



# RIVERSTONE

ENVIRONMENTAL SOLUTIONS INC.

**Craig Mann, H.BSc.F, Dipl. IFRM.**

**Ecologist**

## CAREER AND ACADEMIC HISTORY

<b>2016 – Present</b>	<b>Ecologist, RiverStone Environmental Solutions</b>
2016 – Present	Project Ecologist – Terrestrial (Part Time), WSP, Kitchener, ON
2009 – 2016	Project Ecologist – Terrestrial, MMM Group Ltd, (Ecoplans Ltd.) Kitchener, ON
2006 – 2009	Terrestrial Ecologist, Michalski Nielsen Associates Ltd.
2000 – 2001	B.Ed, Lakehead University, Thunder Bay, Education
1996 – 1999	H.B.Sc.F, Lakehead University, Thunder Bay, Forestry
1994 – 1996	Diploma, Lakehead University, Thunder Bay, Integrated Forest Resource Management

## PROFESSIONAL EXPERIENCE

- Craig has over a decade of experience on numerous projects and has gained sound understanding of the requirements for field assessment and preparation of documentation for Class Environmental Assessments for transportation and land development projects.
- Extensive knowledge of the ecology of central and northern Ontario, is proficient in conducting an array of field duties that include vegetation inventories, vegetation community mapping, woodland assessment, ELC, Species-at-Risk habitat assessments, amphibian surveys, wildlife inventories, benthic invertebrate collection, water sampling and fish rescues / transfer.
- Additional responsibilities include project coordination, proposal preparation, analysis of potential impacts, development of mitigation measures and report preparation.
- Prior work experience developed the bulk of his vegetation identification, ecological interpretation and outdoor skill while working with various forestry companies in northwest, northeast and central Ontario and implementing an enhanced water quality monitoring program in the Muskoka region. These experiences included the installation of permanent forestry plots, forest resource information surveys, road and cut-block location, tree marking, timber scaling, tree planting, forest tending, benthic monitoring and the use various agency protocols.
- Extensive experience working in multi-disciplinary teams, with volunteer groups including government agencies.
- Played a key role in the natural environment component of numerous planning, preliminary design and detail design for highway projects for the Ministry of Transportation (MTO). Responsibilities have included project coordination, review of background natural environment information, terrestrial field surveys, analysis of habitat types, potential impacts, development of mitigation measures for Species at Risk Act (SARA) and Endangered Species Act (ESA) authorizations, preparation of technical specialist reports and providing input to Transportation Environmental Study Reports (TESR) and Design and Construction Reports (DCR).

The following is a partial list of consulting-based project experience since 2006.

### Species at Risk Habitat Assessments

- Species at Risk Screening in the **Town of Bracebridge**; *for private client*; **Key Tasks:** assessment of habitats to determine potential presence of Species at Risk, mapping of potential habitat, development of appropriate mitigation measures to support multiple lot subdivision.
- Species at Risk Study the **Town of Bracebridge**; *for private client*; **Key Tasks:** assessment of habitats to determine potential presence of Species at Risk, mapping of potential habitat, development of appropriate mitigation measures to a single lot severance.
- Species at Risk Screening in the **Town of Warren, Sudbury East Planning Board**; *for private client*; **Key Tasks:** Eastern Meadowlark and Bobolink assessment/surveys and Eastern Whip-poor-will assessment/surveys, mapping of potential habitat to determine potential of multi lot severance.
- Endangered and Threatened Species habitat Assessment in the **District of Parry Sound**; *for private client*; **Key Tasks:** assessment of habitats to determine potential presence of Species at Risk, surveys for turtles, Eastern Whip-poor-will, Eastern Meadowlark and Bobolink, mapping of potential habitat, development of appropriate mitigation measures to support construction of road across crown land.

### Ecological Site Assessments/Environmental Impact Studies/Natural Heritage Evaluations

- Environmental Impact Statement in the **Town of Gravenhurst**; *for private client*; **Key Tasks:** Vegetation classification (ELC), wetland boundary mapping, identification of significant natural heritage features, wildlife species sightings and description of potential habitat for wildlife, Species at Risk assessment and data management to support a multiple lot severance.
- Environmental Impact Statement in the **Town of Huntsville**; *for private client*; **Key Tasks:** Vegetation classification (ELC), wetland boundary mapping, identification of significant natural heritage features, wildlife species sightings and description of potential habitat for wildlife, Species at Risk assessment and data management to support a multiple lot severance.
- Environmental Impact Statement in the **Town of Gravenhurst**; *for private client*; **Key Tasks:** Vegetation classification (ELC), assessment of watercourse, assessment of fish habitat, wildlife species sightings, Species at Risk assessment and data management to support redevelopment of the property.
- Environmental Impact Statement in the **Town of Gravenhurst**; *for private client*; **Key Tasks:** Vegetation classification (ELC), identification of significant natural heritage features, wildlife species sightings and description of potential habitat for wildlife, Species at Risk assessment and data management as due diligence for lot purchase.

### Tree Inventories and Arborist Reports

- Tree Inventory and Tree Compensation Plan in the **Town of Georgina**; **Key Tasks:** tree inventory and health assessment, significant species presence/absence, tree retainment and disturbance minimization recommendations, compensation plan.
- Tree Inventory and Health Assessment in the **Town of Caledon**; *Airport Road (Kings St. to Huntmill Rd.)* **Key Tasks:** tree inventory and health assessment, significant species presence/absence.
- Tree Inventory and Health Assessment in the **Region of Peel**, *Cawthra Road (Eastgate Parkway to South Service Road)*; **Key Tasks:** tree inventory and health assessment, significant species presence/absence.

### Fisheries and Aquatic Assessments

- Fish Salvage in **Gamebridge Ontario, Trent Severn Waterway**; **Key Tasks:** fish rescue in support of lock reconstruction.
- Fish Salvage in **Bradford Ontario, 5th Line over unnamed tributary**; **Key Tasks:** fish rescue in support of bridge reconstruction.
- Fish Salvage in **Parry Sound District, Hwy 612 over tributary between Lake Joseph and Silver Lake**; **Key Tasks:** fish rescue in support of culvert reconstruction.
- Fish Habitat Assessment in **Township of Georgian Bay, Go Home Lake**, *for private client*; **Key Tasks:** assessment of fish habitat in support of deck construction.
- Fish Habitat Assessment in **Town of Huntsville, Lake Vernon**, *for private client*; **Key Tasks:** assessment of fish habitat in support of lot redevelopment.
- Fish Habitat Assessment in **Township of Lake of Bays, Lake of Bays**, *for private client*; **Key Tasks:** assessment of fish habitat in support of boat port construction.

## Transportation Experience

- Highway 11/17 Twinning from the **Manitoba border east to Kenora ON** Sections 1 and 2, Kenora ON: **Key Tasks:** Terrestrial Ecologist. Field assessments of vegetation and wildlife resources within the project limits. Documented the character, sensitivity and significance of terrestrial features, assessed impacts and developed appropriate mitigation strategies. Prepared a Terrestrial Preliminary Design and Detailed Design Reports (in progress). **Client: MTO Northwest Region**
- Hwy Structures - New Liskeard (GWP 5014-E-0019), **New Liskeard Area, ON** (2015–2018): **Key Tasks:** Project Ecologist. Assessment of vegetation and wildlife resources for the rehabilitation / replacement of 11 highway crossing structures throughout the New Liskeard area. Responsibilities included vegetation and wildlife inventories, documentation of the character, sensitivity and significance of all terrestrial features, assessment of impacts, development of appropriate mitigation strategies and documentation. **Client: MTO Northeast Region**
- Highway 11 Rehabilitation (GWP 5200-10-00), **Temagami, ON** (2013–2014): **Key Tasks:** Project Ecologist. Assessment of vegetation and wildlife resources for watercourse structure replacement and highway resurfacing along Highway 11 from 27.4 km north of Highway 64 to 0.7 km South of Lakeshore Drive in the town of Temagami, Ontario. Responsibilities included vegetation and wildlife inventories, documentation of the character, sensitivity and significance of all terrestrial features, assessment of impacts and development of appropriate mitigation strategies. **Client: MTO Northeast Region**
- Highway 11/17 Twinning Detailed Design (Hodder Avenue to Highway 527, Highway 527 to MacKenzie Station, **Red Rock to Nipigon and Ouimet to Dorion, ON** (2009–ongoing): **Key Tasks:** Terrestrial Ecologist. Conducted field assessments of vegetation and wildlife resources. Documented the character, sensitivity and significance of all terrestrial features, assessed impacts and developed appropriate mitigation strategies and prepared impact assessment reports. **Client: MTO Northwest**
- Highway 60 Twinning Hwy 11 to Hwy 35 District of Muskoka Preliminary Design Study, **Huntsville, ON**: **Key Tasks:** Terrestrial Ecologist. Conducted field assessments of all vegetation and wildlife resources within the project limits. Documented the character, sensitivity and significance of all terrestrial features, assessed impacts, provided input to the selection of alternatives and developed appropriate mitigation strategies. **Client: MTO Northeast**

## Relevant Certification or Training Courses

2018	ISA Certified Arborist (ON-2369A)
2018	MNRF Ontario Wetlands Evaluation Systems (OWES) Certificate
2018	Surface Miner Core Module MTCU Program Certificate
2018	Standard First Aid and CPR Certificate
2018	WHMIS Certificate completion
2018	Class 2 Backpack Electrofishing Recertification
2016	MNRF Data Sensitivity Training
2015	Ecological Land Classification (ELC) Provincial
2007	Ecological Land Classification (ELC) Southern Ontario
2014	CN Rail Safety for Canadian Contractors
2014	Butternut Health Assessor Certificate, Ministry of Natural Resources (#493)
2013	Certificate in Garden Design, George Brown College
2010	Certified Seed Collector
2005	Ontario Tree Marker Course
2000	Ontario Timber Scalers License