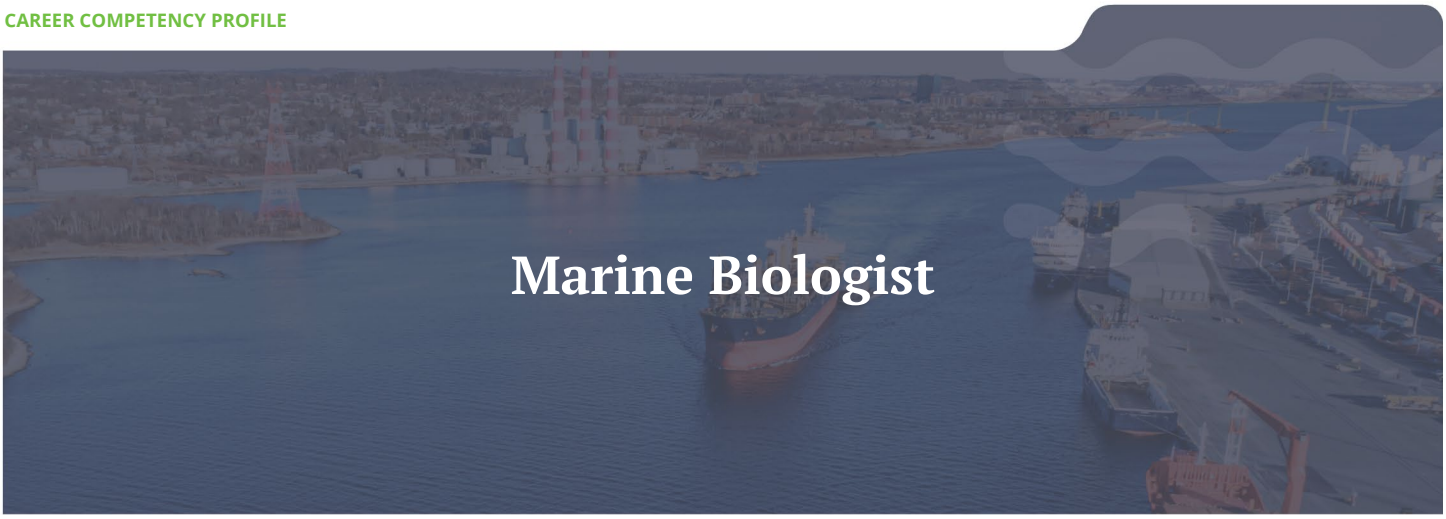

Marine Biologist

ROLE OVERVIEW

As a marine biologist you will work in a variety of locations, including both field and office settings, while collaborating with a multi-disciplinary team of researchers, technical specialists, and project managers.

You will be responsible for leading in areas of scientific research to better understand marine environments and the effects of human developments to them.

While the scope of projects will vary, the primary responsibilities will remain consistent. You will be expected to lead the study design for an applicable project, in addition to collaborating with other scientists, field technicians, and subcontractors.

Marine biologists study species that inhabit bodies of water and observe any changes to bodies of water. They also focus on different aspects of marine life, including the process of marine development, how organisms interact with one another and the ecosystem and how pollution may affect marine environments.

STRATA LEVEL: 3B – Technical Specialist

Also Known as:

- Aquatic Biologist
- Aquatic Resource Biologist
- Marine Aquatic Biologist

Education and Experience:

- Minimum of a bachelor's degree in biology, marine ecology, marine biology, zoology, or related discipline.
- Preferably a masters or doctoral degree in biology, marine ecology, marine biology, zoology, or related discipline.
- Registered or eligible to register as a Professional Biologist (In Alberta and British Columbia).
- At least 5 years of experience related to marine/aquatic ecology.

Associated NOC(s):

- **2121** – Biologist

TECHNICAL

Field Surveys

Conduct field surveys to collect information on the area's ecosystem, environment, benthos, or organisms to evaluate habitat, populations, environment, and impacts of stressors.

- Define the purpose, scope, and objectives of a survey to collect the necessary data and minimize impact of survey on the local environment.
- Identifies and interprets the ecology and distribution of organisms to understand the project location.
- Identifies invasive species to take appropriate action to report or remove species harmful to the local environment.
- Applies appropriate survey techniques to ensure data is accurate, reproducible, and sufficient.
- Prepares and deploys surveying equipment to map specific marine habitats.
- Adheres to protocols and procedures while using survey equipment and materials to ensure data is accurately collected.
- Mitigate the effects of project activities on surrounding ecosystem to prevent the loss of biodiversity.
- Adapts survey plan when data cannot be obtained to identify alternative options to collect necessary data.

Data Analysis

Applies recognized statistical tools and techniques to interpret and analyze data for the purposes of uncovering trends, patterns, and opportunities to enable strategic decision making..

- Applies advanced quantitative data analysis techniques and methods.
- Applies rational arguments and supporting evidence to justify the interpretation of data.
- Identifies data inconsistencies, errors, or reliability to take appropriate action to remedy or recreate data.
- Compares results with primary data to make recommendations to decision makers.
- Seeks feedback from other technical specialists to confirm interpretations and ensure methods and results adequately address project objectives.
- Prepares technical and research reports on observations, data, and/or impacts to communicate conclusions to stakeholders, industry, government, or the public.

Data Quality Assurance and Control

Follows appropriate processes, as directed by organizational best practices, to ensure quality is maintained throughout the collection, analysis, and management of data.

- Participates in developing quality assurance procedures and protocols for the collection and analysis of data.
- Provide oversight on the development of documents to ensure quality control.
- Maintains and calibrates equipment prior to and after use to equipment collects quality data and avoids contamination, and e
- Collects biological and physical data in different temporal and spatial scales to collect data in accordance to project's objectives.

Project Team Management

Oversees a team of professionals to effectively and efficiently produce the required output to ensure project[s] are completed on time and budget.

- Provides direction and supervision towards project planning, implementation, and monitoring for the technical aspects of a project.
- Monitors and controls the allocation of staff and resources to meet project deliverables.
- Provides constructive feedback for junior technical staff to support professional development.
- Manage tasks and projects according to approved scopes of work to deliver quality reports on schedule and within budget
- Contributes to the development of detailed work plans and tasks for field crews to ensure work is effectively allocated to achieve desired goals in an appropriate time frame.

Stakeholder Relationship Management

Working in partnerships with all necessary partners, the project is to be development to ensure the project addresses stakeholder requirements and concerns. identify stakeholder concerns and requirements to execute a achieve a holistic project, process, or program.

- Consult with relevant stakeholders to identify any issues with existing or proposed work to inform decision making.
- Explain opportunities for the protection or improvement of marine areas to relevant stakeholders to communicate organizational project plans.
- Identify potential issues with current or proposed marine use to develop and evaluate potential solutions.
- Record and monitor consultation outcomes to communicate results and actions with relevant stakeholders throughout the project's lifespan.

PERSONAL AND PROFESSIONAL

Communication

Positively directs outcomes by delivering communication that results in a better understanding of goals and objectives that captures interest and gains support for immediate action.

- Verbally conveys complex technical information accurately, clearly, and effectively to communicate technical operations and results.
- Prepares comprehensive reports that clearly identify project objectives, scope, research findings, and recommendations to create a defensible assessment report.
- Maintains a clear line of communication between the development and operations teams to maintain continuously information feedback loops on project deliverables
- Actively listens to team members to address concerns and integrate ideas, values, and new information, where appropriate.

Problem Solving

Identifies problems and uses logic, judgement, and evidence to evaluate alternative scenarios and recommend solutions to achieve a desired goal.

- Considers the impact to the organization and environment when analyzing specific project objectives and goals.
- Analyzes operational data to evaluate operations, understand trends, and potential areas of concern to take appropriate action where required.
- Considers all pieces of information when attempting to solve problems to produce a cognizant and comprehensive solution.
- Takes an unbiased stance to interpreting new information to solve a problem in an object manner.

Professional Ethics

Demonstrates honesty, responsibility, respect, and fairness in decision making to diminish risk, increase trust, and improve long term success.

- Accurately and honestly conveys potentially difficult information to ensure that risks, incidents, and other pertinent are understood by the appropriate persons, including management.
- Respects confidentiality and sensitive information in reports as appropriate to uphold privacy of the individuals involved.
- Takes an unbiased stance to interpreting new information to solve a problem in an objective manner.

Collaboration

Engages in professional collaborative efforts with other members of the team, including sharing information and expertise, utilizing input from others, and recognizing others' contributions to work towards a common goal.

- Provides operational and technical expertise to ensure harmonious and efficient operations.
- Shares relevant and useful knowledge, experience, or expertise to aid team members accomplish their objective more efficiently or effectively.
- Works cooperatively with multiple stakeholders, demonstrating a willingness to consider alternative approaches, ideas, or insights.
- Provides team members with constructive feedback and perspective to aid in the completion of a task or goal.

Regulatory Compliance

Adheres to specific regulation and legislation within a defined jurisdiction to monitor organizations compliance and implementation of best practices.

- Carries out all work according to relevant environmental and health and safety legislation and policy.
- Analyzes relevant regulations, legislations, and standards to ensure project complies withs laws, regulations, and standards.
- Demonstrate knowledge of regulations, codes, standards, and safety, including best practices to ensure project compliance.
- Prepares permit and/or regulatory approval applications to obtain project approvals from agencies.

Health and Safety Procedure

Adheres to and advocates specific workplace safe operating procedures and occupational health and safety requirements within a defined jurisdiction to ensure the health and safety of others.

- Establishes safeguards and best practices within a project team to align with organizational health and safety plan to ensure the safety of all team members.
- Applies appropriate health and safety procedures in all aspects of work to ensure zero-incidents.
- Use appropriate personal and protective equipment while conducting field and laboratory work to maintain hygiene and biosecurity.
- Identifies potentially hazardous working conditions and safety problems to be corrected in workplace safe operating procedures and employee reviews.
- Leads routine safety meetings with project team members to ensure all parties are aware of potential risks and hazards.
- Participates in safe workplace training as required to ensure an up to date understanding of health and safety best practices.

ENVIRONMENTAL

Environmental Monitoring

Monitors and reports on the changes to the environmental conditions of an area to summarize observations and recommend mitigative action.

- Define the variables and parameters to monitor the environmental to ensure the necessary resources and systems are in place to support monitoring.
- Develop long-term programs for monitoring the marine environment to oversee environmental impacts.
- Applies geographic information systems (GIS) tools to visualize / monitor observations and identify trends in natural habitats or ecosystems to manage environmental quality
- Seeks feedback from other technical specialists and stakeholders to validate monitoring program to ensure reporting is accurate and in compliance with legislation and best practices.

Ecosystem Identification

Uses primary and secondary sources of information to identify an area's ecosystem to plan and propose development, remediation, or environmental management activities.

- Identifies and interprets the ecology and distribution of organic species to understand the project location.
- Monitors and tracks species movements to document migration, timing, and presence frequencies in a specific area.
- Identify the range of marine and coastal habitats within a specific area to classify an ecosystem to determine appropriate use cases.
- Identify appropriate indicator species to infer the presence of associated species in an area.
- Identify historical changes to marine and coastal ecosystems to determine the potential effects of project on a local area.
- Adheres to protocols, legislation, and codes of conduct while interacting with local environmental to minimize disturbances to surrounding ecosystem.

Site Assessment

Analyzes an area's ecosystem to understand the impacts of human activity and development to assist in determining appropriate use cases for an area's development and management.

- Contributes to the design, development, and implementation of complex environmental studies to assess the effects of development activities to an environment.
- Collaborate with other technical specialists to confirm roles, responsibilities, and permissions to accurately conduct site assessment.
- Collects samples using established protocol to provide a better understanding of the environmental condition of the area.
- Examines the relationships in marine ecosystems to recommend appropriate development activities that minimize the impacts to marine populations.
- Provide evidence based and rational arguments to support recommendations and data interpretations to present stakeholders with a defensible site assessment.

Site Assessment

Develops and implement plans to create, restore, or enhance an area's local ecosystem to manage the quality and health of environmental habitats with potential impacts of project activities.

- Provide input on the project purpose, scope, and objectives to undertake research studies to survey an areas ecosystem.
- Identify relevant site limitations or necessary permission to conduct habitat management plans.
- Participates in a risk assessment to confirm necessary procedures are in place to protect an area's biosecurity.
- Provides oversight to marine habitat management to ensure all work is carried out in accordance with work plans and relevant environmental legislation.
- Evaluates environmental management policy alternatives to recommend strategies for sustainable development.

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