

# Aquaculture Technician

## ROLE OVERVIEW

**Working as a fisheries and aquaculture technician you will be responsible for the husbandry of aquatic life in addition to maintaining the day-to-day technical operations at an aquacultural facility.**

In this position you are expected to perform some or all aspects of animal husbandry including feeding, breeding, harvesting, and maintaining the health and welfare of aquatic life.

To be successful in this role you must have a strong understanding of animal welfare and aquatic biology and be able to apply that knowledge to aquacultural systems. Although this is a technical role concerned with the integrity of aquacultural operations, there is also a significant aspect of collaboration between various technical roles, where you will report to a site manager.

While the responsibilities may differ depending on the scale of operations and specific environment, the primary directive of this position is to care for the welfare of aquatic life and maintain a safe and healthy environment that ensures high quality seafood for human consumption.

## STRATA LEVEL: 2 – Technician

### Also Known as:

- Seasite Technician
- Hatchery Technician
- Fisheries Technician
- Saltwater Aquaculture Technician

### Education and Experience:

- Minimum completion of a two-year technical diploma in biology, wildlife management, aquatic resources or a related field.
- Preference may be given to a Bachelor of Science in biology, marine biology, aquaculture, or related field.
- Provincial certification may be required depending provincial and employer requirements.

### Associated NOC(s):

- **2221** – Biological Technologist and Technicians



## TECHNICAL



### Equipment Operation

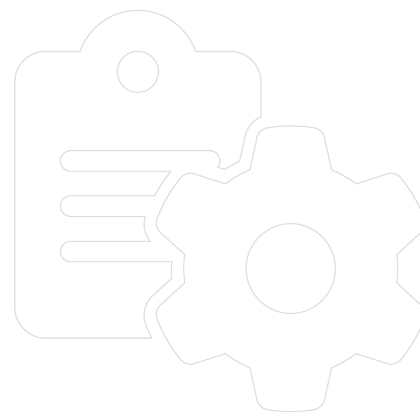
**Operates equipment using established processes to ensure outcomes are within allowable variances and maximizes safety and efficiency.**

- Follows appropriate procedures to calibrate and recalibrate instruments and equipment to ensure accurate measurements and quality control.
- Use heavy equipment such as winches, loaders, and forklifts to prepare, transfer, and position load to designated location.
- Uses analytical and flow monitoring equipment to regulate water quality.
- Use spat collection equipment to monitor, report, and collect on spat fall.
- Prepare depuration system for receiving sterilizing water and shellfish to wash, prepare, and label shellfish for dispatch.

### Equipment Maintenance

**Performs routine and non-routine maintenance of equipment to maintain safe and efficient operations.**

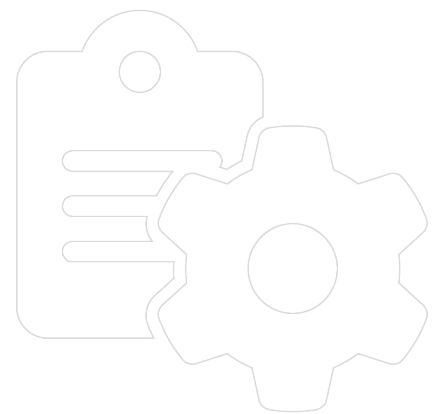
- Performs corrective maintenance according to established protocols to ensure equipment and systems function efficiently.
- Performs preventative maintenance according to established protocols to ensure equipment and systems function efficiently.
- Take appropriate precautions to prevent leaks, spills, contamination, or other hazards to minimize risks and environmental contamination while repairing equipment.
- Documents maintenance to record equipment service to plan future service schedule.
- Resets equipment following repair or service to test equipment to ensure equipment functions as expected.



## Small Craft Operation

**Operates vessel(s) in accordance with organizational standards and jurisdictional requirements to perform work functions.**

- Inspect vessel prior to use to ensure safe operating conditions and suitability to perform work tasks.
- Checks for requisite marine safety, survival, and communications equipment prior to embarking to minimize hazards and reduce potential risk.
- Manoeuvre craft in limited area of mobility to ensure operations are supported and minimize disturbances to aquatic populations.
- Identify potential hazards to environment, craft, or personal to take appropriate precautions to minimize injuries and workplace incidents.



## PERSONAL AND PROFESSIONAL



### Teamwork

**Actively participates in working with and helps others to accomplish a common objective.**

- Listens to constructive feedback and incorporates suggestions to achieve a collective objective.
- Ensures tasks are completed in the most efficient manner to optimize workplace output.
- Maintains positive working relationships with other team members to ensure a collaborative work environment.
- Assess own workplace practices to discuss opportunities to improve workflow and productivity.
- Recognize diverse perspectives to incorporate different ways of thinking into workplace to improve workplace practices.

### Communication

**Positively directs outcomes by delivering communication that results in a better understanding of goals and objectives and that capture interest, and gain support for immediate action.**

- Shares relevant and useful knowledge, experience, or expertise to aid team members accomplish their tasks more efficiently or effectively.
- Communicates clear and transparent instructions to team members to ensure actions are understood and followed correctly.
- Adapt communications depending on the environment, coworkers, or tasks to ensure all parties know their responsibilities.



## Attention to Detail

**Delivers a concentrated concern, including monitoring and checking information, organizing tasks and resources efficiently, or all areas involved towards the completion of an objective.**

- Accurately completes documents and report logs to ensure safe and efficient operations.
- Follows process steps as outlined in standard operating procedures when completing routine tasks.
- Catches and corrects errors or omissions, where applicable, to ensure efficiency and safety.
- Ensures undivided attention while handling aquatic life to maintain the health and wellbeing.



## LEGAL, REGULATORY, AND POLICY



### Regulatory Compliance

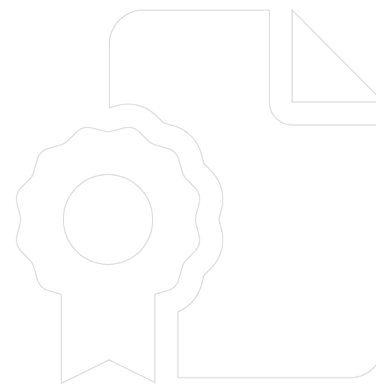
**Adheres to specific regulations, codes, and legislation within a defined jurisdiction to ensure the health and safety of others.**

- Provide technical assistance in the preparation of a range of environmental compliance documents required for project approval and implementation, such as EMPs, EPPs, and environmental work plans.
- Provide technical assistance to acquire environmental permits, licenses, and approvals from regulatory agencies.
- Complies with specific industry regulations within a defined jurisdiction to maintain a safe work environment.
- Interpret regulatory and permitting requirements to ensure compliance to infrastructure developments.

### 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.**

- Identifies potentially hazardous work condition to evaluate risks to health and safety in an aquatic environment.
- Wears appropriate personal and protective (PPE) for the environment to take steps to mitigate injuries and minimize risk.
- Participates in safe workplace training as required to ensure an up to date understanding of health and safety best practices.
- Sterilize equipment following use to mitigate biosecurity risks.
- Documents all incident/near-miss reports to document incidents and adhere to safe operating procedures while working.
- Adhere to biosafety measures when working with animals to control to prevent the transmission of diseases and ensure effective biosecurity.



## ENVIRONMENTAL



### Aquatic Health

**Monitors the health and wellness of aquatic life to identify abnormalities, treat affected populations, and maintain animal wellness.**

- Apply prescribed treatments, including vaccinations, to affected aquatic populations to prevent or mitigate diseases.
- Monitor aquatic population to identify any signs of distress and screen for illness to report any abnormal conditions.
- Documents current state of aquaculture habitat by completing habitat assessment field data sheets to record daily environmental characteristics.
- Follows appropriate processes and policies to prepare environment and facility for fish disease specialist to provide further aquatic treatments.
- Monitor aquatic populations to remove and record mortalities from holding units to reduce disease and minimize impact to environmental conditions.
- Handle harvested aquatic life with appropriate care to ensure quality is maintained for human consumption.

### Recirculating Aquaculture Systems

**Monitors and maintains aspects of a recirculating aquaculture system (RAS) to ensure aquatic life have a constant and controlled environment to allow for the optimal production of aquatic life.**

- Operates water heating and pump equipment to maintain optimal temperatures for aquacultural growth.
- Operate water oxygenation systems to maintain optimal oxygen levels for aquatic growth.
- Manage water intakes, catchments, and oxygen use to control the biological conditions in the aquatic production environment.
- Uses appropriate treatment procedures to remove biological and chemical waste from water and wastewater to maintain water quality levels.
- Measures and tests water samples to determine biological, chemical, and physical properties to evaluates source water characteristics and potential water contamination.
- Use advanced techniques and specialized technology to monitor and cultivate phytoplankton and microalgae production to manage aquacultural habitats and ensure successful production.



## Aquatic Stock Production

**Monitors and maintains aspects of aquatic production, including feeding, growth, and mortalities to ensure end production meets acceptable standards.**

- Monitor instruments to analyze operating conditions to ensure feeders and system are functioning as expected.
- Applies appropriate rearing techniques to broodstock populations to induce spawning.
- Monitors feeding behavior of aquatic population(s) to collect information on the growth of aquatic life and forecast future growth.
- Uses an appropriate method, either manual or automated, for feeding aquatic life according to nutritional needs.
- Dispose of aquaculture waste and poor-quality stock to ensure quality is maintained for human consumption.
- Monitors water quality and demonstrates knowledge on an organization's procedures to respond to poor environmental conditions.

## Hatchery Operations and Monitoring

**Monitors and maintains juvenile aquatic life and eggs in a hatchery to incubate, rear, and maintain aquatic populations to maintain aquaculture operations.**

- Inspect incubated eggs to assess the quality and remove unviable eggs from production stock.
- Use appropriate techniques to monitor juvenile populations to ensure maturation of population(s).
- Classifies and grades different aquatic life to maintain required stocking densities to holding units.
- Uses appropriate techniques to strip fish to minimize stress and maintain the quality of the eggs.

