



Freshwater Fisheries  
Society of BC

## POSITION DESCRIPTION

### Freshwater Fisheries Society of BC

POSITION TITLE:	<b>Fish Culture Technician</b>	CLASSIFICATION:	<b>Scientific Technical Officer 15</b>
PROGRAM AREA:	<b>Operations Division</b>		
UNIT:	<b>Hatchery</b>	LOCATION:	<b>Various</b>
SUPERVISOR'S TITLE:	Hatchery Manager	SUPERVISOR'S CLASSIFICATION:	Exempt
		LOCATION:	Vanderhoof, BC

#### **PROGRAM**

The Freshwater Fisheries Society of BC (FFSBC) is an independent, non-profit organization governed by a Board of Directors. Under its Constitution the FFSBC has a mandate to deliver a wide range of fisheries management services and programs focused on fish conservation, restoration, fisheries enhancement, public education and the development and marketing of freshwater sport fishing in BC.

In carrying out its mandate, the FFSBC provides fish culture services, program planning, product development and program evaluation to various clients and partners including the Province of BC, other Provinces and States, First Nations, Crown Corporations, Community Associations and the Private Sector. Specifically, services include the culture of many species and strains of freshwater fish, the delivery of fish stocking programs in over 1,000 lakes and streams, the evaluation of stocking programs and the development of new strains of fish and strategies to improve stocking performance. The FFSBC also provides conservation fish culture services to support recovery programs for species such as white sturgeon and steelhead. The FFSBC provides scientific policy and recommendations to government and others on matters related to fish culture, aquaculture, fish health management and disease and freshwater fisheries management.

The FFSBC owns and manages six major fish hatchery facilities and 10 ancillary operations with a replacement value in excess of \$50M. Hatchery operations are located in various regions of the Province as well as a fish health laboratory in Nanaimo and a fisheries research office at the University of BC.

The FFSBC mandate includes the promotion and marketing of freshwater recreational fishing in the Province as well as informing and educating the public, the media and governments on matters relating to fish conservation and recreational fishing. Approximately 400,000 freshwater anglers expend \$500M annually on this activity, with the FFSBC programs supporting approximately 50% of the total Provincial freshwater angling effort.

#### **OPERATIONS**

The Operations Division is responsible for the delivery of FFSBC programs including the management and operation of all production and field facilities and delivery of fish culture and stocking programs throughout the province. Operations Division produces 7.0M trout, char, and kokanee salmon annually from approximately 65 separate stocks encompassing 7 separate species of fish, which are released into over 1,000 lakes and streams. Operations Division also has a growing role in the management and operation of conservation fish culture facilities and stocking programs to support the various Recovery Teams' plans to restore endangered fish

populations. Currently two white sturgeon conservation hatchery programs are being operated (Columbia, Nechako). The FFSBC owns six major fish hatcheries located in Duncan, Abbotsford, Summerland, Clearwater, Fort Steele and Vanderhoof as well as a trout distribution centre in Prince George and 15 egg collection stations situated in various locations in the Province. In addition to being responsible for fish culture services at these facilities, Operations Division must also manage the operation and maintenance of the physical plants associated with these complex facilities with a replacement value of about \$50M.

### **PURPOSE OF POSITION**

The Seasonal Fish Culture Technician is a junior working level position which operates under the general supervision of the Hatchery Manager or a Senior Fish Culture Technician. This position is responsible for assisting with technical activities required for the delivery of programs supported by a major fish culture facility including egg collections, incubation and rearing and the transfer and liberation of cultured fish into lakes and streams throughout the Province.

### **NATURE OF WORK AND POSITION LINKS**

1. Assists in the implementation of egg collection, egg incubation and fish rearing strategies and provides technical support to off-site operations managed cooperatively with outside agencies.
2. Performs research technical services as directed, in controlled (lab) and variable (field) settings, supporting the research and development activities of the FFSBC.
3. Assists in the implementation of brood stock management strategies as directed to meet FFSBC production objectives.
4. Implements fish distribution and transfer strategies as directed for stocks reared within FFSBC facilities.

The Seasonal Fish Culture Technician is one level removed from the Senior Fish Culture position and as such is delegated responsibility during peak activity time periods for key areas of the hatchery and field operations. The incumbent interacts with representatives of other fisheries agencies, First Nations, Provincial fisheries staff and other partners on joint projects. This position may be required to supervise a remote field operation without supervision for significant time periods (up to ten days). This position is required to perform solo activities such as fish liberations.

### **SPECIFIC ACCOUNTABILITIES / DELIVERABLES**

**60%**

#### **1. Implements egg incubation and fish rearing strategies within the hatchery operation using appropriate fish culture techniques by:**

- performing egg inventories;
- monitoring and recording biological data on forms and computer systems;
- administering prophylactic treatments as directed to eggs or fish;
- transferring and shipping eggs within and between facilities;
- implementing fish rearing strategies;
- performing daily fish maintenance tasks including pond cleaning and mortality removal;
- allocating/distributing correct feed sizes/amounts to each stock;
- performing water chemistry checks to ensure optimal rearing conditions for fish;
- adhering to proper fish culture hygiene standards in all areas of operation;
- grading fish by size or stage of development;
- cleaning and disinfecting fish culture facilities and equipment;
- conducting sample counts following established protocol;

- grading fish stocks by size or stage of development;
- implementing growth manipulation by a variety of techniques (water temperature, diet, photoperiod, etc.);
- monitoring fish/health/growth/development and reporting any problematic situations;
- performing basic pathological examination of fish to detect external parasites and bacteria;
- collecting and preparing biological and pathological samples for shipment;
- examining and reporting on the physical condition of fish;
- inputting data into the Production and Rearing Information Management (PARIS) system;
- marking and tagging of fish; and
- assisting with the tracking and recovery of stocked juveniles.

**15%**

**2. Implements remote broodstock capture, holding and egg collection station strategies by:**

- measuring, weighing and identifying fish species captured by seine, gill net, trap net, angling, electroshocking or stationary trap;
- ensuring that sufficient mature fish are captured in order to meet established egg collection goals;
- protecting brood capture facilities from predators and vandalism;
- recording all biological data (fish numbers, species, maturity, lengths, weight, scale) and maintaining accurate records of all data collected;
- assessing maturity of fish captured, collecting eggs using appropriate techniques, disinfecting eggs and transporting eggs to their designated target location;
- operating and maintaining station mechanical assets such as electronic fish counting devices, pumps, generators as well as fish holding structures; and
- performing general repairs and maintenance to all egg collection structures and equipment.

**20%**

**3. Implements fish distributions and transfers by:**

- assisting in pre-trip planning (reviewing maps, contacting land owners, obtaining directions/instructions regarding access);
- conducting pre-trip inspections on fish transport vehicles and loaders and preparing fish liberation equipment for operation;
- operating fish transport 4x4 pick-up truck and a double axle flat bed trailer with a sturgeon release tank mounted on it;";
- monitoring and maintaining proper water quality in transport tanks;
- operating and maintaining life support system/equipment on fish transport vehicles and aircraft;
- transporting fish to other provincial hatcheries;
- installing fish transport equipment in aircraft;
- monitoring behaviour and health of fish during transport and reporting concerns to a senior staff member;
- participating in fish releases from aircraft;
- acclimating fish to receiving waters and assessing behaviour of released fish; and
- recommending changes to release sites/procedures to improve survival of stocked fish.

**5%**

**4. Performs other related duties such as:**

- acting as project/group leader;
- purchasing materials, supplies and equipment;

- carrying out minor facilities maintenance tasks, facilities upgrade projects under the supervision and direction of the Senior Fish Culturist;
- attending and participating in workshops and conferences;
- assisting regional fisheries staff in field exercises;
- attending courses/conferences/training sessions to enhance job site safety practices and job related skills; and
- interacting with the general public and providing information and education services, both in the field and at the hatchery.

**FINANCIAL RESPONSIBILITY**

- Responsible for transaction card purchases with spending limits of \$2,000 monthly and \$1000 per transaction.
- Responsible for purchase of vehicle fuel and vehicle service/repair costs.

**DIRECT SUPERVISION** (i.e., responsibility for signing the employee appraisal form)

Role	# of Regular FTE's	# of Auxiliary FTE's
Directly supervises staff	0	0
Supervises staff through subordinate supervisors	0	0

**PROJECT/TEAM LEADERSHIP OR TRAINING**

Role	Applicable	# of FTE's
Supervises students or volunteers	Yes	0-2
Lead project teams	Yes	0-2
Provides formal training to other staff	Yes	0-2
Assigns, monitors and examines the work of staff	Yes	0-2

**SPECIAL REQUIREMENTS**

The Seasonal Fish Culture Technician provides technical support to the hatchery operation, off-site facilities, and remote field projects. A good basic knowledge of recirculation aquaculture systems (RAS), water quality assessments for RAS, and fish culture techniques for white sturgeon including procedures for adult capture and holding, spawning, incubation, rearing juveniles and adults, isolation and disinfection, fish health, fish transfers and liberations is required.

**TOOLS / EQUIPMENT**

- Various power tools; all equipment related to fish rearing/liberation; variety of vehicles
- Familiarity with RAS components, control systems and operating requirements and the differences with flow through culture systems.
- Computers; PLC control systems, HVAC systems; diesel generator and other such equipment; motors of a variety of HP, genset emergency backup
- Also must be familiar with generator/alarm and other emergency systems procedures and be available for “on-call” duty.

## **WORKING CONDITIONS**

Must be able to work in all conditions:

- inside all areas of the hatchery (being familiar with all safety regulations and fish health protocols), and
- outdoors in the field in all weather conditions, and periodically away from home base for periods of up to 10 days.

## **WORK EXAMPLES**

- Understanding key attributes of recirculation aquaculture systems (RAS) and ensures high quality system water by daily testing of water chemistry (pH, alkalinity, O-2, N).
- Participates in various fish culture projects, including fin-clipping, brood stock capture projects, egg sterilization, etc. where improper implementation can instantly result in the death of many thousands of fish or the failure of stocking and assessment programs.
- Participating in and on occasion operating remote field stations. This can include supervising on-site staff, effective and safe fish capture and holding, collecting appropriate numbers of viable eggs for shipping to various hatchery facilities, maintaining high value equipment and facilities.
- Participating in the safe transport and delivery of live fish in specialized transport vehicles during up to 18 hour transfers throughout the province.
- Participating in the local Occupational Health & Safety Committee (monthly meetings).

## **COMMENTS**

This position though listed at a junior level is an essential component of the FFSSBC operational needs. The annual fish culture egg collection, rearing and fish release programs are dependent upon a strong and effective Seasonal Fish Culture staffing component, particularly during its spring, summer and fall field activities. This position participates in all activities at the work-site. This position acts as an assistant to all Senior Fish Culture Technicians in meeting their responsibilities. This position trains and provides some supervisory duties for newly hired fish culture staff.

## **ORGANIZATION CHART**

President  
    Vice President, Operations  
        Manager, Hatchery  
            Senior Fish Culturist  
                **Topic Position: Seasonal Fish Culturist**

## **SELECTION CRITERIA**

### **Education and Related Experience:**

- Technical diploma specializing in fisheries resource management and 1 year directly related fish culture experience,
- Must hold a valid BC driver's license and Air Brakes Certificate is preferred
- Equivalent combinations of education, training and experience may be considered.
- Related Experience includes:
  - ❖ Experience with sturgeon culture at an entry fish culturist level. Will also consider experience with salmonid culture at an entry level.
  - ❖ Experience in the operation of egg collection stations and fish release projects for sturgeon. Will also consider experience in basic salmonid capture and spawning.
  - ❖ Experience in activities associated with other salmonid and/or sturgeon culture tasks including brood capture, egg collection, incubation, rearing, and release activities. Will also consider experience in sturgeon incubation and early rearing.
  - ❖ Prefer experience with recirculation aquaculture systems (RAS)

### **Knowledge:**

- Knowledge of fish culture techniques (Sturgeon knowledge preferred).
- Knowledge of fish health risks and procedures to reduce or prevent pathogen outbreaks.
- General knowledge of biology and scientific methods.
- Basic knowledge of RAS hatchery physical plant operation.
- Knowledge of appropriate emergency response procedures for critical life support systems.
- Knowledge of applicable Occupational Health & Safety regulations and safe work procedures.
- Knowledge of basic computer programs including Word, Excel and email.

### **Skills and Abilities:**

- Ability to communicate effectively both orally and in writing with peer fish culturists, senior fish culture staff and hatchery managers about issues related to fish culture.
- Ability to work independently and as a member of a working team.
- Ability to work in challenging outdoor environmental conditions for long hours.
- Ability to participate effectively in field projects including brood capture, egg collection and fish liberations.
- Competency with basic tools used for carpentry and plumbing and aptitude for minor facilities projects using these skills.
- Ability to operate basic computer programs including Word, Excel and e-mail.

### **Willingness Statements:**

- Willing to work away from home for periods of up to 14 days at a time.
- Willing to work extra hours with compensation and work weekend shifts.
- Willing to learn continuously using personal initiative and to engage in additional training and education.
- Willing to adapt to change within the Society on a continuous basis.
- Willing to contribute to operational efficiencies through innovation and constant striving for improvement.
- Willing to participate on a voluntary call out program.
- Willing to interact with the public regarding the FFSSBC in general and the hatchery program in detail.

### **Core Competencies:**

- **Adaptability** - personal willingness and ability to effectively work in, and adapt to change.
- **Client Focus** - understanding and meeting or exceeding client needs. Clients are those groups or individuals, internal or external who use the organization's products and/or services.
- **Communication** - clearly conveying and receiving messages to meet the needs of all. This may involve listening, interpreting, formulating and delivering: verbal, non-verbal, written, and/or electronic messages.
- **Problem Solving and Judgment** - ability to assess options and implications, in order to identify a solution.
- **Results Orientation** - knowing what results are important, focusing resources to achieve them in alignment with the goals of the organization.
- **Teamwork** - working co-operatively and productively with others to achieve results.
- **Innovation** - using original and creative thinking to make improvements and/or develop and initiate new approaches.