

Staff Summaries

Name: Vince Deschamps

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: vince.deschamps@stantec.com

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 was the Senior Advisor for this Natural Heritage Assessment.

Name: Katherine St. James, BSc, MSc

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: Katherine.St.James@stantec.com

Katherine St. James is a Terrestrial Ecologist certified in Ecological Land Classification (ELC) with four years' experience in ecological field surveys, specializing in herpetofauna and bird surveys. She has been employed in both the public and private sectors and has experience working on a range of projects such as species at-risk, wind development and monitoring, wetland restoration, wildlife hazard management, environmental impact studies, and various other development projects. She specializes in environmental sciences, ecology, and bio-geographical studies, and completed her master's research on potential barrier effects on salamander populations. During her master's research and consulting experience, Katherine has routinely conducted ecological assessments and collected field information on vegetation, birds, amphibians, and other wildlife species throughout Ontario.

Katherine assisted with the preparation of this report.

Name: Scott Martin

Company or organization: WILD Canada Ecological Consulting

Address: #75 - 39th Street North, Wasaga Beach, ON L9Z 2A3

Phone: 705-429-4936

Email: smartin@wildcanada.ca

Scott Martin is a Senior Ecologist at WILD Canada certified in Ecological Land Classification (ELC) with many years' experience in plant identification and botanical field surveys, as well as wildlife inventories. Scott is a professional ecologist with over 27 years of field experience, fully versed in studying the complexities and dynamics of both terrestrial and wetland ecological Systems. He is able to conduct a wide array of biological inventory and analysis studies, from breeding birds and herpetofauna to botany. He is trained, certified and experienced in Ecological Land Classification, Ontario Wetland Evaluation System for both Southern and Northern Ontario, Butternut Health Assessment, as well as other biological monitoring and management protocols.

Scott carried out ELC work 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: 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 ELC work for this project.

Name: Matthew Ross, 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: matt.ross@stantec.com

Matthew Ross is a terrestrial 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 recently obtained his Ecological Land Classification certificate.

Matthew carried out ELC work for this project.

Name: Michele Oxlade, BSc, EMX, EPt
Company or organization: Stantec Consulting Ltd.
Address: 171 Queens Ave. Suite 800, London, ON N6A 5J7
Phone: (519) 645-2007 **Fax:** (519) 645-6575
Email: michele.oxlade@stantec.com

Michele is an Environmental Technologist/Coordinator with several years' experience in amphibian identification and 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 ecological monitoring, wind development, environmental assessments and various other development and infrastructure projects.

Michele carried out amphibian surveys for this project.

Name: Natalie Leava, M.Sc.
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: natalie.leava@stantec.com

Natalie Leava is a Terrestrial Ecologist certified in Ecological Land Classification (ELC) and the Ontario Wetland Evaluation System (OWES) 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 ecological assessment and monitoring, species at-risk, aggregate development, wind development and monitoring, as well as various other development projects.

Natalie carried out ELC 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 is a Terrestrial Ecologist with several years' experience in consulting, including conducting wildlife surveys for birds and amphibians. She has worked on a range of projects such as ecological assessment and monitoring, species at-risk, aggregate development, wind development and monitoring, as well as various other development projects.

Kathryn carried out amphibian surveys for this project.

Name: Melissa Straus, M.Sc.
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: melissa.straus@stantec.com

Melissa is a terrestrial ecologist with experience in various sectors, including renewable energy and development. Her experience involves implementation of the Migratory Birds Convention Act and Endangered Species Act. She also has experience in wildlife habitat assessment, including assessment for habitat of snake species at risk, and recently obtained her Ecological Land Classification certificate. Recently, she also has conducted targeted surveys for Jefferson Salamander. She is also certified under the Ontario Wetland Evaluation System for Southern Ontario.

Melissa oversaw the wetland delineation and assessment for this project.

Name: Andrea McCreery, M.Sc.
Company or organization: Stantec Consulting Ltd.
Address: 171 Queens Avenue 8th Floor, London ON, N6A 5J7
Phone: (519) 6485-2007 **Fax:** (519) 645-6575
Email: andrea.mccreery@stantec.com

Andrea McCreery has 3 years of experience in land use and environmental resources planning and management. Andrea is responsible for planning and coordinating environmental impact assessments, natural environment field programs and biological inventories in support of development, transportation and watershed restoration projects. Andrea has been involved in the implementation of the natural heritage and natural hazards policies of the Provincial Policy Statement, Conservation Authorities Regulations and Municipal planning documents. Formerly with the St. Clair Region Conservation Authority, she developed an extensive working knowledge of watershed management, environmental assessment and natural resources planning through input into the development of SCRCA policies, public consultation and coordinating the review and approval of development applications, permits and Environmental Assessments.

Andrea carried out amphibian surveys for this project.

Name: Heather Hughes
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: heather.hughes@stantec.com

Heather Hughes is an ecologist with experience in plant and wildlife ecology. She has experience in flora, fish, tracks, birds, mammals, reptiles, and benthic macro invertebrate identification, and is familiar with OBBN standards for auto-level and total station surveys and sampling. Heather has conducted amphibian (frog) call surveys in accord with BSC protocols. In addition, Heather has conducted surveys for Species at Risk in Ontario, including bat, and reptile (snake) surveys.

Heather has provided technical support on contract to Stantec Consulting at various project sites in Ontario, involving in-field data collection in support of several of our projects, including wind farm planning, aggregate extraction, and post-construction monitoring projects.

Heather carried out ELC and vegetation surveys for this project.

Name: Don Graham
Company or organization: Stantec Consulting Ltd.
Address: 70 Southgate Dr. Suite 1, Guelph, ON N1G 4P5 (*former address*)
Phone: (519) 836-6050 **Fax:** (519) 836-2493
Email: don.graham@stantec.com

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.

Don carried out ELC and vegetation surveys for this project.

Name: Brian Miller

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: Brian.miller@stantec.com

Brian Miller serves as a Botanist and Terrestrial Ecologist whose academic background encompasses various aspects of natural resource management, with a focus on vascular plant identification and vegetation community assessment. Brian has extensive field experience conducting detailed botanical inventories of plant communities throughout southern Ontario, which has provided him with an advanced knowledge of southern Ontario's vascular flora. For several years, Brian has participated in numerous surveys of species at risk (SAR) and other significant plant species, as well as wetland boundary delineations.

Brian's field experience in avian and amphibian identification through visual and auditory surveys and identification of their associated habitats complements his botanical expertise. He is familiar with the Natural Heritage Information Centre (NHIC) species databases, and is experienced at the application of principles and guidelines of the Significant Wildlife Habitat Technical Guide, the *Endangered Species Act*, the *Migratory Birds Convention Act* and other applicable federal, provincial and municipal legislation.

Name: Brandon Holden

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: Brandon.Holden@stantec.com

Brandon Holden is a skilled Terrestrial Ecologist with extensive birding experience in Ontario and Eastern North America since 1997. Having recorded 365 species in Ontario, Brandon has a keen personal interest in finding vagrant bird species. To date, he has found and photographed the first Blacktailed Gull (*Larus crassirostris*) for the province, the first Sooty/Shorttailed Shearwater (*Puffinus* sp.) for the province, and has the second provincial records of both Neotropic Cormorant (*Phalacrocorax brasilianus*) and Black Swift (*Cypseloides niger*).

Brandon was voted onto the Ontario Bird Records Committee (OBRC), a significant accomplishment, as this makes him the youngest member in the committee's 30 year history. In 2012 he was elected to the position of Chair with the OBRC. Brandon has personally located and identified specimens of every avian species listed in Ontario as special concern, threatened or endangered by COSSARO and COSEWIC, other than the presumed extinct Eskimo Curlew. Brandon is responsible for conducting seasonal bird and wildlife field surveys throughout Ontario, including programs at remote sites. He is highly familiar with various bird survey protocols, including those for species at risk in Ontario.

Vince Deschamps is a senior environmental planner with over 20 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, as well as Natural Heritage Assessments for renewable energy projects under the Renewable Energy Approval (REA) process. Projects have included development and coordination of complex ecological field investigations, including management of 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 experiences with private, public and NGO sectors lend him a creative and thoughtful approach to project development, delivery and evaluation. Vince 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. As a result, he has a keen sense of cultural and political sensitivities that influence the processes bearing on a project's outcome. This translates well into Vince's frequent consultation with stakeholders from all levels, including government and NGOs. His strong interpersonal skills, analytical, writing and presentation abilities are supported by a high level of organization, aiding in the timely and accurate completion of projects.

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

Cement / Aggregates

Upper's Lane Quarry, Walker Industries, Niagara Falls, Ontario (Project Manager / Environmental Planner)

Coordinated field investigations in support of a Natural Environment Level 1 & 2 Report for the development of the Upper's Lane Quarry near Niagara Falls, Ontario. The report was required to meet the natural environment reporting requirements of the Aggregate Resources Act for a Category 2 – Class A Quarry (Below Water Table). A comprehensive suite of field investigations was undertaken, including Ecological Land Classification, winter wildlife surveys, breeding bird and amphibian surveys, snake surveys, insect surveys and habitat assessments for potential rare species and wildlife species at risk.

Vince Deschamps BES (Hons.), M.Sc.

Senior Environmental Planner

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

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), and was successfully defended at an Ontario Municipal Board (OMB) hearing.

Dunnville Quarry Expansion Level 1 and 2 Natural Environment Technical Report, Waterford Sand and Gravel Ltd.*, Haldimand County, Ontario (Environmental Planner)

Prepared a Level 1 & 2 Natural Environment Technical Report for a proposed expansion of an aggregate quarry near Dunnville, Ontario. The report was required to meet the natural environment reporting requirements of the Aggregate Resources Act for a Category 2 – Class A Quarry (Below Water Table) and the EIS requirements of the Haldimand County Official Plan and Town of Dunnville Zoning By-Law. Natural heritage evaluations included Ecological Land Classification, vegetation inventories, breeding bird and amphibian surveys and input to the Rehabilitation Plan. The Level 1 & 2 Report was prepared in accordance with the 2010 Natural Heritage Reference Manual (MNR).

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.

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.

* denotes projects completed with other firms

Vince Deschamps BES (Hons.), M.Sc.

Senior Environmental Planner

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.

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)

Vince played a significant role in the development and execution of a series of studies to assess the economic impacts of agriculture in various counties across Ontario. The focus of the research was to determine the economic value of sales and jobs related to agriculture, either directly or indirectly. The studies involved a combination of 'economic base' and 'input-output like' methods and incorporated secondary data from Statistics Canada, the Ontario Ministry of Agriculture, Food & Rural Affairs (OMAFRA), supplemented by primary data generated through the development, delivery and analysis of surveys of agriculture-related businesses, and focus groups with primary producers and mapping components. The studies were conducted in cooperation with the local (i.e., County-level) Federations of Agriculture, with the support of OMAFRA and Human Resources Development Canada. Vince organized and undertook studies in the following municipalities:

* denotes projects completed with other firms

Vince Deschamps BES (Hons.), M.Sc.

Senior Environmental Planner

- *United Counties of Prescott & Russell*
- *United Counties of Stormont, Dundas & Glengarry*
- *Lambton County*
- *Perth County*
- *Frontenac County*
- *Lennox & Addington County*
- *Elgin County*
- *Oxford County*
- *Middlesex County*
- *Lanark County*
- *Renfrew County*
- *City of Ottawa*

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 on a brick manufacturing, as well as determining the long-term demand trends and quantities for heavy clay products, most notably clay bricks.

Environmental Impact Assessments

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.

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 BES (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)

Vince was 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). Vince worked with the BFS ESHIA Project Manager and Technical Director to ensure timely delivery of all outputs related to Terrestrial Biodiversity. This included 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 mitigation to minimize these impacts. Vince was 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 were conducted in compliance with the Equator Principles, IFC Performance Standards, and any other guidelines 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 BES (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
- Humber College Institute of Technology and Advanced Learning, Orangeville Campus, Environmental Management Plan Part B: Terrestrial and Aquatic Resources, Orangeville, ON

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

Natural Heritage Assessments for Various Renewable Energy Projects Under the Renewable Energy Approvals Process, Ontario (Environmental Planner)

Projects involved assessment of development impact on the natural environment and recommending monitoring strategies in conformity with the REA process include:

- Sydenham Wind Energy Centre, Townships of Brooke-Alvinston and Dawn-Euphemia, ON
- Suncor Energy Adelaide Wind Power Project, Municipality of Adelaide-Metcalf, ON
- Suncor Energy Cedar Point Wind Power Project, Town of Plympton-Wyoming and the Municipality of Lambton Shores, ON
- Bow Lake Wind Farm, Townships of Smilsky and Peever, ON

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.

* denotes projects completed with other firms

Vince Deschamps BES (Hons.), M.Sc.

Senior Environmental Planner

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:

- 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*

* denotes projects completed with other firms

Vince Deschamps BES (Hons.), M.Sc.

Senior Environmental Planner

PUBLICATIONS

Deschamps, V. and P. Hartman. 'Trends in Forest Ownership, Forest Resources Tenure and Institutional Arrangement: Are They Contributing to Better Forest Management and Poverty Reduction? Case Studies from Indonesia'. *Understanding Forest Tenure in South and Southeast Asia. FAO Forestry Policy and Institutions Working Paper No. 14. Rome, 2006.*

Deschamps, V. 'CDM-Based Reforestation in Rawa Aopa Watumohai National Park, Indonesia'. *Report prepared for Canada's Clean Development Mechanism and Joint Implementation Office, 2005.*

Deschamps, V. Presentation. 'Biodiversity and Social Benefits in Community-Based Forest Management: The Leuser Ecosystem, Indonesia'. *Ecological Integrity and Protected Areas, 2001: Proceedings of the Parks Research Forum of Ontario (PRFO) Annual General Meeting, pp. 201-208, 2001.*

Katherine St. James is a Terrestrial Ecologist certified in Ecological Land Classification (ELC) with several years' experience in ecological field surveys, specializing in herpetofauna and bird surveys. She has been employed in both the public and private sectors. Her experience spans a range of projects such as wind development and monitoring, wetland restoration, wildlife hazard management, environmental impact studies, and various development projects. She has focused on Species at Risk (SAR) issues, helping clients develop monitoring programs, producing SAR-specific presentations for groups, and determining plans of action in upcoming court hearings focused on SAR issues.

Katherine has successfully managed both small and large projects, including environmental impact statements (EIS), federal and provincial environmental assessments (EAs), constraint analyses, and natural heritage assessments for wind, solar, and hydroelectric. She is familiar with various Acts and their application to projects, including the Provincial Policy Statement, Migratory Birds Convention Act, Endangered Species Act, Species at Risk Act, and others.

EDUCATION

M.Sc. of Geography and Environmental Management, University of Waterloo, Waterloo, Ontario, 2009

B.Sc. (Hons) of Environmental Science, Minor in Biology, University of Waterloo, Waterloo, Ontario, 2005

Ontario Provincial Ecological Land Classification (ELC), Timmins, Ontario, 2012

PROJECT EXPERIENCE

Natural Sciences & Heritage Resources

TransCanada Energy East Pipeline, Ontario (Provincial Vegetation and Wildlife Lead)

Served as provincial lead for vegetation and wildlife issues, including organizing the field program, training field staff, contributing author for federal EA reporting, and consulting with agencies on survey methods across the province

Algonquin Power Amherst Island Wind Farm, Amherst Island, Ontario (Terrestrial Ecologist)

Prepared NHA and EIS reports for a 37-turbine wind farm located on Amherst Island, Ontario

Suncor Energy Cedar Point Wind Farm, Forest, Ontario (Terrestrial Ecologist)

Prepared NHA and EIS reports for this 72-turbine wind farm located near Chatham, Ontario

Sprott Power Wind Project Analysis, Ontario (Terrestrial Ecologist)

Analyzed status and viability of various wind farms available for purchase throughout Ontario

Cambridge Hydro EIS - Preston 27 kv Feeder, Cambridge, Ontario (Terrestrial Ecologist)

Managed terrestrial field work, mapping, and prepared EIS report for a hydro line upgrade in Cambridge, Ontario

Brantford -Kirkwall Pipeline, Brantford, Ontario (Terrestrial Lead)

Served as terrestrial lead managing field investigations, including correspondence with client and agencies. Provided development of methods and field survey protocols

Renewable Energy Natural Heritage Assessments*, Ontario (Project Manager)

Conducted terrestrial evaluations including Ecological Land Classification, wildlife habitat assessments, and Species at Risk evaluations for various wind and solar projects including Oxley Wind Farm, Silvercreek Solar Park, 77 Netherby Solar Park, Armow Wind Farm, South Kent Wind Farm, and Skyway 124 Wind Farm

Wetland Restoration*, Chatham, Ontario (Terrestrial Ecologist)

Prepared wetland EIS and detailed restoration plan for Mud Creek Provincially Significant Wetland after construction occurred within wetland

* denotes projects completed with other firms

Katherine St. James B.Sc., M.Sc.

Terrestrial Ecologist

PUBLICATIONS

The Ecological Effects of Cleared Boundaries of BPNP. *Master's Thesis*, 2009.

"How We Mark Our Territory". 2009 A.D. *Latornell Conference Symposium*, 2009.

"Assessing Stream Management Needs on Public Land in Pinedale, Wyoming". *Conference Presentation at 2007 CAG-ONT*, 2007.

Predicting Birdstrike Hazard from Gulls at Landfill Sites. *International Bird Strike Committee, Warsaw Poland*, 2003.

Curriculum Vitae

Scott A. Martin

#75 – 39th Street North, Wasaga Beach, ON L9Z 2A3

Tel: 705-429-4936 Mobile: 705-444-4477

Email: smartin@wildcanada.ca

SUMMARY OF QUALIFICATIONS

- professional ecologist with over 27 years of field experience
- fully versed in studying the complexities and dynamics of both terrestrial and wetland ecological systems
- able to conduct a wide array of biological inventory and analysis studies, from breeding birds and herpetofauna to botany, and more
- trained, certified and experienced in Ecological Land Classification, Ontario Wetland Evaluation System for both Southern and Northern Ontario, Butternut Health Assessment, as well as other biological monitoring and management protocols

SAMPLE OF RELEVANT EXPERIENCE

- Contracting and sub-contracting of professional ecological services such as EIS, ELC, Wetland Evaluation, Breeding Bird Studies, Herpetile monitoring, Peer Review and general biological inventory and analysis: 1989-present; AECOM, Azimuth Environmental Inc., R.J. Burnside Inc., Saar Environmental, Tarandus Associates Ltd., and others, as well as to government agencies, municipalities and private business and individual clients
- Ecological Land Classification of Len Gertler Memorial Loree Forest Proposed Provincial Park: 2011; Ontario Ministry of Natural Resources (Ontario Parks)
- Vegetation Cover Study, Ecological Land Classification and Vegetation Management Plan for Land Force Central Area Training Centre Meaford: 2010; Department of National Defence

- Bivouac Sustainability Study for Land Force Central Area Training Centre Meaford: 2010; Department of National Defence
- Preparation of Terms of Reference / Statements of Work for three proposed academic research projects at LFCATC Meaford (Bivouac Sustainability Study; Benthos Biomonitoring Study; Vegetation Cover Study and Vegetation Management Plan): 2009; Department of National Defence.
- Life Science Checksheet for Port Burwell Provincial Park: 2009; Ontario Ministry of Natural Resources (Ontario Parks)
- EIS Peer Reviews for applications to develop aggregate pits; 2007-2008; Tiny and Clearview Townships, Simcoe County, ON and the Municipality of Grey Highlands, Grey County, ON.
- Life Science Checksheet for Inverhuron Provincial Park: 2007; Ontario Ministry of Natural Resources (Ontario Parks)
- Species at Risk Bird Surveys and Management Planning at Land Force Central Area Training Centre Meaford: 2005 and 2007; Department of National Defence.
- Inventory and Assessment of a Federally and Provincially Endangered Plant Species in Three Niagara Escarpment Provincial Nature Reserve Parks: 2005; Ontario Ministry of Natural Resources (Ontario Parks).
- Census of the Cerulean Warbler (*Dendroica cerulea*) Population in Awenda Provincial Park: 2005; Ontario Ministry of Natural Resources (Ontario Parks).
- Biological Study Toward an Environmental Assessment for the Construction of an Instinctive Shooting Battle Range at Land Force Central Area Training Centre Meaford: 2005; Department of National Defence.
- Species at Risk Critical Habitat Surveys and Management Planning at Land Force Central Area Training Centre Meaford: 2004; Department of National Defence.
- Conduct many volunteer, "citizen science" natural history surveys and submit records for Bird Studies Canada and other groups, including: Ontario Breeding Bird Atlas, Ontario Nest Records Scheme, Ontario Grassland Birds Survey, Nocturnal Owl Survey, Marsh Monitoring Program, Project Feeder-watch, Christmas Bird Count, Monarch Watch, Ladybird Beetle Survey, Ontario Herpetofaunal Survey, and others

RELATED EMPLOYMENT

- **Sr. Ecologist / Principal, WILD Canada Ecological Consulting,**
Wasaga Beach, ON (1989 to Present)

Provide a wide variety of Ecological Consulting services to government agencies such as the Department of National Defence and the Ontario Ministry of Natural Resources; Municipalities; fellow Environmental Consulting firms, including AECOM, Azimuth Environmental Inc., Burnside and Associates Inc., Saar Environmental, Tarandus Associates Ltd. and others; and private business and individual clients.

Services include Ecological / Biological Inventory and Analysis such as Breeding Bird Surveys and Amphibian Surveys; Ecological Land Classification; Wetland Evaluation; EIS/EA Peer Review; Butternut Health Assessment, Habitat Restoration, Creation, Naturalization and Management; Native Plants Propagation and Seed Collection; Natural History Interpretation, Presentations, Research and Writing; and more. For 11 years, WILD Canada operated one of Ontario's oldest and largest native plant nurseries, producing over 260 species of native plants for habitat restoration and creation projects.

- **National Co-ordinator, Audubon Cooperative Sanctuary System of Canada,**
Collingwood, ON (1997 to 2004)

Co-ordinated and Managed all activities for national, charitable environmental organization, educating and encouraging over 450 member land owners and managers across Canada to become actively involved in protecting and enhancing wildlife habitats, and conserving and sustaining natural resources on their properties

Provided Environmental Education and Stewardship Assistance to members working to environmentally manage over 25,000 hectares of property. Responsible for all Fund Raising, Proposal Writing and Reporting, Creation and Maintenance of member property database and Fostering Partnerships with various NGOs and trade organizations.

- **Park Naturalist: Point Pelee National Park,** Leamington, ON (1992 to 1993);
- **Chief Park Naturalist: Rondeau Provincial Park,** Ridgeway, ON (1987 to 1991)
- **Park Naturalist: Pinery Provincial Park,** Grand Bend, ON (1986);
- **Naturalist: Wye Marsh Wildlife Centre,** Midland, ON (1985);
- **Naturalist: Tiny Marsh Provincial Wildlife Area,** Elmvalle, ON (1984)

Biological Monitoring (birds, herpetiles, plants and other life forms)
Management of Natural Resources of Parks
Conducted Natural History Interpretation Programs
Researched and Assisted in Development, Updating and Communication of Management Plans
Wrote Reports and Proposals
Supervised and Trained staff

EDUCATION AND SPECIALIZED TRAINING

- **B.Sc. (Natural Sciences),**
Lakehead University, Thunder Bay, ON (1988 – 1992)
Specialized in Ecology
- **H.B.O.R. (Honours Bachelor of Outdoor Recreation, Parks and Tourism)**
Lakehead University, Thunder Bay, ON (1988 – 1992)
Specialized in Natural Areas Planning and Management
- **Parks and Forest Recreation Technician**
Fleming College, Lindsay, ON (1986 – 1988)
Specialization split between Parks Management, Fish and Wildlife Management and Forest Management
- Ecological Land Classification for Southern Ontario (OMNR)
- Ontario Wetland Evaluation System for both Southern Ontario and Northern Ontario (OMNR)
- Ontario Natural Heritage Information Centre (NHIC) Data Sensitivity Training (OMNR)
- Certified Butternut Health Assessor (Forest Gene Conservation Association - FGCA)
- Certified Seed Collector (Forest Gene Conservation Association - FGCA)
- Ontario Managed Forest Tax Rebate Program Plan Reviewer (OMNR)

RELATED VOLUNTEER EXPERIENCE

- Steering committee for the Nottawasaga Watershed Improvement Program (N-WIP), a pilot project of Environment Canada's Lake Huron Framework for Community Action, working towards the rejuvenation of the Lower Nottawasaga River Watershed as part of the greater Lake Huron-Georgian Bay watershed (2008 – present)
- Board of Directors of Tallgrass Ontario, a provincial, charitable NGO dedicated to restoration, stewardship and education of the globally imperilled tallgrass prairie and savannah habitats in Ontario (2007 – present)
- Vice Chair and founding member of Wasaga Beach's Healthy Community Citizens' Network, an official Town advisory committee to assist with environmental and community health issues (2007 – present)
- Have delivered hundreds of presentations on birds and birding, habitat creation and management, general ecology, native plants and natural landscaping to Field Naturalist Clubs and Horticulture Societies, as well as at large industry and public trade shows such as the Cottage Life Show and Canada Blooms

- Guest expert and columnist many times regarding natural history, such as birds and native plants, for national, regional and local television and radio programs, magazines and newspapers

RELEVANT MEMBERSHIPS

- Field Botanists of Ontario
- Society for Ecological Restoration
- North American Native Plant Society
- Tallgrass Ontario
- Federation of Ontario Naturalists

RELATED INTERESTS

- Birding
- Botany
- Nature Photography
- Native Plant Gardening
- Hiking
- Fishing

REFERENCES

Available upon request.

Cheryl-Anne Ross is a terrestrial ecologist whose skills include bird, mammal, herpetile, and plant identification, with technical experience in both the public and private sectors. Cheryl-Anne is certified in Ecological Land Classification (ELC). She is adept at conducting a variety of wildlife and wildlife habitat surveys, and has been involved development projects in various sectors, including renewable energy (wind) planning, residential, and industrial construction.

EDUCATION

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

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

Certificate, Ontario Ministry of Natural Resources / Ecological Land Classification (ELC), Lindsay, Ontario, 2011

PROJECT EXPERIENCE

Natural Sciences & Heritage Resources

Various Development Projects*, Ontario (Terrestrial Ecologist & Wetland Biologist)

Conducted biological field surveys and associated data management and analysis for various developments throughout Ontario, including renewable energy projects. Included were breeding bird surveys, nest searches, amphibian counts, SAR salamander population monitoring, wind farm mortality monitoring, bat species and abundance monitoring, and wetland evaluation. Also involved associated background research and reporting

NOVA Chemicals Genesis Pipeline Extension, Corunna, Ontario (Terrestrial Ecologist)

Conducted SAR surveys and habitat assessments, including reptile (snake) coverboard surveys and amphibian (frog) call count surveys

Amherst Island Wind Farm, Amherst Island, Ontario (Terrestrial Ecologist)

Conducted winter raptor, staging waterfowl, and SAR surveys; provided assistance with technical reporting and data entry

Waterloo Westside, Vista Hills, Clair Creek

Meadows, Waterloo, Ontario (Terrestrial Ecologist)

Conducted an assessment of silt fence integrity and photo-monitoring; assessed impacts of deleterious substance release

NOVA 2020 Plant Expansion, Corunna, Ontario

(Terrestrial Ecologist)

Conducted SAR surveys and habitat assessments, including reptile (snake) coverboard and amphibian (frog) call count surveys

Cedar Point Wind Farm, Forest, Ontario (Terrestrial Ecologist)

Conducted habitat assessment, ELC, SAR surveys including reptile (snake) coverboard surveys

Niagara Region Wind Centre, Niagara Peninsula, Ontario (Terrestrial Ecologist)

Conducted habitat assessment, ELC, amphibian surveys, winter raptor surveys, and SAR surveys; aided with coordination of field studies and assisted with technical reporting for the Natural Heritage Assessment

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

Conducted habitat assessment, amphibian surveys, and SAR surveys; aided in coordination of field studies and assisted with technical reporting for the Natural Heritage Assessment

* denotes projects completed with other firms

Natalie Leava is a terrestrial ecologist, whose practical skills include the identification of grasses, flowering plants, trees, lichens, and bryophytes, as well as conducting wildlife surveys for bats, badgers, reptiles and amphibians according to recognized scientific protocols. She is certified in Ecological Land Classification (ELC) and the Ontario Wetland Evaluation System (OWES). Natalie has experience coordinating, executing and reporting on ecological field surveys, habitat identification and classification as well as determining ecological significance and conducting conservation assessments. As a result of her expanding role in conducting botanical and wildlife inventories, Natalie has developed a strong understanding of the requirements to assess Species at Risk and their habitats.

Her experience spans a range of projects across a variety of sectors, including oil and gas, aggregates, renewable energy (wind and solar) and urban development. In addition to her expertise in terrestrial ecology, Natalie is currently leading in the technical development of Natural Capital Assessments within Environmental Services, while creating an internal and external network for this new and innovative discipline.

EDUCATION

M.Sc., Applied, University College Cork / Ecological Assessment, Cork, Republic of Ireland, 2010

B.Sc., Honours, McMaster University / Earth and Environmental Sciences, Hamilton, Ontario, 2009

Certificate, Ontario Ministry of Natural Resources / Ontario Wetland Evaluation System (OWES), North Bay, Ontario, 2012

Certificate, Ontario Ministry of Natural Resources / Ecological Land Classification (ELC), Lindsay, Ontario, 2011

WHMIS Training Course, Guelph, Ontario, 2011

Boating License & Pleasure Craft Operator, Rosseau, Ontario, 2008

PROJECT EXPERIENCE

Cement / Aggregates

Various Proposed Aggregate Extraction Projects, Ontario (Terrestrial Field Ecologist)

Completion of ecological field surveys, including ELC and botanical inventories, amphibian, reptile, insects, bats, badger, and winter wildlife surveys. Projects included:

- *Proposed Melancthon Quarry, The Highland Companies, Melancthon, Ontario*
- *Proposed Acton Quarry Extension, Dufferin Aggregates, Acton, Ontario*

Upper's Lane Quarry, Walker Industries, Niagara Falls, Ontario (Terrestrial Field Ecology Lead)

Served as field ecologist and fieldwork coordinator. Completed field surveys, including ELC and botanical inventories, salamander, reptile, bumblebee, and winter wildlife surveys

Proposed Spencer Pit, Wellington County, Ontario (Terrestrial Field Ecology Lead)

Served as field ecologist and fieldwork coordinator. Completed field surveys, including ELC and botanical inventories, breeding amphibian, reptile, and breeding bird surveys

Environmental Impact Assessments

Hunter Property, North Dorchester, Ontario (Terrestrial Field Ecologist)

Conducted field surveys, including breeding amphibians, and ELC and botanical inventories

University of Guelph Victoria Lands Environmental Impact Study, Guelph, Ontario (Terrestrial Field Lead)

Served as field ecologist and lead for field program and survey coordination. Surveys included ELC and botanical inventories, breeding amphibian surveys, wetland delineation, and agency consultation

Activa Waterloo East Lands, Kitchener, Ontario (Terrestrial Ecologist)

Responsible for annual photomonitoring, preparation of photolog and reporting. Prepared ecological update on overall health of study area based on monitoring during construction

Natalie A. Leava M.Sc.

Terrestrial Ecologist

Renewable Energy

Grand Valley Phase 3 Wind Project, East Luther, Dufferin County, Ontario (Terrestrial Ecologist)

Served as terrestrial field lead, responsible for preparation and coordination of field program for 2012 and 2013. Performed ELC, OWES, vegetation surveys and mapping, as well as bat, amphibian, and reptile surveys. Prepared species at risk report and assisted in completion of NHA report

Bow Lake Wind Project, Algoma District, Ontario (Terrestrial Ecologist)

Served as field ecologist and assisted with coordination of surveys for species at risk and significant wildlife. Performed wildlife surveys for reptiles, amphibians, moose, waterfowl, and breeding marsh and woodland birds. Assisted with completion of the EEMP report

Niagara Region Wind Centre Project, Niagara Peninsula, Ontario (Terrestrial Ecologist)

Served as field ecologist and provided field work coordination assistance. Fieldwork included ELC, vegetation and botanical surveys, winter raptor surveys, breeding amphibian surveys, reptile surveys, and general habitat assessments. Prepared species at risk report

Grand Renewable Energy Park Wind Project, Haldimand County, Ontario (Terrestrial Ecologist)

Served as field ecologist for species at risk screening and implementing mitigation practices, and monitoring during construction

IPC Wind Project, Kent County, Ontario (Terrestrial Ecologist)

Served as terrestrial field lead for four proposed wind farms. Was responsible for fieldwork coordination and execution, and completion of preliminary constraint analysis reports

Post-construction Monitoring for Various Wind Farms, Ontario (Terrestrial Ecologist)

Led various post-construction surveys, including searcher efficiency trials, scavenger trials, and raptor searches. Performed species identification of bat carcasses. Was responsible for coordinating field surveys and training staff in field survey protocols. Projects included:
- KEPA Wind Energy Project, Kruger Wind Energy Chatham LP, Port Alma, Ontario
- Grand Valley Phases 1 & 2, East Luther, Dufferin County, Ontario

Various Wind Farms, Ontario (Terrestrial Ecologist)

Served as field ecologist and provided field work coordination assistance, including ELC, vegetation and botanical fieldwork. Participated in NHA reporting and field summary reports.

Projects included:

- Cedar Point Wind Project, Municipality of Lambton Shores (Forrest), Ontario*
- Sydenham Wind Energy Centre, Lambton County and Municipality of Chatham-Kent, Ontario*
- Dorland Wind Energy Project, Gilead Power Corp., Dorland, Ontario*
- Adelaide Wind Power Project, London, Ontario*

Roadways

Environmental Consulting Firm in Ontario, Canada* (Junior Botanist)

Assisted and trained under senior biologist. Completed data entry for vegetative species list and ELC mapping.

Participated in species at risk surveys and compensation programs. Projects included:

- Highway 407 Expansion, York and Durham Regions, Ontario*
- Highway 60 Expansion, Algonquin, Ontario*
- Detroit River International Crossing (DRIC), Ontario*

Various Species at Risk Habitat Surveys for Transportation Projects, Ministry of Transportation, Sudbury, Simcoe, Cambridge and Chatham, Ontario (Terrestrial Ecologist)

Performed habitat surveys for Queen Snake, Bobolink, Blanding's Turtle

Natural Sciences & Heritage Resources

University College Cork, Environmental & Civil Engineering Department Hydromet Lab*, Cork, Republic of Ireland (Part-time Research Assistant)

Research included forest inventory, destructive tree sampling, biomass pools, fine root analysis, chemical analysis, and soil analysis, to compare net ecosystem balances of an improved grassland with a newly afforested grassland. Proposed research projects to supplement and complement existing eddy covariance data. Executed all associated field and lab work

* denotes projects completed with other firms

Natalie A. Leava M.Sc.

Terrestrial Ecologist

Lake Simcoe Region Conservation Authority*,
Newmarket, Ontario (Full-time Stewardship
Assistant)

*Interacted with homeowners in Simcoe Region to promote
source water protection and provide public information
regarding government funding programs available. Prepared
and distributed information packages to homeowners*

* denotes projects completed with other firms

Natalie A. Leava M.Sc.

Terrestrial Ecologist

PUBLICATIONS

Peichl, M., N. Leava, and G. Kiely. Above and below ground ecosystem biomass, carbon and nitrogen allocation in a recently afforested grassland and adjacent intensively managed grassland. *Plant and Soil*, 2010.

Leava, N.A. A Baseline Ecological Assessment for Castlerefreke, Co. Cork. *M.Sc. Thesis, University College Cork, Cork, Republic of Ireland*, 2010.

Leava, N.A. Bioremediation of Heavy Metal Leachate in Contaminated Oligotrophic Aquifers. *B.Sc. Term Paper. McMaster University, Hamilton, Ontario, Canada*, 2009.

Leava, N. Fractionation of Sulfur Isotopes within Microbial Processes. *B.Sc. Term Paper and Presentation. McMaster University, Hamilton, Ontario, Canada*, 2008.

Leava, N. PAH Contamination of Soils and Remedial Process Available within North America. *B.Sc. Thesis Paper and Presentation. McMaster University, Hamilton, Ontario, Canada*, 2008.

Melissa Straus completed her undergraduate degree with honours in Environmental Sciences at the University of Guelph and her Masters degree in Biology at Trent University. Her M.Sc. focused on the effects of silvicultural practices on reproductive success of cavity-nesting birds in southwestern Ontario.

Melissa is a Terrestrial Ecologist with experience in various sectors, including aggregate services, electrical power distribution, oil and gas, renewable energy, residential development and transportation planning. Her experience involves implementation of the *Migratory Birds Convention Act* and *Species at Risk Act*. Melissa is a skilled birder and has field experience conducting avian, reptile, amphibian, Ecological Land Classification (ELC), and botany surveys, as well as conducting post-construction monitoring at wind farms.

EDUCATION

M.Sc. in Biology, Trent University, Peterborough, Ontario, 2009

B.Sc. in Environmental Sciences, Co-op Program, University of Guelph, Guelph, Ontario, 2003

Certificate, Ontario Ministry of Natural Resources / Ontario Wetland Evaluation System, North Bay, Ontario, 2012

Certificate, Ontario Ministry of Natural Resources / Ecological Land Classification System for Southern Ontario, Kemptville, Ontario, 2010

PROJECT EXPERIENCE

Aggregate Services

Proposed Melancthon Quarry, The Highland Companies, Melancthon Township, Ontario (Terrestrial Ecologist)

Conducted habitat assessment and species at risk surveys.

Proposed Acton Quarry Extension, Dufferin Aggregates, Acton, Ontario (Terrestrial Ecologist)
Conducted evening amphibian surveys in accord with MNR protocols.

Electrical Power Distribution

Hydro One Bruce X Milton Transmission Reinforcement, Bruce County, Ontario (Ecologist)
Located and protected active bird nests during land clearing to ensure client compliance with the Migratory Birds Convention Act.

Multi-Unit / Family Residential

Natural Heritage Evaluations for Various Residential Development Projects, Southern Ontario (Terrestrial Ecologist)

Terrestrial surveys included breeding bird, species at risk, habitat assessment, and ELC for various residential development projects.

Municipal

City of Hamilton Professional and Consultant Services Roster 2011-2012 (C12-06-10); Garner/Rymal Road and Garth Street Environmental Assessment, Hamilton, Ontario (Terrestrial and Avian Ecologist)

Served as study lead and conducted tree inventory to document existing trees and shrubs within 10 m of the existing municipal right-of-way; identified constraints with respect to Species at Risk within the right-of-way for the proposed expansion of Garner/Rymal Road.

Natural Sciences & Heritage Resources

Conservation Planning*, Mississauga, Ontario (Conservation Planning Assistant)

Created conservation plans for private landowners in the Credit Valley Watershed and inventoried vegetation using Ecological Land Classification for Southern Ontario protocol.

Forestry Impacts on Regeneration Rates and Bird Communities Research*, East Lansing, Michigan (Field Assistant)

Performed avian point counts in the upper peninsula of Michigan, estimated White-tailed Deer densities, and completed specialized vegetation surveys to assess forest regeneration rates.

* denotes projects completed with other firms

Melissa A. Straus M.Sc.

Terrestrial Ecologist

Forest Bird Research*, London, Ontario (Project Biologist)

Prepared a manuscript on the nesting success of cavity-nesting birds in woodlots subjected to silviculture, conducted a meta-analysis of edge effects on nesting success of songbirds, and created fact sheets for a landowner stewardship guide. Conducted salamander mark and recapture surveys, nest searching and monitoring, completed numerous vegetation surveys, located and reported avian and vegetative species at risk, collected and identified invertebrates to Order.

Oil and Gas Pipelines

NOVA Chemicals Genesis Pipeline Extension Project, Corunna, Ontario (Terrestrial Ecologist / Environmental Inspector)

Conducted suite of pre-construction and environmental surveys including ELC, amphibian and bird surveys, as well as species at risk survey for various vegetation species, grassland birds, and coverboard surveys for Butler's Gartersnake. Served as on site environmental inspector during construction, responsible for snake exclusion fencing maintenance and encountered wildlife, including Butler's Gartersnake.

St. Clair Pipelines Bluewater River Crossing Replacement, Corunna, Ontario (Terrestrial Ecologist / Environmental Inspector)

Conducted pre-construction environmental surveys including coverboard surveys for Butler's Gartersnake. Served as on site environmental inspector during construction, responsible for snake exclusion fencing and encountered wildlife, including Butlers' Gartersnake and Snapping Turtle.

NOVA Chemicals 2020 Expansion Project, Corunna, Ontario (Terrestrial Ecologist)

ELC, amphibian and bird surveys, botanical inventory (including searching for species at risk), and coverboard surveys for Butler's Gartersnake.

Enbridge Project Nexus Interconnect Pipeline, Mooretown, Ontario (Terrestrial Ecologist)

Species at risk surveys for various vegetation species and coverboard surveys for Butler's Gartersnake.

Renewable Energy

Melancthon Ecopower Centre, Melancthon Township, Ontario (Terrestrial Ecologist)

Participated in environmental monitoring of post-construction wind turbine impacts on bird and bat mortalities.

White Pines, Picton, Ontario (Terrestrial Ecologist)

Conducted ELC, amphibian, and crepuscular bird auditory surveys.

Grand Renewable Energy Park, Cayuga, Ontario (Terrestrial Ecologist / Technical Reporting)

Conducted ELC and wildlife habitat assessment; coordinated and conducted winter raptor and Short-eared Owl surveys; assisted with NHA, EIS, and APRD reporting for proposed wind and solar project.

Wolfe Island Wind Plant, Wolfe Island, Ontario (Terrestrial Ecologist)

Conducted winter raptor and raptor disturbance surveys in addition to assisting with permitting reports and post-construction mortality monitoring trials.

Kruger Energy Port Alma, Port Alma, Ontario (Terrestrial Ecologist / Coordinator)

Coordinated on site subcontractors conducting mortality monitoring and scavenger trials, some permit reporting.

Transportation Planning

MTO Highway 40, Chatham, Ontario (Terrestrial Ecologist)

Conducted reptile and species at risk surveys and habitat assessment.

MTO Highway 24, Cambridge, Ontario (Terrestrial Ecologist)

Conducted reptile and avian species at risk surveys and habitat assessment.

* denotes projects completed with other firms

Melissa A. Straus M.Sc.

Terrestrial Ecologist

PUBLICATIONS

Straus, M.A., K. Bavrlic, E. Nol, D.M. Burke, K.A. Elliott. Reproductive success of cavity-nesting birds in partially harvested woodlots. *Canadian Journal of Forest Research*, 41: 1004-1017, 2011.

Burke, D., K. Elliott, K. Falk, and T. Pirano. (M. Straus, contributing author). A land manager's guide to conserving habitat for forest birds in southern Ontario. *Ministry of Natural Resources and Trent University*, 2011.

Straus, M. Reproductive success of cavity-nesting birds in partially harvested woodlots in southwestern Ontario. *M.Sc. Thesis, Department of Biology, Trent University, Ontario, Canada*, 2009.

Straus, M. The effects of partial harvesting on cavity-nesting bird communities in southwestern Ontario. *Society of Canadian Ornithologists (SCO-SOC) Conference Poster*, 2007.

Straus, M. Carolinian forests of southern Ontario: Species at risk and cavity-nesters. *Guelph Field Naturalists Guided Hike*, 2006.

Peterborough Field Naturalists Guest Speaker. *Impacts of partial harvesting on cavity-nesting birds in southwestern Ontario*, 2006.

Andrea McCreery has 3 years of experience in land use and environmental resources planning and management. Andrea is responsible for planning and coordinating environmental impact assessments, natural environment field programs and biological inventories in support of development, transportation and watershed restoration projects. Andrea has been involved in the implementation of the natural heritage and natural hazards policies of the Provincial Policy Statement, Conservation Authorities Regulations and Municipal planning documents. Andrea has developed a thorough understanding of the complex and evolving policy framework in the Province and a comprehensive understanding of the interconnections between the physical and the natural environment, and maintains a good working relationship with the review and approval agencies.

Formerly with the St. Clair Region Conservation Authority, she developed an extensive working knowledge of watershed management, environmental assessment and natural resources planning through input into the development of SCRCA policies, public consultation and coordinating the review and approval of development applications, permits and Environmental Assessments.

EDUCATION

Bachelor of Environmental Studies, University of Waterloo, Waterloo, Ontario, 2008

Master of Science, Rural Planning and Development, University of Guelph, Guelph, Ontario, 2011

School of Environmental Design and Rural Development Program Evaluation Certificate, University of Guelph, Guelph, Ontario, 2011

PROJECT EXPERIENCE

Environmental Planning

Dorchester South Stormwater Drainage Area Class Environmental Assessment, Dorchester, Ontario (Environmental Planner)

Environmental Planner responsible for updating the Natural Environment Report (NER) by performing an environmental constraints analysis for the subject lands, using published resources and field investigations provided by technical staff to identify constraints to development. A Class EA in progress will consider the proposed alternatives of development, the potential environmental impacts and discuss mitigation measures for each potential impact. Preparation of this report required the coordination of technical staff and active involvement with other study team members.

Upper Little River Stormwater and Master Drainage Plan, Ontario (Environmental Planner)

Responsible for the completion of a Natural Heritage Study to recommend measures to protect the natural features and functions in the area. The Natural Heritage Study considers the proposed plan of development, the potential environmental impacts and discussed mitigation measures for each potential impact. Preparation of this report required the coordination of technical staff and active involvement with other study team members.

Niagara Region Wind Project, Ontario (Environmental Planner)

Performed a preliminary environmental constraints analysis for the subject lands, using published resources and consultation with government agencies to identify constraints to development. Preparation of this report required the active involvement with other study team members.

Sunningdale Court Scoped Environmental Impact Study, London, Ontario (Environmental Planner)

Responsible for the completion of an Environmental Impact Study to recommend measures to protect the natural features and functions in the area. Currently in progress, this EIS will consider the proposed plan of development, the potential environmental impacts and discussed mitigation measures for each potential impact. Preparation of this report required the coordination of technical staff and active involvement with other study team members.

Andrea E. McCreery B.E.S., M.Sc.

Environmental Planner

Beachville Trail Component of the Thames Valley Trail System, Environmental Assessment, County of Oxford (Environmental Planner)

Performed a preliminary environmental constraints analysis for the subject lands, using published resources to identify constraints to development. Preparation of this report required the active involvement with other study team members.

Pine Street Subdivision Environmental Impact Study, Ingersoll, Ontario (Environmental Planner)

Responsible for the completion of an Environmental Impact Study to recommend measures to protect the natural features and functions in the area. An EIS currently in progress will consider the proposed plan of development, the potential environmental impacts and discussed mitigation measures for each potential impact. Preparation of this report required the coordination of technical staff and active involvement with other study team members.

Hamilton Road Natural Environment Report, London, Ontario (Environmental Planner)

Environmental Planner responsible for updating to the report by performing an environmental constraints analysis for the subject lands, using published resources and field investigations provided by technical staff to identify constraints to development.

Policy Planning

County Aggregate Resource Strategy, Huron County Planning Department* (Junior Planner)

In response to Provincial direction, the planning department initiated a process to develop a strategy to manage mineral aggregate resources in Huron County. Andrea was responsible for the completion of a strategy report to recommend policy measures that balance ecologic objectives, extraction, and long-term protection of aggregate resources. This strategy report required the coordination of a steering committee, collaboration with external stakeholders and active involvement with other planners.

Policies for the Administration of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourse Regulation, Ontario Regulation 171/06, St. Clair Region Conservation Authority* (Regulations & GIS Technician)

Acting as Regulations & GIS Technician, Andrea organized a set of draft policies based on existing provincial and regional legislation. The purpose of the document was to provide the public with a user-friendly guide to SCRCA policies. This document required the active involvement with other study team members.

Provincial Policy Statement Five Year Review, Middlesex County Planning Department* (Policy Planner)

The Province conducted a review of the PPS requesting input from a variety of agencies and departments in Ontario. Andrea was responsible for participating in agency consultation, identifying inconsistencies, and providing an evaluation of the document's ability to adequately address emerging land issues. Upon approval from County Council, the completed evaluation was submitted to the Province for review.

Middlesex County Industrial, Commercial and Residential Vacant Lands Inventory* (Planner)

Andrea conducted an inventory of all vacant industrial, commercial and residential lands within Middlesex County to provide recommendations for the County five year review. Recommendations were based on the vacant land findings and potential future development scenarios. The completed report required a GIS catalog of vacant lands, accurate estimation of projected lots and lot sizes (based on existing designs, zoning bylaws and natural heritage features and hazards), and estimated population growth. In addition to the report, Andrea presented the study findings with policy recommendations to support development growth.

Reporting

Middlesex County Municipal Water and Wastewater Infrastructure Report* (Planner)

Elgin County Local Food Study, University of Guelph* (Project Assistant)

* denotes projects completed with other firms

Andrea E. McCreery B.E.S., M.Sc.

Environmental Planner

Managing Water Resources in Ontario: A
comparative study of Ontario and Australian Water
Policies*

Greenhouse Gas Emissions Reduction Strategy*,
University of Guelph, Guelph (Project Developer)

** denotes projects completed with other firms*

Brandon Holden is a skilled Terrestrial Ecologist with extensive birding experience in Ontario and Eastern North America since 1997. Having recorded 365 species in Ontario, Brandon has a keen personal interest in finding vagrant bird species. To date, he has found and photographed the first Black-tailed Gull (*Larus crassirostris*) for the province, the first Sooty/Short-tailed Shearwater (*Puffinus* sp.) for the province, and has the second provincial records of both Neotropic Cormorant (*Phalacrocorax brasilianus*) and Black Swift (*Cypseloides niger*). Brandon was voted onto the Ontario Bird Records Committee (OBRC), a significant accomplishment, as this makes him the youngest member in the committee's 30 year history. In 2012 he was elected to the position of Chair with the OBRC. Brandon has personally located and identified specimens of every avian species listed in Ontario as special concern, threatened or endangered by COSSARO and COSEWIC, other than the presumed extinct Eskimo Curlew. Brandon is responsible for conducting seasonal bird and wildlife field surveys throughout Ontario, including programs at remote sites. He is highly familiar with various bird survey protocols, including those for species at risk in Ontario.

EDUCATION

St. Johns Ambulance / First Aid and CPR, Guelph, Ontario, 2012

WHMIS Training, Guelph, Ontario, 2012

Trailer Training, Guelph, Ontario, 2013

ATV Driver Training, Guelph, Ontario, 2013

Bear Awareness Training, Guelph, Ontario, 2012

Defensive Driver Training, Guelph, Ontario, 2013

MEMBERSHIPS

Member, Ontario Field Ornithologists

AWARDS

2009 Category Finalist: Veolia Wildlife Photographer of the Year

2004 Ross Thompson Trophy of Proficiency in Ornithology

2002 Hamilton Civic Award

2002 Ross Thompson Trophy of Proficiency in Ornithology

2002 Doug Tarry Young Ornithologist Award

PROJECT EXPERIENCE

Renewable Energy

Wolfe Island Wind Project, Wolfe Island, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, migratory waterfowl, waterfowl movement, wintering raptors, wintering Short-eared Owls and aerial waterfowl monitoring. Conducted behavioral studies on raptors, focused on Red-tailed Hawks. Collaborated on 4 years of during- and post-construction monitoring reports. Conducted scavenger and searcher efficiency trials, as well as specimen identification of mortalities

White Pines Wind Project, Prince Edward County, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, including targeted species at risk surveys for breeding Whip-poor-will, and breeding American Woodcock and Wilson's Snipe, migratory passerine stopover usage, migratory raptors, wintering raptors and wintering Short-eared Owls. Conducted Blanding's Turtle observation and habitat assessments

Thunder Bay Wind Power Project, Thunder Bay District, Ontario (Terrestrial Ecologist)

Conducted migratory raptor surveys

Bow Lake Wind Power Project, Algoma District, Sault Ste. Marie, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, migratory passerine stopover usage and migratory raptors. Conducted Moose aquatic feeding area assessments

Brandon Holden

Terrestrial Ecologist

Mica Bay Wind Power Project, Algoma District, Sault Ste. Marie, Ontario (Terrestrial Ecologist)

Conducted surveys for raptor stopover usage, migratory waterbirds and migratory raptors

Royal Road Wind Project, Prince Edward County, Ontario (Terrestrial Ecologist)

Conducted migratory raptor and migratory passerine stopover usage surveys

Port Ryerse Wind Power Project, Norfolk County, Ontario (Terrestrial Ecologist)

Conducted surveys for migratory passerine stopover usage

Port Dover and Nanticoke Wind Energy Project, Haldimand County, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, and shorebird and Tundra Swan stopover usage

Port Alma Wind Project, Municipality of Chatham-Kent, Ontario (Terrestrial Ecologist)

Conducted surveys for migratory raptors, raptor stopover usage, Tundra Swan stopover usage and shorebird stopover usage. Conducted Eastern Fox Snake hibernacula surveys, as well as searcher efficiency trials and specimen identification of mortalities

PEC Wind Project, Prince Edward County, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, migratory passerine stopover usage, and targeted species at risk surveys, including breeding Whip-poor-will, and breeding American Woodcock & Wilson's Snipe. Conducted species at risk Blanding's Turtle observation and habitat assessments

Parkhill Wind Energy Project, Middlesex County, Ontario (Terrestrial Ecologist)

Conducted surveys for wintering raptors, wintering Short-eared Owls and migratory passerine stopover usage

Niagara Region Wind Power Project, Niagara Region, Ontario (Terrestrial Ecologist)

Conducted surveys for wintering raptors, wintering Short-eared Owls and migratory passerine stopover usage. Conducted breeding amphibian call count surveys

Melancthon Wind Project, Dufferin County, Ontario (Terrestrial Ecologist)

Conducted breeding bird surveys and raptor mortality surveys, as well as specimen identification of mortalities

Kingsbridge Wind Power Project, Huron County, Ontario (Terrestrial Ecologist)

Conducted surveys for wintering raptors

Grand Valley Wind Power Project, Dufferin County, Ontario (Terrestrial Ecologist)

Conducted surveys for wintering raptors and wintering Short-eared Owls

Grand Renewable Energy Park, Haldimand County, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, wintering raptors, wintering Short-eared Owls and migratory passerine stopover usage

Dorland Wind Power Project, Lennox and Addington, Ontario (Terrestrial Ecologist)

Conducted surveys for wintering raptors, migratory waterfowl, and wintering Short-eared Owls

Cedar Point and Adelaide Wind Power Projects, Lambton County, Ontario (Terrestrial Ecologist)

Conducted targeted species at risk surveys for breeding Bobolink, and coverboard surveys for Butler's Gartersnake

Byran Wind Power Project, Prince Edward County, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, as well as targeted species at risk surveys for breeding Short-eared Owl, Loggerhead Shrike, King Rail and Henslow's Sparrow

Ostrander Point Wind Energy Park, Prince Edward County, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds and breeding Whip-poor-wills, wintering raptors and migratory raptors. Conducted surveys noting the migration of Common Green Darner and Monarch, in addition to anabat research for migratory bats

* denotes projects completed with other firms

Brandon Holden

Terrestrial Ecologist

Belwood Wind Energy Project, Wellington County, Ontario (Terrestrial Ecologist)

Conducted surveys for wintering raptors, wintering Short-eared Owls and migratory waterfowl, and conducted anabat research for migratory bats

Amherst Island Wind Power Project, Lennox and Addington, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, breeding Short-eared Owl and Eastern Whip-poor-will, fall staging raptors, wintering raptors, wintering Short-eared Owls, summer staging aerial insectivores and migratory waterfowl, in addition to breeding amphibian call count surveys

Natural Sciences & Heritage Resources

Highway 17 Route Planning Study and New Highway 69 Connection, GWP 5031-09-00, Sudbury to Markstay, Ontario (Terrestrial Ecologist)

Conducted habitat assessment surveys for several species at risk, including Purplish Copper, Eastern Milksnake, Snapping Turtle, and Blanding's Turtle

The Highland Companies Proposed Melancthon Quarry, Dufferin County, Ontario (Terrestrial Ecologist)

Conducted surveys for breeding birds, and targeted species at risk surveys for breeding Whip-poor-will, breeding Henslow's Sparrow, as well as wintering raptors and wintering Short-eared Owl. Conducted species at risk habitat assessments and mapping for Barn Swallow and Bobolink, and conducted detailed inventories for butterflies and odonata

Bruce to Milton Transmission Project, Ontario (Terrestrial Ecologist)

Conducted breeding bird nest searches

Walker Aggregates Inc. Duntroon Expansion Quarry, Simcoe County, Ontario (Terrestrial Ecologist)

Assisted with Harts-tongue Fern field management project

Dufferin Aggregates Proposed Acton Quarry Extension, Acton, Ontario (Terrestrial Ecologist)

Conducted breeding amphibian call count surveys

* denotes projects completed with other firms

Brandon Holden

Terrestrial Ecologist

PUBLICATIONS

Holden, B.R.H. Black-tailed Gull: New to Ontario. *Ontario Birds* 31(1): 2-9, 2013.

Holden, B.R.H. A Painted Bunting in my Office. *OFO News* 31(3): 5, 2013.

Holden, B.R.H. Bald Eagle Flip. *OFO News* 23(2), 2005.

Holden, B.R.H. Jaeger watching at Van Wagner's Beach. *OFO News* 22(2), 2004.

Holden, B.R.H. A Young Birder and Photographer. *OFO News* 22(1), 2004.

Brian Miller serves as a Botanist and Terrestrial Ecologist whose academic background encompasses various aspects of natural resource management, with a focus on vascular plant identification and vegetation community assessment. Brian has extensive field experience conducting detailed botanical inventories of plant communities throughout southern Ontario, which has provided him with an advanced knowledge of southern Ontario's vascular flora. For several years, Brian has participated in numerous surveys of species at risk (SAR) and other significant plant species, as well as wetland boundary delineations.

Brian's field experience in avian and amphibian identification through visual and auditory surveys and identification of their associated habitats complements his botanical expertise. He is familiar with the Natural Heritage Information Centre (NHIC) species databases, and is experienced at the application of principles and guidelines of the Significant Wildlife Habitat Technical Guide, the *Endangered Species Act*, the *Migratory Birds Convention Act* and other applicable federal, provincial and municipal legislation.

EDUCATION

Tech. Dipl., Sault College / Fish and Wildlife Technician (Honours), Sault Ste. Marie, Ontario, 2006

Certificate, University of Guelph / Classification and Morphology of Seed Plants, Guelph, Ontario, 2007

Certified Arborist, International Society of Arboriculture, Guelph, Ontario, 2012

Certificate, Ontario Ministry of Natural Resources / Ontario Wetland Evaluation System (OWES), North Bay, Ontario, 2013

Certificate, Ontario Ministry of Natural Resources / Ecological Land Classification (ELC) for Southern Ontario, Lindsay, Ontario, 2008

Certificate, Ontario Ministry of Natural Resources / Butternut Health Assessor, Hamilton, Ontario, 2009

Royal Botanical Gardens / Woodland Sedge Identification Workshop, Burlington, Ontario, 2009

Field Botanists of Ontario / Spring Hawthorn Identification Workshop, Middlesex County, Ontario, 2010

Toronto and Region Conservation Authority / Carex Sedge Identification Workshop, Toronto, Ontario, 2011

PROJECT EXPERIENCE

Natural Sciences & Heritage Resources

Enbridge Pipelines Inc., Lines 10 and 11, Thorold and Hamilton, Ontario (Botanist)

Performed Butternut Health Assessments (SAR)

Parkway West Union Gas Facilities Expansion, Milton, Ontario (Botanist)

Performed detailed botanical inventories of study areas

Brantford to Kirkwall Union Gas Pipeline, Ontario (Botanist)

Performed detailed botanical inventory of natural features along the pipeline

Union Gas Panhandle Replacement, Ojibway Prairie Complex, Windsor, Ontario (Botanist)

Performed detailed botanical inventory and SAR mapping along pipeline corridor

Wesdome Eagle River Gold Mine, Wawa, Ontario (Botanist)

Conducted vegetation community characterization and assessment along proposed road and pipeline

Canadian Pacific Site-specific Ecological Risk Assessment, Pointe au Baril Derailment Site, Parry Sound District, Ontario (Botanist)

Performed detailed botanical inventory and herpetofaunal SAR survey

Brian M. Miller Tech. Dipl.

Botanist / Terrestrial Ecologist

Design-Build New Interchange, Highway 401 at
Wonderland Road, London, Ontario (Arborist)
*Conducted detailed tree inventory of trees within the proposed
works area*

Detailed Design Services for Leslie Street
Realignment, York Region, Ontario (Botanist)
Performed detailed botanical inventory and ELC mapping

Hydro One Inc., Proposed Clarington Transformer
Station, Durham Region, Ontario (Botanist)
Performed detailed botanical inventory and ELC mapping

Cambridge Hydro North Dumfries at Speed River,
North Dumfries, Ontario (Botanist)
Performed detailed botanical inventory and ELC mapping

Henvey Inlet Wind Project, Parry Sound District,
Ontario (Botanist)
*Performed detailed botanical inventory, ELC vegetation
community mapping, and assisted with breeding bird and
avian migration surveys for wind farm and transmission line*

Gesner Wind Farm, Chatham-Kent, Ontario
(Botanist)
*Performed botanical surveys and ELC mapping of natural
features within the study area*

Grand Renewable Energy Park, Haldimand County,
Ontario (Botanist)
*Performed numerous wetland boundary delineations and
mapping*

Niagara Region Wind Centre, Niagara Peninsula,
Ontario (Botanist)
*Performed roadside ELC assessment along transmission line
route*

Suncor Energy, Cedar Point Wind Project, Lambton
County, Ontario (Botanist)
Performed detailed botanical inventory and ELC mapping

Grand Valley 3 Wind Project, Dufferin County,
Ontario (Botanist)
*Performed roadside ELC assessment and wetland boundary
delineations*

Walker Industries Holdings, Uppers Lane Quarry,
Niagara Falls, Ontario (Botanist)
*Performed fall hawthorn (*Crataegus* sp.) survey and botanical
inventory*

Sharp Road Lands EIS, County of Brant, Ontario
(Botanist)
*Performed detailed botanical inventories of natural features
within the study area*

9820 Lakeshore Road EIS, Lambton Shores, Ontario
(Botanist)
*Performed detailed botanical inventory of natural features
within the study area*

Kilworth-Black Property, Komoka, Ontario (Botanist)
*Performed detailed botanical inventory of study area and
adjacent natural features*

Courtney Subdivision, London, Ontario (Botanist)
*Performed detailed botanical inventory of natural features
within and adjacent to the study area*

Fairway/Lackner Lands, Kitchener, Ontario
(Botanist)
*Performed detailed botanical inventory, ELC mapping, and
wetland boundary delineation*

Marigold Homes North Dorchester Servicing Study
and EIS, Middlesex County, Ontario (Botanist)
Performed detailed botanical inventory and ELC mapping

Sunningdale Golf and Country Club, Hole
Relocation EIS, London, Ontario (Botanist)
*Performed detailed botanical inventory, ELC mapping, and
SAR surveys*

Endangered Species/Species at Risk Assessments

Enbridge Pipeline Integrity Digs, Thorold and
Hamilton, Ontario (Botanist)
*Conducted butternut health assessments and SAR surveys
within pipeline easements*

* denotes projects completed with other firms

Brian M. Miller Tech. Dipl.

Botanist / Terrestrial Ecologist

Union Gas Easements, Windsor, Ontario (Botanist)
Conducted detailed botanical inventories and mapped numerous SAR and provincially rare species in gas line easements

Shell Canada Proposed Heavy Oil Refinery Expansion Project*, Lambton County, Ontario (Botanist)
Conducted ELC surveys and GPS mapping of provincially and regionally significant species and vegetation communities

Ferromin Iron Magnetite Quarry, Ompah, Ontario (Ecologist)
Conducted a survey for the presence of Pale-bellied Frost Lichen, a provincially endangered lichen species

CBM Olszowka Property Pit Application, Township of Burford, Ontario (Botanist/Ecologist)
Performed detailed botanical inventories of natural features within the study area. Conducted snake cover board surveys and breeding bird surveys

Windsor Essex Parkway*, Windsor, Ontario (Botanist)
Conducted detailed botanical inventories of SAR-rich remnant prairie sites. Numerous SAR were flagged and mapped using handheld GPS

Highway 407 Extension*, Durham Region (Botanist)
Conducted regionally rare /significant plant species surveys and GPS mapping along new Highway route

CPA Subwatershed Study*, Township of Centre Wellington, Ontario (Botanist)
Conducted comprehensive biological inventories of vascular flora, vegetation communities, breeding birds, snakes and calling anurans as part of Phase 1 (Existing Conditions) of the subwatershed study. All species of regional and provincial significance were mapped

Mill Pond Park Biological Inventory*, Town of Richmond Hill, Ontario (Botanist)
Conducted detailed biological inventory of vascular flora, vegetation communities and breeding birds for proposed trail improvements. Prepared 64 page 'Ecological Land Classification (ELC) Assessment and Breeding Bird Survey of Mill Pond Park' technical report with appendices and ELC map (Aboud & Associates Inc., 2010)

Block 11 Wetland Vegetation Monitoring*, Vaughan, Ontario (Botanist)
Set-up and conducted wetland vegetation monitoring in two wetlands adjacent to a proposed subdivision

* denotes projects completed with other firms

Brian M. Miller Tech. Dipl.

Botanist / Terrestrial Ecologist

PUBLICATIONS

Miller, Brian M. A Day of Botanizing at the rare Charitable Research Reserve, Cambridge, Ontario. *Field Botanists of Ontario (FBO) Newsletter* 25 (2/3), 2013.

Miller, Brian M. Sparrow Lake Aquatics Trip Report, Muskoka. *Field Botanists of Ontario (FBO) Newsletter* 24(1), 2012.

Miller, Brian M. Five Points Forest Trip Report, Ingersoll (June 6th, 2010). *Field Botanists of Ontario (FBO) Newsletter* 23(1), 2011.

Miller, Brian M., Robert J. Aitken, Michael J. Oldham, and Anton A. Reznicek. Slender False Brome (*Brachypodium sylvaticum*, Poacea), an invasive grass new to Ontario, Canada. *Canadian Field Naturalist* 125(3): 235-240, 2011.