



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

Title: Fisheries Data Analyst (17-932)

Location: Juneau, Alaska (99801)

Anticipated Start Date: November 1, 2017

Position Type: Full Year (12 months or more), Hourly/Non-Exempt

Benefits Eligible: Yes | www.psmfc.org/benefits

Salary Target: \$27.52/hour

Job Number: 17-932

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

Closing Date: September 28, 2017 at 9pm PT

Group Definition: Data Management Specialists (Natural Sciences) use a background in the natural sciences as they assist in the population, maintenance, enhancement and distribution of databases. They locate, obtain, standardize, enter, verify, and correct various data sets related to project goals and work plans.

Position/Project Specifics: This position is located in Juneau, Alaska. The person hired for this position will work closely with a team of fishery data analysts from Pacific States Marine Fisheries Commission, National Marine Fisheries Service (NMFS) in the catch accounting and data quality branch of the Sustainable Fisheries Division, Alaska Region, and the fisheries Monitoring and Analysis Division of the Alaska Fisheries Science Center.

Accurate estimates of catch are vital to the management, conservation, and scientific understanding of living marine resources that are impacted by commercial groundfish fisheries. The catch and bycatch estimates in Alaska are derived from a combination of industry reports and data from an extensive Observer Program, which collects information about harvest and bycatch from vessels fishing for groundfish in the GOA (Gulf of Alaska) and the BSAI (Bering Sea Aleutian Islands). Estimates of total catch in the groundfish and halibut fisheries are generated in the Alaska Catch Accounting System (CAS) and enable the in-season quota monitoring and fisheries management. The translation of data to information that can be used in support of decision making depends on credible data collection, statistically sound analyses, and resilient data storage and processing infrastructure.

The individual selected for this position will: analyze information regarding fishery-dependent catch and bycatch data, fishery management issues, and the effects of alternative proposed management approaches; analyze, develop and document appropriate methodologies for deploying observers and estimating catches of groundfish, prohibited species, and non-target species in the North Pacific groundfish fisheries; help analyze and evaluate monitoring options and data needs for management of federally managed fisheries off Alaska; and assist in the development and implementation of information systems. We are seeking a highly organized self-starter with excellent analytical, critical thinking, and problem solving skills. The person hired will have applied analytical and statistical



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

experience (preferably in sampling, sample design and estimation), and the ability to present analytical results in easily understood written and oral formats.

Position Duties:

- Participate in data analytic projects in support of catch estimation, observer deployment, and fishery management actions.
- Work effectively within a team environment to find creative approaches for problem solving and to develop analytical results to support decision-making. Assist in maintenance of data products produced from observer data.
- Document algorithms used to generate the data products and summaries provided to users; develop User Guides for standard data products.
- Assist in quantitative data analysis supporting Agency reports, research papers and manuscripts.
- Manage multiple projects with tight and often competing deadlines to produce written products and oral presentations in a timely fashion.
- Present results of analyses in oral presentations to diverse audiences including agency staff, science committees, fishery participants, or the general public meetings; respond to questions; and revise written documents, as needed.

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, Fisheries Data Analysts:

- Extract and complete quantitative analysis of relevant data.
- Develop and maintain documentation of analysis and datasets in accordance with established regional standards and principles.
- Create data analysis, summaries, and/or maps in response to requests for customized data.
- Prepare and manipulate various data and graphic outputs for use in reports, presentations and internet applications using R programming scripts.
- Prepare written reports that document and effectively communicate the results of analytical of analytical projects.

At the upper end of the range, employees:

- Develop and implement analysis of catch estimation methodologies and observer deployment. Includes acquiring new data as well as taking previously created or historical datasets and integrating them. Custom R programming may be required.
- Produce written research and statistical reports (including graphs, tables, maps, and text), data sets, and data summaries using a variety of analytical techniques and software tools. This involves the master-level use of data analysis scripts.



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

- Perform a variety of tasks related to spatial data that may include map preparation and spatial analysis of fisheries-dependent data.
- Present results of analyses or other work products to diverse audiences including agency staff, science committees, fishery participants, or the general public.
- Document research techniques including writing reports with knitter/RMarkdown/LaTeX or similar.
- Develop interactive graphics using R Shiny or similar technologies.
- Document data handling and maintain and update data catalogs, data catalog directories, and metadata.

Knowledge Required by the Position:

The employee must have knowledge of:

- natural sciences
- computers and software packages and applications for data analysis and word processing
- statistical analysis concepts, principles, and methods
- quality assurance principles
- technical documentation methods and procedures
- quantitative analytical methods and common data analysis languages
- writing queries in relational databases
- fisheries data

sufficient to: input data; structure information retrievals; edit, combine and manipulate data; and/or communicate to a broad range of audiences orally and in writing. This knowledge allows the employee to assess the results and relate that to the overall objective of the assignment.

Additional Mandatory/Desirable Knowledge and Skills

Mandatory Skills:

- Proficiency (2-3 years experience) in "R" programming, or proficiency in another code-based analysis language;
- 1-2 years of analytic/statistical experience (including at least two statistics or quantitative courses);
- Strong written and oral communication skills, and the ability to distill critical information from diverse and detailed sources, and translate that information between technical experts and more general audiences

Desirable Skills:

- R Package development (ability to write, prepare, test packages).
- Ability to prepare documents using reproducible research tools such as knitr/RMarkdown/LaTeX



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

- Familiar with relational databases (e.g. Oracle) and SQL
- Experience as a Fisheries Observer in the North Pacific and/or other observer program, or North Pacific research surveys.
- GIS experience
- Training/experience with sampling theory and data collection.
- Quantitative analysis to inform fishery management.

Personal Contacts:

Contacts are with employees in PSMFC; federal, state, or tribal agencies; university researchers, private/non-profit organizations, industry members, computer professionals, and the general public.

Purpose of Contacts:

The purpose of the contacts is to exchange and transfer ideas and information. Coordination, planning, and mutual support are important aspects of the contacts.

Physical Demands:

The work is generally sedentary, although there may be some nominal walking or standing for short periods of time, or carrying of light loads of papers, books, reports, etc. that require only moderate physical ability and physical stress.

Work Environment:

The works area is adequately lighted, heated, and ventilated. The work involves the common risks or discomforts typical of office, meeting rooms, libraries, and the like.

Minimum Qualification Requirements:

Preference will be given to a candidate with a minimum of bachelor's degree with quantitative coursework and/or training related to data analysis and/or sampling and at least three years of experience in data analysis. Master's degree in fisheries, biological sciences, natural resource management or other relevant field with 1-2 years of experience strongly preferred.

A range of experience and education may be presented. Candidates must present one year of Specialized Experience** AND four years of successfully completed education above high school in the natural sciences (biology, fishery biology, environmental science, aquatic science, geology, chemistry, physics, mathematics). An equivalent combination of experience and education is also qualifying.

**Specialized Experience is experience that equips the applicant with the knowledge skills, and abilities to perform successfully the duties of the position and is typically in or related to the work of the position



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

being filled to be creditable, specialized Experience must have been equivalent to at least the next lower level in the normal line of progression for the position being filled.

Pacific States Marine Fisheries Commission is an Affirmative Action (AA) and 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, gender identity, age, mental or physical disability, sexual orientation, 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 p.m. PST, Monday-Friday. Reasonable accommodations for interviews will be provided upon request to individuals with disabilities.

We maintain a drug-free workplace.