



# FIERA

## Biological Consulting



- **Wildlife**
- **Aquatics**
- **Vegetation**
- 

---

200, 10318-82 Avenue  
Edmonton, AB T6E 1Z8  
tel: (780) 466.6554  
fax: (780) 466.9134  
w: [fieraconsulting.ca](http://fieraconsulting.ca)  
e: [info@fieraconsulting.ca](mailto:info@fieraconsulting.ca)

# Fiera Biological Consulting Ltd.

---

Fiera Biological Consulting is a multi-disciplinary consulting firm with experience in biological and environmental research throughout western Canada. Fiera provides consulting services to clients in both the private and public sectors, including customers the forest industry; academic institutions; municipal, provincial and federal governments; and other environmental consulting firms.

Fiera focuses on biological and environmental research that contributes to the integration of industrial development and resource management. Fiera seeks to provide its clients with information that can be used by managers to effectively balance the interests of industry and wildlife, and to preserve biodiversity. We are committed to providing research services with the highest level of professional and scientific integrity.

Fiera focuses its research, monitoring, and management services in the following areas of expertise:

1. Wildlife Resources
2. Fisheries and Aquatic Resources
3. Vegetation & Forest Resources

## Wildlife Resources

---

Wildlife and their habitats are increasingly coming under pressure from the expansion of industrial development and human settlement. Habitat loss, fragmentation, and alteration are just some of the growing threats facing wildlife populations. In an effort to help our clients meet their environmental management goals and objectives, Fiera offers wildlife research, management, and monitoring services for the following species guilds:

- Amphibians
- Bats
- Large Carnivores
- Small Mammals
- Song Birds & Raptors
- Ungulates



Additionally, Fiera personnel have extensive knowledge and experience with standardized techniques for sampling and assessing wildlife populations, which include, but are not limited to:



- Aerial & Ground Telemetry
- Breeding Bird Surveys
- Call-playback Surveys
- Habitat Modelling
- Hair Snare & Scent Station Deployment
- Large Carnivore Trapping & Handling
- Migratory Bird Assessments
- Mist Netting
- Mortality Site Investigations
- Necropsy
- Pellet Surveys
- Small Mammal Trapping & Handling
- Snow Track Surveys
- Remote Camera Trapping
- Wildlife Corridor Assessments
- Wetland Assessments
- Wildlife and Wildlife Habitat Assessments

Fiera personnel have experience with the design, implementation, and management of research and monitoring projects, and have the expertise to develop and implement Adaptive Management strategies, as well as short and long-term monitoring projects. In this capacity, Fiera can implement wildlife research and monitoring projects that are part of an environmental audit or Environmental Assessment.

## **Fisheries & Aquatic Resources**

---

Fiera personnel have a working knowledge of provincial and federal legislation regulating activities conducted in and around a water body, such as the installation of bridges, culverts, outfall structures, and pipelines. Fiera has a team of professional biologists with the qualifications and experience to act as a Qualified Aquatic Environment Specialist (QAES), and to provide specifications and recommendations to mitigate any loss to aquatic habitats that may result from in-stream works.



To ensure that all in-stream works conducted by our clients are in compliance with provincial and federal regulations for “no net loss”, we offer the following services:

- **Watercourse Assessments**

These assessments are required prior to commencement of any construction works that have the potential to adversely affect a watercourse or water body.



- **Fish and Fish Habitat Assessments**

Done in conjunction with watercourse crossing assessments, fish and fish habitat assessments examine and document the value of spawning, rearing, and overwintering fish habitat that existed prior to the commencement of in-stream works.

- **Fish Community Sampling**

Fish community sampling establishes whether fish are present within a watercourse prior any in-stream works. Information regarding fish presence within a watercourse is essential for making informed decisions that will protect fish and fish habitat values.



- **On-Site Construction Monitoring**

Fiera’s professional biologists are available for on-site construction monitoring to ensure that the water body is not adversely affected by construction activities.

- **Fish Salvage Operations**

In the event that a water body is fish-bearing, Fiera’s qualified personnel can carry out fish salvage operations prior to the commencement of any construction activities.



- **Permit Application & Acquisition**

Upon completion of a watercourse or fish habitat assessment, Fiera personnel are available to make application on behalf of the client to the appropriate provincial and federal agencies to acquire the necessary permits.

Additionally, Fiera personnel have experience with aquatic research and monitoring, and can provide the following services:

- Collection of Water Quality Data
- Benthic Invertebrate Sampling and Monitoring
- Fish Population Estimates



# Vegetation & Forest Resources

---

## Vegetation Resources

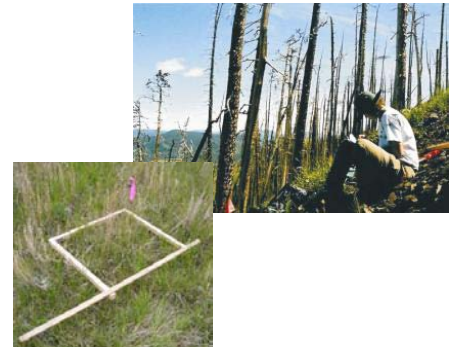
The protection and preservation of native vegetation communities is often overlooked in favour of protecting wildlife resources during resource development.



The protection of native vegetation communities is essential to the well being and health of an ecosystem and without protecting these resources, ecosystem health can be severely impacted. Understanding the intricate link between wildlife and vegetation resources is of critical importance to protecting and maintaining biodiversity. Increasingly, the maintenance and protection of native plant communities has become an issue of concern for resource managers.

Fiera Biological Consulting Ltd. has experience in the following areas as they relate to the research, management, and monitoring of vegetation resources:

- Biomass Surveys
- Forest Fire Burn Severity Classification
- Invasive Plant or Weed Surveys
- Phenology Surveys
- Plant Community Classification
- Pre-Development Vegetation Assessments
- Rare Plant Surveys



## Forest Resources



Reforestation standards in Alberta are enforced with legislative requirements that ensure appropriate monitoring and reporting. The “2000 Regeneration Standards” and the revised “Free-to-Grow” or “Performance Standards” ensure that forestry companies meet legislative requirements for reforestation. As part of these requirements, surveys must be conducted by a certified surveyor, as stipulated under the authority of Section 141.3 of the Timber Management Regulation.



Fiera Biological Consulting Ltd. has personnel with the certification and experience to conduct silviculture surveys in Alberta. Fiera's silviculture team prides itself on providing accurate, high quality services, and has experience conducting the following:

- Stocking Surveys
- Establishment Surveys
- Performance Surveys

Our certification, extensive field experience, and professionalism make Fiera an asset to our clients for long or short term contracts, or for last minute survey requirements.



## **Professional Membership**

---

Fiera personnel are members of the **Alberta Society of Professional Biologists**, and as such, abide by the Society's Bylaws and Code of Ethics.



## **Certification & Training**

---

The following certification and training are held by Fiera personnel and their associates.

### **Animal Care & Handling**

- Alberta Conservation Association Certification for Wildlife Care and Handling
- Canadian Association of Zoo and Wildlife Veterinarians Chemical Immobilization of Wildlife Certification
- Electrofishing Certification (supervisor status)

### **Silviculture**

- Regeneration Survey Certification (Alberta)

### **Safety Training**

- Level 1 First Aid with Level A CPR (Alberta)
- H<sub>2</sub>S Alive
- Transportation of Dangerous Goods (TDG)
- Workplace Hazardous Materials Information System (WHIMIS)
- Construction Safety Training System (CSTS)
- Canadian Firearms Safety Training Certification

## **Fiera Website**

---

In an effort to provide our clients and associates with the most current and up-to-date information regarding our services and experience, Fiera maintains and regularly updates a website located at **[www.fieraconsulting.ca](http://www.fieraconsulting.ca)**



## **Recent Clients & Projects**

---

### Alberta Conservation Association

- Ungulate Winter Range Restoration Program vegetation surveys

### Alberta Newsprint Company (ANC)

- Snow track monitoring of the A La Peche woodland caribou herd in west central Alberta

### Alberta Biodiversity Monitoring Institute

- Baseline monitoring of mammal distribution and abundance throughout Alberta
- Alberta Biodiversity Monitoring Program snow tracking protocol development and field testing

### Alberta Infrastructure and Transportation

- Preliminary Biological Resource Assessment for the Grimshaw flood control drop structure repair program
- Preliminary Biological Assessment for the Winagami-Girouxville canal rehabilitation project

### ATCO Pipelines Ltd.

- Preliminary Biological Site Assessment for the Pocahontas Control Valve Assembly Replacement.
- Amphibian surveys and canid den searches as part of an Environmental Screening Assessment for the Jasper Transmission Pipeline Relocation Project at Jasper Lake
- Preliminary Biological Resource Assessment as part of a Federal Environmental Screening Assessment for a control valve assembly replacement in Jasper National Park

### Bel MK Engineering Ltd.

- Fish Community Sampling in a water body near Lac Ste. Anne, AB
- Fish and Fish Habitat Assessment for the placement of a stormwater outfall structure on the Hangingstone River in Fort McMurray, AB
- Fish and Fish Habitat Assessment for the placement of a wastewater effluent pipeline and outfall structure on a water body near Lac Ste. Anne, AB
- Value and Function Assessment of a wetland receiving wastewater effluent discharge near Lac Ste. Anne, AB

### British Columbia Ministry of Agriculture and Lands

- Environmental Risk Assessment of three road options to the Tsay Keh Dene and Kwadacha communities in northern British Columbia
- Fine filter Environmental Risk Assessment for the Central Coast Land Use Plan

### Caribou Landscape Management Association

- Evaluation of vegetation response to disturbance and implication for range recovery for the Little Smoky and L la Peche caribou herds.

### City of Edmonton

- Development of a Natural Area Management Plan for the conservation and management of ESA NW 7009 in west Edmonton
- Biological Resource Assessment and Fish Habitat Assessment for the construction of a storm tunnel and outfall structure placement on the North Saskatchewan River
- Biological Resource Assessment for the re-alignment of a major road in west Edmonton



### ConocoPhillips Canada

- Predictive mountain goat habitat mapping in west central Alberta.
- Preliminary impact assessment to assess potential impacts of a sour gas well construction on the Pinto Creek mountain goat herd

### Clearwater Environmental Consultants

- On-site monitoring of a stream fording operation utilizing rig-matting near Hinton, AB

### Gartner Lee Ltd.

- Song bird point count surveys in the Long Lake Project Area near Fort McMurray, AB,
- Baseline monitoring and habitat use of mammals by snow tracking in the Long Lake Project Area near Fort McMurray, AB.
- Watercourse & Fish and Fish Habitat Assessments for pipeline and road crossing construction near Redcliff, AB
- Watercourse & Fish and Fish Habitat Assessments for a proposed gas gathering system near High Level, AB
- Watercourse & Fish and Fish Habitat Assessments for pipeline construction near Edson, AB
- Watercourse & Fish and Fish Habitat Assessment for a series of pipeline crossings near Fort McMurray, AB
- Watercourse & Fish and Fish Habitat Assessments for pipeline and road crossings near Redwater, AB
- Fish salvage and on-site construction monitoring for a pipeline repair near Cynthia, AB
- On-site construction monitoring for a pipeline installation near Leslieville, AB
- Watercourse & Fish and Fish Habitat Assessment for a pipeline crossing near Rocky Mountain House, AB
- Watercourse & Fish and Fish Habitat Assessment for a bridge crossing near the Sunchild/O'Chiese Reserve, AB
- Watercourse & Fish and Fish Habitat Assessment for a series of pipeline crossings near Cold Lake, AB

### Golder Associates

- Song bird point count surveys in the oil sands region of Alberta
- Environmental Assessment and baseline monitoring of mammal distribution and abundance in the oil sands region of Alberta

### Green Plan Ltd.

- Preliminary Ecological Assessment as part of an Environmental Screening Assessment for the Millennium Subdivision Project, Bonnyville, AB
- Preliminary Ecological Assessment and ungulate winter range habitat mapping for a Surface Material Lease application

### Hinton Wood Products – West Fraser Mills Timber Co. Ltd.

- Relative abundance of northern flying squirrels in west central Alberta
- Pinto Creek Mountain Goat Monitoring Project
- Snow track monitoring of the A La Peche woodland caribou herd in west central Alberta
- Compartment-level wildlife & wildlife habitat inventories
- Barred owl and Northern goshawk surveys
- Development and production of a Stream Crossing Operational Handbook
- Development and production of a Stand Structure Operational Handbook



### Parks Canada

- Elk forage biomass sampling & burn severity classification of areas disturbed by low-intensity forest fires within Banff National Park
- Elk forage biomass sampling & burn severity classification along the east slopes of Banff National Park, and in the Dogrib and Lost Guide burns
- Caribou lichen sampling

### Sundre Wood Products – West Fraser Mills

- Elk forage biomass sampling and seedling recovery assessment in the Dogrib burn
- MTU Stocking Surveys
- MTU Establishment Surveys

### Tolko Industries Ltd.

- Research and development of Life Requisite reports and habitat suitability indices for selected vertebrate species occurring within the Tolko Industries Forest Management Area

### UMA Engineering Ltd.

- Wetland Assessment as part of a residential subdivision development in Gibbons, AB
- Wetland Assessment as part of a industrial subdivision development in Spruce Grove, AB
- Wetland Assessment for a residential subdivision in west Edmonton, AB
- Preliminary Ecological Assessment as part of an Environmental Screening Assessment for a Drainage Improvement Project on the Sucker Creek First Nation, AB
- Fish and Fish Habitat Assessment of Sucker and Arcadia Creeks on the Sucker Creek First Nation
- Preliminary Ecological Assessment as part of an Environmental Screening Assessment for a Sewage System Upgrade Project on the Alexis Nakota Sioux Nation, Lac Ste. Anne, AB
- Western Toad pitfall trapping and Yellow Rail surveys on the Alexis Nakota Sioux First Nation, Lac Ste. Anne, AB
- Fish community sampling and Fish Habitat Assessment for placement of a storm water outfall structure, Devon, AB
- Fish and Fish Habitat Assessment for placement of a storm water outfall structure, Leduc, AB

### University of Alberta

- Ungulate biomass surveys as part of the Ya Ha Tinda Elk and Wolf Study
- Wolf backtracking as part of the Central East Slopes Elk and Wolf Study
- Vegetation biomass surveys as part of the Kinsella Experimental Ranch Rangeland Management Project

### University of Michigan

- Design and production of small mammal handling bags

### University of Victoria

- Winter trapping and behavioural observations of flying squirrels in west central Alberta

### Woodlands County

- Watercourse and Fish and Fish Habitat Assessment for a proposed stream channel re-alignment
- Permit application and acquisition for stream channel re-alignment
- Fish salvage operation and construction monitoring during construction of a new stream channel

