

Aquaculture Production Manager

ROLE OVERVIEW

An Aquaculture Production Manager is the operational leader of an aquaculture hatchery or farm, responsible for ensuring production is achieved in a safe and efficient manner while adhering to quality standard on the wellbeing of aquatic life.

The manager oversees all production of a fish farm or hatchery, upholding safety, and quality above all else, while managing a multidisciplinary team of labourers, technicians, and specialized scientists to ensure operations follow organizational standards and practices.

Aquaculture managers plan, train, direct, and coordinate the production in large-scale aquaculture operations. In a hatchery, managers oversee breeding of fish and shellfish, developing aquaculture breeding strategies using various types of spawning techniques. They supervise incubation, early feeding, and rearing techniques of the cultured species. To do so, they use a broad skillset, usually acquired through a combination of undergraduate level studies in a related field, usually biology, and experience in leadership as well as the technical aspects of fish farming.

Often working out of remote settings, Aquaculture Production Managers require hands-on experience in an aquacultural setting to be relied upon in supporting their team directly. The managerial reach will be partially determined by the size of the aquacultural operation. In larger operations there may be multiple managerial positions to help train and supervise, specializing in specific operational functions such as hatcheries, broodstock, or rearing. Positions on an aquacultural farm can be isolating at times, with remote workstations and long hours.

STRATA LEVEL: 3A – Manager

Also Known as:

- Aquaculture Rearing Manager
- Aquaculture Hatchery Manager

Education and Experience:

- Bachelor's degree in biology, aquatic life, fisheries science, aquaculture, hatchery management, or other related STEM fields is preferred.
- Small Vehicle Operator Proficiency (SVOP) may be required for open-water operations.
- Occupational Diver Certificate of Competency issued by the Diver Certification Board of Canada (DCBC), or similar qualification may be required for open-water operations.

Associated NOC(s):

- **0823** – Managers in Aquaculture



TECHNICAL



Project Planning and Integration

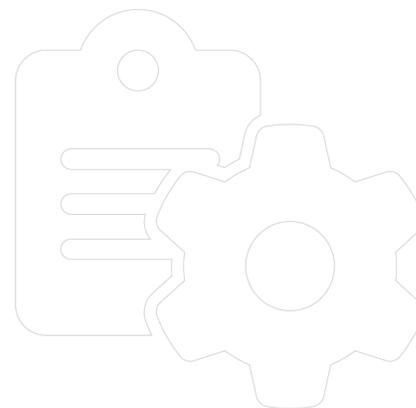
Develops a comprehensive project management plan to define how the project is executed, monitored, and controlled, integrating any subsidiary plans to perform the necessary actions and process required to complete the project.

- Develops strategic production objectives for aquaculture production to align with organizational objectives.
- Develops a comprehensive quality control/assurance program to maintain the highest possible standard for production to continually emphasize continuous improvement.
- Develops procurement documents to ensure vendors' and contractors' deliverables and services are suitable for completing project goals.
- Calculates the range from an ROV to other transducers to adjust for variables such as water temperature, the density of water, salinity, etc. to accurately position vehicle.
- Engages with employees and delegates work to implement strategic business and operational plan to achieve organizational objectives.
- Monitors progress to operational plan to adjust and evaluate the success of strategic objectives, lessons learned, and recognize contributions.

Budget and Cost Management

Develops comprehensive plans to create, monitor, and evaluate operational budgets and costs to account for all project activities and spending so that operations are financially sustainable.

- Documents and reports on the site operations costs and budget metrics to communicate potential profits and losses to external stakeholders and internal decision-makers.
- Leads the development of a cost management plan to establish procedures and documentation to manage project costs throughout the project lifecycle.
- Documents all resource and financial costs to ensure accurate accounting of project details.
- Analyze the performance of aquatic production to assess the deviation from forecasts to improve operational metrics.



Project Team Management

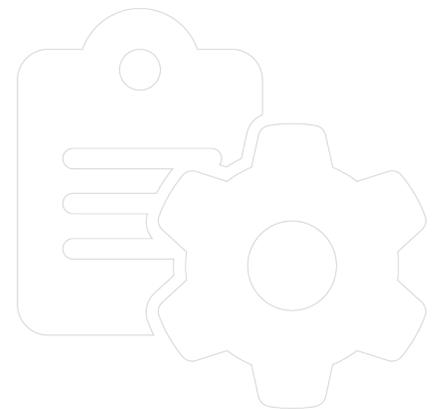
Coordinates a team of professionals to effectively and efficiently produce the required output to ensure project[s] are completed on time and budget.

- Evaluate seasonal labour requirements and adjusts employees according to changing demand for the continuation of operations.
- Oversees hiring of new employees to ensure the operation has the requisite team members to successfully approach the project.
- Assigns daily and weekly duties to team members to ensure supervised employees achieve deliverables and tasks are completed as required.
- Monitors and controls the allocation of resources and reassigns staff as needed to support production.
- Provide, implement, and supervise on-site training program in aquaculture facilities to ensure all staff can perform duties.

Stakeholder Relations Management

Identifies the needs of relevant actors, working in partnerships with all necessary partners, to achieve a well-balanced solution to the desired project, process, or program.

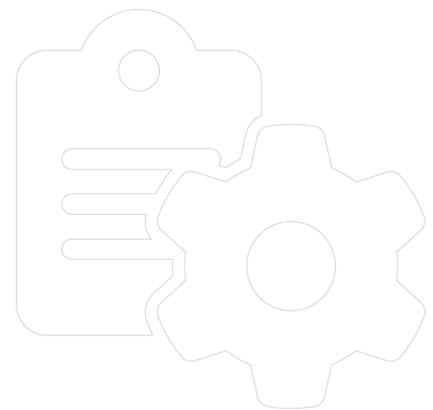
- Develop and maintain relationships with clients and customers to ensure optimum customer service and maintenance of contract requirements.
- Engages suppliers in problem solving and participates in suppliers' improvement processes by providing performance feedback on supplier surveys.
- Engages with regulatory agencies to determine requirements for obtaining approvals and certificates.
- Coordinates with external stakeholders and internal staff to provide general supervision of infrastructure construction including the preparation of agreements for the construction of infrastructure and site servicing, for project[s] development.



Equipment Maintenance

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

- Troubleshoots service plant operations equipment, including pumps, valves, motors, meters, tanks, reservoirs, feeders, and online analyzers, to determine what repairs or replacements are required.
- Installs and tests required plant equipment or machinery to ensure efficient operations.
- Recommends potential updates and short-and long-term infrastructure and equipment requirements.
- Maintains a record of all completed routine maintenance to ensure accuracy and operational compliance.
- Assess the quality of tanks, platforms, nets and any other structural standards to find flaws and prevent accidents.
- Use equipment to identify, patch and repair tanks and nets for the prevention of fish escape and cross-species contamination.



PERSONAL AND PROFESSIONAL



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.

- Provides clear instructions, information, and duties to supervised employees to ensure employees clearly understand their position.
- Actively participates in or leads team discussions to generate ideas and solutions, solve problems, and improve overall organizational performance.
- Verbally conveys complex technical information accurately, clearly, and in plain language to communicate technical operations.
- Informs team members of developments affecting consistencies and functionalities to ensure safe and efficient systems.

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 expertise and technical direction as appropriate to ensure harmonious and efficient operations.
- Shares relevant and useful knowledge or expertise to aid team members accomplish their objectives more efficiently or effectively.
- Develops and maintains effective working relations with stakeholders, individuals, agencies, and the public to encourage cooperative partnerships or facilitate information findings and interpretations.



Problem Solving

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

- Analyzes production metrics to understand trends and potential areas of concern to take appropriate actions where required.
- Analyzes operational data to evaluate operations, understand trends, and potential areas of concern to take appropriate action where required.
- Identifies, evaluates, and generates solutions to concerns brought forth by team members to maintain a harmonious workflow.

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.

- Establishes procedures or processes to validate information to minimize disruptions to ensure project meets deliverables.
- Scrutinizes data and samples to ensure accuracy in collection.
- Routinely expresses concern that procedures and standards are followed thoroughly in the completion of a task[s].
- Maintains a checklist of tasks to ensure that all processes are followed, and small details not overlooked.



LEGAL, REGULATORY, AND POLICY



Regulatory Compliance

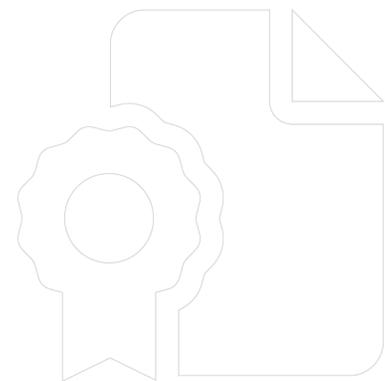
Provides expert advice to decision-makers or to other relevant stakeholders on risks, specifications and responsibilities related to current and emerging regulatory requirements.

- Calculate the rate of deposition of biochemical oxygen demand to predict contours for food and fecal waste.
- Complies with specific industry regulations within a defined jurisdiction to maintain a safe work environment.
- Participates in developing and maintaining organizational standard operating procedures to safeguard against hazards.
- Clearly communicates the regulatory compliance requirements to employees to ensure employees have the requisite information to perform duties safely and effectively.
- Maintain up-to-date knowledge of relevant standards regarding feed, water composition, pharmaceuticals, and any other inputs for best practice.

Health and Safety Procedure

Abides by 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.

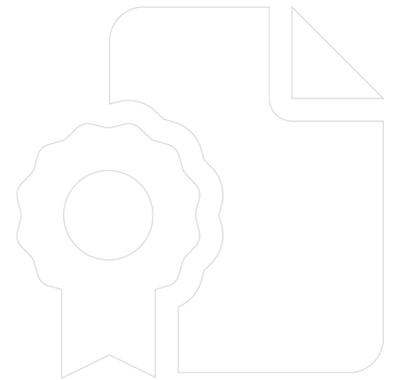
- Identifies potentially hazardous working conditions and safety problems to be corrected in the workplace safe operating procedures and employee reviews.
- Establishes safeguards and best practices in alignment with organizational health and safety plans to ensure the safety of all team members.
- Ensures team complies with organizational safe operating procedures to ensure zero workplace incidents.



Marine Pollution Prevention

Follows requirements to ensure projects and operations are conducted at the highest standard possible for the prevention of marine pollution.

- Takes appropriate precautions to prevent pollution of the marine environment.
- Applies procedures for monitoring farming operations to comply with legislative requirements to ensure a positive environmental reputation.
- Adheres to appropriate legislations and regulations in response to reporting pollution incidents to ensure pollution is addressed.



ENVIRONMENTAL



Hatchery Production Management

Oversees all aspects of producing juvenile aquatic populations to support the production of health fish suitable for human consumption.

- Plans and implements the resources necessary to support hatchery production to ensure the environment is suitable to maintain early life stage populations.
- Develop procedures and grading regimes to effectively support hatchery production to ensure high quality stock.
- Develops procedures to monitor environmental conditions within the hatchery to manage the biosecurity of the facility accordance with legislative requirements and best practices.
- Provides oversight and expertise to manage the environmental conditions of an aquatic environment to support the development of healthy stock to meet production targets.

Aquatic Stock Production Management

Abides by 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.

- Oversees all aspects of aquatic production, including rearing, feeding, growth, mortalities, and harvesting to ensure end production meets acceptable standards.
- Establish and maintain appropriate alarm systems and emergency procedures to ensure optimal health, hygiene, and biosecurity.
- Develops a stocking plan to select and maintain stock populations to produce high quality and healthy populations.
- Determine food requirements and feeding schedules for the optimal health and growth of the stock.
- Monitors the use of resources, such as food, oxygen, and water quality to ensure aquatic populations have the necessary resources to remain healthy.
- Assesses the impacts of biological conditions such as algae blooms or invasive species to make necessary adjustments to control the aquatic production environment.
- Maintains a precautionary inventory of key resources such as feed and containment repair supplies for emergency purposes.
- Assesses emergency situations to implement appropriate solutions to water quality concerns.



Recirculating Aquaculture Systems Management

Oversees all aspects of a recirculating aquaculture system (RAS) to ensure aquatic populations have a consistent and controlled environment to allow for the optimal production of aquatic life.

- Plans and implements the resources necessary to monitor and maintain a RAS to ensure a suitable environment to maintain stock health.
- Develops procedures to manage personal hygiene and the biosecurity of the facility to manage RAS in accordance with legislative requirements and best practices.
- Provides oversight and monitors pumping, aeration, heating, and lighting equipment used in RAS to ensure equipment functions as expected.
- Supervises circulation and aeration systems to make necessary adjustments to water chemistry to ensure appropriate levels of elements.
- Monitors the condition of water filtering and purification equipment to ensure water circulations levels are maintained within acceptable holding units.
- Use electronics and other instruments to measure the physical and chemical properties of water to identify any non-conformance or the potential for non-conformance.
- Provides oversight and technical expertise to wastewater treatment to ensure processes are followed according to regulations.

Aquatic Health Management

Establishes health and maintenance programs for aquatic populations to identify disease, abnormalities, and poor production growth.

- Develops a site stock health plan to plan and communicate the necessary resources to monitor and maintain stock health.
- Monitors the animals' health and implements programs to protect and improve the health and overall quality of the final product.
- Identifies diseases and parasites posing a threat to production and arrange veterinarian evaluation for administration therapeutic treatments.
- Manage and implement programs to control treatments and maintain stock health through the maintenance of environmental conditions and stocking densities in holding units.
- Manage health records in accordance with jurisdictional and organization health plans to document activities and evaluate site conditions.

