Position Description Form (PDF)

College: Sir Sandford Fleming

Incumbent's Name: Vacant

Position Title: Fish Hatchery Technician

Payband: I

Position Code/Number (if applicable): S00541

Scheduled No. of Hours___35_____

Appointment Type: _____X_____10 months

Supervisor's Name and Title: Tania Clerac, Academic Chair Environmental Cluster

Completed by: Tania Clerac and Ron Hill

PDF Date: September 2019
Last Revision: August 2019

Signatures:

Incumbent:
(Indicates the incumbent has read and understood the PDF)

Date:

Supervisor:

Date:

Instructions for Completing the PDF

1. Read the form carefully before completing any of the sections.

2. Answer each section as completely as you can based on the typical activities or requirements for the position and not on exceptional or rare requirements.

3. If you have any questions, refer to the document entitled "A Guide on How to Write Support Staff Position Description Forms" or contact your Human Resources representation for clarification.

4. Ensure the PDF is legible.

5. Responses should be **straightforward and concise using simple factual statements.**

Position Summary

Provide a concise description of the overall purpose of the position.

The Fish Hatchery Technician provides technical service by applying specialized knowledge of the Atlantic Salmon/Rainbow Trout hatchery and rearing program and provides technical support to the Aquaculture programs. As part of the team responsible for organism husbandry and the successful day-to-day operation of the facility, the incumbent performs and directs daily fish culture routines and other procedures that are required for the rearing of healthy organisms, including the purchase and inventory feed and supplies. The Technician monitors and adjusts water quality parameters to ensure optimum water quality and troubleshoots and resolves complications related to disease pathogens or system issues that may impact fish health. The Technician also assists in the development of Standard Operating Procedures (SOPs) and Animal Use Protocols (AUPs) for approval by the Animal Care Committee and ensures that such procedures are followed. The incumbent monitors and ensures all equipment is operating to specifications, maintains records, and recommends and performs service. The Technician trains and directs students and part-time employees, including demonstrating the correct use of facility equipment and fish culture procedures to students. The Technician also assists with planning, purchasing, fabricating, installing and testing mechanical systems and develops record keeping methods and learning aids. The incumbent assists in organizing and participates in field trips and camps for the Aquaculture programs. Hatchery technician monitors and maintains a safe work environment for all staff, students and visitors and provides support to weekend student fish hatchery workers. Technicians are available for emergency call outs when there is no staff at the hatchery- nights, weekends, and holidays. Technician helps faculty design and develop lab activities and instruct students through hands on labs.

Duties and Responsibilities

Indicate as clearly as possible the significant duties and responsibilities associated with the position. Indicate the approximate percentage of time for each duty. Describe duties rather than detailed work routines.

	Approximate % of time annually*
Performs and directs daily fish culture routines as well as intermittent procedures, as required in rearing healthy fish stocks and meeting targets. This includes troubleshooting complications that arise with fish rearing, related disease pathogens or system issues which impact fish health. Assists in developing and implementing Standard Operating Procedures (SOPs) and Animal Use Protocols (AUPs) for approval by the Animal Care Committee.	20
Ensures all equipment is operating to specifications (water temp, dissolved oxygen, pumps etc). Monitors systems and equipment, maintains records, recommends and performs service as required/responds to the adaptive management approach to the research and rearing of Atlantic Salmon and Rainbow Trout stocks.	20
Provides technical support to the Aquaculture Program. Lab support, preparation, and hands on demonstrations. Guidance for students with husbandry and hatchery tasks.	45
Assists with planning, purchasing, fabricating, installing and testing mechanical systems. Assists with development of manual record keeping methods, learning aid, programs associated with operating facility and student activities.	9
Demonstrates to student workers the correct procedures for use of facility equipment and fish culture procedure. Participates in hiring, training and direction of students and part-time employees.	5
Other duties as assigned	1

* To help you estimate approximate percentages:

½ hour a day is 7% | 1 hour a day is 14% | 1 hour a week is 3%
½ day a week is 10% | ½ day a month is 2% | 1 day a month is 4%
1 week a year is 2%

1. Education

A. Check the box that best describes the **minimum** level of **formal** education that is required for the position and specify the field(s) of study. Do not include on-the-job training in this information.

□ Up to High School □ 1 year certificate X 2 year diploma

□ Trade certification □ 3 year diploma / degree □ 4 year degree or 3 year diploma / degree plus professional certification

□ Post graduate degree (e.g. Masters) or 4 years degree plus professional certification

□ Doctoral degree

Field(s) of Study:

Biology, Aquaculture

B. Check the box that best describes the requirement for specific course(s), certification, qualification, formal training or accreditation in addition to and not part of the education level noted above and in the space provided specify the additional requirement(s). Include only the requirement that would typically be included in the job posting and would be acquired prior to the commencement of the position. Do not include courses that are needed to maintain a professional designation.

□ No additional requirements	
X Additional requirements obtained by course(s) of a total of 100 hours or less	B.O.A.T. Certification CPR and Emergency First Aid
□ Additional requirements obtained by course(s) of a total between 101 and 520 hours	
□ Additional requirements obtained by course(s) of a total of more than 520 hours	

2. Experience

Experience refers to the minimum time required in prior position(s) to understand how to apply the techniques, methods and practices necessary to perform this job. This experience may be less than experience possessed by the incumbent, as it refers only to the minimum level required on the first day of work.

Check the box that best captures the typical number of year of experience, in addition to the necessary education level, required to perform the responsibilities of the position and, in the space provided, describe the type of experience. Include any experience that is part of a certification process, but only if the work experience or on-the-job training occurs after the conclusion of the educational course or program.

□	Less than one (1) year	
□	Minimum of one (1) year	
□	Minimum of two (2) years	
□	Minimum of three (3) years	
X	Minimum of five (5) years	Experience with fish rearing and husbandry, Experience operating a recirculating hatchery and properly handling fish. Mechanical aptitude, plumbing, construction, basic hand tools, small gas powered units, Computer skills. Supervisor experience Project leading experience (small projects)
□	Minimum of eight (8) years	

3. Analysis and Problem Solving

This section relates to the application of analysis and judgement within the scope of the position.

The following charts help to define the level of complexity involved in the analysis or identification of situations, information or problems, the steps taken to develop options, solutions or other actions and the judgement required to do so.

Please provide up to three (3) examples of analysis and problem solving that are regular and recurring and, if present in the position, up to two (2) examples that occur occasionally:

	#1 regular & recurring
Key issue or problem encountered.	Disease Pathogen: Fish health is deteriorating and must respond to and effectively control emergency situation.
How is it identified?	Observation, elevated mortalities, changes in fish behaviour, refer to previous records, microscopy.
Is further investigation required to define the situation and/or problem? If so, describe.	Elimination of cause's .Further investigation may include consultation with external experts, or hatchery technologist, pathology staff, MNR fish culture staff.
Explain the analysis used to determine a solution(s) for the situation and/or problem.	Incumbent uses understanding of target disease organisms (for the species) and monitoring techniques. Confirmation of the disease or condition is made in consultation with experts (pathology lab). The incumbent may determine a course of action by reference to written procedures and personal communications, expert Ministry advice from fish culture staff.
What sources are available to assist the incumbent finding solution(s)? (eg. past practices, established standards or guidelines).	Standard Operating Procedures (SOP); Animal Use Protocols; Past practices, Faculty, Hatchery Project Manager (Operations Leader), Operations manuals, MNR protocols.

3. Analysis and Problem Solving

	#2 regular & recurring
Key issue or problem encountered	Water chemistry: Water quality parameters measure outside of acceptable tolerances.
How is it identified?	Regular measurements performed by hatchery personnel, evaluated by the incumbent, using devices - tensiononometers to monitor dissolved gas, etc.
Is further investigation required to define the situation and/or problem? If so, describe.	Further investigation to determine the cause, and mitigation of the problem. Forward and backward problem solving to eliminate causes.
Explain the analysis used to determine a solution(s) for the situation and/or problem.	The incumbent isolates the cause by re-testing, checking that measuring equipment is calibrated, and isolating the source of the problem– mental flow chart of "if-then" solutions. .Identify supersaturated dissolved gases from well water supply. Research, purchases, installs and tests various configurations to improve survival and growth of eggs/sac fry e.g. design and test a new degasser system.
What sources are available to assist the incumbent finding solution(s)? (eg. past practices, established standards or guidelines).	SOP, Past Practices, Texts, Previous Records, Established Standards. Scientific studies. Specialized system configuration that may have no prototype. Consults with the Hatchery Technologist, external specialist and Project Manager (Operations Leaders) as required, for confirmation of results and action to be taken.

3. Analysis and Problem Solving

	#3 regular & recurring
Key issue or problem encountered	Mechanical systems: Specialized aspects of rearing ATS require constant monitoring and adjustment of mechanical systems – water chemistry analysis.
How is it identified?	.Water chemistry analysis, increased mortalities, failure to convert from egg to sac fry to swim up life stage. Sensitivity to water chemistry during the early rearing processes (incubation to sac fry stage) is highly variable and can require frequent adjustments
Is further investigation required to define the situation and/or problem? If so, describe.	Consideration of additional filters and mechanical mixing systems. The incumbent investigates options and methods by networking with industry experts and consulting scientific papers.

Explain the analysis used to determine a solution(s) for the situation and/or problem.	Individual groups of fish in each tank have differing requirements for feed arrangements, assessments of development stage, and water quality aspects depending on life stage (e.g. fry vs. yearling). The incumbent makes judgements hourly to daily during early stages as to various environmental requirements.
What sources are available to assist the incumbent finding solution(s)? (eg. past practices, established standards or guidelines).	SOP, Past practices, hatchery technologists in other facilities, industry experts, texts, operations manuals. Larger system changes are done in consultation with Project Manager (Operations Leader)..

4. Planning/Coordinating

Planning is a proactive activity as the incumbent must develop in advance a method of acting or proceeding, while coordinating can be more reactive in nature.

Using the following charts, provide up to three (3) examples of planning and/or coordinating that are regular and recurring and, if present in the position, up to two (2) examples that occur occasionally:

	#1 regular & recurring
List the project and the role of the incumbent in this activity.	The incumbent plans the daily and short-term fish culture operations to meet production targets in annual production planning cycle.
What are the organizational and/or project management skills needed to bring together and integrate this activity?	Incumbant uses systems such as Excel to plan growth, predict fish densities, and maximize system capacity to meet goals. Plans feed orders through three lifecycles endpoints. The incumbent assesses several factors such as staff (student availability, water chemistry, life stage requirements, fish health, feed rates to meet production targets).
List the types of resources required to complete this task, project or activity.	Past practices, industry experts, hatchery technologist, manuals – human resource processes as provided by project manager.
How is/are deadline(s) determined?	Established production targets include timelines and fish end-product parameters. The incumbent follows guidelines and directions to meet the targets. Consultation with the financial officer re: budget.
Who determines if changes to the project or activity are required? And who determines whether these changes have an impact on others? Please provide concrete examples.	The incumbent determines short-term adjustments. Coordinating goals with Aquaculture program chair and researchers. Aquaculture chair determines number of fish an species to be raised.

4. Planning/Coordinating

	#2 regular & recurring
List the project and the role of the incumbent in this activity.	Oversee the continuous operation and functionality of all mechanical systems, back-up, and alarm systems
What are the organizational and/or project management skills needed to bring together and integrate this activity?	The incumbent must devise and maintain a process of monitoring, testing regular maintenance, and servicing of existing mechanical systems and pumps in a complex recirculating hatchery with very narrow water chemistry parameters. This involves monitoring and maintaining ultraviolet sterilizer systems and valve manipulation -as well as record keeping, producing updated record systems (computer –based), communicating with service personnel via phone and email.
List the types of resources required to complete this task, project or activity.	SOPs, Animal Use Protocols, past, practices, records, service manuals, industry contacts
How is/are deadline(s) determined?	Deadlines are determined by observing service dates, regular test dates, and immediacy of repairs required by in-house or outside service personnel.
Who determines if changes to the project or activity are required? And who determines whether these changes have an impact on others? Please provide concrete examples.	Changes are made in consultation with the Project Manager (Operations Leader) or Facilities Department

	#3 regular & recurring
List the project and the role of the incumbent in this activity. (during the winter semester)	
What are the organizational and/or project management skills needed to bring together and integrate this activity?	

List the types of resources required to complete this task, project or activity.	
How is/are deadline(s) determined?	
Who determines if changes to the project or activity are required? And who determines whether these changes have an impact on others? Please provide concrete examples.	

#1 Occasional

List the project and the role of the incumbent in this activity.	Incumbent plans daily student paid worker and volunteer activities at certain times of the year (summer).
What are the organizational and/or project management skills needed to bring together and integrate this activity?	The ability to train workers, oversee, check work and maintain work quality
List the types of resources required to complete this task, project or activity.	Past practices
How is/are deadline(s) determined?	The incumbent develops a schedule for completion of daily activities
Who determines if changes to the project or activity are required? And who determines whether these changes have an impact on others? Please provide concrete examples.	The incumbent may modify daily activities depending on conditions and requirements. Larger implementations or variations to a long-term plan are to be discussed with the Hatchery Project Manager (Operations Leader).

5. Guiding/Advising Others

This section describes the **assigned responsibility** of the position to guide or advise others (e.g. other employees, students). Focus on the actions taken (rather than the communication skills) that directly assist others in the performance of their work or skill development.

Though Support Staff cannot formally "supervise" others, there may be a requirement to guide others using the incumbent's job expertise. This is beyond being helpful and providing ad hoc advice. It must be an assigned responsibility and must assist or enable others to be able to complete their own tasks.

Check the box(es) that best describe the level of responsibility assigned to the position and provide an example(s) to support the selection, including the positions that the incumbent guides or advises.

Regular & Recurring	Occasional	Level	Example
□	□	Minimal requirement to guide/advise others. The incumbent may be required to explain procedures to other employees or students.	
□	□	There is a need for the incumbent to demonstrate correct processes/ procedures to others so that they can complete specific tasks.	
√	□	The incumbent recommends a course of action or makes decisions so that others can perform their day-to-day activities.	Incumbent demonstrates correct processes to student weekend paid. Workers, who work independently without direct supervision. Available by phone for questions and to update at end of shift.
□	□	The incumbent is an active participant and has ongoing involvement in the progress of others with whom he/she has the responsibility to demonstrate correct processes/procedures or provide direction.	

√	□	The incumbent is responsible for allocating tasks to others and recommending a course of action or making necessary decisions to ensure the tasks are completed.	Incumbent directs the work of the summer paid student, which involves a variety of tasks performed somewhat independently.

6. Independence of Action

Please illustrate the type of independence or autonomy exercised in the position. Consideration is to be given to the degree of freedom and constraints that define the parameters in which the incumbent works.

What are the instructions that are typically required or provided at the beginning of a work assignment?	
Regular and Recurring	Occasional (if none, please strike out this section)
Discussion of short and long term project goals. Overall definition of short an intermediate term production targets such as expected survival rates, growth rates.	Adjustments of techniques, adaptation of processes, refinement of methods

What rules, procedures, past practices or guidelines are available to guide the incumbent?	
Regular and Recurring	Occasional (if none, please strike out this section)
Past practices, historical data, hatchery technologist, industry experts	SOPs

How is work reviewed or verified (eg. feedback from others, work processes, Supervisor)?	
Regular and Recurring	Occasional (if none, please strike out this section)
Feedback from aquaculture profs and students. Discussion with contractors and other operators who run similar operations	Discussion with outside sources – aquaculture operators In-house verification by facilities dept Re: equipment repairs, modifications.

6. Independence of Action

Describe the type of decisions the incumbent will make in consultation with someone else other than the Supervisor?	
Regular and Recurring	Occasional (if none, please strike out this section)
Annually: Production planning and lab planning/execution is done in consultation with aquaculture professors and other techs.	Disease diagnosis in consultation with fish health pathologists (U of Guelph pathologist). Mechanical systems repairs, consultation with service providers, suppliers

Describe the type of decisions that would be decided in consultation with the Supervisor.	
Regular and Recurring	Occasional (if none, please strike out this section)

Purchases, budget, personal issues, team planning. Final decisions regarding egg intake numbers are deferred to the supervisor because of resource constraints. Discussions with partners regarding long term Fleming involvement in the project and resource allocation. Capital and major mechanical improvements to the facility.	Renovations, long term production goals

Describe the type of decisions that would be decided by the incumbent.	
Regular and Recurring	Occasional (if none, please strike out this section)
Hatchery operational daily methods, fish culture daily operations, scheduling and training student workers	

7. Service Delivery

This section looks at the service relationship that is an assigned requirement of the position. It considers the required manner in which the position delivers service to customers. It is not intended to examine the incumbent's interpersonal relationship with those customers and the normal anticipation of what customers want and then supplying it efficiently. It considers how the request for service is received and the degree to which the position is required to design and fulfil the service requirement. A "customer" is defined in the broadest sense as a person or groups of people and can be internal or external to the College.

In the table below, list the key service(s) and its associated customers. Describe how the request for service is received by the incumbent, how the service is carried out and the frequency.

Information on the service		Customer	Frequency (D, W, M. I)*
How is it received?	How is it carried out?		
Conducting tours, demonstrating related hatchery activities during tours, demonstrating techniques	Personal contact, tours	Student, Faculty, General Public Project Partners	D/W/
Provision of information and public education support for the hatchery operations and hatchery projects	Personal contact, education	Students, Project Info, General Interest	D/W
Telephone	Communication	Public Queries Project Partners	M
Lab delivery	Oral delivery with practical demonstrations and hands on practice. Written lab book with explanations, instructions and questions.	Students	D

* D = Daily W = Weekly M = Monthly I = Infrequently

8. Communication

In the table below indicate the type of communication skills required to deal effectively with others. Be sure to list both verbal (e.g. exchanging information, formal presentations) and written (e.g. initiate memos, reports, proposals) in the section(s) that best describes the method of communication.

Communication Skill/Method	Example	Audience	Frequency (D, W, M ,I)*
Exchanging routine information, extending common courtesy	General Updates and information relating to general fish health and husbandry issues (feeding, cleaning, mechanical operation, water quality monitoring, disease testing)	Students, Faculty Staff, Project Partners	D/W
Explanation and interpretation of information or ideas	Relating to raising ATS in a re-circulating hatchery environment; demonstrating techniques such as water quality testing (e.g. using DO meter, PH meter)	Students Volunteers Training	D/W
Imparting technical information and advice	On using water quality testing equipment; feeding and cleaning regime, student paid work methods; ATS rearing activities/challenges	Students Industry Experts	W
Instructing or training	Standard Operating Protocols – charting and documentation. Lab delivery	Student workers Volunteers	W
Obtaining cooperation or consent			
Negotiating			

* D = Daily W = Weekly M = Monthly I = Infrequently

9. Physical Effort

In the tables below, describe the type of physical activity that is required on a regular basis. Please indicate the activity as well as the frequency, the average duration of each activity and whether there is the ability to reduce any strain by changing positions or performing another activity. Activities to be considered are sitting, standing, walking, climbing, crouching, and lifting and/or carrying light, medium or heavy objects, pushing, pulling, working in an awkward position or maintaining one position for a long period.

Physical Activity	Frequency (D, W, M, I)*	Duration			Ability to reduce strain		
		< 1 hr at a time	1 - 2 hrs at a time	> 2 hrs at a time	Yes	No	N/A
Standing, Bending	D		X			√	
Lifting	D	X				√	
Working in Awkward position	W	X				√	
Driving watercraft, motor vehicles	I			√	√		

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If lifting is required, please indicate the weights below and provide examples.

X	Light (up to 5 kg or 11 lbs)	Feed Containers, pumps, equipment
X	Medium (between 5 to 20 kg or 11 to 44 lbs)	Full and part feed bags
X	Heavy (over 20 kg or 44 lbs)	40 kg bags, oxygen tanks (l)

10. Audio Visual Effort

Describe the degree of attention or focus required to perform tasks taking into consideration:

- the audio/visual effort and the focus or concentration needed to perform a task and the duration of the task, including breaks (eg. up to 2 hours at one time including scheduled breaks)
- impact on attention or focus due to changes to deadlines or priorities
- the need for the incumbent to switch attention between tasks (eg. multi-tasking where each task requires focus or concentration)
- whether the level of concentration can be maintained throughout the task or is broken due to the number of disruptions

Provide up to three (3) examples of activities that require a higher than usual need for focus and concentration.

Activity #1	Frequency (D, W, M, I)*	Average Duration		
		Short < 30 mins	Long up to 2 hrs	Extended > 2 hrs
Communicating and correspondence	D	X		
Can concentration or focus be maintained throughout the duration of the activity? If not, why? X Usually □ No				

Activity #2	Frequency (D, W, M, I)*	Average Duration		
		Short < 30 mins	Long up to 2 hrs	Extended > 2 hrs
Performing system repairs	W/M			X
Can concentration or focus be maintained throughout the duration of the activity? If not, why? X Usually □ No				

Activity #3	Frequency (D, W, M, I)*	Average Duration		
		Short < 30 mins	Long up to 2 hrs	Extended > 2 hrs
Lab delivery preparation	D	√		
Can concentration or focus be maintained throughout the duration of the activity? If not, why? X Usually √ No				

* D = Daily W = Weekly M = Monthly I = Infrequently

11. Working Environment

Please check the appropriate box(es) that best describes the work environment and the corresponding frequency and provide an example of the condition.

Working Conditions	Examples	Frequency (D, W, M, I)*
□ acceptable working conditions (minimal exposure to the conditions listed below)		
accessing crawl spaces/confined spaces		
□ dealing with abusive people		
□ dealing with abusive people who pose a threat of physical harm		
□ difficult weather conditions		
□ exposure to extreme weather conditions		
X exposure to very high or low temperatures (e.g. freezers)	Unheated or cooled hatchery (ambient outside temps) humidity	D
X handling hazardous substances	Formaldehyde, anaesthetics, pharmaceuticals, chemicals	D
X smelly, dirty or noisy environment	Noisy, damp, cold conditions	D
X travel	To camps, PD, purchasing supplies, driving college/rental vehicles including watercraft	M
□ working in isolated or crowded situations		
□ other (explain)		

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