



Assessment of Aquatic Systems

Trinity Consultants' Minnow Aquatic Environmental Services team is a highly qualified group of environmental scientists specializing in aquatic environmental assessment services. Founded in 2000, Minnow has completed over 550 projects across Canada.

Experience and Commitment

Minnow scientists have extensive expertise in the toxicology, chemistry, biology, and ecology of aquatic systems (see Figure 1). We have a keen appreciation for the technical challenges and political sensitivities that clients face, and are highly familiar with regulatory frameworks across Canada. As important as Minnow's technical expertise and experience is our commitment to quality, to understanding and addressing our client's needs, to efficient and cost-effective project implementation, and to clear, concise interpretation and reporting.

Water Quality Evaluation

Water quality assessment is an integral component of most Minnow projects. As such, we are experts in the design and implementation of water quality monitoring programs, data management and the application of statistical analyses or other tools required to allow effective, scientifically sound, and concise data interpretation.

Aquatic Environmental Monitoring Program Design and Implementation

Our scientists are intimately familiar with the requirements of effective and scientifically-defensible monitoring programs and have extensive experience implementing monitoring programs that meet regulatory requirements as well as client objectives. These include: Environmental Effects Monitoring (EEM), Aquatic Environmental Monitoring Programs (AEMP), and contaminant-specific monitoring programs.

Environmental Impact Assessment

Following a small or large-scale impact to an aquatic system, characterization of the overall impact to aquatic ecosystem health may be required. We have experience with both planning



and implementing immediate post-impact response as well as managing ongoing monitoring programs that assess temporal changes.

Bioavailability and Toxicity Evaluation

The bioavailability (and therefore toxicity) of compounds can be substantially modified by site-specific physical, chemical, and biological factors. Our expertise includes knowledge of these mediating factors and their complex interactions, and the design of bioavailability/toxicity evaluations that efficiently identify the potential for adverse effects in the aquatic environment.

Baseline Studies (Physical, Chemical and Biological)

Effective planning and implementation of a baseline study is critical in establishing existing conditions, and can be invaluable in interpreting potential future effects. Our team brings a long-term view to baseline monitoring, asking the key question: "how can the data be collected to most optimally suit future needs?"

Regulatory Compliance and Permit Acquisition

We have been involved in numerous projects requiring permit acquisition at the federal level and the provincial levels (particularly in British Columbia and Ontario). As a result, we understand the intricacies of regulatory review, thereby facilitating efficient acquisition of permits.

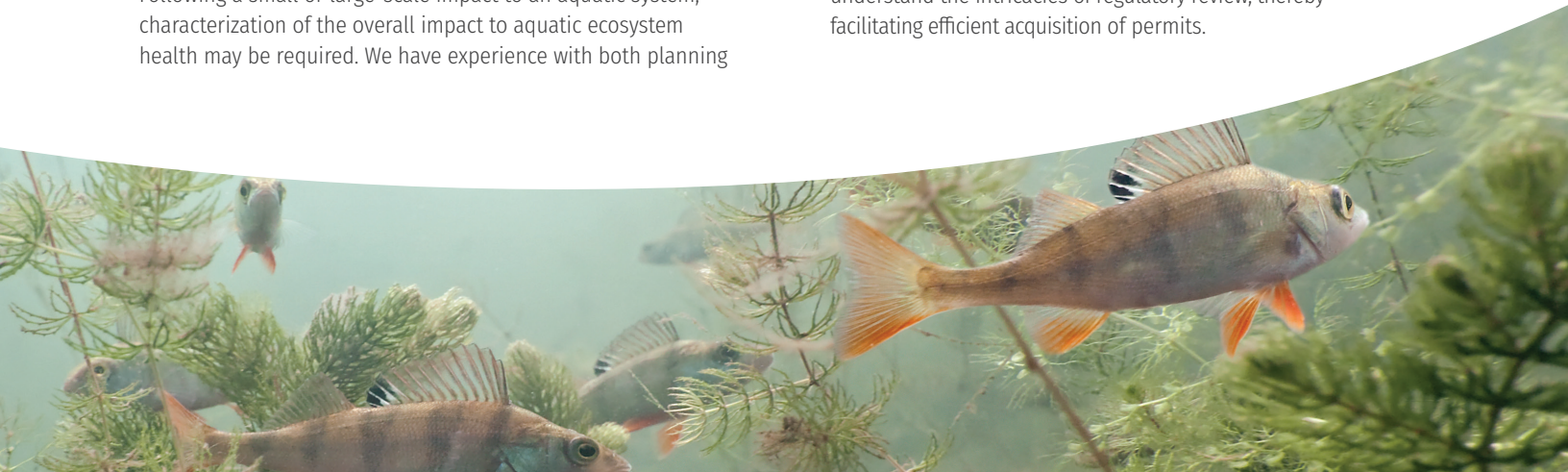


Figure 1: Assessment of Aquatic Systems



Site-Specific Water Quality Objective (SSWQO) Development

Minnow has successfully assisted numerous clients in the development of SSWQO based on site-specific opportunities such as chemical modifiers of bioavailability and toxicity, background concentrations, and species distributions. In addition, our scientists have been involved in the development of receiving environment and effluent discharge standards.

Fish Habitat Assessment and Offsetting

Under the federal Fisheries Act, fish habitat loss or alteration requires characterization of the quality and quantity of the loss, and an offsetting plan. We successfully support numerous clients through this process by performing habitat assessments and designing and/or implementing offsetting measures.

For more information about our aquatic environmental assessment services, contact us today!

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