

Education

M.Sc. Biology, York University, North York, Ontario, 1994

B.Sc. Biology, Honours, McMaster University, Hamilton, Ontario, 1991

Languages

English – Fluent

Golder Associates Ltd. – Calgary**Principal, Fisheries Biologist**

Kristine Mason is a Principal with Golder and technical/project director and senior fisheries biologist with more than 20 years of experience in aquatic and fisheries biology. She has experience with a wide variety of projects across Canada, including fisheries inventory and impact assessment for development projects, such as mining, oil and gas, seismic operations, linear developments, and hydroelectric facilities. Kristine has experience as technical director for large, multidisciplinary environmental assessments, and has also managed/directed the fisheries components for large environmental impact assessment projects.

Kristine has experience in the assessment and mitigation of impacts from a variety of development projects on fish, fish habitat, and the aquatic ecosystem. As well as dealing with the scientific and technical aspects of these types of developments, Kristine has also been involved with the regulatory approval process under the *Fisheries Act*. Kristine has also been involved with the regulatory approval and permitting processes in several jurisdictions, as well as the development of monitoring and management plans.

Employment History**Golder Associates Ltd. – Calgary, Alberta****Principal, Senior Fisheries Biologist/Project Manager (2000 to Present)**

Responsible for managing/directing projects or tasks related to environmental assessment, impact mitigation and management, and monitoring of proposed mining, oil and gas, and linear developments in western and northern Canada. Also responsible for senior technical advice, project management, client liaison, proposal preparation, report writing, and regulatory engagement and support

Aquatics Division Manager (2008 to 2009)

Division manager responsible for about 40 professionals in the fields of fisheries and water quality as well as support staff. The role included the participation in the office management team, supervision of group manager's activities, financial analysis and reporting, recruiting and personnel management, and contribution to strategic decisions within the division.

Fisheries Group Manager (2006 to 2008)

Group manager responsible for about 20 professionals (fisheries biologists and technicians). Responsibilities included scheduling and management of staff, workload allocation, recruitment, budgeting, and financial management.

Triton Environmental Consultants Ltd. – British Columbia, Canada**Biologist/Project Manager (1996 to 1999)**

Biologist for watershed inventory, fish habitat assessment and impact assessment projects. Field and office experience with a wide variety of environmental projects, including Forest Renewal BC funded lake and stream inventory, stream classification according to the Forest Practices Code, and watershed restoration program. Involved with background review, data analysis and interpretation, and report writing for environmental impact assessments. Responsible for proposal preparation, client liaison and budget tracking for

selected projects. Supervised field crews in remote locations and coordinated data collection, entry and analysis, and report preparation.

Ontario Ministry of Natural Resources – Maple, Ontario
Community Dynamics Biologist (1995 to 1995)

Statistical analyses and report writing, focusing on salmonid/invertebrate interactions.

York University, Biology Department – North York, Ontario
Research Assistant / Teaching Assistant (1992 to 1994)

Limnological assessment including sampling for crayfish, benthic invertebrates, zooplankton and aquatic plants in Lake Simcoe, Ontario. Performed laboratory experiments of crayfish respiration and crayfish predation on salmonid embryos. Modelled effects of crayfish predation rates on the lake trout population of Lake Simcoe. Maintained salmonid embryos and adult crayfish in a wet laboratory. Laboratory assistant for undergraduate courses in Comparative Vertebrate Anatomy, Biology of Animals, Ichthyology and Natural Science.

Ontario Ministry of Natural Resources – Maple, Ontario
Fisheries Resource Technician (1992 to 1993)

Limnological, invertebrate and fish sampling. Performed measurements of crayfish distribution and calculated estimates of density.

PROJECT EXPERIENCE – ENVIRONMENTAL ASSESSMENT / PERMITTING

Pine Point Mining Ltd.
Pine Point Project
Northwest Territories

Technical director for the Environmental Assessment Initiation Package for the Pine Point Project, a proposed development at a historical lead-zinc mine in the NWT. Includes senior technical review of environmental assessment and management plan framework documents, as well as strategic advice related to permitting, environmental assessment, and closure. Also includes technical and regulatory support for the Water Licence and Land Use Permit applications for the Confirmation and Exploration Program at the site.

Kennady North Project
Northwest Territories

Technical and project director for environmental baseline studies for the proposed Kennady North Project. Also includes strategic support for environmental assessment and permitting for the project.

NexGen Rook I Project
Northern Saskatchewan

Senior review and direction for the fish and fish habitat component for the environmental assessment for the proposed Rook I Project, a uranium mine in northern Saskatchewan. Also involved in the overall assessment approach and methods and Environmental Impact Statement preparation and senior review.

Teck Coal Cedar North
In-pit Backfill
Extension Project
Sparwood, BC

Project Director for the Cedar North In-pit Backfill Extension Project at Teck's Elkview Operations which involved environmental assessment and permitting support for a *Mines Act* Amendment Application and *Environmental Management Act* Notification. Provided senior technical review of the baseline and environmental assessment sections of the application, as well as the Closure and Reclamation Plan for the project.

Faro Mine Remediation
Project
Faro, Yukon

Review and technical editing of the Project Proposal (environmental assessment) for the Faro Remediation Plan which was submitted to the Yukon Environmental and Socio-economic Assessment Board. Involved in the preparation and senior technical review of responses to information requests during the environmental assessment review process. Also providing support to the *Fisheries Act* authorization process and integration with the engineering team.

Teck Coal South Tailings Pond Floodplain Widening Project Sparwood, BC	Project Director and senior review for the assessment of surface water quantity and quality for the South Tailings Pond Floodplain Widening Program at Teck's Fording River Operations.
Dominion Diamond Jay Project Northwest Territories	Environmental technical director during the environmental assessment review process and for the subsequent water licence and land use permitting process for the Jay Project at the Ekati Diamond Mine. Review of comment/Information Request responses, hearing preparation and attendance, client liaison, regulatory engagement, and coordination with the engineering team. Also involved in the <i>Fisheries Act</i> application support and offsetting plan development.
Dominion Diamond Misery Underground Project Northwest Territories	Environmental technical director for the development of the documentation to support the Water Licence amendment application for the Misery Underground Project and associated permitting support. Included review of documents, environmental assessment, and coordination with the engineering team.
De Beers Canada Inc. Gahcho Kué Project 2018 Water Licence Amendment Northwest Territories	Involved in review and development of the documentation to support the 2018 Water Licence amendment application for the Gahcho Kué Mine and associated permitting support. Included review of documents, environmental assessment screening, responses to comments and interventions, and attendance at technical sessions and the public hearing.
Dominion Diamond Interim Closure and Reclamation Plan Northwest Territories	Provided senior review and writing support for the development of Version 3.0 of the Ekati Diamond Mine Interim Closure and Reclamation Plan. Facilitated a two-day workshop with participants from regulatory agencies and local Indigenous communities.
Agnico-Eagle Mines Ltd. Whale Tail Pit Expansion Project Nunavut	Senior review and direction for the fish and fish habitat component of the Final Environmental Impact Statement for the Whale Tail Pit Expansion Project, located on Inuit Owned Land north of the hamlet of Baker Lake and the Meadowbank Mine in the Kivalliq region of Nunavut.
Teck Coal Baldy Ridge Extension Project Sparwood, BC	Project Director for the baseline data collection phase of the environmental assessment for the Teck Coal Baldy Ridge Extension Project and Elkview Operations. Provided support and direction to the Project Manager. Responsible for final senior review, quality control, and risk management.
Northwest Territories Power Corporation Northwest Territories	Senior document review for documentation in support of a water licence application for the Jackfish Lake Generating Facility, including the effluent quality report and the draft conceptual aquatic effects monitoring program.
De Beers Canada Inc. Gahcho Kué Project Northwest Territories	Managed the fish and fish habitat component for the environmental impact statement for the Gahcho Kué Project. Responsible for report preparation, responses to Information Requests, attending regulatory/technical meetings, and development of the Aquatic Effects Monitoring Program. Involved in providing regulatory support and advice, offsetting planning, and Health and Safety.
Dominion Diamond Ekati ULC Lynx Project Northwest Territories	Involved in water licence amendment application and subsequent review process for the Lynx project at the Ekati Diamond Mine. Included review and development of comment responses, hearing preparation and attendance. Involved in <i>Fisheries Act</i> application support and offsetting plan development for the offsetting measure developed near Lutsel K'e.

**Diavik Diamond Mines
Closure Monitoring
Program Development**
Northwest Territories

Senior review of a plan for closure and post-closure monitoring activities at the Diavik Diamond Mine to support Version 4.0 of the Interim Closure and Reclamation Plan. The performance monitoring program considered the mine site as a whole and specific closure management areas, and the environmental effects monitoring considered aquatic effects and wildlife monitoring.

Parks Canada Agency
Various Projects in
National Parks

Senior review for aquatics components for environmental assessments for projects including the Wood Buffalo National Park Highway 5 Project, the Illecillewaet Curve Project, and the Yoho Twinning Project. Also involved in review of self-assessments and requests for review under the Fisheries and Oceans Canada permitting process.

**NextBridge
Infrastructure East-
West Tie Transmission
Project**
Thunder Bay, Ontario

Senior review and direction for the fish and fish habitat assessment for the proposed East-West Tie Transmission Line in northwestern Ontario. Also involved in permitting support for watercourse crossings associated with the project, which included client liaison and regulatory support.

**Wataynikaneyap Power
Projects**
Northwestern Ontario

Senior review and direction for fish and fish habitat assessments for transmission line projects in Northern Ontario to connect remote First Nation communities to the electrical grid.

**Cenovus Energy
Christina Lake Phase H
and Eastern Expansion**
Conklin, AB

Responsible for providing senior advice and direction to fish and fish habitat component lead on the completion of baseline studies, environmental impact assessment reporting, and preparation of Supplemental Information Requests. Responsible for senior review and overall aquatics coordination.

**Cenovus FCCL Kirby
West Project**
Conklin, AB

Fish and fish habitat component director for the baseline studies for the Cenovus Kirby West project.

**Cenovus Energy
Pelican Lake Grand
Rapids Project**
Wabasca, Alberta

Project Manager for the environmental impact assessment for the Cenovus Pelican Lake Grand Rapids project. Responsible for scheduling, Health and Safety, cost tracking, quality control, report review, client liaison and regulatory advice.

**Cenovus Energy Grand
Rapids Pre-
Disturbance
Assessment**
Wabasca, Alberta

Project Director for the pre-disturbance assessment for the Cenovus Pelican Lake Grand Rapids project.

**Shell Canada Jackpine
Mine Expansion &
Pierre River Mine**
Fort McMurray, AB

Managed the environmental impact assessment for the fish and fish habitat component of the project. Involved in the development of the Conceptual Compensation Plan to meet the requirement for No Net Loss, as well as follow-up work related to the project.

**ConocoPhillips,
Surmont Expansion**
Conklin, AB

Responsible for providing senior advice and direction to fish and fish habitat component lead on the completion of baseline studies and report preparation.

**MEG Energy, Christina
Lake Regional Project
Phase 2**
Conklin, AB

Managed the completion of baseline studies and an environmental impact assessment as the fish and fish habitat component lead, including responses to Supplemental Information Requests and Statements of Concern.

**Suncor Energy,
Voyageur South**
Fort McMurray, AB

As the fish and fish habitat component lead, managed the completion of baseline studies and an environmental impact assessment for the Suncor Voyageur oil sands development in watersheds north of Fort McMurray.

Mackenzie Gas Project Northwest Territories	Involved in task management, impact assessment, field planning and report preparation for the fish and fish habitat component of the Mackenzie Gas Project. Participated in the preparation of the Environmental Impact Statement and responding to Information Requests. Involved in permit approval process and hearing preparation/support.
ConocoPhillips Surmont Phase 2 Fort McMurray, AB	Managed the Fisheries component involving an update to the project description for the ConocoPhillips Surmont EIA.
MEG Energy, Christina Lake Regional Project Conklin, AB	Managed the completion of baseline studies and an environmental impact assessment as the aquatic resources component lead for the MEG Energy Christina Lake Regional Project located near Conklin, Alberta.
Sunshine Village Corporation, Healy Creek Banff, AB	Fish and fish habitat task manager for an environmental assessment for water withdrawal from Healy Creek for snowmaking operations at Sunshine Village in Banff National Park. Co-ordinated baseline field studies, data compilation and report preparation. Involved in regulatory liaison and providing technical advice.
OPTI/Nexen, South Lease Baseline Project Conklin, AB	Managed the completion of field studies as fish and fish habitat discipline lead for the OPTI/Nexen South Lease baseline studies, as a proposed expansion to the Long Lake Project.
PetroCanada, Meadow Creek II Project Fort McMurray, AB	Managed the completion of baseline studies as fish and fish habitat discipline lead for a proposed expansion to the PetroCanada Meadow Creek Project.
Rio Alto Exploration (now Canadian Natural), Kirby Project Conklin, AB	As aquatic resources component lead, managed and participated in baseline aquatic studies and the completion of the environmental impact assessment for Rio Alto Exploration Ltd.'s (now Canadian Natural) Kirby SAGD development near Conklin, Alberta.
TransAlta Utilities, Keephills EIA Keephills, AB	Collected water and sediment quality samples and water quality measurements within the power plant cooling pond and other local waterbodies to provide baseline data for the impact assessment.
True North (now UTS), Fort Hills Project Fort McMurray, AB	Collected baseline inventory data in lake and stream habitats for a proposed oil sands development in the Fort McMurray area. Field studies included the collection of water quality, habitat mapping, discharge and fish inventory data.
Taseko Mines, Prosperity Project Williams Lake, BC	Data analyses and impact assessment reporting for water quality data collected for the proposed Prosperity Gold-Copper project near Williams Lake, BC.

PROJECT EXPERIENCE – LINEAR DEVELOPMENTS

TransCanada PipeLines Ltd.	Senior review of the fish and fish habitat assessment and Fisheries and Oceans Canada self-assessment for the Ghostpine West Lateral Exposure.
Enbridge Inc.	Senior review of the fish and fish habitat assessment reports for the Cheecham Corridor Reroute.
NextBridge Infrastructure East-West Tie Transmission Project Thunder Bay, Ontario	Senior review and direction for the fish and fish habitat assessment for the proposed East-West Tie Transmission Line in northwestern Ontario. Also involved in permitting support for watercourse crossings associated with the project, which included client liaison and regulatory support.

Wataynikaneyap Power Projects Northwestern Ontario	Senior review and direction for fish and fish habitat assessments for transmission line projects in Northern Ontario to connect remote First Nation communities to the electrical grid.
Parks Canada Agency Various Projects in National Parks	Senior review for aquatics components for environmental assessments for projects including the Wood Buffalo National Park Highway 5 Project, the Illecillewaet Curve Project, and the Yoho Twinning Project. Also involved in review of self-assessments and requests for review under the Fisheries and Oceans Canada permitting process.
Mackenzie Gas Project Northwest Territories	Involved in task management, impact assessment, field planning and report preparation for the fish and fish habitat component of the Mackenzie Gas Project. Participated in the preparation of the Environmental Impact Statement and responding to Information Requests. Involved in permit approval process and hearing preparation/support.
Parks Canada, TransCanada Highway Twinning, Phase IIIB Banff, AB	Managed completion of the fish and fish habitat component of the environmental screening for the proposed twinning of Phase IIIB of the TransCanada Highway in Banff National Park, including the collection of baseline field data at proposed watercourse crossings. The screening was required to meet requirements of the <i>Canadian Environmental Assessment Act</i> .
OPTI/Nexen, Watercourse Crossings Anzac, AB	Managed fish and fish habitat studies for pipeline and watercourse crossings in the Long Lake and Jackfish leases. Provided technical advice to OPTI/Nexen related to provincial and federal requirements for their linear infrastructure and prepared applications and supplementary reports for the proposed crossings.
Paramount Resources, Pipeline Crossings Northern Alberta	Managed studies to assess fish and fish habitat at proposed pipeline watercourse crossings associated with numerous gathering systems and prepared necessary documents for review by provincial and federal authorities.
Alaska Gas Producers Pipeline Team, Feasibility Study Calgary, AB	Involved in the fish and fish habitat investigation along three pipeline routes proposed by a consortium of Alaskan North Slope Gas producers, including reconnaissance level surveys of fish habitat along proposed pipeline routes.
CN Rail, Fish Habitat Assessments Northern BC	Fish habitat assessment of streams crossing the rail line between Houston and Prince Rupert, BC.

PROJECT EXPERIENCE – SEISMIC OPERATIONS

Aguila, Winter Seismic Monitoring Mackenzie Delta, NWT	Provided senior advice on an aquatic monitoring project for Aguila's winter seismic program in the Mackenzie Delta.
Chevron Canada Resources, Winter Seismic Monitoring Mackenzie Delta, NWT	Managed aquatic monitoring projects at ChevronTexaco's winter seismic programs in the Mackenzie Delta, which involved field coordination, client liaison, data analyses and report preparation.
De Beers Canada, Air Gun Seismic Yellowknife, NWT	Provided technical expertise to the team involved in the preparation of a project description for a proposed air gun seismic operation in Snap Lake.

**WesternGeco, Winter
Seismic Monitoring
Mackenzie Delta, NWT**

Project manager for environmental monitoring of winter seismic programs conducted in the Mackenzie Delta at the WesternGeco Parsons Lake, Nuna and Tittlalik seismic programs. Responsibilities included field coordination, sampling, client and regulatory liaison, data analyses, and report preparation. Field studies monitored water quality during drilling and water overpressures during blasting, according to protocols established by Fisheries and Oceans Canada.

**Salmo Consulting,
Monitoring Data
Review
Calgary, AB**

Project manager for data analyses of water quality and overpressure monitoring data collected in the Mackenzie Delta during the winter of 2002. Data from multiple programs and program areas were compiled, analyzed, and summarized in a report, which was incorporated into a background paper on the Use of Explosives in Waterbodies for the Canadian Association of Petroleum Producers.

**Salmo Consulting, Fish
Deterrent Review
Calgary, AB**

Involved in the review of fish deterrent literature and the applicability for seismic operations. A summary of the information was produced, as well as a study design and cost estimate for testing of potential deterrents.

**Gulf Canada
Resources, Seismic
Monitoring
Parsons Lake, NWT**

Monitoring of summer seismic activities in Parsons Lake, NWT, including blast-induced overpressure monitoring, turbidity monitoring, and water and sediment quality sampling. A report was prepared summarizing the monitoring results.

PROJECT EXPERIENCE – AQUATIC STUDIES

**Fisheries and Ocean
Canada, Pathways of
Effects
Calgary, AB**

Managed project to conduct a literature review to provide scientific evidence for the linkages between certain physical activities and the endpoints of temperature and dissolved oxygen, as part of DFO's "Pathways of Effects" methodology. This involved identification of linkages, database searches, selection of relevant literature and summarizing into a report.

**City of Calgary, Pine
Creek Baseline
Calgary, Alberta**

Fish and fish habitat component lead for the first phase of aquatic baseline studies of Pine Creek, a tributary to the Bow River south of Calgary. Developed study plan and coordinated field data collection.

**Fisheries and Ocean
Canada, Dredging
Review
Inuvik, NWT**

Managed project to conduct a literature review on the potential physical and biological effects of dredging in the Beaufort Sea. The results were summarized, including the aquatic organisms present in the Beaufort Sea, past dredging operation, environmental effects of dredging, mitigation and recovery, and appropriate legislation and guidelines.

**Petrobank, Coal Bed
Methane Project
Princeton, BC**

Managed literature review and completion of baseline fish and fish habitat studies for a proposed coal bed methane project. Seasonal studies were developed to meet the draft Code of Practice for coal bed methane operations.

**Sunshine Village
Corporation, Healy
Creek
Banff, AB**

Task manager for project to perform bank repair and restoration to Healy Creek at the Sunshine Village base area. Prior to construction, a site visit was conducted and reports prepared for Fisheries and Oceans and Parks Canada. Further baseline fish habitat studies were conducted during construction, as well as suspended sediment monitoring.

**TransCanada
Pipelines, Michel Creek
Calgary, AB**

Prepared an assessment of the extent and significance of an inadvertent release of sediments into Michel Creek during construction of a pipeline crossing.

**Cominco Mines, Risk
Assessment
Trail, BC**

Preparation of a problem formulation report for a screening level risk assessment. Responsibilities included literature review and summary, data analysis, and report preparation.

**TransAlta Utilities,
Weed Harvesting**
Wabamun Lake, AB

Monitoring of weed harvesting program in Wabamun Lake, including field work and reporting. Performed fish salvage in outlet canal of Wabamun power plant.

Queen Charlotte Power
Moresby Island, BC

Collected background fisheries and limnological information for proposed hydroelectric project near Takakia and Moresby Lakes, Queen Charlotte Islands.

PROJECT EXPERIENCE – FORESTRY

**Slocan Group, Tolko
Industries and
Weldwood of Canada**
Quesnel, BC

Watershed inventory in various working areas within the Quesnel TSA. Field data collection involved fish sampling and biophysical characteristics. Responsible for field logistics, data collection, analyses, and report writing.

Carrier Lumber
Prince George, BC

Watershed inventory in the Missinka watershed. Responsible for lake inventory data collection and report writing.

Riverside Industries
Chilcotin, BC

Reconnaissance level lake inventories of lakes in the Chilcotin region of BC. Responsible for lake inventory data collection, report writing, and budgeting.

**Ministry of
Environment, Lands
and Parks**
North Coast, BC

Lake inventory of remote lakes on the North Coast of BC, involving bathymetry, fish sampling, limnological and water sampling. Responsible for budgeting, client liaison, field logistics, data collection, analyses, and report writing.

**Ministry of Forests,
Kalum Forest District**
Terrace, BC

Stream Survey and Riparian Classification for streams in the Nass watershed. Supervised field crews performing classification of tributary streams according to the Forest Practices Code.

Skeena Sawmills
Terrace, BC

Classified fish streams, riparian management areas, and wetlands in accordance with the Forest Practices Code in various watersheds on the North Coast of BC.

**International Forest
Products**
North Coast, BC

Inventory and classification of streams within the Kumealon Lake watershed on the North Coast of BC.

**International Forest
Products**
Porcher Island, BC

Involved with the report writing and editing for a large watershed restoration program report for watersheds on Porcher Island, BC.

PROFESSIONAL AFFILIATIONS

Member, Alberta Society of Professional Biologists (ASPB)