



2018-2019 WHIRLING DISEASE INNOVATIVE RESEARCH AND LEARNING GRANT PROGRAM

Alberta Environment and Parks

APPLICATION PACKAGE

Alberta
Government

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Photo: Clayton James, Alberta Environment and Parks



Field sampling for juvenile salmonids using electrofishing

Photo: Janelle Sloychuk, Alberta Environment and Parks



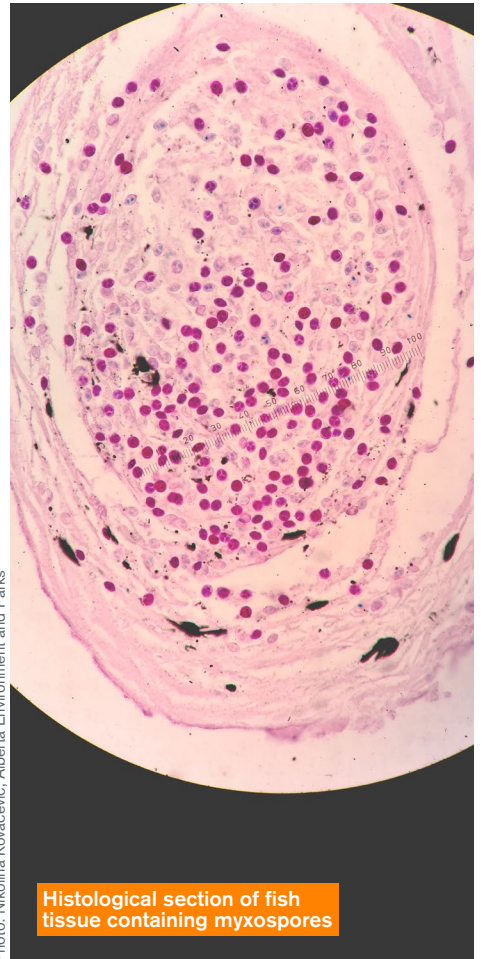
Rainbow Trout eggs

Photo: Lisa Schaubel, Alberta Environment and Parks



Using steam to decontaminate a boat

Photo: Nikolina Kovacevic, Alberta Environment and Parks



Histological section of fish tissue containing myxospores

WHIRLING DISEASE INNOVATIVE RESEARCH AND LEARNING (WhIRL) GRANT PROGRAM

Applications must be received by 14:00:59 Alberta time, September 1, 2018.

Applications must be sent to:

2nd Floor, 9920-108 street
Edmonton, AB T5K 2M4
Attn: Clayton James, WhIRL Grant Program Application
E-mail: AEP.Whirl@gov.ab.ca

INTRODUCTION AND BACKGROUND

In August 2016, the presence of whirling disease was confirmed in fish from Johnson Lake in Banff National Park and the Bow River Basin in Alberta. This is the first confirmed occurrence of whirling disease in Canada. Whirling disease has been observed in the United States since the 1950s and is prevalent in the western and northeastern states. The disease is caused by the Myxozoan parasite, *Myxobolus cerebralis*, which can severely impact some salmonid fish populations by deforming and killing juveniles. Whirling disease has no impact on human health, but can be transmitted to other water bodies through natural or anthropogenic means.

Alberta Environment and Park's (AEP) primary goal is to ensure the conservation of healthy, productive fish habitats and sustainable fish populations. Whirling disease presence in Alberta adds an additional stressor to the sustainability of our trout populations. We are committed to prevent further spread where possible and implement management strategies to reduce the risk to susceptible fish populations.

In 2016, AEP committed to financially support a program dedicated to determining the distribution of the parasite, education and outreach initiatives, and mitigation to help prevent the spread of the parasite. As a part of that commitment, the Whirling Disease Innovative Research and Learning (WhIRL) Grant Program was created to fulfill AEP's obligation to dedicate funding to research initiatives providing AEP with current knowledge and management tools to help maintain populations of wild and native salmonids in the presence of the whirling disease parasite. A total of \$1,000,000 will be allocated in 2018-19 to fund research proposals that align with AEP's goals to assist in effectively understanding and managing *M. cerebralis* in Alberta.

Research can be of a wide diversity of disciplines but should focus on the distribution, mitigation, and education of whirling disease within Alberta.

PROGRAM ELIGIBILITY

The WhIRL Grant Program is available to applicants in North America who meet all of the following criteria:

- Applicant is a faculty member of a recognized post-secondary institution **OR** member of a non-government organization with research experience;
- Applicant has previously published in peer reviewed journals;
- Applicant is willing to work collaboratively with AEP staff; and
- Applicant's project must have clearly demonstrated timelines and deliverables within the proposal.

Please Note:

1. Applications are considered final upon submission and may not be amended unless additional information is requested by AEP or an amendment is warranted due to extenuating circumstances (this determination is solely at AEP's discretion).
2. Applications must only be for a single project. Application forms with more than one project in a document will not be accepted. However, multiple application forms may be submitted in the same email.
3. **Deadline for Grant Application and Proposal Submission (in hand) is September 1, 2018, no later than 14:00:59 Alberta Time.**

GRANT AVAILABILITY

Grants up to \$1,000,000 total for 2018-19 has been allocated for immediate initiatives focused on research of whirling disease in Alberta. The program envisions a resource shared agreement between AEP and the Applicant, whereby AEP covers the cost of the project and may provide in-kind support and the Applicant provides the personnel and established facilities required to complete the project. Proposed projects will be eligible for a grant with respect to:

- Personnel wages,
- Resources (equipment, consumables, etc.) necessary to complete the project under AEP's discretion (Note - capital assets and durable items will not be considered for funding); and
- Additional AEP staffing or resources may be available as in-kind support.

Grants will be considered for research topics that fall within a wide range of categories and may involve researchers from many disciplines, agencies and jurisdictions. Research categories identified as short-term priorities for whirling disease research include:

Diagnostic Methods: The area of research focuses on field and laboratory diagnostics for *M. cerebralis*, including identifying diagnostic methodologies that are not lethal to fish.

Distribution and Dissemination: This area of study describes the geographic regions of *M. cerebralis* infection worldwide as well as vectors for transmission and methods for detecting the whirling disease parasite.

Ecology: This research area explores the complex two-host life cycle of the whirling disease parasite and provides more information on host–parasite ecology.

Education and Outreach: This area of research focuses on educational best practices and programs for disseminating information to the general public as it relates to whirling disease.

Management Strategies: Review of management strategies for controlling disease, including improving stocking policies, education, regulation, and control of the worm host habitat is required.

Mitigation and Decontamination: This area of research examines a variety of aspects that would help prevent the spread of whirling disease including an increased understanding of the efficacy of physical, chemical or thermal decontamination methods, the viability of the parasite under variable environmental conditions or the natural or human-induced spread of whirling disease.

Oligochaete Research: This area of research focuses on *Tubifex tubifex*, including the habitat needs of the worm host, lineage delineations and ideal conditions for the worms' production of the infective form of the parasite.

Other Relevant Studies: Additional relevant study areas on whirling disease.

Parasite Research: This area of study focuses on the taxonomy, life cycle, and developmental phases of the whirling disease parasite, *M. cerebralis*. This basic knowledge helps in our understanding of how the parasite interacts with its fish and worm hosts, and the environment.

Salmonid Research: This area of study examines both wild and cultured salmonid species and their susceptibility to *M. cerebralis*, species by species.

Socioeconomic/Cultural Studies: Research contributing to the socioeconomic or cultural impacts of whirling disease.

Surveillance Methods: This area of research focuses on the development of monitoring programs for *M. cerebralis* infection that incorporate a basis for both temporal and spatial comparisons.

ROLES AND RESPONSIBILITIES

The Program will be led and administered by AEP. A WhIRL Grant Program committee consisting of employees of AEP and non-bidding external stakeholders that will provide advice and support to applicants, as required. An applicant's key contact will be a WhIRL Grant Program committee designate.

Applicants will be responsible for the management of the projects including:

- Project scoping;
- Submission of a grant application and research proposal;
- Sending AEP regular updates at agreed upon intervals; and
- Completion and final reporting of project.

All future correspondence regarding the completed work will be the sole responsibility of the Applicant.

Decisions on the eligibility and prioritization of proposals will be made by the WhIRL Grant Program committee. Final project and funding approval will be determined by the Minister, or delegate.

PROJECT CRITERIA

Proposed whirling disease research projects must meet all of the following criteria:

- Projects are in alignment with the research categories identified
- Projects provide new information pertaining to whirling disease in Alberta;
- A comprehensive literature review is conducted and the Applicant is able to demonstrate the proposed research is novel to the study of whirling disease;
- Proposed project budgets are expressed in CDN dollars only;
- Priority will be given to field work conducted in Alberta.

EVALUATION MATRIX

Each proposal will be scored using an evaluation matrix created by the WhIRL Grant Program Committee. All members of the committee will be involved in the scoring process and the final proposal rating will be an average of committee member scores. Proposals will be evaluated on Innovation, Excellence, Merit, and Feasibility.

Innovation: The applicant demonstrates a clear understanding of the current state of research in their chosen field of study. A comprehensive literature search must be conducted and the applicant must be able to demonstrate the novelty of their proposed research idea. **(30%)**

Excellence: The applicant demonstrates robust experience and expertise in their chosen field of study. Publications in peer-reviewed journals (requirement), awards received for previous research, demonstrated leadership within the applicant's field of study, and previously successful funding applications are considered assets in this evaluation category. **(10%)**

Merit: The applicant demonstrates how their research can benefit Alberta. Applicable research with the potential to lead to government policy changes or that has a direct implication on resource management within Alberta will be scored favorably in this category. **(30%)**

Feasibility: The applicant provides a demonstrated understanding of project feasibility including identification and access to the required resources and personnel, achievable timelines, and reasonably estimated funds to complete the project. Proposals must reflect the fair economic cost of the project and value added components (e.g., leveraging resources, added results and collaborations) will be considered an asset. **(30%)**

PROCESS

PHASE 1: GRANT APPLICATION AND RESEARCH PROPOSAL SUBMISSION

The first step to apply for a WhIRL grant is to submit a digital copy of the Grant Application Form located at the back of this Program detailing a brief summary of the proposed research idea.

Applicants will also be required to submit a detailed research proposal and CV. The research proposal should outline the project's estimated time line and budget, a clear hypothesis, a demonstrated awareness of the key research that relates to the project, and a description of how this research contributes to our further understanding of whirling disease in Alberta.

The proposal budget should be broken down as follows:

- Costs of resources - total requested and separated into relevant subcategories (e.g. equipment, consumables, etc);
- Costs of personnel wages - total requested and listed by position and term; and
- Travel and field expenses - total requested and itemized.

Deadline for Fund Application and Proposal Submission (in hand) is September 1, 2018, no later than 14:00:59 Alberta Time.

PHASE 2: GRANT APPROVAL

All submitted proposals will be reviewed by the WhIRL Grant Program Committee by October 15, 2018. The WhIRL Grant Program Committee will then select projects that most align with the interests of AEP and the Whirling Disease Program. Successful Applicants will enter an agreement with AEP which will outline the terms and conditions applicable to the grant, including cost-sharing as appropriate.

There is no restriction on the total grant amount that applicants can pursue within the \$1,000,000 pool. However, projects may be considered for partial funding only.

PHASE 3: DELIVERING THE PROJECT

The Applicant shall obtain any necessary research licenses and approvals prior to commencing projects and are responsible for following all municipal, provincial, and federal regulations and laws and policies. Any research using animals will be required to obtain approval from a certified animal care committee.

It is encouraged that Applicants collaborate with AEP staff from the Whirling Disease Program. AEP staff may provide in-kind support to aid in the success of any projects.

The Applicant shall inform AEP of any intent to publish or present the findings of their research. Once complete, the Applicant shall inform AEP of the project's completion and are required to present their findings to the WhIRL Grant Program Committee.

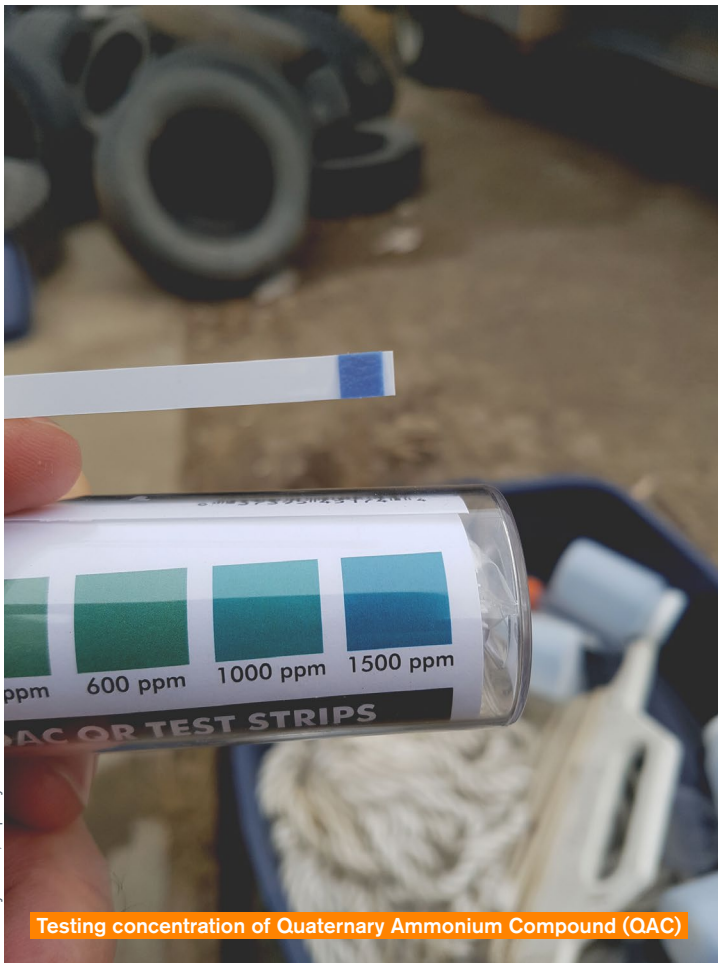


Photo: Jay White, Aquality



Photo: Clayton James, Alberta Environment and Parks



Photo: Janine Higgins, Alberta Environment and Parks



Photo: Mark Adkinson, University of California, Davis, School of Veterinary Medicine

GRANT APPLICATION

PURPOSE

The purpose of the 2018 WhIRL Grant Program is to support research initiatives that will provide novel information on whirling disease in Alberta.

REPORTING REQUIREMENTS

- If the grant is approved in whole or in part, the Applicant agrees:
- To enter into an agreement with Alberta Environment and Parks to meet all requirements.
- To recognize the contribution of Alberta Environment and Park's grant.
- The grant shall be used only for the purposes for which the grant application was approved.
- If the original application has been varied by the Minister, the grant will be used only for those varied purposes.

FREEDOM OF INFORMATION

The Government of Alberta has passed the Freedom of Information and Protection of Privacy Act (Act). All information and documents submitted to the Minister become the property of the Minister and are subject to the provisions of the Act. The Act grants a right of access to records in the Minister's custody or control and prohibits among other things the Minister from disclosing information where disclosure would be harmful to your business interests as defined in Section 15 of the Act or would be an unreasonable invasion of your personal privacy as defined in Section 16 of the Act.

APPLICANT INFORMATION

Application is hereby made to the Minister of Alberta Environment and Parks (hereinafter called the "Minister") for Grant pursuant of the Environment Grant Regulation, A.R. 182/2000 [refer also to the Designation and Transfer of Responsibility Regulation, Section 21(6)]

Applications must be received by
14:00:59 Alberta time, **September 1, 2018.**

Applications must be sent to:

2nd Floor, 9920-108 street
Edmonton, AB T5K 2M4

Attn: Clayton James, WhIRL Grant Program Application
E-mail: AEP.Whirl@gov.ab.ca

CONTACT INFORMATION

Organization Name(s):		
Name of Representative(s) or Contact(s):		
City:	State/Province:	Zip/Postal Code:
Phone:	Fax:	Email:

Provide name of all Officers and Directors (if additional space is required, please use attachment)

First Name:		Last Name:	
Position:	Phone:	Fax:	Email:

First Name:		Last Name:	
Position:	Phone:	Fax:	Email:

First Name:		Last Name:	
Position:	Phone:	Fax:	Email:

First Name:		Last Name:	
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First Name:		Last Name:	
Position:	Phone:	Fax:	Email:

First Name:		Last Name:	
Position:	Phone:	Fax:	Email:

If organization is incorporated, please indicate the applicable Act by checking one of the following and provide a copy of the incorporation documents if not previously provided:

Societies Act (Alberta)	Business Corporations Act (Alberta)	Incorporation Number:
Other	Individual	Other (Explain)

Purpose of organization including goals and objectives or occupation of individual (provide a copy of your curriculum vitae):

PROJECT INFORMATION

Project Title:

Grant Amount Requested: \$

Category of Proposed Research:

Have you included your supporting documentation?

Proposal/project budget CV of Applicant

Brief description of project/program include schedule of work and how the work contributes to further whirling disease research.

How does the research contribute to our current understanding of whirling disease in Alberta and how does it benefit Albertans?

In the event a grant is awarded what is the communication strategy expected?

Provide a description of how Alberta Environment and Parks' contribution will be recognized.

Date of Application:	Position:
Name:	Signature:

ADDITIONAL SPACE: Provide name of all Officers and Directors

First Name:		Last Name:	
Position:	Phone:	Fax:	Email:

First Name:		Last Name:	
Position:	Phone:	Fax:	Email:

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