



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

Title: Alaska Groundfish Stock Assessment Analyst (19-1117)

Location: Seattle, WA (98115)

Anticipated Start Date: September 9, 2019

Position Type: Temporary (6 months or less), Salary/Exempt

Benefits Eligible: No | www.psmfc.org/benefits

Salary Target: \$2,766.08-\$3,083.33/semi-monthly

Job Number: 19-1117

How to Apply: Online at www.psmfc.org/careers

Closing Date: August 22, 2019 at Midnight PST

Group Definition: Fishery Biologists use professional knowledge and competence in the science of fishery biology to perform work: (a) developing, conserving, propagating, managing, and administering fishery resources; (b) evaluating the impact of construction projects and other socioeconomic activities that present potential or actual adverse effects on fishery resources and their habitat; and (c) producing and managing aquatic resources in their natural habitat and/or within facilities and systems that have been constructed for their benefit and public use.

Position/Project Specifics:

The Alaska Groundfish Stock Assessment Analyst position serves as a stock assessment specialist who provides scientific guidance regarding the monitoring, assessment, and management of Alaska groundfish. The project requires the preparation of assessments of the status and trends of Alaska groundfish stocks, and assisting with research directed towards improving the ability to model the population dynamics of species and the influence of ecosystem factors on their productivity.

As part of a research team, the stock assessment analyst will be required to compile data for stock assessments, to conduct statistical modeling, and make short- and long-term projections of Alaska groundfish populations. The analyst will also conduct and/or assist with assigned Alaska groundfish stock assessments and provide supporting analyses.

The position requires skill and experience with mathematical and statistical models for Alaska groundfish stock assessments (e.g., maximum likelihood estimation, Markov Chain Monte Carlo techniques, automatic differentiation, Bayesian statistics, multivariate statistics), and the incorporation of environmental covariates in stock assessments and forecasts.



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In addition to conducting stock assessments and supporting analyses, the analyst will be required to provide written results detailing the data, methods, and outcomes of the assessments. The analyst will be required to provide written reports in a required format, and assist with presentations of results in response to requests from the North Pacific Fishery Management Council's Gulf of Alaska and Bering Sea Aleutian Islands Groundfish Plan Teams.

Hours will vary weekly according to deadlines and support needs of the Alaska Fisheries Science Center's stock assessment program. It is anticipated that approximately full time hours will be required in the month of October.

Essential Functions: (The functions listed below are characteristic of the type and level of work associated with this group and pay band. They are not all-inclusive. Individual positions may perform some or all, as well as other similar work.)

At the lower end of the range, Fishery Biologists have a solid working knowledge of established scientific methods and techniques to perform recurring assignments of moderate difficulty. Methods and techniques are well established, apply to most situations, and do not require significant deviations. Resource planning reports generated by employees at this level involve conventional biological concerns. Reports generated may be short-range management plans or portions of annual work plans. Lower range work examples include:

- Following existing protocols for fish health screenings; conduct tissue sample collection, bacterial testing and analyses, blood collection and analyses, parasite identification, and necropsies on experimental fish populations. Recommend modifications of existing research protocols. Design data collection forms and set up research databases for integration of data. Compile and analyze data for reports, prepare graphics, contribute to or write papers for peer-reviewed journals, and present research results at professional meetings.
- Develop age composition structures, stock assessments, escapement totals, harvest levels, run reconstruction frameworks, and/or run forecasts for designated fish species and stock. Evaluate and direct sampling efforts or reporting practices to best meet data requirements. Write memoranda and reports necessary for transfer of information to the appropriate individuals, agencies, and organizations.



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- Plan, schedule, and conduct behavioral, physiological, morphological, and survival evaluations of hatchery and/or experimental fish populations. Oversee and assist with fish culture tasks for study purposes and recommend procedure variations. Write or contribute to papers and reports for publication, and compile reports on results of data collection and analysis. Prepare and deliver formal and informal presentations at seminars, meetings, etc.
- Plan, design, schedule, and conduct fish catch and effort surveys for marine fisheries. Utilize existing general creel survey protocols and determine modifications that address specific marine fisheries conditions or special fisheries. Work with state, federal and regional fishery management councils to provide data on fisheries catch and effort and population trends as well as biology of marine fish species. Work with stock assessment biologists in relation to fisheries-specific data utilized in their stock assessments. Assist with database presentations of the data collected. Prepare reports and presentations as requested. Provide expertise in improvements to the design of creel surveys
- Conduct limited physical and biological watershed, stream, and fish habitat assessments. Responsible for conducting data investigation and research, drafting technical report, database management, GIS for all physical and biological data, and survey and inventory results. Prepare, present, implement and update watershed assessment plans.
- Assist in writing contract proposals and progress reports. Assist in developing detailed contract specifications, task statements, quality of work criteria, and other specifications.
- Monitor budget expenses for projects, control purchasing, and manage equipment inventories.

At the upper end of the range, the Fishery Biologist has specialized knowledge and demonstrated competence in advanced techniques of a complex area of fish biology sufficient to serve as a troubleshooter or specialist. The employee is competent to modify or adapt standard techniques, processes and procedures, and to assess, select, apply precedents and devise strategies and plans to overcome significant problems related to species production, protection, habitat restoration, or program management and evaluation. Planning reports



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generated by employees at this level assess the impact of various multi-faceted management or public practices on a resource. Upper range work examples include:

- Use biological information to evaluate run profiles and habitat suitability in stocked streams within a major geographical area. Develop comprehensive management plans to insure preservation, protection, and enhancement of habitats.
- Plan, design and implement research studies on fish health and/or nutrition. Analyze and report biological and/or genetic information affecting future selection, rearing, and spawning activities.
- Prepare both quarterly progress and annual reports on run status and hatchery or fish facility operations.
- Monitor and evaluate hatching, rearing and planting of fish. Evaluate and monitor adult return rates. Develop new rearing strategies.
- Prepare fish habitat measurement plans or management plans for a watershed or large geographic area.
- Diagnose various fish diseases or nutritional disorders in experimental populations or brood stock. Develop modifications to existing health protocols as well as experimental protocols.
- Write publishable reports of research and project findings.

Knowledge Required by the Position:

- Knowledge of fishery biology (including knowledge of particular species of fish) .
- Knowledge of aquatic habitats.
- Knowledge of the scientific method.
- Knowledge of sampling protocols.
- Knowledge of Windows-based computer applications such as:
 - word processing
 - spreadsheets
 - e-mail
 - publishing software
 - presentation software
 - database software



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- topographic software
- bibliographic software
- statistical analysis packages.
- Knowledge of technical writing protocols.
- Knowledge of advanced statistical analysis and mathematics.

Additional Mandatory Skills:

- *oral communication skills*
- *written communication skills*
- *specific software: R (statistical analysis), Automatic Differentiation Model Builder (programming)*

Additional Desirable Skills:

- *oral communication skills*
- *written communication skills*
- *specific software: R (statistical analysis), Automatic Differentiation Model Builder (programming)*

Physical Demands:

Demands are sedentary and will intermittently require long hours of computer work.

Work Environment:

All work is performed in an office setting with adequate lighting, heating and ventilation; office furniture and computer provided.

Minimum Qualification Requirements:

Education level requirement is a minimum of a Master of Science degree in fisheries science or mathematical/statistics, with a specialty focus on fishery population dynamics and stock assessment techniques. A minimum of 5 years of stock assessment experience conducting or assisting with Alaska groundfish stock assessments or West Coast groundfish stock assessments is required. Preference is for Alaska groundfish stock assessment experience and expertise.



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Pacific States Marine Fisheries Commission is an Equal Employment Opportunity (EEO) employer and welcomes all qualified applicants. Applicants will receive fair and impartial consideration without regard to race, sex, color, religion, national origin, age, disability, veteran status, genetic data, or other legally protected status.

If you have a disability and need assistance completing the application form, you may call the PSMFC human resources office at (503) 595-3100 between the hours of 8 a.m. and 5:00 p.m. PST, Monday-Friday. Reasonable accommodations for interviews will be provided upon request to individuals with disabilities.

We maintain a drug-free workplace.