POSITION TITLE:	Project Engineer	CLASSIFICATION:	Licensed Science Officer 4
PROGRAM AREA:	Science		
UNIT:	Engineering	LOCATION:	Negotiable
SUPERVISOR'S TITLE:	Vice President, Science Division	SUPERVISOR'S CLASSIFICATION:	ML 6
		LOCATION:	Victoria

PROGRAM (OPTIONAL)

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 and management, fish science and research, 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. 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 and scientific services to support freshwater fisheries management.

The FFSBC owns and manages five 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 is mandated to promote and market freshwater recreational fishing in the Province as well as to inform and educate 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.

PURPOSE OF POSITION

The primary purpose of the Project Engineer is to provide engineering advice and expert consultative services in support of FFSBC's five major trout hatchery facilities and two sturgeon culture facilities as well as a fish distribution center and numerous remote egg collection facilities. In addition, the position provides consultative and advisory services to Ministry of Environment (MOE) fisheries programs for fisheries and habitat improvement and related projects.

The role includes direct provision of engineering services, the administering and monitoring of engineering services provided by consultants as well as applied research and prototype development on specialized engineering projects.

This position is the sole expert and authority on fisheries related engineering issues for FFSBC and MOE. Ability to conceptualize and coordinate the development of innovative solutions to a wide variety of engineering problems is a critical requirement for this position. This position must personally perform preliminary engineering investigations, conceptual design, model testing, prototype design, detailed design, installation and operation of projects. This position is expected to make the sole decision on engineering design and to work with biologists and senior management staff to ensure biological requirements are met.

SPECIFIC ACCOUNTABILITIES / DELIVERABLES

1. Provides engineering advice and expert consultation service on a wide variety of projects in support of FFSBC fish culture programs including but not limited to water supply and effluent treatment, design of fish culture, facilities, equipment and fish transport systems by:
   - Supporting the implementation of key major capital projects at FFSBC facilities requiring engineering involvement.
   - Appraising, evaluating and interpreting biological requirements and performance specifications from an engineering perspective
   - Developing innovative new approaches to resolve fish culture program and hatchery design challenges including analysis, design and construction of prototype systems requiring performance evaluations and field modifications
   - Reviewing development proposals with senior managers and staff and making recommendations on the course of future engineering requirements
   - Preparing preliminary and detailed designs, specifications and tender documents
   - Preparing feasibility reports and recommending feasibility of proceeding to construction
   - Selecting consultants, reviewing and monitoring project work
   - Providing engineering services during planning and construction
   - Arranging for and conducting further investigations where necessary either in-house or by consultants
   - Maintaining excellent communication and working relationships with facilities staff and Hatchery Managers

2. Provides expert consultative and advisory engineering service to MOE in support of provincial fisheries programs on projects as diverse as fish exclusion screens, fish fences/traps, fish passage facilities, spawning channels, fish habitat mitigation/enhancement by:
   - Meeting with senior MOE staff to review proposals and advise on engineering requirements, project development and scheduling requirements
   - Appraising, evaluating and interpreting biological requirements and performance specifications from an engineering perspective
   - Working with senior fisheries biologists to establish biological and engineering performance specifications to act as design criteria
   - Arranging for and conducting further investigations where necessary either in-house or via consultants including surveys, mapping, soils and hydrology
   - Preparing feasibility reports, preliminary designs, cost estimates and recommending feasibility of proceeding with the project
   - Acting as a representative of MOE including meeting with other agencies such as Fisheries and Oceans or BC Hydro to conduct technical reviews and to resolve problems

3. Performs other related duties including:
   - Drafting correspondence for the VP Science Division, VP Operations or President, FFSBC
   - Preparing project-specific budget estimates
   - Managing engineering budget and controlling expenditures
   - Attending workshops, seminars and conferences as a fisheries engineering specialist

FINANCIAL RESPONSIBILITY

Manage operating budget of approximately $50,000. Full spending authority on assigned budget. Writes terms of reference for contracts, negotiates prices up to $100K reviews, tenders, and recommends payment based on satisfactory completion of project.

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 (Check the appropriate boxes)

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

EXCLUDED MANAGER AUTHORIZATION

I confirm that:

1. the accountabilities / deliverables were assigned to this position effective: September 11, 2007..
2. the information in this position description reflects the actual work performed.
3. a copy has / will be provided to the incumbent(s).

NAME:	SIGNATURE:	DATE:
Bryan Ludwig		September 11, 2007

SELECTION CRITERIA

EDUCATION AND EXPERIENCE:

- Graduation from a university of recognized standing, with a Bachelor of Applied Science or equivalent degree in civil or mechanical engineering, with at least eight years of experience in the practice of engineering. Demonstrated experience in fisheries and fish-culture related engineering would be preferred. Registration as a professional engineer with the Association of Professional Engineers And Geoscientists of British Columbia. Equivalent combinations of experience, education and/or training may be considered.

KNOWLEDGE:

- Sound knowledge of engineering design and administration applicable to fisheries projects with an emphasis on water supply and treatment and water resource development

SKILLS & ABILITIES:

- Must be able to conceptualize projects, develop innovative solutions and coordinate research and prototype development following biological criteria
- Demonstrated ability to develop and complete major works (fish-ways, hatcheries, spawning channels, fish fences, water control structures)
- Ability to work collaboratively and act as FFSBC representative in a confident, competent and professional manner on sensitive and contentious resource management issues, often with other agencies, consultants, biologists, stakeholders, and clients;
- Strong communication skills, i.e. oral, written, presentation, and inter-personal skills;
- Strong leadership, facilitation, negotiation and conflict resolution skills, and the ability to solve complex problems;
- Ability to manage budgets, prepare forecasts and exercise spending authority;
- Ability to use computers for word processing, design, drafting, graphics, spreadsheets and data bases,
- Ability to show initiative, tact, good judgement and participate in a team approach;
- Ability to work independently under pressure;

Willingness Statements:

- Willing to travel extensively
- Candidates must be able to meet the transportation requirements of the Society (i.e. valid BC Driver's license)
- Willing to work in adverse weather conditions, often in the field for up to 7 days at a time
- Willing to work evenings, weekends and holidays when required
- Must be physically able to conduct field work

COMPETENCIES

Adaptability, Client Focus, Communication, Organizational Awareness, Problem Solving and Judgment, Results Orientation, Teamwork