL, May 2015, December 2014

Marine Protected Areas Workshop, Memorial University of Newfoundland, St. John's, NL, March 2015

2nd World Small-scale Fisheries Congress, Merida, Mexico, September 2014

Too Big To Ignore Working Group 1, Tiburon, CA, February 2014

Development of Well-being and Sustainability in Small-scale Fisheries, Centre for Economic and Social Studies, Hyderabad, India, December 2013

CoastGIS, Victoria, BC, June 2013

Too Big To Ignore Working Group 1, Vancouver, BC, June 2013

NCC 50th Anniversary Retreat, Niagara, ON, November 2012

Newfoundland and Labrador Environment Network Annual General Meeting, St. John's, NL, November 2012

Ducks Unlimited Canada Wetland Policy Workshop, St. John's, NL, October 2012

Newfoundland and Labrador Species at Risk Stewardship and Education Workshop, St. John's, NL, October 2012

Voices from the Land (environmental education workshop), St. John's and Torbay, NL, September 2011

Newfoundland and Labrador Species at Risk Stewardship and Education Workshop, Corner Brook, NL, April 2011

Newfoundland and Labrador Environment Network Annual General Meeting and Conference, St. John's, NL, April 2011

Newfoundland and Labrador Environment Network Funding Workshop, St. John's, NL, March 2011

ESRI International User Conference, San Diego, CA, July 2010

Society for Conservation GIS, Monterey, CA, July 2010

Traditional Use Map Biography Seminar (with Terry Tobias), St. John's, NL, April 2010

Aldrich Interdisciplinary Conference, St. John's, NL, March 2010

GIS Day, St. John's, NL, March 2010

Humber River Basin Project Workshop, Corner Brook, NL, February 2010

International Symposium on Spatial Data Quality, St. John's, NL, July 2009

GIS Day, St. John's, NL, March 2009

Humber River Basin Project Workshop, Corner Brook, NL, October 2008

Geomatics Atlantic, St. John's, NL, June 2007

Newfoundland and Labrador Marine Show, St. John's, NL, 2004, 2003, 2002

Canadian Centre for Marine Communications Showcase, St. John's, NL, 2001

Gupta Software Developers' Conference, Palm Springs, CA, June 1995

Oral and Poster Presentations

Memorial University Faculty of Science, St. John's, NL, February 2020 – “Science Career Talks”, public presentation and discussion.

Environmental Policy Institute and Humber Natural History Society, Corner Brook, NL, November 2018 – “Coastal Restoration Planning in Newfoundland and Labrador: Identification and Prioritization of Sites”, public presentation

Nature Newfoundland and Labrador, St. John's, NL, September 2018 – “Coastal Restoration Planning in Newfoundland and Labrador: Identification and Prioritization of Sites”, public presentation

Coastal Zones Canada, St. John's, NL, July 2018 – “Coastal Restoration Planning in Newfoundland and Labrador: Identification and Prioritization of Sites”, conference presentation

Geomatics Atlantic, St. John's, NL, November 2017 – “Delineating the Human Footprint for Conservation Planning (and other applications)”, conference presentation

Geomatics Atlantic, St. John's, NL, November 2017 – “We Can't Afford Not To: Exploring geographic information applications for small communities”, conference presentation co-author

Canadian Institute of Geomatics Conservation GIS Workshop, St. John's, NL, June 2017 – “Conservation Prioritization using Multi-Criteria Overlay in QGIS”, workshop presentation

Conservation Biology Senior Undergraduate Lectures, St. John's, NL, November 2018, November 2017, November 2016, November 2015, November 2014, March 2014, March 2013 – “Using GIS to Guide Conservation Planning”, guest lectures

Cartography Senior Undergraduate Lectures, St. John's, NL, December 2015 (guest lecturer), January 2015 (guest lecturer), November 2014 (guest lecturer), Winter 2014 (course instructor), Fall 2011 (course instructor), Winter 2010 (guest lecturer)

Geomatics Atlantic, St. John's, NL, November 2014 – “Putting Small-scale Fisheries on the Map”, conference presentation co-author

Geomatics Atlantic, St. John's, NL, November 2014 – “Use of Intact Landscapes by Woodland Caribou on the Island of Newfoundland”, conference presentation co-author

2nd World Small-scale Fisheries Congress, Merida, Mexico, September 2014 – “Information System on Small-scale Fisheries”, user training and feedback sessions

Too Big To Ignore Working Group 1, Vancouver, BC, June 2013 – “Information System on Small-scale Fisheries”, professional presentation

Labrador Conservation Blueprint Core Team Meetings, Goose Bay, NL, March 2013 – “Representation Analysis”, “Rare and Special Species and Habitats”, “Overall Conservation Importance”, professional presentations

Labrador Conservation Blueprint Core Team Meetings, Goose Bay, NL, September 2012 – “Consolidated Land Cover”, “Conservation Prioritization”, professional presentations

Connectivity Working Group, St. John's, NL, May 2012 – “Using Forest Resource Inventory to Measure Intactness on the Island of Newfoundland”, professional presentation

Labrador Conservation Blueprint Core Team Meetings, Goose Bay, NL, February 2012 – “Identifying and Prioritizing Large Conservation Benchmark Areas in Labrador Using BEACONS Tools”, professional presentation

Labrador Conservation Blueprint Core Team Meetings, Goose Bay, NL, November 2011 – “Labrador Human Footprint Index”, professional presentation

Newfoundland and Labrador Species at Risk Stewardship and Education Workshop, Corner Brook, NL, April 2011 – “Data Collection by Volunteers”, workshop presentation

Torbay Gully Land Owners Meeting, Torbay, NL, March 2011 – “NCC Land Acquisition Options”, professional presentation

Landscape Collaborative Community, November 2010 – “Normalization in GIS-based Multiple Criteria Decision Analysis”, webinar presentation to online community

Society for Conservation GIS, Monterey, July 2010 – “A GIS-based Multiple Criteria Approach to Integrated Land Management Decision Analysis: Case study in the Humber region of Newfoundland, Canada”, conference presentation and poster

Aldrich Interdisciplinary Conference, Memorial University of Newfoundland, March 2010 – “A GIS-based Multiple Criteria Approach to Integrated Land Management Decision Analysis: Case study in the Humber region of Newfoundland, Canada”, conference presentation

GIS Day, Memorial University, March 2010 – “Multiple Criteria Decision Analysis System”, software demonstration

Humber River Basin Research Workshop, Sir Wilfred Grenfell College, Corner Brook, NL, February 2010 – “A GIS-based Multiple Criteria Approach to Integrated Land Management Decision Analysis: Case study in the Humber region of Newfoundland, Canada”, workshop poster

Department of Geography, Memorial University, February 2010 – “More than Coincidence: Supporting Land Management Decision Making with GIS”, blue box seminar on thesis project results

Canadian Forest Service, Natural Resources Canada, Corner Brook, NL, December 2009 – “More than Coincidence: Supporting Land Management Decision Making with GIS”, thesis project presentation

ESRI Regional User Conference, St. John’s, NL, November 2009 – “More than Coincidence: Supporting Land Management Decision Making with GIS”, thesis project Phase 1 presentation

Department of Geography, Memorial University, April 2009 – “A GIS-based Multiple Criteria Approach to Land Management Decision Making in the Humber River Basin”, thesis proposal presentation

GIS Day, Memorial University, March 2009 – “Introduction to GIS for high school students”, software demonstration and interactive exercise

Geography 6001 **research methods presentation**, March 2009 – “Case Study Methodology: Annotated bibliography”

Geography 6000 **technology show and tell**, November 2008 – “Sieve Mapping”

Humber River Basin Research Workshop, Sir Wilfred Grenfell College, Corner Brook, NL, October 2008 – “A GIS-based Multiple Criteria Approach to Land Management Decision Making in the Humber River Basin”, thesis project overview presentation

Geography 6120 **weekly class presentations**, Fall 2008 – various spatial analysis topics

QPS and HITT, The Netherlands, September 2006 – “ICAN’s Next Generation Software Architecture and Prototypes”, professional presentations

ICAN, St. John’s, NL, 2006-2008 – “ICAN’s Next Generation Software Architecture and Prototypes”, professional presentations

St. John’s .NET Developers’ Group, November 2005 – “Managing Settings in .NET”, educational presentation

St. John’s .NET Developers’ Group, September 2004 – “To Port or Not To Port”, overview presentation of ICAN’s marine navigation and surveillance software, and discussion of options and issues for porting to or re-writing for .NET

ICAN, St. John’s, NL, 2002-2008 – “Structured Query Language”, internal educational presentations

ICAN, St. John’s, NL, 1998-2005 – “Internal Information Systems”, internal educational presentations

Newtel Information Solutions, St. John’s, NL, 1997 – “Hardware Replacement Strategy for Software Development Workstations”, presentation to company leaders

Publications and Reports

Greene, R., Vincent, P. (2020). “Natural Areas System Plan 2020: A Review of Ecosystem Representation in Existing and Proposed Protected Areas on the Island of Newfoundland”, prepared for Canadian Parks and Wilderness Society.

Greene, R. (2019). “Coastal Restoration Fund Project: Site Identification and Prioritization 2018-19”, prepared for World Wildlife Fund Canada.

Greene, R., Bradstreet, M., Macdonald, C., Notzl, L. (2019). “Southeastern Beaufort Sea Natural Area Conservation Plan”, prepared for the Nature Conservancy of Canada.

Greene, R., Bradstreet, M., Macdonald, C., Notzl, L. (2018). “Tallurutiup Imanga Natural Area Conservation Plan”, prepared for the Nature Conservancy of Canada.

Gallo, J., Greene, R. (2018). “Connectivity Analysis Software for Estimating Linkage Priority: A User Guide for the Linkage Priority Tool of the Linkage Mapper Toolbox”, prepared for the Conservation Biology Institute (https://figshare.com/articles/User_Guide_Linkage_Priority_Tool_of_the_Linkage_Mapper_Toolbox/5673715).

Greene, R. (2018). “Coastal Restoration Fund – Newfoundland and Labrador Project Report 2: Proposed Site Prioritization Approach, Capelin Spawning Sites Mapping, Data Acquisition Gap Analysis”, prepared for World Wildlife Fund Canada.

Greene, R. (2018). “Options and Recommendations for an Online Spatial Data Exploration Platform for the WWF-Canada Coastal Restoration Fund project”, prepared for World Wildlife Fund Canada.

Chuenpagdee, R., Rocklin, D., Bishop, D., Hynes, M., Greene, R., Lorenzi, M.R., Devillers, R. (2017). "The global information system on small-scale fisheries (ISSF): A crowdsourced knowledge platform", *Marine Policy*, IN PRESS (<http://dx.doi.org/10.1016/j.marpol.2017.06.018>).

Greene, R. (2017). "Technical Background for Joint Agreement on CBPPL Voluntary Protected Areas", prepared for the CBFA Newfoundland Regional Working Group.

Greene, R., Lisgo, K. (2015). "Benchmark Potential on the Island of Newfoundland", prepared for the CBFA Newfoundland Regional Working Group.

Lisgo, K., Greene, R. (2015). "Proposed Goals and Protected Area Objectives and Targets for Conservation Features of Interest", prepared for the CBFA Newfoundland Regional Working Group.

Greene, R. (2014). Land Cover Dataset Background, prepared for the CBFA Newfoundland Regional Working Group.

Greene, R. (2014). Water Edge Density Background, prepared for the CBFA Newfoundland Regional Working Group.

Greene, R., Devillers, R., Chuenpagdee, R. (2014). "Putting Small-scale Fisheries on the Map", *Geomatics Atlantic*, St. John's, NL, November 2014, abstract in conference proceedings.

Goudie, I., Greene, R., Feldgajer, J. (2014). "Use of Intact Landscape by Woodland Caribou on the Island of Newfoundland", *Geomatics Atlantic*, St. John's, NL, November 2014, abstract in conference proceedings.

Greene, R., Lisgo, K. (2014). "Benchmark Constraint Analysis". Prepared for the CBFA Newfoundland Regional Working Group.

Greene, R., Fernandez, R. (2013), "Watershed Mapping for the Northeast Avalon", in Edinger, E., Hermanutz, L., *Profiling Regional Watershed Management on the Northeast Avalon: Integrating Practices for Drinking Water Quality*, prepared for Northeast Avalon Atlantic Coastal Action Plan and The Harris Centre (https://www.mun.ca/harriscentre/reports/arf/2012/Edinger_Hermanutz_Water_12_13_Final.pdf).

Notzl, L., Greene, R., Riley, J.L. (2013). "Labrador Nature Atlas, Volume One", *Nature Conservancy of Canada*, ISBN 9781897386293 (<http://support.natureconservancy.ca/pdf/blueprints/Labrador-Nature-Atlas-Vol1.pdf>).

Riley, J.L., Notzl, L., Greene, R. (2013). "Labrador Nature Atlas, Volume Two: Ecozones, Ecoregions and Ecodistricts", *Nature Conservancy of Canada*, ISBN 9781897386293 (<http://support.natureconservancy.ca/pdf/blueprints/Labrador-Nature-Atlas-Vol2.pdf>).

Greene, R., Devillers, R., Luther, J.E., Eddy, B. (2011). "GIS-based Multiple Criteria Decision Analysis (MCDA)", *Geography Compass* 5(6), 412-432 (<http://dx.doi.org/10.1111/j.1749-8198.2011.00431.x>).

Greene, R., Luther, J.E., Devillers, R., Eddy, B. (2010). "An approach to GIS-based multiple criteria decision analysis that integrates exploration and evaluation phases: Case study in a forest-dominated landscape", *Forest Ecology and Management* 260(12), 2102-2114 (<http://dx.doi.org/10.1016/j.foreco.2010.08.052>).

Greene, R. (2010). "A GIS-based Multiple Criteria Approach to Integrated Land Management Decision Analysis: Case study in the Humber region of Newfoundland, Canada", *Society for Conservation GIS Annual Conference*, Monterey, CA, July 2010, abstract in conference proceedings.

Greene, R. (2010). "A GIS-based Multiple Criteria Approach to Integrated Land Management Decision Analysis: Case study in the Humber region of Newfoundland, Canada", Aldrich Interdisciplinary Conference, Memorial University of Newfoundland, St. John's, NL, March 2010, abstract in conference proceedings.

Greene, R., Devillers, R., Luther, J.E., Eddy, B. (2009). "More than Coincidence: Supporting Land Management Decision Making with GIS", ESRI Regional User Conference, St. John's, NL, November 2009, abstract in conference proceedings.

Greene, R. (2008). "A GIS-based Multiple Criteria Approach to Land Management Decision Making in the Humber River Basin", Humber River Basin Research Workshop, Sir Wilfred Grenfell College, Corner Brook, NL, October 2008, abstract in conference proceedings.

Academic Scholarships, Awards and Research Support

Fellow of the School of Graduate Studies – MSc studies

ESRI Canada scholarship – MSc studies

MITACS Accelerate internship – MSc thesis project

Institute for Biodiversity, Ecosystem Science and Sustainability funding – MSc thesis project

Humber River Basin Project funding – MSc thesis project

School of Graduate Studies funding – MSc studies

Faculty of Business Administration Honours award – BComm studies

Financial Management Association National Honours Society – BComm studies

Faculty of Arts Deans List – first year university studies

Centenary of Responsible Government scholarship – first year university studies

Noel Sparrow Award for Academic Excellence – grade 9 studies

Training

Spatial Analysis in R – Society for Conservation GIS

Various ArcGIS Enterprise/Server Training (online self-paced) – Esri

Various Spatial Analysis and Data Management Webinars – Conservation Biology Institute, Society for Conservation GIS, DataOne, Canadian Institute of Geomatics, Geo for All, etc.

Agile Meets Design Thinking (online self-paced course) – Coursera / University of Virginia

Coastal Monitoring Drone Training – Newfoundland and Labrador Geological Survey

Open Standards for the Practice of Conservation (self-paced tutorial) – Conservation Measures Partnership

Moving to the Cloud (online self-paced course) – Coursera / University of Melbourne

Mentoring Master Class – Mary Jane Copps, through Futurpreneur Canada and TD Bank

Maxent (self-paced tutorial) – AT&T Research

Species Data Use Training (self-paced tutorial) – NatureServe

GeoPlanner Workshop – Esri

CityEngine Workshop – Esri

Marxan with Zones – Pacific Marine Analysis and Research Association

Competitive Strategy (online self-paced course) – Coursera / Ludwig Maximilians Universitat

Information Architecture (self-study) – O'Reilly

New Models of Business in Society (online self-paced course) – Coursera / University of Virginia

Technology Commercialization Workshop – Concordia Ventures, organized by Oceans Advance and NATI

Smart Growth (online self-paced course) – Coursera / University of Virginia

Lean Startup (self-study) – Eric Reis

PostGIS (online self-paced course) – Boundless Geo

Python Scripting for Map Automation in ArcGIS 10 (online self-paced course) – ESRI

Fundraising and Philanthropy – Nature Conservancy of Canada

Exploring Spatial Patterns in Your Data Using ArcGIS 10 (online self-paced course) – ESRI

Editing in ArcGIS Desktop 10 (online self-paced course) – ESRI

Performing Analysis with ArcGIS Desktop – ESRI Canada

Wilderness and Remote First Aid – Pretty SAFE Enterprises

Land Information System – Nature Conservancy of Canada

ArcGIS Desktop III: GIS Workflows and Analysis – ESRI Canada

Protected Area Tools for Marxan and ArcGIS – The Nature Conservancy

Marxan Tutorials and Good Practices (self-paced) – University of Queensland

Spatial Analysis Workbook (self-paced) – ESRI

Intellectual Property, Patents and Trademarks – MITACS STEP

Effective Networking – MITACS STEP

Using and Managing a Web-based GIS – ESRI Canada

Fundamentals of the Geodatabase – ESRI Canada

IDRISI (self-paced) – Clark Labs

Graduate Research Integrity Program – Memorial University of Newfoundland

First Aid – St. John Ambulance

Introduction to Microsoft Project – Nexient Learning Centres

Programming with C# – IEEE Online Training

Visual Studio .NET Introduction – SmartCertify Direct

Dealing with Difficult People – Fred Pryor Seminars

Microsoft Access Developer's Guide to SQL Server (self-study) – SAMS

Structured Query Language – ICAN Internal (developed and presented this course)

Advanced Visual Basic 5 – IRIS Software

Business Systems Analysis and Design – Peopleware Technologies

Object Oriented Analysis – IMSIG

Advanced Structured Query Language – American Management Systems

Project Management & Team Building – Andersen Consulting

Graphical User Interface Design – Corporate Computing

SQLWindows Performance by Example – Gupta

Introduction to ClassIQ class library for SQLWindows – Metex

Advanced SQLWindows (Building Blocks class library) – FrontEnd Systems

Introduction to SQLWindows (video) – Gupta (also facilitated this course)

Introduction to SQLWindows – SQLTechnologies

Application Developers Workbench – Ernst and Young

Introduction to Local Area Networks – Memorial University Continuing Studies

Management of Desktop Publishing – Memorial University Continuing Studies

IBM Mainframe Tools Training – Newfoundland and Labrador Computer Services

Software Development Tools, Languages and Platforms

CityEngine

SketchUp

TileMill/MapBox

Django web development framework

Leaflet web-mapping library

JavaScript

PostgreSQL/PostGIS

PyCharm

PHP

R

arcpy

Python

ArcObjects

SPSS

DevExpress

ArcGIS ModelBuilder

C++

gdal

C#

Microsoft SQL Server

Oracle DBMS

ERWin

Crystal Reports

Visual Basic

Microsoft Visual Studio

Lotus Approach

Visual Basic for Applications

Microsoft Access

Gupta SQLWindows

Gupta SQLBase

Structured Query Language

SAS

Focus

COBOL

Clipper

dBase

Simscrip

LINDO

Pascal

Basic

Web Content, Team Collaboration and Project Management Tools and Platforms

ArcGIS Enterprise/Server

Microsoft Azure

Slack

Survey123

Google Forms

Miradi and Miradi Share

Doodle

GitKraken

Trello

eSurv.org

Microsoft OneDrive

Google Docs and Sheets

GitHub

Atlassian BitBucket

Git

WooThemes for WordPress

WordPress

Sawtooth

HelpNDoc

DataBasin

ArcGIS Online

ArcGIS Server

Google Drive

PBWorks

Dropbox

Atlassian Confluence

Subversion

Atlassian Jira

Microsoft Visual Source Safe

Microsoft Project

Memberships

Genesis Coworking (formerly Common Ground) – member

Canadian Institute of Geomatics – member and regular attendee of events

NL Nature – user and contributor of nature observations on this online citizen science community

Society for Conservation GIS – member

Open Forum on Participatory GIS – member

Royal Canadian Geographical Society – member

Nature Newfoundland and Labrador (formerly the Natural History Society) – member and regular attendee of events

Newfoundland and Labrador Historical Society – member and regular attendee of presentations

East Coast Trail Association – member

The Works Fitness Centre – member

Wildflower Society – former member

Newfoundland and Labrador Beekeeping Association – former member

Society for Conservation Biology – former member

International Appalachian Trail, Newfoundland and Labrador Chapter – former member

The Landscape Collaborative – former member and volunteer development coordinator

IEEE – former Geoscience Society and Computer Society member

Canadian Association of Geographers – former member

St. John's .NET Developers' Group – former participant and occasional presenter

Squash Newfoundland and Labrador – former member and regular tournament participant

Volunteering

Canadian Species Data Modelling Working Group – member of peer support and learning group of experts in spatial data management and analyses related to species occurrences and ranges

Futurpreneur Canada – business mentor for entrepreneurs leading startups

Nature Newfoundland and Labrador – member of the Long Pond clean-up team; fundraising advisor to the board; researcher for feedback regarding environmental matters

Canadian Institute of Geomatics – vice-chair of the Newfoundland and Labrador branch; chair of organizing committee for Conservation GIS Workshop 2017; member of organizing committee for Geomatics Atlantic 2020, 2017 and 2014 conferences

Heart and Stroke Foundation – canvasser

Elsevier and Wiley Interscience – peer reviewer for international journals including Geography Compass, Biological Conservation and Land Use Policy

Science Gossip – citizen science volunteer, classifying figures and illustrations from Victorian-era science periodicals for this Zooniverse project

Association for New Canadians – mentor providing informal assistance with language skills, job searching and local familiarization for recent immigrants

Newfoundland and Labrador Environment Network – former steering committee member

City of St. John's – former environmental advisory committee member

Landscape Collaborative – former development coordinator

GIS Day – display booth and “GIS in an hour for high school students” organizer and presenter

The Works Squash League – former co-organizer

Junior Squash – former coaching assistant