

Appendix G

Curricula Vitae



Nathan Burnett serves with Stantec's Environmental Services group as an aquatic ecologist with experience on projects that include renewable energy and other industries, and specialized Environmental Effects Monitoring (EEM) and Investigation of Cause (IOC) studies for the mining and pulp and paper industries. He has extensive field experience in Ontario and elsewhere with projects ranging from urban to remote environments during all seasons, where he has been involved in a variety of field programs, including the collection of fish, benthic invertebrate, sediment, amphibian and bird data. He is familiar with protocols for fish sampling, and has an excellent working knowledge of benthic invertebrate identification. Nathan excels in the identification of fish, amphibians, birds, insects, and mammal species, aquatic and terrestrial plants, trees and shrubs, including species at risk and their habitats. He is also experienced in wetland evaluation, FEC and ELC protocols. Nathan's field skills are complemented by his laboratory and research experience, for which he has collected, analyzed and managed data for the purposes of developing plant and wildlife management guidelines. Nathan has been a contributing author on a number of technical reports prepared in compliance with federal and provincial legislation, policies and guidelines.

EDUCATION

B.Sc. (Hons.), Trent University / Honours Bachelor of Science in Biology, Peterborough, Ontario, 2009

Tech. Dipl., Sir Sandford Fleming College / Fish and Wildlife Technology Diploma, Lindsay, Ontario, 2007

Tech. Dipl., Sir Sandford Fleming College / Fish and Wildlife Technician Diploma, Lindsay, Ontario, 2006

PROJECT EXPERIENCE

Mining

Alderon Iron Ore Mine Project Baseline Study, Wabush, Labrador, Newfoundland and Labrador (Field Ecologist)

Baseline mining study that comprised sediment and water sampling, bathymetry data, flow and discharge measurements, and downloading surface and ground water loggers

Williams Mine EA/Baseline Aquatic Study*, Marathon, Ontario (Crew Leader)

Aquatic assessment included habitat characterizations and field sampling of water sediment, benthic invertebrates and fish for metal analysis. Organized field program for three crews and logistics for accessing remote areas by helicopter

Red Lake Gold Mines, Chukuni River System Sediment Characterization* (Aquatic Biologist)

Performed sediment sampling and coring in reference and exposure areas, and effluent plume delineation. Assisted with data management and report preparation

Xstrata Zinc, Heath Steele Mine Biological Monitoring Program, Brunswick Mine Cycle 2 EEM Fish Survey, Pabineau River Watershed Biological Assessment* (Aquatic Biologist)

Conducted electrofishing for three projects, including closed station quantitative sampling as well as qualitative sampling. Conducted the benthic and water sampling and habitat characterization components of the projects. Assisted with data management and report preparation

Xstrata Copper, Kidd Metallurgical Site, Investigation of Cause* (Aquatic Biologist)

Participated in extensive sampling program deploying passive sampling devices for sediment and pore water collection. Conducted sediment coring, benthic sampling, and several fishing methods. Assisted with data management and report preparation

Agrium Phosphate Mine*, Kapuskasing, Ontario (Aquatic Biologist)

Participated in a fish population and spawning survey on Lake Pitama at the Agrium Phosphate Operation

* denotes projects completed with other firms

Nathan Burnett Tech. Dipl., B.Sc. (Hons.)

Aquatic Ecologist

Red Lake Magnitude and Extent Study and Cochenour-Wilanour Mine Biological Assessment* (Aquatic Biologist)

Participated in field study program involving sediment coring and collection of sediment pore water, benthic macroinvertebrates, and a lethal small-bodied fish survey

Goldcorp Canada Ltd., Musselwhite Mine Fall Program* (Aquatic Biologist)

Participated in field study to assess chemical condition and toxicity in priority fish tissues and the health of sentinel sport fish species in northern Ontario

Xstrata Copper, Kidd Mine, Metal Mining Cycle 3 EEM* (Aquatic Biologist)

Crew member of EEM study that comprised of benthic and water sampling, habitat characterization, and a hybrid lethal fish survey using minnow traps and seine nets. Assisted with data management and report preparation

Cameco Corporation, Rabbit Lake Operation, Effects of Metals and Radionuclides on Breeding Birds* (Biologist)

Served as field crew leader for two tree swallow breeding and growth studies. Collected eggs for toxicity analysis, compiled chick growth data at regular intervals and determined nesting success and productivity. Benthic sampling for metal and toxicity analysis. Wild and domestic duck harvesting to determine contaminant uptake in tissue. Reported all bird sightings at reference and exposure areas. Aided in data management and report preparation

Natural Sciences & Heritage Resources

Proposed Simpson's Quarry EA, Coloured Aggregates, Bancroft, Ontario (Field Ecologist)

Conducted field sampling that included breeding bird, waterfowl breeding, and amphibian surveys, aquatic assessments, habitat characterizations, as well as species at risk surveys that included Blanding's Turtle and Whip-poor-will

Various Volunteer Programs* (Volunteer Ecologist)

Participated in various initiatives for organizations that included Trent University (Environmental Educator - meeting coordination and facilitation pertaining to animal tracking, physiology, bird identification, wilderness survival, flora/fauna identification and biology, edible and medicinal wild plants); OFAH & CVC (Atlantic salmon fry stocking of Credit River, conducted demonstrations of terrestrial and stream ecology); Loon and Sturgeon Lakes Fish and Wildlife Projects (analysis of water chemistry to assess health, productivity and biomass employing various sampling techniques, conducted inventories and assessments of lentic communities, Forest Ecosystem and Ecological Land Classification systems, prescribed sustainable harvest limits for moose and deer); Ringwood Fish Hatchery Chinook Salmon Spawning Initiative (conducted electrofishing to collect scales and otoliths for aging analysis, and extracted milt and eggs for rearing at hatchery); FrogWatch (amphibian species identification through sight and sound, data collection and reporting)

Stream Survey of Clearview, Levi and Mullet Creeks*, Mississauga, Ontario (Aquatic Biologist)

Served as crew leader for a stream survey involving benthic sampling (qualitative and quantitative), and habitat characterizations as part of the Biological Monitoring and Assessment Program protocols. Assisted with data management and report preparation

Sawmill Creek Aquatic Assessment* (Aquatic Biologist)

Participated in aquatic habitat assessment of Sawmill Creek to characterize habitat. Water quality and field measures including channel width and depth, substrate, channel morphology, flow, presence of vegetation and occurrence of erosion were collected

McCabe Lake Fish and Fish Habitat Survey*, Elliot Lake, Ontario (Aquatic Biologist)

Participated in study on limitations of fish productivity in McCabe Lake to determine probable cause of reduced fish abundance. Sampling included a mark-recapture spawning survey, identification of active white sucker spawning areas in lake, and associated inlets/outlet. Habitat characterization survey was completed to determine spawning enhancement opportunities

* denotes projects completed with other firms

Nathan Burnett Tech. Dipl., B.Sc. (Hons.)

Aquatic Ecologist

Various Clients*, Ontario (Aquatic Biologist)

Mining and pulp and paper mill project fieldwork preparation, planning and organization, including necessary equipment. Applied for permits and authored summary reports. Performed sample tracking, submission of samples collected during monitoring programs, screening and QA/QC for various sample types. Managed data, presentation of tables, figures, reports, station location mapping and habitat characterization for Environmental Effects Monitoring (EEM) and Investigation of Cause (IOC) studies

Renewable Energy

Capital Power (K2) Wind Farm, Goderich, Ontario (Field Ecologist)

Conducted aquatic assessments using REA water body designations, fish community presence/absence study and habitat characterization related to proposed wind farm

Cedar Point Wind Farm, Middlesex County, Ontario (Field Ecologist)

Conducted aquatic assessments using REA water body designations, fish community presence/absence study and habitat characterization related to proposed wind farm

Bow Lake Wind Farm, Montreal River Harbour, Ontario (Field Ecologist)

Conducted fieldwork related to natural heritage terrestrial assessment that included locating bat maternity roosts, amphibian surveys, and habitat delineation. Aquatic fieldwork included habitat characterization and water body determination congruent with the Renewable Energy Act (REA) and fish community assessments

Research / Laboratories

John Matthews Ph.D. Dragonfly Research* (Field Researcher)

*Conducted field research component of study tracking Green-darner Dragonfly (*Anax junius*) emergence dates and their relationship to water and air temperature, as well as water depth. Used water monitoring devices to infer relationship between water temperature and juvenile emergence. Used water chemistry instruments and developed wetland identification skills*

* denotes projects completed with other firms

David Charlton is a LEED® Accredited Professional, who has been contributing to sustainable resource management practices since 1982. He has developed a practical approach to impact assessment and conflict resolution through his central role in a number of Environmental Assessments and watershed management plans dealing with the protection, restoration and management of a range of ecosystems.

David has written more than 200 impact assessments, and has been cited for his work by the Ontario Provincial Planning Institute and the Ontario Municipal Board, among others. He has provided planning and management services to a range of industrial resource sectors including aggregate, forestry and agriculture. He has conducted pure and applied scientific research for all levels of Canadian government on topics ranging from Species at Risk, wetland management to agricultural land stewardship. He has worked closely with all interests, ranging from development proponents to public interest groups, to solve difficult resource management issues. David has served on several advisory committees, such as the City of Guelph Environmental Advisory Committee, and has appeared as an expert witness in front of Boards and Tribunals including the Ontario Municipal Board, the Consolidated Hearings Board and the Ontario Court of Justice.

EDUCATION

M.Sc, Resources Development, University of Guelph, Guelph, Ontario, 1986

B.Sc., Agriculture, University of Guelph, Guelph, Ontario, 1982

Ontario Wetland Evaluation System, Southern Manual, (3rd Edition) and Ontario Wetland Evaluation System, Northern Manual, (1st Edition), Ontario Ministry of Natural Resources, Lowville, Ontario, 1995

Temperate Wetland Restoration Training Course, Ontario Ministry of Natural Resources, Peterborough, Ontario, 2004

Fisheries Assessment Specialist and Fisheries Contracts Specialist, MTO/DFO/OMNR Fisheries Protocol Course, Downsview, Ontario, 2010

Qualified Electrofishing Operator (Class 2), Ontario Ministry of Natural Resources, Guelph, Ontario, 2010

REGISTRATIONS

LEED Accredited Professional, Canada Green Building Council

MEMBERSHIPS

Professional Agrologist, Agricultural Institute of Canada

PROJECT EXPERIENCE

Cement / Aggregates

Proposed Acton Quarry Extension, Dufferin Aggregates, Acton, Ontario (Project Director)

The extension of the existing Acton Quarry is proposed to meet the need for additional close-to-market aggregate resources of high quality Amabel Dolostone. The area of focus encompasses approximately 615 ha, across two Conservation Authority watersheds within the Regional Municipality of Halton Hills. David directed and participated in extensive ecological field work, including terrestrial and aquatic species surveys that included SAR Jefferson's Salamander field surveys and MNR-permitted sampling, and habitat assessments, inventories for potential Species at Risk habitat, and aquatic rehabilitation planning. He co-authored technical reports produced in accordance with the PPS and ARA application requirements, as well as participated in interdisciplinary consultation with agencies and agency-appointed committees

CBM Bromberg Pit (Senior Ecologist)

Natural heritage features assessment and senior report review.

CBM Neubauer Pit (Senior Ecologist)

Senior project direction and report review.

* denotes projects completed with other firms

David L. Charlton M.Sc., P.Ag., LEED® AP

Senior Principal, Environmental Management

Capital Paving Proposed Montrose Pit, County of Wellington, Ontario (Senior Ecologist)

Senior project direction and report review.

Capital Paving Aikensville Pit (Senior Ecologist)

Directed project and provided senior input to wetland assessment.

CBM Godfrey Pit (Senior Ecologist)

Provided senior direction concerning site design with reference to critical natural environmental features (i.e., coldwater stream and Butternut specimens).

CBM Olszowka Pit (Senior Ecologist)

Directed project and contributed to design of mitigation and rehabilitation plan to protect coldwater stream.

Staff Seminars, Toronto, Ontario (Restoration Advisor)

Researched and presented staff seminars at the Ontario Ministry of Agriculture regarding rehabilitation guidelines for gravel pit restoration to specialty crop production, microclimate and soils.

Fonthill Pit, Fonthill, Ontario (Restoration Advisor)

Assisted in design and implementation of rehabilitation guidelines for gravel pit restoration to specialty crop production, microclimate and soils.

Seeley and Arnill Aggregates Drysdale Pit Rehabilitation, Meaford Township, Ontario (Restoration Advisor)

Designed rehabilitation guidelines for gravel pit restoration to specialty crop production, microclimate and soils.

Walker Aggregates Inc. Orillia Quarry License, Orillia, Ontario (Project Manager)

Managed environmental reports in support of Official Plan Amendment and Aggregate License; rare species management plan, water balance to maintain streams and wetlands, heronry impacts and monitoring, wetland policy application, Ontario Municipal Board hearing

Walker Aggregates Inc. Duntroon Quarry Expansion, Collingwood, Ontario (Project Director)

Completing Natural Environment Technical Reports and joint authored Adaptive Management Plan for extension of a Category 2 Aggregate License; issues include Niagara Escarpment, ANSI, provincially significant wetlands, rare and SAR species including Butternut and American Hart's-tongue Fern, brook trout habitat, water balance, agricultural impacts and quarry rehabilitation

Carden Quarry Aggregates License, Brechin, Ontario (Project Director)

Natural Environment Technical Reports and Feasibility Study for a Category 2 Aggregate License; alvar ecology, SAR species including Loggerhead Shrike and Five-lined Skink, significant wildlife habitat issues, water balance, quarry rehabilitation

Craig Pit Expansion, Mono Centre, Ontario (Project Director)

Natural Environment Technical Reports for gravel pit expansion, impacts on adjacent wetlands and fish habitat, cross watershed boundary issues, recreational impacts.

Environmental Assessments

Environmental Assessment Training Activities Canadian Forces Base Petawawa (Project Manager)

Managed ecological inventories, GIS, Valued Ecosystem Component identification, impacts and impact mitigation analysis, forest, fish and wildlife and recreational resource management

Medway Valley Trunk Sewer Schedule C Class EA, London, Ontario (Project Director, Environmental Sciences)

Coordinated data collection, analysis and mapping for the terrestrial ecology and aquatic ecology components of the study; worked with other team members to integrate ecological issues with servicing and cost concerns; responsible for natural science input to the public participation process; led technical meetings with government agencies and public on environmental issues; developed mitigation and rehabilitation plans, supervised applications for DFO and CA permits, replanting of disturbed areas, and performance monitoring for stream crossings and ecological restoration

* denotes projects completed with other firms

David L. Charlton M.Sc., P.Ag., LEED® AP

Senior Principal, Environmental Management

Kingston Master Drainage Plan and Class EAs for stormwater Retrofit, Kingston, Ontario (Project Director, Environmental Sciences)

Part of a multidisciplinary team reviewing stormwater management policies and practices for the City of Kingston; reviewed background information; met with agencies, conducted field work and mapping; set priorities on a Subwatershed basis; identified and evaluated alternative stormwater retrofit locations, recommended policy changes and management protocols, contributed to public participation process

Highway 10 Widening and Turning Lane Improvements, Orangeville, Ontario (Project Director)

Supervised ecological data collection and analysis; recommended mitigation measures to protect cold water stream and terrestrial habitat; provided sediment control and site restoration guidelines

Environmental Assessment Training Activities Canadian Forces Base Val Cartier (Project Manager)

Managed ecological inventories, Valued Ecosystem Component identification, impacts and impact mitigation analysis, recommended a forest, fish and wildlife and recreational resource management program

Environmental Assessment Training Activities Canadian Forces Base Borden (Technical Advisor)

Advised on ecological inventories, application of Valued Ecosystem Components approaches, impacts and impact mitigation, ongoing forest resource management

Multi-Unit / Family Residential

The Neighbourhoods of Sunningdale, London, Ontario (Project Director)

Coordinated all environmental input for the design and approval of The Neighbourhoods of Sunningdale; project started with a Secondary Plan, progressing through alternative servicing analyses, plans of subdivision and detailed design exercises; was responsible for all environmental components of the project approval included extensive public input, negotiations with Conservation Authorities and an Ontario Municipal Board hearing. Located adjacent to the Medway Valley Environmentally Sensitive Area, The Neighbourhoods of Sunningdale was designed to take advantage of the natural beauty of the valley while protecting and enhancing the significant ecological resources in the ESA. The location and market thrust presented significant design and approval challenges that David helped overcome. His involvement continued into the marketing phase of the project as he contributed to the production of a Community Environmental Guide, which won the London Homebuilder's Association award for Best Brochure in 2002.

Jackson's Landing, Sutton, Ontario (Project Director)

Environmental policies, approvals and design - Secondary Plan to Master Site Plan, site design and impact mitigation for high water table and sensitive vegetation, natural corridor functions and forest edges, Ontario Municipal Board

Huron Road Subdivision, Kitchener, Ontario (Project Director)

Environmental approvals and design - Plan of subdivision, forest and wetland buffers, tree preservation, naturalized stormwater management, cold-water stream protection

Aberfoyle Creek Estates: Phases 2 and 3, Puslinch, Ontario (Project Director)

Environmental policies, approvals and design - wetland buffer, site plan control, naturalized stormwater management, protection of trout habitat, groundwater and fisheries interactions

Brentwood Subdivision, Aurora, Ontario (Project Director)

Environmental policies, approvals and design - Secondary Plan and plan of subdivision, recreational and aquatic corridor, forest and ravine buffers, naturalized stormwater management

* denotes projects completed with other firms

David L. Charlton M.Sc., P.Ag., LEED® AP

Senior Principal, Environmental Management

Natural Sciences and Heritage Resources

Torrance Creek Subwatershed Study, City of Guelph, Ontario (Project Director, Environmental Sciences)

Directed ecological inventory, analysis and policy formation, guidelines for recreational trail location and design in provincially significant wetlands, resource management and land use policies and implementation guidelines, invasive species control and fisheries enhancement recommendations.

The Effect of Lake Levels on Great Lakes Coastal Wetlands (Project Director)

Detailed historic air photo and GIS analysis of wetland community dynamics in response to lake level fluctuations, input to management responses

Terrestrial Effects of Acid Rain, Province of Ontario (Project Manager)

Managed crews evaluating the impact of acid rain on the tolerant hardwood forests of Ontario, involved visual assessment of trees, tissue sampling and soil sampling, data analysis

Technology Evaluation and Development Subprogram of Soil and Water Environmental Enhancement Program, Province of Ontario (Project Manager)

On behalf of Agriculture Canada, planned and managed \$3.5 million of research into technologies for farm level control of soil erosion and sediment and chemical transport to waters in south western Ontario; coordinated a team responsible for identifying research needs, planning and implementing research program; multi-disciplinary workshops, statements of work, evaluating proposals, quality control and trouble shooting for research projects, control of a large budget and an ambitious communications program

Laurel Creek Subwatershed Study, City of Waterloo, Ontario (Project Manager, Environmental Sciences)

Directed ecological inventory, analysis and policy formation, resource management and land use policies and implementation guidelines, integrated modeling of water quality and quantity and fish habitat, GIS mapping and extensive public involvement and consultation

Fletcher's Creek Subwatershed Study, City of Brampton, Ontario (Project Manager, Environmental Sciences)

Directed ecological inventory, analysis and policy formation, resource management and land use policies and implementation guidelines, intermittent headwater tributary and swale management

Environmental Impact Studies Guidelines and Training, Province of Ontario (Trainer)

Assisted Ontario Ministry of Natural Resources in designing and delivering training programs on how to prepare environmental impact studies in compliance with Provincial Policies; established minimum standards, developed case studies; designed model mitigation measures; delivered nine, two-day training sessions to more than 400 people

Credit Valley Secondary Plan, City of Brampton, Ontario (Project Director, Environmental Sciences)

Planned, implemented and managed the multidisciplinary natural science inputs to a Subwatershed study done in support of this Secondary Plan, completed for the City of Brampton. Coordinated data collection, analysis and mapping for the terrestrial ecology and aquatic ecology components of the study; worked with other team members to integrate ecological issues with water quality and quantity analyses and policy formation; responsible for natural science input to the public participation process and participated in technical meetings with government agencies. The project and the ultimate policy recommendations were controversial, and the scientific basis for recommendations as well as the validity and interpretation of data were challenged by many interests. David's scientific credibility and his firm focus on objective interpretation of data were instrumental in helping arrive at an appropriate balance between competing interests, and provided the City with practical and effective ecological policies.

Sports, Recreation & Leisure

York Major Golf Club, Vaughan, Ontario (Project Director)

Environmental design and Approvals - forest buffers, tree preservation, naturalized stormwater management, turf and water management, ESA and ANSI impacts, cold water stream protection, restoration of an aggregate operation.

* denotes projects completed with other firms

David L. Charlton M.Sc., P.Ag., LEED® AP

Senior Principal, Environmental Management

Cardinal Golf Course, King Township, Ontario (Project Director)

Impacts of construction and expansion, wetland and forest preservation and buffers, turf and water management, Oak Ridges Moraine policies, restoration of an aggregate operation.

Sandhills Golf and Residential Community, Uxbridge, Ontario (Project Director)

Environmental design and Approvals - Plan of subdivision, forest and wetland buffers, tree preservation, naturalized stormwater management, cold water stream protection, Oak Ridges Moraine policies, Ontario Municipal Board

Maskinonge Waterfront Development, Georgina, Ontario (Project Director)

Environmental feasibility studies for recreational development on Lake Simcoe, wetland, shoreline and fish habitat impact and mitigation studies

Lake Fanshawe Rowing Centre Course Upgrades - London, Ontario (Project Director)

Directed staff in evaluating fish habitat impacts of course improvements, designing mitigation measures and obtaining all necessary work permits

Emerald Hills Golf Course, Whitchurch-Stouffville, Ontario (Project Director)

Impacts of course changes, wetland and forest buffers, turf and water management, compliance with Oak Ridges Moraine policies

Dallaire Golf Course - Orillia, Ontario (Project Director)

Environmental design and Approvals - forest buffers, tree preservation, significant wildlife habitat, wild turkey management, naturalized stormwater management, turf and water management, cold water stream protection

Aikers Marina - Long Point, Ontario (Project Director)

Environmental impacts and mitigation for marina expansion: waterfowl staging, fish habitat, shoreline stability, World Biosphere Reserve, Ontario Municipal Board

Transportation Planning

Chinguacousy Road Widening, Brampton, Ontario (Fisheries Biologist)

Provided senior review of technical reports and regulatory approvals applications related to road widening works and natural channel design works affecting Redside Dace, a federally and provincially Endangered species

Train Derailment Wetland Restoration, Parry Sound, Ontario (Director of Ecological Restoration)

A freight train derailment in February 2003 resulted in the release of chemicals and grain into an approximately 2 hectare wetland area situated approximately 500 metres upstream of a lake in rural northern Ontario. David Charlton provided project guidance to Stantec's ecological restoration team of terrestrial and aquatic specialists. The wetland restoration plan involved the use of regionally common plant species, where locally-sourced material was transplanted directly at the site from nearby sources, or propagated at the Royal Botanical Gardens' Burlington Wetland Nursery for transplantation following the winter. The selected wetland restoration technique successfully capitalized on natural succession processes, while avoiding the introduction of invasive species, and has resulted in the transformation of a damaged landscape into a naturalized one.

DFO Approvals, Compensation and Mitigation Plans for the Construction of a New Road Network and Associated New Culverts in Muskoka Commercial Park, Huntsville, Ontario (Senior Reviewer)

Senior report review of habitat assessments and fisheries inventories on Haynes Creek, the site of a proposed new commercial park. Review of agency correspondence and compensation designs.

MTO Retainer Assignment #3006-E-0009 (Senior Reviewer)

Served as senior reviewer of reporting related to fluvial geomorphology, post-construction monitoring, fisheries assessment, terrestrial assessment, impact assessment, site rehabilitation and DFO approvals related to 'No HADD'.

David L. Charlton M.Sc., P.Ag., LEED® AP

Senior Principal, Environmental Management

Waste Management

Interim Waste Authority Metro-York and Durham EAs,
Province of Ontario (Project Director)

Peer reviewed biological and agricultural components of the IWA process on behalf of Municipalities with identified sites (Vaughan and Pickering); evaluated the study process, data, analysis techniques and final decisions for appropriateness, comprehensiveness, consistency, accuracy, reliability and comprehensibility; worked with legal counsel to prepare interrogatories and witness statements; met with proponent representatives, recommended process improvements and modifications.

Various Projects and Clients Across Southern Ontario,
Counties of Grey, Wellington, Elgin and Lambton
(Agrologist)

Evaluated the site selection criteria and process, evaluated agricultural impacts and mitigation measures, attended open houses and public meetings, made presentations to Municipal councils, and negotiated pre-hearing issues settlement and/or provided expert testimony in front of the Consolidated Hearings Board for landfills on behalf of public and private proponents as well as affected landowners. Focused on positive, proactive solutions to outstanding issues and represented all parties objectively and responsibly.

* denotes projects completed with other firms

Vince Deschamps B.E.S. (Hons.), M.Sc.

Senior Environmental Planner



Vince Deschamps is a senior environmental planner with experience in ecology. He has over 18 years of experience in Canada and abroad, conducting environmental assessments, resource economics, conservation planning and biological inventories. Vince has focused on assessing ecological components of urban and aggregate development proposals for conformity with municipal OPs, the PPS and the Aggregate Resources Act, which includes development and coordination of complex ecological field investigations, including management of expert staff and subconsultants, data analysis, including assessment of impacts to ecological receptors, and reporting. Vince's familiarity with applicable legislation and the regulatory authorities serves our clients well; his experience in the private, public and non-government sectors provide him with a creative and thoughtful approach to project development, delivery and evaluation. Vince once lived and worked in Indonesia for five years, where he specialized in assessing impacts of development activities on biodiversity, specifically regarding the IFC's Performance Standard 6–Biodiversity Conservation and Sustainable Natural Resource Management. This experience imbued Vince with a keen sense and appreciation for cultural and political sensitivities that influence the processes, and ultimately the potential for a project's success. This translates well into his frequent consultation with stakeholders from all levels, including government and NGOs. Vince's strong interpersonal skills, analytical, writing and presentation abilities are supported by a high level of organization, such that projects are completed on time and are of superior quality.

EDUCATION

M.Sc., University of Guelph / Rural Planning and Development, Guelph, Ontario, 2000

B.E.S. (Hons.), University of Waterloo / Environment and Resource Studies, Waterloo, Ontario, 1988

Certificate, Ontario Ministry of Natural Resources / Ecological Land Classification System for Southern Ontario, Kingston, Ontario, 2006

MEMBERSHIPS

Full Member, Canadian Institute of Planners

Full Member, Ontario Professional Planners Institute

Verification Service Provider, "Towards Sustainable Mining" Initiative, Mining Association of Canada

PROJECT EXPERIENCE

Aggregate Services

Township of East Garafraxa Gravel Pit Expansion*, Ontario (Project Manager / Ecologist)

Prepared a Natural Environment Level 1 & 2 Report for the expansion of the Township of East Garafraxa's existing licensed gravel pit operation near Orangeville, Ontario. The report was required to meet the natural environment reporting requirements of the Aggregate Resources Act for a Category 3 – Class A Pit (Above Water Table), and included Ecological Land Classification and a breeding bird survey.

Clinton Pit Level 1 & 2 Natural Environment Technical Report, Jennison Construction Limited*, Huron County, Ontario (Project Manager / Ecologist)

Prepared a Natural Environment Level 1 & 2 Report for a proposed gravel pit operation near Clinton, Ontario. The report was required to meet the natural environment reporting requirements of the Aggregate Resources Act for a Category 3 – Class A Pit (Above Water Table) and the EIS requirements of the Huron County and Ashfield-Colborne-Wawanosh Township Official Plans. Natural heritage evaluations included Ecological Land Classification, vegetation inventories, breeding bird surveys and the preparation of a Woodlot Restoration and Rehabilitation Plan. The Level 1 & 2 Report was prepared in accordance with the 2010 Natural Heritage Reference Manual (MNR).

* denotes projects completed with other firms

Vince Deschamps B.E.S. (Hons.), M.Sc.

Senior Environmental Planner

Conservation & Reclamation Planning

Javan Tiger Survey in Meru Betiri National Park, World Wide Fund for Nature (WWF)/Indonesia Programme, PHPA (Indonesian Department of Forest Protection and Nature Conservation) (1993)* (Project Manager)

Coordinated a field survey to determine the existence/status of the Javan tiger (Panthera tigris sondaicus) in Meru Betiri National Park and the surrounding area in East Java, using a combination of remote automated cameras and extensive field patrols to gather evidence of tiger and other large mammals.

Information Officer and Buffer Zone Initiatives in Ujung Kulon National Park, World Wide Fund for Nature (WWF)/Indonesia Programme, PHPA (Indonesian Department of Forest Protection and Nature Conservation) (1991-1993)* (Project Manager)

Developed and implemented a Park interpretation/awareness strategy for Park visitors and community extension programs in this World Heritage Site. Assisted with biological studies on the Javan rhinoceros (Rhinoceros sondaicus), and other large mammals. Developed alternative income sources for people living around the Park boundaries, including a traditional craft and tourist facilities cooperative. Related "buffer zone" activities included the formation of Village Environmental Advisory Boards and land/forest rehabilitation programs.

Development of a Model Reserve Management Strategy in the Danau Sentarum Wildlife Reserve, Asian Wetland Bureau/Indonesia Programme, Overseas Development Administration, PHPA (Indonesian Department of Forest Protection and Nature Conservation) (1993-1994)* (Project Manager)

Established a model reserve management strategy at the Danau Sentarum Wildlife Reserve, a remote floodplain reserve and RAMSAR site in West Kalimantan (Indonesian Borneo), via a process of combining ecological research with sustainable resource utilization by local people.

Evaluation of Community Forests as a Buffer Zone Initiative, Indonesia, Leuser Management Unit and CIDA Awards for Canadians (2000)* (Masters Thesis)

Developed and field-tested a model to evaluate the relationship between biodiversity and social benefits through community-based forest management in the Leuser Ecosystem. A secondary study was conducted among residents of the city of Medan to measure levels of awareness and concern of regional environmental issues, and their perceptions of the Leuser Management Unit.

Economic Analysis & Feasibility Studies

Value of Water Resources in Lore Lindu National Park, Indonesia, The Nature Conservancy (2001) (Project Manager)

This study investigated the economic contributions of waters arising from Lore Lindu National Park in Central Sulawesi. As part of this study, the framework for water and other resource valuations was developed using a combination of literature review, key informant interviews, field visits and data analysis. One of the key components was the development and application of the Agricultural Producer and Water User Survey that gathered primary data at the household level from a statistically-representative sample of rural households in the Study Area. In concert with other research techniques, the survey was used to estimate the value of agricultural production, livestock inventories and other sources of protein, and household and industrial water consumption. The study also estimated the total number of people who are dependent on water from LLNP for drinking, washing, bathing, and other day-to-day activities, as well as the total area of land irrigated by waters arising from the Park.

Value of Water Resources in Berau Regency, East Kalimantan, Indonesia, The Nature Conservancy (2002) (Project Manager)

This study estimated the economic contributions of water from the Kelay and Segah rivers in Berau Regency. The results present a conservative, but reliable estimate of the value of these contributions to the local economy using the framework developed in the LLNP Water Value Study. The study estimated the value of agricultural production, livestock inventories and other sources of protein, and household consumption of waters from these two rivers, the total number of people who are dependent on them for drinking, washing, bathing, and the total area of land irrigated by the two rivers. This study may also serve as a model to guide future conservation initiatives in Berau, and on the larger Mahakam River in East Kalimantan.

* denotes projects completed with other firms

Vince Deschamps B.E.S. (Hons.), M.Sc.

Senior Environmental Planner

Carbon/Mangrove Rehabilitation Feasibility Study, East Kalimantan, The Nature Conservancy (2004)* (Project Manager / Lead Researcher)

Vince carried out a feasibility study for restoring mangrove forest using carbon-funding mechanisms. The feasibility study covered the technical and financing sustainability aspects, including a thorough literature review of previous efforts. Technical feasibility focused on South East Asia with emphasis on Indonesia and the financial aspects worldwide. The outcome documented how the Clean Development Mechanism (CDM) might be used to set aside forest concessions in ecologically sensitive areas in Indonesia.

Comprehensive Review & Overhaul of Barbados Groundwater Protection Zoning Policy & System, Barbados Water Authority (2008)* (Planning Specialist)

Vince served as a Planning Specialist to assess the social, financial and economic impact of land use restrictions in Groundwater Protection Zones 1 through 5. Assessment involved engaging a representative cross section of stakeholders and consisted of reviewing current and historic Government of Barbados' population and economic statistics, conducting two Public Information Centres and Key Informant Interviews to identify common land use practices affecting groundwater resources, conducting community mapping to assess the impacts of land use practices on groundwater resources and conducting water-user and land use surveys to determine social, financial and economic conditions in the five Zones.

Economic Impacts of Agriculture Studies*, Ontario (Researcher)

Played a significant role in studies to assess the economic impacts of agriculture in nine counties across Ontario. The studies include reviews of relevant literature, analyses of secondary data, surveys of agriculture-related businesses, focus groups with primary producers and mapping components

Northwest Brampton Urban Boundary Review, Shale Resources Review, City of Brampton, Ontario (Researcher)

Conducted an economic assessment of the Greater Toronto Area market area for shale production and brick manufacturing, as well as determining the long-term demand trends and quantities for heavy clay products, most notably clay bricks.

Environmental Impact Assessments

Biodiversity Management Rosia Montana Project, Rosia Montana Gold Corporation S.A., Romania (2003-2004) (Biodiversity Specialist)

Vince was a member of the Stantec consulting team that conducted an Environmental Impact Assessment of the Rosia Montana Gold Corporation S.A. proposed Rosia Montana Project in Romania. Among other project-related tasks, he was responsible for producing the Biodiversity Conservation Plan, drafting several sections of the EIA report, coordinating biological field surveys in Romania, and acquiring and analyzing data from other project consultants.

Martabe Project Biodiversity Management and Impact Assessment, Newmont Mining, Indonesia (2004-2005)* (Biodiversity Specialist)

Vince was part of the MWH Global team conducting preliminary feasibility studies for Newmont Mining Corporation for development of the Martabe gold mine project in North Sumatra, Indonesia. Vince was responsible for reviewing ecological baseline studies conducted in the Martabe Project Area (MPA) on behalf of Newmont, identifying key ecological issues, potential impacts and developing management options for the proposed project. Key to the development of the biodiversity component of the feasibility study was the presence of globally threatened species in and adjacent to the MPA, and accelerating forest cover loss as a result of unsustainable land conversion by local communities.

* denotes projects completed with other firms

Vince Deschamps B.E.S. (Hons.), M.Sc.

Senior Environmental Planner

External Environmental Audit, PT Freeport, Indonesia (2005)* (Biodiversity Specialist)

As a sub-consultant to MWH Global, Vince participated in the 2005 External Environmental Audit of the PT Freeport Indonesia (PTFI) mining operation in Papua, Indonesia. The audit is required on a periodic basis by the current Contract of Work established between the Government of Indonesia and PTFI, and is focused on evaluation of: compliance with specific COW requirements and applicable regulations; the effectiveness of PTFI's environmental management system, practices, and procedures in actual practice; and, the level to which PTFI's operations employs internationally recognized best management practices for the management and mitigation of its environmental impacts. In his role as an Audit Team member, Vince was responsible for the evaluation of biodiversity and ecological impacts, particularly in relation to the restoration, rehabilitation and monitoring of the Ajkwa Deposition Area and excavated/waste rock stockpile areas in the highlands. Given his fluency in Bahasa Indonesia, Vince was also called upon to assist in the evaluation of regulatory compliance issues and provide translation assistance to other audit team members as circumstances required.

Biodiversity Evaluation, PT Holcim Indonesia, Tuban, East Java (2008)* (Biodiversity Specialist)

Served as the Lead Consultant for a biodiversity evaluation of Holcim's proposed PT. Semen Dwima Agung Cement Operation near Tuban, East Java. The International Finance Corporation (IFC) requested Holcim to conduct an independent expert evaluation of the biodiversity analysis conducted for the Project ESIA (ANDAL) within the context of the IFC Performance Standard 6 – Conservation of Biodiversity and Sustainable Resource Management (PS6). In addition to the evaluation of the content of the ANDAL, the evaluation also provided a series of recommendations to further understand conditions at the project site and bolster PT Holcim Indonesia's effort to minimize impacts on terrestrial flora and fauna in the project area.

Eramet/Weda Bay Nickel BFS ESHIA, Halmahera, Indonesia (2009-2011)* (Terrestrial Biodiversity Team Leader)

Currently engaged as the Team Leader for Technical Memorandum 01 (TM01, Terrestrial Biodiversity) for Weda Bay Nickel's "Bankable Feasibility Study-Environmental, Social and Health Impact Assessment" (BFS ESHIA). Working with the BFS ESHIA Project Manager and Technical Director to ensure timely delivery of all outputs related to Terrestrial Biodiversity. This includes providing oversight and guidance to experts from the Indonesian Institute of Sciences Research Centre for Biology (LIPI) to design and conduct field investigations, analyzing the results of these investigations, assessing potential impacts to terrestrial biodiversity as a result of mine development, and recommending mitigations to minimize these impacts. Responsible for the preparation of the Terrestrial Biodiversity Baseline Report, Terrestrial Biodiversity Action Plan and integrating these documents into the overall BFS ESHIA Report. Fieldwork and reporting will be in compliance with the Equator Principles, IFC Performance Standards, and any other guidelines to be designated by Weda Bay Nickel.

Peer Reviews of Other Consultants' Ecological Reports for Various Land Development Proposals and Projects on Behalf of Various Municipalities*, Ontario (Lead Reviewer)

Conducted ecological peer reviews on behalf of various municipalities. Projects included:

- Island Lake Golf and Country Club Community Environmental Impact Study and Proposed French Drive Road Extension, Town of Mono, ON*
- Environmental Impact Assessment, Part of North Half of Lot 16 and Part Lot 17, Concession 4, Township of Adjala-Tosorontio, ON*
- Hamount and Valleygrove Lands - Dufferin County Road #16 Township of Amaranth Environmental Impact Statement, Township of Amaranth, ON*
- Country Meadows Estates Subdivision Environmental Impact Assessment (Part Lot 30, Concession 1) Township of Amaranth, Dufferin County, ON*
- Melancthon II Wind Project Environmental Screening Report / Environmental Impact Statement, Township of Amaranth, ON*

** denotes projects completed with other firms*

Vince Deschamps B.E.S. (Hons.), M.Sc.

Senior Environmental Planner

Environmental Impact Assessments for Various Land Development Proposals and Projects*, Ontario (Ecologist / Environmental Planner)

Projects involved assessment of development impact on the natural environment and recommending monitoring strategies in conformity with legislative requirements, including municipal Official Plans, the Provincial Policy Statement, the Aggregate Resources Act, the Oak Ridges Moraine Conservation Plan and conducting Municipal Class Environmental Assessments under the Ontario Environmental Assessment Act. Projects include:

- Rehabilitation of The Gore Road from King Street to Patterson Sideroad Municipal Class EA (Schedule B), Region of Peel, ON
- Kincardine Avenue Municipal Service Extension Municipal Class EA (Schedule B), Township of Kincardine, ON
- Municipal Class EA (Schedule C) for the East Luther Grand Valley Water Pollution Control Plant, Grand Valley, ON
- ORMCP Conformity Report for the Colgan Water Supply Municipal Class EA (Schedule B), Township of Adjala-Tosorontio, ON
- Bonaire Highlands Scoped EIS, Fergus, ON
- Veterans Way Lands EIS, Orangeville, ON
- Aberfoyle Creek Estates Phase III EIS, Aberfoyle, ON
- Giant's Tomb Subdivision EIS Review, Tiny Township, ON
- Pickering-Kingston Road Environmental Report, Pickering, ON
- Gamble Road Lot 5 EIS, Richmond Hill, ON
- Hilltop Community EIS, Ayr, ON
- Churchville Planning & Heritage Study, Natural Heritage Component, Brampton, ON

Goreway Direct Access Natural Gas Pipeline Environmental and Social Impact Assessment, Sithe Canadian Pipelines, Ontario (Project Manager)

Managed and prepared a Draft ESIA to construct and operate a 610 mm (NPS 24) natural gas pipeline to provide fuel for the 800 MW Goreway Station combined cycle gas fuelled power station proposed to be located on Goreway Drive in the City of Brampton, Ontario. The Draft ESIA was based on the Ontario Energy Board's "Environmental Guidelines for Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario", and documented the information analysis and decision-making that resulted in the recommendation of a Preferred Pipeline Route, and the impact assessment, mitigation and monitoring measures associated with construction and operation of the pipeline.

Compatibility Assessment, Iron Ore Company of Canada*, Labrador (Project Manager)

Conducted an environmental, socioeconomic, and land use compatibility assessment for a proposed hospital and community college in the Town of Labrador City on IOCC's long-range mine plan. The assignment consisted of a quick assessment of the Town's proposed facilities, a technical assessment of the potential impacts of IOCC's mine plan on them, and input to the provincial and municipal EA processes required to develop these facilities.

Technical EA Reviews of the Detour Gold Project, Coral Rapids Power Limited Partnership & Taykwa Tagamou Nation*, Ontario (Project Manager / Lead Reviewer)

Served as project manager overseeing multi-disciplinary technical reviews, on behalf of Coral Rapids Power Limited Partnership and the Taykwa Tagamou Nation (TTN), of Environmental Assessment reports prepared for the Detour Lake gold mine project in northern Ontario. The reviews focused on the interests of the TTN, in particular how the proposed mine facilities, electrical transmission corridor and roads may affect them and how potential effects might be accommodated.

Renewable Energy

Environmental Permitting for Bluewater, Goshen and Jericho Wind Energy Centres, NextEra Energy Canada*, Huron and Lambton Counties, Ontario (Project Manager)

Served as project manager for the environmental permitting for the Bluewater, Goshen and Jericho Wind Farms proposed by NextEra Energy Canada in Huron and Lambton Counties in Ontario. These wind centres have a maximum generating capacity of 480 MW. Environmental permitting for the wind energy centres was undertaken in accordance with the recent Renewable Energy Approval (REA) process, as required under the 2009 Green Energy Act. Provided overall management responsibilities for the assignment, including project administration and the timely provision of deliverables, as well as serving as the primary point of contact for NextEra Energy Canada for the assignment.

Technical Writing

Various Writing and Editing Assignments in Indonesia (2005-2006)* (Project Manager)

In Indonesia, Vince has assisted CARE International and The Nature Conservancy with a variety of field assignments, project reports and professional papers. These include:

* denotes projects completed with other firms

Vince Deschamps B.E.S. (Hons.), M.Sc.

Senior Environmental Planner

- Editing and technical input to CARE Indonesia's "Protection of Tropical Forests Through Environmental Conservation of Marginal Lands (PTF-EMCL) Phase II Final Report". Prepared for the Norwegian Development Agency (NORAD), January 2006
- Preparation of CARE Indonesia's proposal: "CDM-Based Reforestation in Rawa Aopa Watumohai National Park, Indonesia". Prepared for Canada's Clean Development Mechanism and Joint Implementation Office, November 2005
- Co-authored the TNC paper: "Trends in Forest Ownership, Forest Resources Tenure and Institutional Arrangement: Are they Contributing to Better Forest Management and Poverty Education? Case Studies from Indonesia". Prepared for the FAO Regional Workshop in Bangkok, Thailand, October 2005
- Editing and input to TNC's Interim Report: "A Comparative Study on the Impacts of Inappropriate Land-Use and the Development of Participatory Watershed Plans". Prepared for the Japan Bank for International Cooperation, April 2005

Mitch Ellah is an aquatic ecologist who serves Stantec's Environmental Services group. He has significant experience conducting field research in the Canadian Arctic and various locations in southern and northern Ontario and Quebec. Mitch has been involved in all aspects of aquatic and terrestrial projects, including the review of background data, correspondence with government agencies, site investigation and data collection, and report writing. He is knowledgeable in, and proficient at field surveys and standardized protocols involving data collection for water quality and quantity, benthic macroinvertebrates, fish, bird, herpetofauna, aquatic plants and forest communities. Mitch has performed vegetation surveys using Ecological Land Classification (ELC) and Ontario Wetland Evaluation (OWES) protocols. He has excellent fish identification skills, and is proficient at conducting aquatic habitat and fish community assessments using electrofishing equipment, gill nets, fyke nets, seine nets and minnow traps. Mitch worked progressively for three field seasons in the Canadian Arctic investigating treatment wetlands in Nunavut and NWT Inuit communities. Mitch's knowledge of ecology and biotic identification, his strong communication skills and proven abilities at multi-discipline teamwork are complemented by his research experience, providing him with valuable technical expertise to meet a variety of project needs.

EDUCATION

B.Sc. (Honours), Trent University / Environmental Resource Science, Peterborough, Ontario, 2011

Tech. Dipl., Sir Sandford Fleming College / Environmental Technologist Diploma, Lindsay, Ontario, 2009

Tech. Dipl., Sir Sandford Fleming College / Environmental Technician Diploma, Lindsay, Ontario, 2008

Certificate, Ministry of Natural Resources / Ontario Wetland Evaluation System (OWES), Lindsay, Ontario, 2009

Certificate, Royal Ontario Museum / Fish Identification Workshop, Toronto, Ontario, 2011

Certificate, Stantec Consulting Ltd. / Class 2 Electrofishing Training, Guelph, Ontario, 2012

PROJECT EXPERIENCE

Natural Sciences & Heritage Resources

Hydro One Clarington Transformer Station, Clarington, Ontario (Field Ecologist)

Conducted fisheries and aquatic habitat assessment for proposed transformer station development

Shell Oil and Gas, Montreal, Quebec (Field Ecologist)

Conducted site investigation for amphibian and reptile populations, and amphibian breeding call surveys

Natural Heritage Site Inventories and Reporting*, Various Locations (Field Ecologist)

Bat maternity roost surveys in forest settings, various wildlife surveys including amphibians, reptiles, mammals, and birds; data collection and report writing for renewable energy REA environmental assessment projects; ELC vegetation community and wildlife habitat assessments; online database research for technical report preparation, including MNR Biodiversity Index and various atlases

Proposed Melancthon Quarry, Melancthon, Ontario (Field Ecologist)

Conducted species at risk surveys targeting Whip-poor-will using standardized MNR protocol

* denotes projects completed with other firms

Proposed Simpson's Quarry EA, Bancroft, Ontario (Field Ecologist)

Conducted field sampling, including breeding bird, waterfowl breeding, and amphibian surveys, aquatic assessments, habitat characterizations, as well as species at risk surveys that included Blanding's Turtle and Whip-poor-will

Renewable Energy

Niagara Region Wind Corp. Wind Farm, Niagara Region, Ontario (Field Ecologist)

Conducted aquatic assessments using REA water body designations, fish community presence/absence study and habitat characterization related to proposed wind farm

Bow Lake Wind Farm, Montreal River Harbour, Ontario (Field Ecologist)

Conducted fieldwork related to natural heritage terrestrial assessment that included locating bat maternity roosts, amphibian surveys, and habitat delineation. Aquatic fieldwork included habitat characterization and water body determination congruent with the Renewable Energy Act (REA) and fish community assessments

Cedar Point Wind Farm, Middlesex County, Ontario (Field Ecologist)

Conducted snake cover board searches to determine presence/absence of snake population and diversity

Capital Power (K2) Wind Farm, Goderich, Ontario (Field Ecologist)

Conducted aquatic assessments using REA water body designations, fish community presence/absence study and habitat characterization related to proposed wind farm

Research / Laboratories

Centre for Alternative Wastewater Treatment (CAWT), Sir Sandford Fleming College*, Baker Lake, Nunavut (Arctic Field and Laboratory Research Technician)

Remote study site in Baker Lake, NU; researcher for an International Polar Year project and United Nations Environmental Program

Centre for Alternative Wastewater Treatment (CAWT), Sir Sandford Fleming College*, Various Sites, Nunavut and Northwest Territories (Arctic Field and Laboratory Research Technologist)

Remote study sites in Baker Lake, NU, Gjoa Haven, NU and Holman, NT; results used for the continuation of the International Polar Year research project

Centre for Alternative Wastewater Treatment (CAWT), Sir Sandford Fleming College*, Alert, Nunavut (Arctic Field and Laboratory Research Technician)

A partnership project with Department of National Defense and Environment Canada Wastewater Division; remote study site in Alert, NU; sole researcher to plan, research, organize equipment, work with partners and set-up laboratory; conducted bird surveys for Environment Canada

Water

Komoka Wastewater Treatment Plant, Komoka, Ontario (Field Ecologist)

Conducted benthic macroinvertebrate and water quality sampling for wastewater treatment plant discharge

Fox Meadow Subdivision EEM, Peterborough, Ontario (Field Ecologist)

Conducted benthic macroinvertebrates and water quality sampling for EEM of subdivision encroachment on PSW

Canagagigue Creek EEM, Elmira, Ontario (Field Ecologist)

Water quality and quantity measuring, benthic macroinvertebrate, and fish community assessment at chemical plant discharge site

Blue Springs EEM, Guelph, Ontario (Field Ecologist)

Routine flow measurement, monitoring and maintenance of rain gauges, Barologgers, air temperature loggers and in-stream water level loggers to assess potential effects of aggregate operations and groundwater draw down on fish habitat in a coldwater stream

Mill Creek EEM, Guelph, Ontario (Field Ecologist)

Routine flow measurement, monitoring and maintenance of rain gauges, Barologgers, air temperature loggers and in-stream water level loggers to assess potential effects of aggregate operations and groundwater draw down on fish habitat in a coldwater stream

* denotes projects completed with other firms

Mitch Ellah Tech. Dipl., B.Sc. (Hons.)

Aquatic Ecologist

PUBLICATIONS

Chemical and Biological Changes in an Arctic Treatment Watershed to Assess the Value of Macroinvertebrate Biomonitoring. *Undergraduate Thesis, Trent University, Peterborough, Ontario, 2011.*

Don Graham is a Field Biologist with Stantec's Terrestrial Team providing environmental management consultation services to projects across Ontario. Don has a diverse background, having completed his Master of Science in Zoology at the University of Guelph and continued his education obtaining a Teaching Certificate from the University of Western Ontario, as well as the Ontario Wetland Evaluation System (OWES) course offered by the Ministry of Natural Resources.

Don has extensive experience conducting terrestrial fieldwork and writing terrestrial components of reports which meet provincial and municipal requirements for Class EA for Transportation Facilities, Municipal Class EA, Environmental Impact Studies and Natural Heritage Evaluations. Don's experience includes transportation, servicing, residential, industrial and commercial projects. His projects have involved a broad spectrum of field survey types including assessment of breeding birds, amphibians, vegetation communities, vegetation species, reptiles and Species at Risk in a variety of habitats within southern, central, eastern and northern Ontario, using protocols of the Ontario Breeding Bird Atlas, Marsh Monitoring Program and Ecological Land Classification. He is familiar with pertinent policies such as the Natural Heritage policies of the Provincial Policy Statement, Conservation Authority Regulatory Areas, the *Endangered Species Act* and the *Migratory Bird Convention Act*, and is experienced at effective regulatory agency liaison.

EDUCATION

B.A., University of Guelph / Psychology, Guelph, Ontario, 1983

M.Sc., University of Guelph / Zoology, Guelph, Ontario, 1987

B.Ed., University of Western Ontario / Ontario Teaching Certificate, London, Ontario, 1990

Certificate, Ministry of Natural Resources / Ontario Wetland Evaluation System, North Bay, Ontario, 2005

Diploma, McMaster University / Spatial Analysis and GIS, Hamilton, Ontario, 2004

MEMBERSHIPS

Member, Field Botanists of Ontario

Member, Ontario Field Ornithologists

Member, Bird Studies Canada

PROJECT EXPERIENCE

Commercial / Retail Development

Various Commercial Development Projects*, Ontario (Biologist)

Conducted terrestrial fieldwork and wrote terrestrial components of Environmental Impact Studies to support Commercial Development projects in Ontario, including:

- Proposed golf course in Kawartha Lakes;
- Existing golf course in Gravenhurst;
- Mall expansion in Cookstown;
- Car dealership in Toronto; and
- Strip mall in Ajax.

Highway and Transportation

Various Highway and Transportation Projects*, Ontario (Biologist)

Conducted terrestrial fieldwork and wrote terrestrial components of Class EA Reports for Transportation Facilities and supporting Technical Reports to support proposed road improvements in Ontario, including:

- New Highway 7 corridor between Kitchener-Waterloo and Guelph;
- Improvements to Highway 7 corridor in Durham Region;
- Improvements to Highway 11 north of Temagami;
- Twinning of Highway 11 in and north of Burk's Falls;
- Twinning of Highway 69 in vicinity of Pointe au Baril;
- Improvements to Highway 11 between Cochrane and Kirkland Lake;
- Bridge improvements and replacements in central Ontario;
- Proposed LRT line in Ottawa;
- Proposed LRT line linking Mississauga and Brampton;

* denotes projects completed with other firms

Don Graham M.Sc., B.Ed., B.A.

Ecologist

- Extension of Peterborough Airport runway;
- Proposed Toronto-Bolton GO rail transit line; and
- Improvements to Toronto-Milton GO rail transit line.

Industrial Development

Various Industrial Development Projects*, Ontario (Biologist)

Conducted terrestrial fieldwork and wrote terrestrial components of Environmental Impact Studies to support Industrial Development projects in Ontario, including projects in Oakville and Toronto, Ontario.

Linear Infrastructure

Various Servicing Projects*, Ontario (Biologist)

Conducted terrestrial fieldwork and wrote terrestrial components of Municipal Class EA Reports and supporting Technical Reports to support proposed linear infrastructure construction in Ontario, including:

- York-Durham Sanitary Sewer development;
- Don River and Waterfront Sewer Improvements, Toronto;
- Horgan Watermain construction in Scarborough;
- Kennedy Road Sewer development in Markham;
- Improvements to sewage lagoon in Neustadt;
- Watermain in Sauble Beach;
- Jet fuel pipeline for Pearson International Fuel Facilities Corp. in Toronto;
- Repair of Trans-Northern Pipelines Inc. in eastern Ontario; and
- Construction of new pipeline for Trans-Northern Pipelines Inc. in eastern Ontario.

Natural Sciences & Heritage Resources

Species at Risk in Ontario*, Various Sites (Biologist)

Field experience with many Species at Risk including: Butternut, Blanding's turtle, Snapping Turtle, Eastern Hog-nosed Snake, Chimney Swift, Common Nighthawk, Bobolink, Least Bittern, Hooded Warbler, Acadian Flycatcher, Loggerhead Shrike, Canada Warbler and Golden-winged Warbler.

Ontario Ministry of Natural Resources*, London and Aylmer District, Ontario (Field Biologist / Ornithological Technician)

Scored wetlands within Aylmer District for the Ministry of Natural Resources using the Southern Ontario Wetland Evaluation System (3rd Edition) protocol. Work involved assessment of biological, social, hydrological and special features of wetlands in accordance with OWES, landowner liaison and planning of fieldwork. Created, edited, organized and managed data layers for Ontario wetlands, forests and urbanization using aerial photography, satellite imagery and ArcGIS software. Searched research plots for bird nests, collected field data on forest bird nesting success and plant characteristics using established techniques, managed data and created maps of research sites and nest locations using GIS software.

Bird Studies Canada*, Port Rowan, Ontario (Ornithological Technician)

Conducted bird and amphibian inventories for a wetland study using specified protocols. Reviewed background data and literature and wrote reports on population trends of colonial nesting tern species. Conducted forest bird inventories used in developing forestry management practices. Reported current bird sightings for the Bird Studies Canada web-site.

Residential Development

Various Residential Development Projects*, Ontario (Biologist)

Conducted terrestrial fieldwork and wrote terrestrial components of Environmental Impact Studies to support Residential Development projects in Ontario, including projects located in: Kawartha Lakes, Pickering, Holland Landing East, Holland Landing West, Sharon, Newmarket, Belleville, Peterborough, Aurora and Toronto.

* denotes projects completed with other firms

James Leslie has over six years of experience as a Terrestrial Ecologist with Stantec and is the Technical Lead for vegetation field studies. While James has acquired a diverse skill set, he has become a specialist in vegetation ecology with expertise in plant identification, Ecological Land Classification (ELC), wetland delineation, and vegetation monitoring. Additionally, he has gained extensive experience conducting and leading herpetofauna field surveys.

James completed his Bachelor of Environmental Studies at the University of Waterloo with a focus on applied ecology and environmental policy. He has obtained certification for Ecological Land Classification (ELC), Ontario Wetland Evaluation System (OWES), Ecological Monitoring and Assessment Network (EMAN), and is a Ministry of Natural Resources (MNR) designated Butternut Health Assessor for the endangered Butternut tree. He is RAQS-certified by the Ontario Ministry of Transportation (MTO), and can lead natural heritage assessments for MTO projects. James is familiar with legislation that applies to natural heritage assessment, including the Provincial Policy Statement (PPS), the *Endangered Species Act, 2007* and the federal *Species at Risk Act (SARA)*.

James provides expertise in a variety of sectors including aggregate extraction, infrastructure, energy, and urban land development. He has gained extensive experience conducting and leading vegetation related surveys for renewable energy and highway infrastructure projects. He has authored a variety of reports, including natural heritage components of Environmental Impact Studies, Environmental Assessments, and Natural Environment Technical Reports.

EDUCATION

B.E.S., University of Waterloo / Environmental Studies /
Geography, Waterloo, Ontario, 2006

Certificate, Humboldt Field Research Institute / Applied
Field Identification of Grasses and Sedges, Steuben,
Maine, 2010

Certificate, Butternut Health Assessment, Burlington,
Ontario, 2009

Certificate, Ontario Wetland Evaluation System, North
Bay, Ontario, 2009

Certificate, Ecological Monitoring and Assessment
Network, Turkey Point, Ontario, 2008

Certificate, Ecological Land Classification for Southern
Ontario, Kingston, Ontario, 2007

MEMBERSHIPS

Member, Botanical Society of America

Member, Field Botanists of Ontario

PROJECT EXPERIENCE

Aggregate Services

Proposed Duntroon Quarry Expansion, Duntroon,
Ontario (Terrestrial Ecologist)

Designed and conducted a multi-year research program to assess the habitat characteristics of American hart's-tongue fern – a federal and provincial Special Concern species. Research examined various features of soil, ambient air, tree canopy cover, associate species, and snow depth. The purpose of this research was to compare and contrast known habitat with potential transplant locations. A preliminary transplant of over 500 ferns was conducted where post-transplant monitoring studies are ongoing. Unrelated surveys conducted onsite include butternut health assessments and forest plot assessments using protocols outlined in the Ecological Monitoring and Assessment Network (EMAN).

Proposed Flamorough Quarry, Hamilton, Ontario
(Ecologist)

Aquatic surveys included stream flow discharge and uploading of data loggers. Terrestrial surveys included winter wildlife surveys and health assessments of over 100 butternut trees using 2009 OMNR guidelines.

* denotes projects completed with other firms

James Leslie B.E.S.

Terrestrial Ecologist

Acton Quarry Environmental Review, Acton, Ontario (Terrestrial Ecologist)

Assist with extensive amphibian surveys to identify significant wildlife habitat, species composition, and presence or absence of pure Jefferson salamander specimens. Surveys included call counts, egg mass surveys, pit and aquatic trapping, and tail clippings of potential Jefferson species (in conjunction with the OMNR). Assisted with surveys in 2007 and thereafter, which remain ongoing.

Environmental Mitigation and Monitoring Various Urban Lands Projects, Waterloo and Oakville, Ontario (Terrestrial Ecologist)

Monitor vegetation communities using Ecological Monitoring and Assessment Network (EMAN) and local Conservation Authority guidelines. Field surveys consisted of identifying vascular plants growing within pre-determined plots and determining their respective cover; photographic records were compiled each year for temporal comparison. Data analysis included calculation of frequency, dominance, and importance value.

Georgia Pacific PCB Remediation, Thorold, Ontario (Terrestrial Ecologist)

ELC; mapping and evaluation of species at risk (Butternut); develop vegetation monitoring plots to determine density, frequency, dominance, and importance value; data synthesis, and technical memorandum.

Oil & Gas

Union Gas Lobo Compressor Station Expansion, Strathroy, Ontario (Terrestrial Ecologist)

Assist with Project Management of a proposed compressor station expansion, including proposal and budget; conduct/delegate appropriate field surveys; compile background data through review of Official Plan, Significant Wildlife Habitat Technical Guide, Ontario Provincial Policy Statement, etc.; agency consultation. Deliverables consisted of an Environmental Impact Study report.

Power Transmission & Distribution

Bruce to Milton Transmission Project, Milton, Ontario (Terrestrial Ecologist)

180 km linear study area of proposed hydro transmission lines from Bruce Nuclear to Milton, Ontario. Assisted with ELC, butternut health assessments, flora inventories, and winter wildlife surveys.

Renewable Energy

Terrestrial Surveys for Wind and Solar Projects, Various Municipalities, Ontario (Terrestrial Ecologist)

Conducted numerous site assessments based on the Renewable Energy Approvals (REA) process for proposed layouts near Belwood, Port Dover, Sydenham, Whittington, St. Columban, and Prince Edward County. Field work included ELC, wetland delineations and evaluations using the Ontario Wetland Evaluation System (OWES), floral and faunal species inventories, and identification of significant wildlife habitat. Study areas included proposed turbine locations, access roads, and transmission corridors. Data analysis and summaries were provided in the respective Natural Heritage Assessment Reports.

Island Falls Energy Project, Smooth Rock Falls, Ontario (Terrestrial Ecologist)

Field work component of a proposed hydroelectric dam in Northern Ontario. Assist with ELC, botanical inventory, and soil surveys in remote areas.

Avian Surveys for Wind and Solar Projects, Various Municipalities, Ontario (Terrestrial Ecologist)

Avian monitoring was conducted at Kingsbridge, Melancthon, Ostrander, Parkhill, and Plateau wind energy locations. Field work consisted of installation, troubleshooting, and data retrieval of Anabat SD1 monitoring devices. Received training for data interpretation and isolation of bat calls based on digital graph patterns. Post-construction surveys of avian mortality under active wind turbines were completed for the Kingsbridge and Melancthon locations.

Terrestrial Assessments

Master Service Plan, Cayuga and Jarvis, Ontario (Terrestrial Ecologist)

Develop ELC mapping for the towns of Jarvis and Cayuga. The purpose was to update natural heritage data for the respective Master Service Plan revisions. Data analysis included ecological constraints mapping and authoring a technical memorandum.

* denotes projects completed with other firms

Transportation Planning

Highway 3 Rehabilitation, Detail Design, Renton to Jarvis, Ontario (Terrestrial Ecologist)

This work was conducted to identify natural features where road widening and culvert replacement was proposed. Performed ELC and compiled records of local flora and fauna. The study area included Endangered butternut trees and a variety of forested, wetland, and cultural communities. A Terrestrial Ecosystems Report was submitted to characterize existing conditions, and to address predicted impacts and required mitigation to on-site vegetation communities, terrestrial wildlife and their habitat. Fieldwork and reporting conducted in accordance with MTO regulations and guidelines.

Highway 69, Preliminary Design, Patrol Yard Selection, Parry Sound to Sudbury, Various Sites, Ontario (Terrestrial Ecologist)

This study was undertaken in order to assess a number of alternative locations for patrol yards within the study area, and to identify preferred alternatives at three locations. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. Natural heritage features consisted of numerous wetland communities, large, contiguous forests, significant wildlife habitat and observations of a Threatened species. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

Highway 17, Preliminary Design, Sudbury Southwest Bypass, Sudbury, Ontario (Terrestrial Ecologist)

The purpose of this study was to identify a four-lane highway plan for a section of Highway 17 through the Sudbury area, with access restricted to interchange locations only. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included a variety of upland and wetland habitats, including Areas of Natural and Scientific Interest. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

Highway 11, Preliminary Design Study, Access Review from Powassan to Callander, Ontario (Terrestrial Ecologist)

This project was part of a study to upgrade the highway to 'full freeway standard', which included eliminating at-grade intersections and entrances and providing access to highway only at interchanges. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included a variety of upland and wetland habitats. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

Highway 401 and Highway 8 Improvements, Preliminary Design, Kitchener, Ontario (Terrestrial Ecologist)

This study was undertaken to assess proposed interchange improvements in the cities of Kitchener and Cambridge along Highway 401 and Highway 8. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included rare flora, Provincially and Locally Significant Wetland, and an Area of Natural and Scientific Interest (ANSI). A Terrestrial Ecosystems Report was submitted to characterize existing conditions, and to address predicted impacts and required mitigation to on-site vegetation communities, terrestrial wildlife and their habitats. The preliminary impact assessment included constraint ratings of each ELC unit and the calculation of the areas potentially affected by the Preferred Plan. Fieldwork and reporting conducted in accordance with MTO regulations and guidelines.

Highway 11, Preliminary Design Study, Improvements North of Highway 144, Huntsville, Ontario (Terrestrial Ecologist)

The purpose of this study was to undertake the Planning, Preliminary Design and Environmental Assessment for improvements to Highway 11 from 1 km north of Highway 141, northerly for 5.5 km. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included a rare vegetation community not previously documented and a variety of upland and wetland habitat. A Terrestrial Ecosystems Report was submitted to characterize existing conditions, and to address predicted impacts and required mitigation to on-site vegetation communities, terrestrial wildlife and their habitats. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

James Leslie B.E.S.

Terrestrial Ecologist

Highway 11, Preliminary Design Study, South Entrance to Powassan, Powassan, Ontario (Terrestrial Ecologist)

This study was carried out to update a Preliminary Design Report that recommended interchange locations for this stretch of Highway 11. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included significant features, a variety of habitats, and cultural communities. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

Municipal Road Improvement Projects, Various Sites, Ontario (Terrestrial Ecologist)

Conducted ELC and wetland delineations using OMNR protocols. Identified wildlife habitat and determined potential impacts and mitigation options.

- City of London, Southdale Road Widening
- City of London, Hamilton Road Improvements

Victoria Road North Class EA, Guelph, Ontario (Terrestrial Ecologist)

Assist with Task Management for a proposed road widening, including background data review of applicable legislation and guidelines; conduct or delegate appropriate field surveys; agency consultation; prepare a draft Natural Environment Technical Report and constraints analysis for a proposed parking area.

Mark has 14 years of experience designing, coordinating, and implementing small and large scale aquatic habitat and impact assessments, encompassing numerous habitat types including lakes, ponds, large rivers, warmwater and coldwater streams. Mark has also developed and implemented many monitoring, mitigation, compensation and inventory processes. Past employment with Fisheries and Oceans Canada (DFO), and both the Grand River and St. Clair Region Conservation Authorities contributes to Mark's extensive working experience with regulatory and approvals processes related to the *Fisheries Act*, the *Conservation Authorities Act* and the *Drainage Act*. Mark's familiarity with *Fisheries Act* mitigation and compensation includes an understanding of the Habitat Alteration Assessment Tool (HAAT). He has extensive experience involving permitting and issues resolution related to the federal *Species at Risk Act* and the provincial *Endangered Species Act*. His experience also includes several transportation-related Environmental Assessments.

EDUCATION

Honours B.Sc. (Agriculture), University of Guelph /
Natural Resources Management, Guelph, Ontario, 2000

Royal Ontario Museum / Freshwater Fish Identification
Course, Toronto, Ontario, 2011

Class 1 Electrofishing Certificate / Ministry of Natural
Resources, Waterloo, Ontario, 2010

Ontario Freshwater Mussel Identification Workshop /
Fisheries and Oceans Canada - Canada Centre for
Inland Waters, Burlington, Ontario, 2007

Fisheries Assessment Specialist and Fisheries Contracts
Specialist, MTO/DFO/OMNR Fisheries Protocol Course,
Downsview, Ontario, 2006

PROJECT EXPERIENCE

Environmental Assessments

Locks 24 and 25 – VLH Turbine Installation, Canadian
Projects Limited, Lakefield, Ontario (Aquatic Biologist)
*Conducted aquatic assessments including walleye and bass
spawning and habitat surveys in support of an Environmental
Assessment (EA) for the installation of Very Low Head (VLH)
turbines at Dams 24 and 25 on the Otonabee River. As part of
the EA, will provide an analysis of impacts to walleye and bass
spawning habitat and habitat use by small-bodied fish. The
impact assessment will also be used as during the assessment of
the project using the Fisheries & Oceans Canada (DFO) Risk
Management Framework.*

Pier 27 Dockwall and Dredging, Hamilton Port Authority,
Hamilton, Ontario (Aquatic Biologist)

*Coordinated and conducted aquatic assessments in support of
the installation of a new dockwall and dredging to facilitate
shipping traffic. Coordinated with DFO regarding need for
Fisheries Act approval.*

Pier 22 Environmental Assessment, Hamilton Port
Authority, Hamilton, Ontario (Aquatic Biologist)

*Coordinated and conducted aquatic assessments in support of
site improvements. Negotiated compensation measures and
drafted letter of intent in pursuit of Fisheries Act Authorization.*

Bruce to Milton Transmission Line, Various, Ontario
(Fisheries Biologist)

*Planned, coordinated and assisted with execution of large-scale
fisheries field program to assess potential impacts of proposed
hydroelectric corridor reinforcement project and provided
relevant input to the provincial environmental assessment
process as well as the Fisheries Act and Conservation
Authorities Act permitting processes. Managed data entry,
analysis and completed reporting of aquatic resources sections.
Coordination of multi-disciplinary team and regulatory agencies
for acquisition of appropriate permits and approvals.*

Yellow Falls Hydroelectric Project, Smooth Rock Falls,
Ontario (Aquatic Biologist)

*Planned, coordinated and assisted with execution of fisheries
field program to assess potential impacts of proposed
hydroelectric dam project. Facilitated acquisition of permits and
approvals from relevant agencies. Assisted with fish, benthos,
habitat, water and sediment sampling. Authored significant
portions of the technical appendix related to aquatic study
results.*

* denotes projects completed with other firms

Mark C. Pomeroy B.Sc.

Fisheries Biologist / Project Manager

Environmental Impact Assessments

Georgia Pacific Thorold Cycle 4 EEM, Thorold, Ontario
(Aquatic Ecologist)

Assisted in field sampling of fish, benthos, water and sediment for federally regulated pulp and paper environmental effects monitoring.

Spruce Falls Cycle 4 EEM, Kapuskasing, Ontario
(Aquatic Ecologist)

Assisted in field sampling of fish, benthos, water and sediment for federally regulated pulp and paper environmental effects monitoring.

Smooth Rock Falls Cycle 4 EEM, Smooth Rock Falls, Ontario
(Aquatic Ecologist)

Assisted in field sampling of fish, benthos, water and sediment for federally regulated pulp and paper environmental effects monitoring.

Highway and Transportation

King Street and Fountain Street Improvements Class Environmental Assessment Study, Cambridge, Ontario
(Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess aquatic habitat at watercourse crossings within the project study area. Data collected during field investigations was used to assess potential impacts of preferred option. Drafted text for relevant sections of Class EA document.

Franklin Boulevard Widening Class Environmental Assessment Study, Cambridge, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess aquatic habitat at watercourse crossings within the project study area. Data collected during field investigations was used to assess potential impacts of preferred option. Drafted text for relevant sections of Class EA document.

Highway 69 - Patrol Yards between Parry Sound and Sudbury, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess aquatic habitat at watercourses within the project study area. Data collected during field investigations was used to assess potential impacts of proposed maintenance patrol yards located adjacent to Highway 69. Drafted text for inclusion in Fisheries and Aquatic Ecosystems Report. All work was conducted in accordance with the MTO/DFO/MNR Protocol (2006).

Highway 11 - High Falls Road Access Improvements Class Environmental Assessment, Bracebridge, Ontario
(Fisheries Biologist)

Planned and conducted field investigations to assess aquatic habitat at watercourse crossings within the project study area. All work was conducted in accordance with the MTO/DFO/MNR Protocol (2006).

Highway 11 - Intersection Improvements, Powassan, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess aquatic habitat at watercourse crossings within the project study area. Data collected during field investigations was used to assess potential impacts of preferred option, including potential impacts to Brook Trout. Drafted text for inclusion in Fisheries and Aquatic Ecosystems Report. All work was conducted in accordance with the MTO/DFO/MNR Protocol (2006).

Highway 3 - Rehabilitation between Jarvis and Renton, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess aquatic habitat at watercourse crossings within the project study area. Data collected during field investigations was used to assess potential impacts of preferred option, including potential impacts to Brook Trout. Drafted Fisheries and Aquatic Ecosystems Report. All work was conducted in accordance with the MTO/DFO/MNR Protocol (2006), and included preparation and submission of "no HADD forms" to satisfy Fisheries Act requirements.

* denotes projects completed with other firms

Mark C. Pomeroy B.Sc.

Fisheries Biologist / Project Manager

Highway 69 - Key River Bridge Replacement, Britt, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess aquatic habitat in Key River at proposed location of bridge replacement. Data collected during field investigations was used to assess potential impacts of bridge replacement activities. Drafted Fisheries and Aquatic Ecosystems Report. All work was conducted in accordance with the MTO/DFO/MNR Protocol (2006), and included preparation and submission of "no HADD forms" to satisfy Fisheries Act requirements.

Replacement of Coutts Line Bridge over Baptiste Creek, Tilbury, Ontario (Fisheries Biologist)

Facilitated acquisition of provincial Endangered Species Act (ESA) approval (letter of advice) through provision of advice regarding construction techniques. Planned, coordinated and conducted field investigations to assess freshwater mussel community and habitat at bridge site.

Replacement of Dawn Mills Bridge over Sydenham River Creek, Dresden, Ontario (Fisheries Biologist)

Dawn Mills Bridge is located over a reach of the Sydenham River known to contain one of the largest number of taxa of federally regulated Species at Risk fish and mussels in Canada. Facilitated acquisition of federal approvals (Fisheries Act and Species at Risk Act, letter of advice) through provision of advice regarding construction techniques. Planned, coordinated and conducted field investigations to assess freshwater mussel habitat at bridge site.

Chinguacousy Road Widening, Brampton, Ontario (Fisheries Biologist)

Conducted fish community assessment to determine presence of Redside Dace (a provincially Endangered species). Drafted applications for Fisheries Act Authorization, Conservation Authorities Act approval, and Endangered Species Act approval. Provided input to engineering design for compensation measures related to Redside Dace habitat.

Detroit Windsor Truck Ferry Improvements (Design) (GWP 3071-06-00), Windsor, Ontario (Fisheries Biologist)

Provided aquatic community and habitat assessment services as well

as input regarding project design, construction staging and silt and sediment control planning. Acquired approvals under Fisheries Act and Conservation Authorities Act related to fish habitat. Negotiated compensation measures with Conservation Authority prior to project design change, resulting in no HADD.

Highway 24 - Intersection Improvements, Cambridge, Ontario (Fisheries Biologist)

Provided fish rescue services. Performed environmental inspection duties related to implementation of the Fisheries Act compensation plan and resolution of onsite issues related to construction.

Detroit Windsor Truck Ferry Improvements (Contract Administration) (WP 3071-06-00), Windsor, Ontario (Fisheries Biologist)

Construction monitoring services related to Fisheries Act implications (fish removals, species at risk identification training for contract staff, staging and implementation design review), provision of advice regarding alternative staging/construction operations to prevent impacts to aquatic habitat/organisms.

Fanshawe Park Road Widening, London, Ontario (Fisheries Biologist)

Facilitated acquisition of approvals from DFO for the realignment of Heard Drain/Snake creek during the expansion of Fanshawe Park Road. Performed construction inspection services, resolved onsite implementation issues related to the Fisheries Act.

Natural Resource Services

Municipal Drain Classification Program*, Various, Ontario (Drain Assessment Technician)

Planned and implemented large scale sampling protocol designed by DFO to assess the sensitivity of various municipal drains to disturbance. Sampling program encompassed all drains within the Grand River watershed and consisted of habitat, thermal and fish community characterization based on extensive field sampling. Analyzed substantial quantities of field data, summarized results and produced interim and final reports.

* denotes projects completed with other firms

Mark C. Pomeroy B.Sc.

Fisheries Biologist / Project Manager

Fish Habitat Study*, Strathroy, Ontario (Biological Technician)

Planned and implemented field program to sample fish community in reservoirs managed by the St. Clair Region Conservation Authority. Responsible for writing final report concerning existing fish habitat status and providing recommendations based on field data. Participated in water quality and benthic community field sampling programs.

Various Environmental Assessments*, Sarnia, Ontario (Fish Habitat Biologist)

Assessed project proposals for impacts to fish habitat as defined in the Fisheries Act. Issued Letters of Advice and Authorization under the Fisheries Act. Carried out screening level environmental assessments of proposed projects under the Canadian Environmental Assessment Act. Participated in outreach programs and inter-agency work groups regarding Species at Risk recovery. Acquired familiarity with the Habitat Alteration Assessment Tool (HAAT).

Renewable Energy

St. Columban Wind Project, Huron County, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess potential aquatic impacts resulting from proposed wind project consisting of fifteen turbines. Drafted Water Assessment and Water Body Report as mandated under Ontario Reg. 359/09.

Plateau Wind Project, Grey County, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to update previous field work to assess potential aquatic impacts resulting from proposed wind project consisting of eighteen turbines. Drafted relevant sections of the Environmental Screening Report (ESR) as mandated under Ontario Reg. 116/01. Provided advice concerning provincial species at risk concerns.

Grand Renewable Energy Park, Haldimand County, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess potential aquatic impacts resulting from proposed wind and solar project consisting of sixty-seven turbines and 425,000 solar panels. Drafted Water Assessment and Water Body Report as mandated under Ontario Reg. 359/09.

Springwood Wind Project, Belwood, Ontario (Fisheries Biologist)

Conducted field investigations to assess potential aquatic impacts resulting from proposed wind project consisting of and assisted with draft Water Assessment and Water Body Report under Ontario Reg. 359/09.

Whittington Wind Project, Dufferin County, Ontario (Fisheries Biologist)

Planned and coordinated field investigations to assess potential aquatic impacts resulting from proposed wind project consisting of three turbines. Drafted Water Assessment and Water Body Report as mandated under Ontario Reg. 359/09.

Fairview Wind Project, Stayner, Ontario (Fisheries Biologist)

Planned and coordinated field investigations to assess potential aquatic impacts resulting from proposed wind project consisting of eight turbines. Drafted Water Assessment and Water Body Report as mandated under Ontario Reg. 359/09.

White Pines Wind Project, Prince Edward County, Ontario (Fisheries Biologist)

Planned, coordinated and conducted field investigations to assess potential aquatic impacts resulting from proposed wind project consisting of twenty-nine turbines. Drafted Water Assessment and Water Body Report as mandated under Ontario Reg. 359/09 (in progress).

Urban Land

Berczy Dam Removal, Markham, Ontario (Fisheries Biologist)

Provided fish rescue services, including resolution of issues related to Species at Risk.

Medway Sanitary Trunk Sewer Extension, London, Ontario (Fisheries Biologist)

Drafted Fisheries Act application and Endangered Species Act application for pipeline crossing of Medway Creek. Coordinated and completed aquatic habitat assessment and relocation of freshwater mussels. Negotiated compensation measures prior to project design change, resulting in no HADD.

* denotes projects completed with other firms

Mark C. Pomeroy B.Sc.

Fisheries Biologist / Project Manager

Fox Hollow Subdivision, London, Ontario (Fisheries Biologist)

Facilitated acquisition of approvals from DFO for the realignment of the Heard Drain/Snake Creek and the installation of a stormwater management pond in relation to construction of the Fox Hollow Subdivision. Performed construction inspection services, resolved onsite implementation issues related to the Fisheries Act.

Matthew Ross is an ecologist whose skills include bird, mammal, reptile and plant identification. He is adept at conducting wildlife and wildlife habitat surveys, including those that relate to environmental assessment, conservation and species at risk. Matthew is familiar with provincial and federal guidelines, including Ontario Wetland Evaluation System (OWES), Ecological Land Classification (ELC) and Renewable Energy Approvals (REA). He has conducted surveys for a variety of development projects, including renewable energy, aggregate extraction and residential, and has work experience in both the public and private sector. In addition, Matthew is familiar with wildlife handling, including bird banding and migration monitoring at Selkirk Provincial Park. He has performed native tree species plantings and been involved in exotic plant control efforts as a volunteer at Florida Panther National Wildlife Refuge.

EDUCATION

B.Sc., University of Northern British Columbia / Natural Resources Management Wildlife and Fisheries, Prince George, British Columbia, 2007

Sir Sandford Fleming College / Fish and Wildlife Technologist, Lindsay, Ontario, 2004

Certificate, Ontario Ministry of Natural Resources / Ecological Land Classification System for Southern Ontario, Kempenville, Ontario, 2011

Certificate, Stantec Consulting Ltd. / WHMIS, Guelph, Ontario, 2011

PROJECT EXPERIENCE

Aggregate Services

Proposed Melancthon Quarry, Melancthon, Ontario (Terrestrial Technician)

Conducted habitat assessment and species at risk surveys and performed reporting

Multi-Unit / Family Residential

Clair Creek Meadows, Waterloo, Ontario (Terrestrial Technician)

Matthew conducted an assessment of silt fence integrity

Hammersley, Cambridge, Ontario (Terrestrial Technician)

Conducted snake cover board and amphibian surveys

Buffalo Springs Residential Development, Ontario (Terrestrial Technician)

Matthew conducted habitat assessment and species at risk surveys, and performed project reporting

Natural Sciences & Heritage Resources

Nova 2020 Plant Expansion Project, Corunna, Ontario (Terrestrial Technician)

Conducted snake cover board and amphibian surveys

Woodland Bird Nest Surveys, Ontario Ministry of Natural Resources (MNR), 2006* (Avian Nest Biologist)

Matthew performed surveys that involved finding and monitoring woodland bird nests in southern Ontario, including species at risk, radio tracking and identifying fledgling birds, as well as associated vegetation surveys

Wildlife and Habitat Surveys, 2009* (Biologist)

While working for a private consulting firm, Matthew carried out various wildlife and habitat surveys for several energy related projects, including wind farm mortality monitoring, breeding bird surveys, amphibian, reptile and mammal surveys. He also conducted scientific literature research and data entry, as well as assisted in writing project proposals and presentation to clients

Various Development Projects, 2007, 2008, 2010* (Biologist)

While working for a private consulting firm, Matthew conducted biological field surveys and associated data management and analysis for various developments throughout Ontario and other provinces, including renewable energy. These involved breeding bird surveys, nest searches, amphibian counts, salamander population monitoring for species at risk, wind farm mortality monitoring, bat species and abundance monitoring and wetland evaluation. He also conducted associated research and assisted in reporting

* denotes projects completed with other firms

Matthew Ross B.Sc.

Ecologist

Oil and Gas Pipelines

TransCanada Pipelines Ltd., Eastern Mainline Expansion, Ontario (Terrestrial Technician)

Conducted species at risk breeding bird surveys

Enbridge Integrity Dig Program, Ontario (Terrestrial Technician)

Conducted nesting bird surveys and nest monitoring surveys

Trans-Northern Pipelines Inc., Bronte Creek Risk Assessment, Burlington, Ontario (Terrestrial Technician)

Assisted in conducting an initial site assessment and salamander egg mass survey

Nova Chemicals Genesis Pipeline Extension, Corunna, Ontario (Terrestrial Technician)

Conducted snake cover board and amphibian surveys

St. Clair Pipelines Bluewater River Crossing Replacement, Corunna, Ontario (Terrestrial Technician)

Conducted snake cover board and amphibian surveys

Post-Construction

Victoria Park, Kitchener, Ontario (Terrestrial Technician)

Conducted post-construction migratory waterfowl, botanical inventory and replanting monitoring surveys

Renewable Energy

Solray Renewable Solar Energy Project, Ontario (Terrestrial Technician)

Conducted due diligence site assessment with client to identify project constraints and assisted in reporting

Various Renewable Wind Energy Projects, Ontario (Terrestrial Technician)

Conducted ELC, amphibian, migratory passerine, waterfowl, raptor and crepuscular bird auditory surveys, species at risk habitat assessment and surveys, amphibian surveys, post-construction monitoring, and assisted with technical reporting for various wind energy projects, including Wolfe Island Wind Farm, Amherst Island Wind Farm, White Pines Wind Farm, Niagara Region Wind Centre, Bow Lake Wind Farm, K2 Wind Project, Cedar Point Wind Project, and Dorland Wind Project

Roads and Highways

Detail Design for the Rehabilitation of Highway 6/10 from Chatsworth to Owen Sound, Grey County, Ontario (Terrestrial Technician)

This study included a 15 km stretch of highway through several significant natural habitat features, including the Niagara Escarpment, Life Science ANSI, unevaluated wetlands, and large continuous tracts of mature forest and riparian habitat. Matt's responsibilities on this assignment included Ecological Land Classification, bird surveys and surveys for species at risk, documentation of wildlife species and habitat, and mapping of birds' nests

* denotes projects completed with other firms

Other Stantec staff who contributed to field surveys include:

Name: Cheryl-Anne Payette B.Sc., FWT
Company or organization: Stantec Consulting Ltd.
Address: 70 Southgate Dr. Suite 1, Guelph, ON N1G 4P5
Phone: (519) 836-6050 **Fax:** (519) 836-2493
Email: cherylanne.payette@stantec.com

Cheryl-Anne Payette is a Terrestrial Ecologist whose skills include bird, mammal, reptile and plant identification developed through her education and professional experience, and through employment in the public and private sectors. Cheryl-Anne recently obtained her ecological land classification (ELC) certificate and is familiar with the Ontario Wetland Evaluation (OWES) through recent positions in the private sector. Cheryl-Anne is adept at conducting a variety of wildlife and wildlife habitat surveys and has been involved in a variety of development projects; particularly renewable energy, residential, and industrial construction projects.

Cheryl-Anne carried out wildlife inventory work and assisted with the preparation of the report for this project.

Name: Nicole Charlton, BA
Company or organization: Stantec Consulting Ltd.
Address: 70 Southgate Dr. Suite 1, Guelph, ON N1G 4P5
Phone: (519) 836-6050 **Fax:** (519) 836-2493
Email: nicole.charlton@stantec.com

Nicole Charlton is a Terrestrial Ecologist certified in Ecological Land Classification (ELC) with several years' experience in plant identification and botanical field surveys, as well as additional experience conducting various other ecological field surveys and inventory work. She has been employed in both the public and private sectors and has experience working on a range of projects such as invasive species control, ecological monitoring, species at-risk, land stewardship, wind development and monitoring, and various other development projects.

Nicole carried out ELC work for this project.

Name: Michael Oliveira
Company or organization: Stantec Consulting Ltd.
Address: 70 Southgate Dr. Suite 1, Guelph, ON N1G 4P5
Phone: (519) 836-6050 **Fax:** (519) 836-2493
Email: michael.oliveira@stantec.com

Michael carried out wildlife inventory work for this project.

Name: Kathryn Walpole
Company or organization: Stantec Consulting Ltd.
Address: 70 Southgate Dr. Suite 1, Guelph, ON N1G 4P5
Phone: (519) 836-6050 **Fax:** (519) 836-2493
Email: kathryn.walpole@stantec.com

Kathryn carried out wildlife inventory work for this project.

Name: Robert Tymstra

Company or organization: Stantec Consulting Ltd.
Address: 70 Southgate Dr. Suite 1, Guelph, ON N1G 4P5
Phone: (519) 836-6050 Fax: (519) 836-2493
Email:

Robert Tymstra's avian wildlife experience includes bird surveys, censuses, expeditions, banding, and migration monitoring. He has worked on avian surveys and studies in Ontario and has birded in over 60 countries worldwide. Since 2004, Rob has specialized in conducting avian surveys for wind turbine projects across Canada.

Rob carried out wildlife inventory work for this project.

Name: Mary-Jane McCormick
Company or organization: Stantec Consulting Ltd.
Address: 70 Southgate Dr. Suite 1, Guelph, ON N1G 4P5
Phone: (519) 836-6050 Fax: (519) 836-2493
Email:

Mary-Jane carried out wildlife inventory work for this project.

Name: Cynthia Davis
Company or organization: Stantec Consulting Ltd.
Address: 70 Southgate Dr. Suite 1, Guelph, ON N1G 4P5
Phone: (519) 836-6050 Fax: (519) 836-2493
Email:

Cynthia carried out wildlife inventory work for this project.

BIOGRAPHY

Rhiannon Leshyk is a Renewable Energy Biologist for M. K. Ince and Associates. She graduated from McMaster University with an Honours Bachelor of Science degree in the field of Biology with a specialization in Biodiversity. As well, she graduated from Trent University with a Master of Science degree in Environmental and Life Sciences, where her research involved the effects of logging on populations of Ovenbirds (*Seiurus aurocapilla*).

Rhiannon has a strong background in research and has been involved in variety of projects on both flora and fauna. She has participated in studies throughout Ontario, from Thunder Bay to Windsor, and in parts of Quebec. Rhiannon has a broad knowledge of species identification and ecological processes, which are valuable skills to the REA Application process. Her past experiences and education has given her the skills necessary to succeed in both field and office settings.

Rhiannon is a bird enthusiast and actively volunteers at the Ruthven Bird Banding Station in Cayuga, ON. She is an outdoor enthusiast and amateur wildlife photographer. She is very passionate about conservation and believes strongly that the future is dependent on the development and implementation of green energy.

EXPERIENCE

- Over five years of experience conducting field work in aquatic and terrestrial ecosystems on plants, insects, fish, amphibians, reptiles, birds, and small mammals in remote locations and in all weather conditions
- Study design, permit applications
- Writing of pre-construction reports for commercial-scale wind energy projects.
- Data analysis and report writing
- Both poster and oral presentations
- Co-ordination and supervision of field researchers

EDUCATION

- M.Sc., in Environmental and Life Sciences, Trent University, 2011
- B.Sc. (Hons), in Biology, McMaster University, 2007

AFFILIATIONS

- Bird Studies Canada (Member)

PROJECT EXPERIENCE

- Bow Lake Wind Farm Phase I & II REA Application Process
- Management of various flora and fauna surveys for MKI pre-construction monitoring

PRIOR WORK / VOLUNTEER EXPERIENCE

- Avian migration monitoring in Southern and Central Ontario
- Bird, insect, and botanical surveys related to silvicultural (logging) practices
- Small mammal research that contributed a long-term study in Algonquin Provincial Park
- Species at Risk monitoring and research in aquatic and terrestrial systems
- Wetland monitoring surveys including fish, turtle, plants, water chemistry, and wetland birds in Southern Ontario and Georgian Bay

BIOGRAPHY

Katie Meyer-Beck brings a background in project management, community outreach and media and communications to MKI.

With ten years of experience in capacity-building and international development, Katie has managed projects and worked in collaboration with partners in Europe, Africa, SouthEast Asia, Central Asia, Latin America and the Middle East and North Africa. Katie holds a Master's degree in Peace and Conflict studies and is adept at motivating teams and leading community-driven initiatives with strong conflict resolution skills. She also has a B.A. in Political Science from the University of Guelph where she studied public administration, international development and environmental policy; there she put her skills to use working for the institution's Office of Research, Human Rights and Equity Office and the university student newspaper, *The Ontarion*.

Prior to joining MKI, Katie developed and led the advocacy arm of an international network of over 90 human rights organisations. For the past three years she also volunteered as Vice-President of a Toronto-based international peace-building organization.

Katie has strong skills in writing and editing and has experience in communications, journalism, advocacy, policy and research. She is currently bringing these skills to the management of the Renewable Energy Approval (REA) process for the Bow Lake Wind Farm and the Roubos Wind Farm.

Katie loves collaborating with people on shared projects and discovering different cultures and perspectives. She enjoys reading good fiction, discovering hiking trails and new Canadian music. Katie grew up in Burlington, Ontario. After 10 years of extensive travel and of living in Guelph, France, Austria, Uganda and Toronto, she is now proud to call Hamilton home, where she resides with her husband and young daughter.

EXPERIENCE

- Conducting community outreach and engagement
- Managing project activities and completing reports
- Communication and conflict transformation
- Liaising with a wide range of stakeholders
- Writing, editing and policy analysis

EDUCATION

- Master of Arts, Peace & Conflict Studies, European University Center for Peace Studies, Austria, 2007
- Bachelor of Arts Honours, Political Science, University of Guelph, 2003

CORE COMPETENCIES

- Project coordination
- Communications and community engagement
- Research & writing
- Training and capacity-building

PROJECT EXPERIENCE

- Bow Lake Wind Farm – Management of REA process including reporting, government liaison and public consultations
- Roubos Wind Farm - Management of REA process including reporting, government liaison and public consultations

PRIOR WORK / VOLUNTEER EXPERIENCE

- Campaigns and Advocacy/ Outreach and Development Coordinator - International Freedom of Expression Exchange (IFEX) Clearing House/Canadian Journalists for Free Expression (Toronto)
- Vice President - InterChange – International Institute for Community-Based PeaceBuilding, (Toronto)
- International Research Coordinator; Writer/Project Manager - Office of Research, University of Guelph (Guelph)

BIOGRAPHY

Daniel Stuart is a Renewable Energy Biologist for M.K. Ince and Associates. He graduated from the University of Guelph with an Honours Bachelor of Science degree in the field of Ecology.

Daniel's background includes academic research involving the study of both flora and fauna for the University of Guelph as well as mitigation, monitoring and assessment work for the consulting industry. His work experience has contributed to equal proficiency in both field and office settings.

Daniel has considerable knowledge of species identification and the dynamics of ecological interactions in Ontario. These skills are particularly valuable to the REA Application process. He is an active member of the Field Botanists of Ontario. Along with his avid botany pursuits, Daniel is an enthusiastic hiker and canoeist. His outdoor interests have brought him to mountainous trails, rivers and lakes in places such as Western Canada, the American Southwest, Switzerland, Italy, France, and New Zealand. These experiences have instilled in him a respect for the natural world, and a belief that the development of renewable energy sources is essential for the future of our natural environment.

EXPERIENCE

- Field work with vascular plants, small mammals, amphibians and reptiles often in remote areas and in all weather conditions
- Data analysis and reporting
- Synthesis of information necessary for the writing of pre-construction reports for commercial-scale wind energy projects.
- Cultural awareness experience with First Nations communities in Ontario

EDUCATION

- B.Sc., Honours, Ecology, University of Guelph, 2010

AFFILIATIONS

- Field Botanists of Ontario, member

PROJECT EXPERIENCE

- ZEP Wind Farm Ganaraska, Whispering Woods Wind Farm, Wind Farm Collie Hill, Grey Highlands ZEP Wind Park, Grey Highlands Clean Energy, Clean Breeze Centreton Wind Park, Snowy Ridge Wind Park, Settler's Landing Wind Park, Bow Lake Phase 1 and Phase 2 Wind Farms – REA Application Process
- Organization and implementation of biological field studies for all projects listed above

PRIOR WORK / VOLUNTEER EXPERIENCE

- LGL Limited. Detroit River International Crossing: Mitigation and monitoring for large-scale ecological restoration project
- LGL Limited. Former Camp Ipperwash: Transect surveys observing for floral Species at Risk in Ontario
- University of Guelph. Small Mammal Research: Participation in long-term population study of small mammals in Algonquin Park
- University of Guelph Herbarium. Assistant to the Curator: Mounting, repairing, and filing of vascular plant specimens into the University of Guelph collection

BIOGRAPHY

Mr. Tymstra is an avian wildlife specialist with M.K. Ince and Associates. He graduated from the University of Waterloo with a Bachelor of Environmental Studies.

Mr. Tymstra's avian wildlife experience includes bird surveys, censuses, expeditions, banding, and migration monitoring. He has worked on avian surveys and studies in Ontario and has birded in over 60 countries worldwide. Since 2004, Rob has specialized in conducting avian surveys for wind turbine projects across Canada.

EXPERIENCE

- Participated in bird surveys, censuses, expeditions and migration monitoring programs across Canada and remote parts of the world.
- Regional Co-ordinator for Ontario Herpetological Atlas and Ontario Mammal Atlas. Participated in Ontario Forest Birds Monitoring Program.
- Led bird survey expeditions in Hudson Bay Lowlands for Ontario Breeding Bird Atlas (Opinnagau and Albany Rivers) and completed several sections in Southern Ontario for Breeding Bird Atlas 1981-1985 and 2001-2005.
- Researcher and camp leader for a Habitat Based Wildlife Assessment of Ekwan Point, Longridge Point and Western James Bay coast. Field work involved walking line transects, point counts.
- Worked two summers as Nature Interpreter at Algonquin Provincial Park
- Initiated a long-term distributional study of the birds of the little-known islands and waters of James Bay.
- Participated in Yunnan, China expedition in a successful search for *Sclater's Monal*, a rare pheasant not seen by westerners since WWII. Also documented other limited distribution bird species.
- Conducted population surveys on endangered *Butler's Garter Snake* in southern Ontario 2008-2010.

EDUCATION

- B.E.S., University of Waterloo, 1991.
- Professional Photography Diploma, New York Institute of Photography

TRAINING

- Wildlife biology, Marine and Fisheries courses: courses, University of Guelph
- Wilderness Survival and Tracking courses: Tom Brown School, New Jersey

CORE COMPETENCIES

- Avian surveying and monitoring
- Wildlife tracking
- Bird-banding
- Recording bird songs
- Birding tourleader

RELEVANT INDUSTRY EXPERIENCE

- Over 5100 bird species observed in over 60 countries
- Avian surveys, censuses, expeditions and migration monitoring
- Preparation of technical reports, journal articles and a book for bird studies
- Publication of several photos in books and journals

MEMBERSHIPS AND ASSOCIATIONS

- Board of Directors: Pelee Island Bird Observatory (banding station)
- Board of Directors: Wilds of Pelee Island
- Ontario Field Ornithologists member
- Explorers Club fellow

Joel Jameson has a Bachelor (Honours) degree from the University of Manitoba and a Masters degree in Biology from the University of Winnipeg. He has 8 years of ecological field experience working in California, Ontario, Saskatchewan and Manitoba. His work has resulted in 4 peer-reviewed publications on bats and a number of non-peer-reviewed papers, reports, and presentations on bats. He has spent three years designing, implementing and overseeing various research projects to understand and quantify impacts of wind energy on wildlife, especially bats. He is familiar and experienced with Ontario's Renewable Energy Approvals Process, The Natural Heritage Assessment Guide for Renewable Energy Projects, Ontario's Wildlife Significant Habitat Technical Guide, and Ontario's Bats and Bat Habitats Guidelines for Wind Power Projects. He has also worked for Stantec on two pre-construction impact assessments of wind energy on bats.

Specifically, Joel is very knowledgeable and experienced in most forms of survey techniques and equipment for bats including Avisoft, Pettersson, Anabat and Sonobat acoustic monitoring equipment as well as mist nets, harp traps, telemetry, PIT tagging, and visual roost and exit count surveys. He is experienced in conducting amphibian trapping, egg mass, and acoustic surveys. He also has a strong desire to become proficient with identifying Ontario birds by sight and sound, a goal which he is currently working strongly to achieve, and with great stride. Additionally, Joel has experience with numerous analytical software including GIS. During his Masters, Joel negotiated with landowners to conduct the first mortality study at a wind energy facility where survey areas were mowed and kept clear of any vegetation (total of 26,400m²) thus maximizing accuracy of mortality estimates. He also worked with Manitoba Telecommunications Services to conduct the first study to mount acoustic monitoring equipment on cell phone towers using a self-designed deployment system. His experience training and managing personnel and volunteers, presenting at international conferences, and teaching and assisting in university laboratories has provided him with excellent communication and organizational skills as well as an enthusiasm and drive for team work and leadership. He is also fluent in both French and English.