

Fish Health Section



FHS NEWS

Fish Health Section website: <https://units.fisheries.org/fhs/>

Fish Health Section Facebook Site: <https://facebook.com/FishHealthSectionAFS>

AFS Membership Campaign

In efforts to boost American Fisheries Society (AFS) membership, the AFS is currently holding an “AFS Member-get-a-member” campaign, the details of which can be found at <https://secure.fisheries.org/memgetmem>. Please consider recruiting a new AFS member (or three) who I’m sure would also be interested in joining the Fish Health Section. We have many important and active efforts underway within our section, so the more brain power, the better! Thanks for your continued activity as dedicated AFS-FHS members! *For perspective on the low number of you that are actual AFS-FHS members, in June of 1991, the section had 606 members. As of this month, the section only has 295 members, less than half that of nearly 30 years ago.*

MEETINGS, WORKSHOPS AND COURSES

Joint Meeting of the Northeast Fish Health Committee and AFS Fish Health Section

Burlington, VT

July 12th – 15th, 2021

See attached pdf for more information.

Calling all Aquaculture America 2021 attendees!

Are you interested in speaking in a special session at Aquaculture America 2021, to be held in San Antonio, Texas from August 11th-14th, 2021? Please see the link below to learn more about the National Aquaculture Association (NAA) special sessions that AADAP is co-hosting with the Aquatic Drug Approval Coalition (ADAC) and the Association of Fish and Wildlife Agencies-Drug Approval Working Group (AFWA-DAWG).

<https://www.fws.gov/fisheries/aadap/Expert-Presenters-Invited-Aquaculture-America-2021.html>

JOBS/GRADUATE ASSISTANTSHIPS

Fishery Biologist 1 – Microbiologist

Pacific States Marine Fisheries Commission

Eagle, ID

Closes: December 13, 2020

Link: http://www.psmfc.org/psmfc-info/careers_2018

Microbiologists perform diagnostic tests and do limited consultation regarding microbiology in regards to aquatic animal pathogens and aquatic nuisance species.

Typical responsibilities: performs parasitological, bacteriological, virological, serological, mycological, and microbiological examinations on clinical, environmental, and reference samples using standard testing procedures; interprets results and reports findings; maintains host cell systems for viral, parasitic, mycological, and pathogenic bacterial samples; processes and reads slides of animal, or plant tissue; prepares media, reagents, stains, standards, and quality control solutions; prepares and calibrates laboratory equipment and instruments for operation; stains, examines, and interprets smears from various animal, and plant tissues; identifies pathogenic, parasitic, and contaminating bacteria, evaluates and determines need for further testing; uses molecular biological technology to determine pathogen DNA sequences (PCR and qPCR); determines antibiotic susceptibility of pathogenic bacteria to antibiotics, performs quality-control testing of materials and samples; calculates finished data; evaluates the validity of samples; researches, evaluates, implements, and standardizes new methods and instrument operation problems; reviews/analyzes test results to locate malfunction and maintain objective tests; performs minor repair and maintenance on laboratory equipment; insures glassware and equipment are properly sterilized; autoclaves and disposes of hazardous materials; orders and maintains supply of standard solutions and reagents; may train/instruct other personnel regarding sample collections, preservation, testing procedures and interpretations, and equipment operation; consults with health professionals, other agencies and the public regarding laboratory practices and procedures, testing, and results; responds to inquiries regarding testing and procedures; maintains records, charts, and supply of standard solutions and reagents.

Participates in development of a Quality Management System (QMS) of the Eagle Fish Health Laboratory, including development of Standard Operating Procedures (SOP).

For more information, see attached pdf.

Assistant Extension Professor and Fish Nutrition Specialist

University of Maine Cooperative Extension

Orono, ME

Application Review Starts: December 15, 2020

Link: <https://umaine.hiretouch.com/job-details?jobID=65494&job=assistant-extension-professor-and-fish-nutrition-specialist>

Primary responsibility includes research in aquatic animal nutrition as applicable to finfish species in aquaculture and natural systems. The faculty member is expected to be a project leader on the UMaine USDA ARS non-assistance cooperative agreement project. Collaboration and outreach with the aquaculture industry is required of this position. The faculty member may become a member of the graduate faculty through an affiliation with an academic department or school, and may serve as an advisor on graduate committees. The faculty will be expected to conduct experiential workshops and short courses as part of ARI's workforce development programs.

Qualifications

Required:

- Doctorate required in an area of aquatic animal nutrition specific to finfish nutrition
- Demonstrated excellent oral and written communication skills
- Documented ability to conduct high-quality scientific research, as evidenced by grant acquisition and publications in peer-reviewed journals
- Computer and mobile device proficiency
- Ability to work independently and as part of a team
- Ability to be self-motivated and directed
- Demonstrated success in working collaboratively with other agencies and organizations, including private industry
- Experience and knowledge necessary to participate in interdisciplinary collaborations at UMaine, Cooperative Extension and the Aquaculture Research Institute, especially related to marine and coastal issues
- Experience working with industry partners on applied research
- Ability to formulate aquaculture feeds

Preferred:

- Experience in the application of genomics in aquaculture nutrition research related to stress, health, physiology and reproduction, broodstock and larval nutrition; and/or technology for fish meal and fish oil replacement in aquaculture feeds
- Experience with the nutrition and husbandry of finfish especially salmonids
- Experience with the operation of machinery related to fish nutrition such as feed extruders and top coaters
- Experience teaching in academic or outreach environments

For more information see the Complete Job Description attached.

Faculty Specialist (Aquaculture Technology)

University of Maryland, Sea Grant Extension

Queenstown, MD

Best Considered By: 12/20/2020

Link: <https://ejobs.umd.edu/postings/80152>

University of Maryland Extension invites applications for a full-time, grant-funded Shellfish Aquaculture Extension Specialist. This position will provide Extension support for the USDA funded “Smart Sustainable Shellfish Aquaculture Management (S3AM)” project. Major responsibilities of the position are to coordinate Extension and outreach activities of a national multidisciplinary team to develop and implement smart technologies to advance bottom culture of oysters in the United States. Annual renewal of contract for up to five years will be dependent on USDA funding and results of annual accomplishment reporting.

Minimum Qualifications:

- Bachelor’s degree in aquaculture or a related field.
- Experience in oyster aquaculture production with emphasis on bottom culture techniques.
- This position is subject to a Criminal History Record Check. Employment is contingent upon successful completion and clearance of the Criminal History Record Check.

Preferences:

- Master’s or Ph.D. in aquaculture or a relevant discipline preferred.
- Experience providing Extension support to shellfish growers is highly desired.
- The candidate should be able to manage multiple projects simultaneously while working independently, as well as a member of a team.
- The individual should have strong communication skills and be able to communicate with a variety of audiences.

RESPONSIBILITIES:

- Assist in building a nationwide Extension network focused on shellfish aquaculture technology to support S3AM project goals;
- Link team members and industry for S3AM advancement;
- Coordinate activities of a national advisory board for the S3AM project;
- Assist team member meetings and workshops;
- Identify audiences for needs assessments;
- Assist with production of peer reviewed journal articles, Extension publications and video products documenting the S3AM project;
- Provide leadership in developing a project focused website;
- Interact with project evaluation specialist to ensure outputs, outcomes and impacts are measured and communicated to stakeholders;
- Assist with reporting and other written deliverables, and; other duties related to S3AM project and shellfish Extension technologies education as developed or assigned.
- The position will work closely with University of Maryland Extension Specialists and researchers as well as team members at other institutions, agencies and NGOs. The position is also expected to work closely and develop working partnerships with non-project UME Extension Specialists and researchers with Maryland Sea Grant through University of Maryland College Park, the University of Maryland’s Center for

Environmental Studies (UMCES), Morgan State University's PEARL laboratory and hatchery, and others.

Assistant Professor of Aquaculture

Lake Superior State University

Sault Ste. Marie, MI

Open until filled

Link: <https://jobs.lssu.edu/postings/2781>

Lake Superior State University (LSSU) seeks qualified applicants for a tenure track faculty position in Aquaculture starting in August 2021, with a dual appointment within LSSU's new Center for Freshwater Research and Education (CFRE; www.lssu.edu/cfre) and the School of Natural Resources & Environment (<https://www.lssu.edu/snre/>).

This is a 12 month position with administrative (50%), research (25%) and teaching (25%, minimum of 3 contract hours per semester) responsibilities during the 9 month academic year, and administrative (50%) and research (50%) responsibilities during the remaining 3 months. Administrative responsibilities include, but are not limited to, providing vision for and oversight of CFRE Fish Hatchery operations, developing and managing the hatchery operational budget, supervising hatchery personnel, and working with internal and external partners to ensure smooth operation of the hatchery. Research responsibilities include creating an active, externally-funded research program in aquaculture that engages undergraduate students and external collaborators, publishing research results in peer-reviewed scientific journals, presenting at professional conferences, acquiring external funding for research, and maintaining and developing collaborative relationships with state, federal, and tribal agencies. Teaching responsibilities include teaching Freshwater Fish Culture, Internship in Aquaculture, Apprenticeship in Fish Culture, and contributing to our undergraduate research seminar series. Additionally, the successful candidate will be expected to develop an academic program in aquaculture (AS or BS level) and any required course(s). Academic advising and mentoring undergraduates engaged in research are also expected.

LSSU is a small (<2,000 undergraduate students) state university located in the beautiful Upper Peninsula of Michigan. The campus sits on the St. Marys River, the sole outflow of Lake Superior and international boundary with Canada, and provides numerous educational and professional opportunities in aquaculture, fisheries management, and aquatic ecology. Additionally, LSSU is surrounded by three Great Lakes and many state, provincial, and national forests and parks that provide tremendous recreational opportunities and a high quality of life.

The CFRE Fish Hatchery (<https://www.lssu.edu/cfre/hatchery/>) houses a student-run Atlantic salmon hatchery, providing hands-on classroom opportunities, and the new Barch CFRE building is expected to be constructed and open in 2021. The Barch CFRE will provide expanded research facilities, including an analytical lab and experimental

mesocosms, along with a Great Lakes visitors center and discovery center for K-12 education, all along the shores of the St. Marys River. The new facility will be uniquely positioned to build partnerships to advance Great Lakes education, research, and community engagement in the region. This new position will play a key role in contributing to the growth of the CFRE and related undergraduate opportunities. The SNRE provides exceptional lab space, specimens, and equipment for education and research. Success of SNRE students stems from extensive interaction with faculty during hands-on labs, student research, and active student organizations. Most students within SNRE are required to complete senior thesis research and they are encouraged to present their research at regional and national scientific conferences. Faculty also work closely in advising student clubs, including the nationally recognized Fisheries and Wildlife Club (student sub-unit of the American Fisheries Society). The successful candidate would be expected to contribute to university service, including advising student organizations.

Minimum Qualifications

Doctoral degree in Aquaculture closely related discipline appropriate to the assignment is required at the time of appointment. The successful applicant should have administrative experience, demonstrated excellence in research, and teaching experience.

Desired Qualifications

Familiarity with aquaculture of salmonids, experience including undergraduates in research, and providing professional opportunities for students outside of class.

Preferred Qualifications

Be able to accompany students on field labs, actively lead and participate in field activities in, on and off the water; be able to lift up to 25 pounds; possess a valid driver's license and operate a 4WD truck and motor boat.

Aquaculture Veterinarian

Newfoundland Dept. of Fisheries and Aquaculture

St. Alban's, NL

Open until filled

Link: www.hiring.gov.nl.ca

See attached pdf.

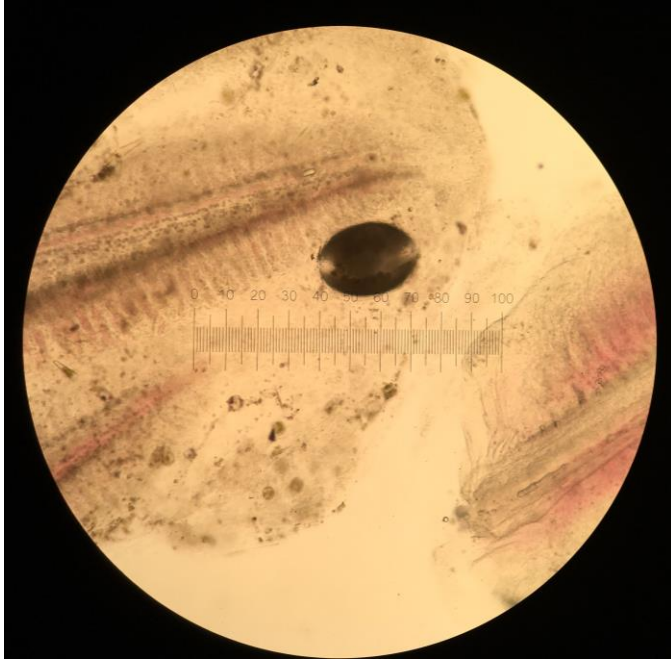
Zebrafish Related Job Announcements

<https://wiki.zfin.org/display/jobs/Zebrafish-Related+Job+Announcements>

RESOURCES/NEWS

Aquatic Animal Drug Approval Partnership (AADAP) Updates are now available online: https://www.fws.gov/fisheries/AADAP/aadap_update.html

NEW FEATURE – EDITOR’S RANDOM PICS



Glochidia (*Margaritifera falcata* larva) in the gills of a summer steelhead smolt, Lake Billy Chinook, OR, 5/2/2019.



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

Title: Fishery Biologist 1- Microbiologist (20-1155)

Location: Eagle, ID (83616)

Anticipated Start Date: January 25, 2021

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

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

Salary Target: \$16.79- \$25.85/ hour, DOE

Job Number: 20-1155

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

Closing Date: December 13, 2020 at midnight (PT)

Position/Project Specifics:

Microbiologists perform diagnostic tests and do limited consultation regarding microbiology in regards to aquatic animal pathogens and aquatic nuisance species.

Typical responsibilities: performs parasitological, bacteriological, virological, serological, mycological, and microbiological examinations on clinical, environmental, and reference samples using standard testing procedures; interprets results and reports findings; maintains host cell systems for viral, parasitic, mycological, and pathogenic bacterial samples; processes and reads slides of animal, or plant tissue; prepares media, reagents, stains, standards, and quality control solutions; prepares and calibrates laboratory equipment and instruments for operation; stains, examines, and interprets smears from various animal, and plant tissues; identifies pathogenic, parasitic, and contaminating bacteria, evaluates and determines need for further testing; uses molecular biological technology to determine pathogen DNA sequences (PCR and qPCR); determines antibiotic susceptibility of pathogenic bacteria to antibiotics, performs quality-control testing of materials and samples; calculates finished data; evaluates the validity of samples; researches, evaluates, implements, and standardizes new methods and instrument operation problems; reviews/analyzes test results to locate malfunction and maintain objective tests; performs minor repair and maintenance on laboratory equipment; insures glassware and equipment are properly sterilized; autoclaves and disposes of hazardous materials; orders and maintains supply of standard solutions and reagents; may train/instruct other personnel regarding sample collections, preservation, testing procedures and interpretations, and equipment operation; consults with health professionals, other agencies and the public regarding laboratory practices and procedures, testing, and results; responds to inquiries regarding testing and procedures; maintains records, charts, and supply of standard solutions and reagents.

Participates in development of a Quality Management System (QMS) of the Eagle Fish Health Laboratory, including development of Standard Operating Procedures (SOP).

**** This position requires a valid driver's license and all offers of employment will be contingent upon passing a driving record check. ****



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

Essential Functions:

- Make standardized observations such as species identification, length, weight, behavior, growth, survival, reproductive condition, and/or signs of parasites, diseases or pathogens, fin clips or tags.
- Lead and perform data entry for data from representative biological samples. Error check the data, maintain and update database, analyze and organize data in the appropriate format (table, spreadsheet, memorandum, or report) necessary for transfer to individuals, agencies, and organizations. Modify software programs and perform data queries. Prepare summary reports to transfer data.
- Assist researchers in investigations of long term and short term fisheries resource management problems. Collect biological samples, record data, perform routine analyses of data, and contribute draft sections to scientific papers for publication.

Knowledge Required by the Position:

- Knowledge of fishery biology (including knowledge of particular species of fish).
- Knowledge of fish husbandry.
- Knowledge of aquatic habitats.
- Knowledge of the scientific method.
- Knowledge of personal computer applications such as word processing, spreadsheets, e-mail, publishing software, presentation software, database software, topographic software, bibliographic software, and statistical analysis packages.
- Knowledge of technical writing protocols.
- Knowledge of statistics and mathematics.
- Knowledge of database management.
- Knowledge of programming languages such as SQL.

Additional Mandatory Skills:

- *elec. detection technology*
- *lift 40-50 lbs.*
- *valid driver's license*
- *fish species ID skills*
- *compile and collect neat and accurate data*
- *specific software skills (spreadsheet, word processing, database, GIS, statistical)*
- *oral communication skills*
- *written communication skills*

Physical Demands:

Demands can range from sedentary, to moderate --where there is walking, climbing stairs and ladders, reaching, lifting, and bending, to rigorous. In the latter case, the employee must be able to handle



PACIFIC STATES MARINE FISHERIES COMMISSION POSITION DESCRIPTION

buckets of water or gear weighing up to 50 pounds. Long daily periods of hiking, carrying equipment, swimming, and/or standing may be required.

Work Environment:

Work is performed in an office/ laboratory setting with adequate lighting, heating and ventilation. Typical laboratory hazards exist.

Minimum Qualification Requirements:

A range of education and experience may be presented. At the lower end of the range, candidates must present successful completion of a full 4-year course of study in an accredited college or university leading to a bachelor's or higher degree that included a major in biological science with at least 6 semester hours in aquatic subjects and at least 12 semester hours in the animal sciences. An equivalent combination of experience and education is also qualifying.

At the upper end of the range, candidates must present one year of Specialized Experience** OR a year of graduate education that is directly related to the work of the position.

**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 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.



***University of Maine Cooperative Extension and Aquaculture Research Institute
Assistant Extension Professor and Fish Nutrition Specialist***

Purpose: Primary responsibility includes research in aquatic animal nutrition as applicable to finfish species in aquaculture and natural systems. The faculty member is expected to be a project leader on the UMaine USDA ARS non-assistance cooperative agreement project. Collaboration and outreach with the aquaculture industry is required of this position. The faculty member may become a member of the graduate faculty through an affiliation with an academic department or school, and may serve as an advisor on graduate committees. The faculty will be expected to conduct experiential workshops and short courses as part of ARI's workforce development programs.

Anticipated Start Date: 1/1/ 2021

Department: Cooperative Extension

Reports to: Extension Program Administrator

Position Type: Soft money faculty member with continuing contract

Essential Duties and Responsibilities:

- Designs and implements a plan of work that addresses priorities in aquatic animal nutrition specific to finfish
- Develops and implements an applied research agenda that is consistent with the identified needs of the aquaculture industry focused on current and emerging critical issues in fish nutrition such as alternative feed ingredients to fish meal, alternatives to fish oil, and additional dietary supplements
- Contributes to the research mission of the UMaine Aquaculture Research Institute
- Shares the findings of applied research through the publication of peer reviewed journal articles, conference proceedings, abstracts, poster sessions and other venues
- Delivers educational programs in support of aquaculture nutrition that align with the UMaine Cooperative Extension mission and plan of work
- Collaborates with academic and Extension colleagues and other agency staff

- Designs and delivers presentations on various aquaculture nutrition that enhance stakeholders knowledge and capacity for applied learning
- Secures external grants and contracts for program expansion and sustainability
- Assesses needs as an essential part of program planning, program implementation and grant development
- Builds capacity of field staff involved in aquaculture production related to finfish nutrition
- Train undergraduate/graduate research assistants and other personnel as appropriate
- Participates in local, regional, and state program development and implementation teams
- Serves on organizational development and governance committees
- Provide timely and accurate information in response to public requests for information
- Develop and sustain a program of professional development including membership in state, national and international aquatic health organizations and committees appropriate for the position
- Makes special effort to seek, involve and serve under-served and under-represented clients.
- Ensures compliance with civil rights, affirmative action and equal opportunity requirements.
- Develops and maintains professional relationships that reflect courtesy, civility, and mutual respect
- Utilizes coaching and mentoring methods which provide an environment that is anticipatory, supportive, and encourages constructive feedback on performance
- Perform other reasonably related duties as assigned.

Required Knowledge and Skill Qualifications:

- Doctorate required in an area of aquatic animal nutrition specific to finfish nutrition
- Demonstrated excellent oral and written communication skills
- Documented ability to conduct high-quality scientific research, as evidenced by grant acquisition and publications in peer-reviewed journals
- Computer and mobile device proficiency
- Ability to work independently and as part of a team
- Ability to be self-motivated and directed
- Demonstrated success in working collaboratively with other agencies and organizations, including private industry
- Experience and knowledge necessary to participate in interdisciplinary collaborations at UMaine, Cooperative Extension and the Aquaculture Research Institute, especially related to marine and coastal issues
- Experience working with industry partners on applied research
- Ability to formulate aquaculture feeds

Preferred qualifications:

- Experience in the application of genomics in aquaculture nutrition research related to stress, health, physiology and reproduction, broodstock and larval nutrition; and/or technology for fish meal and fish oil replacement in aquaculture feeds
- Experience with the nutrition and husbandry of finfish especially salmomids
- Experience with the operation of machinery related to fish nutrition such as feed extruders and top coaters
- Experience teaching in academic or outreach environments

Supervisory Responsibilities: Mentoring of students and postdocs, supervision of technical assistants

Work Environment/Dynamics: The position is a joint appointment between the Aquaculture Research Institute (50%) and Cooperative Extension (50%). The majority of the work is performed from UMaine campus in Orono, ME. University of Maine Cooperative Extension and ARI office hours are weekdays from 8:00 a.m. to 4:30 p.m. The Finfish Nutrition Specialist will work a flexible schedule to meet the requirements of the position that may involve work beyond regular office hours including evenings and weekends. Travel required requiring a valid Maine Driver's License.

Work Year: Full-time contingent upon funding faculty appointment.

Schedule for Evaluation: Performance evaluations will be conducted in accordance with the University of Maine System (UMS) and the Associated Faculties of the UMS (AFUM) collective bargaining agreement.

We're Hiring.

Aquaculture Veterinarian Permanent - St. Alban's, NL Department of Fisheries and Aquaculture

Are you...

- looking to build a successful career of clinical field work, frontline medicine and applied research fieldwork in finfish, shellfish and biosecurity?
- wanting to work within the newest state of the art aquatic diagnostic facility in the country with on site tech support?
- looking to grow our province's fledgling industry into a world renowned and respected operation?
- interested in supporting activities in fish husbandry, vaccination, disease control and nutrition?
- looking to build on your Doctor of Veterinary Medicine with our commitment to provide you with a fully supported continuing education environment?
- someone who enjoys travel, autonomy and the outdoors?

We are...

- located on the historic Connaigre Peninsula and completing construction of our new Diagnostic Laboratory and Regional Office in the summer of 2011.
- able to support you in adding to the current aquaculture health knowledge.
- able to support you in adding to current knowledge with the presentation of your findings to the worldwide scientific community.
- offering a work environment that will support your clinical field work and applied research through our state of the art facility.
- offering a work environment that promotes and supports your continued learning.

Upon offer of employment, the successful candidate is required to be licensed to practice veterinary medicine in the province. For additional information on this position, please contact Dr. Daryl Whelan at (709) 729-6872.

The public service is an equal opportunity employer and values diversity in its workforce. Please forward your resume, quoting competition number FA.10.11.389. Salary: \$74,929.40 - \$88,561.20. Please apply online or send resume via mail to: Recruitment Centre, Public Service Commission, 50, Mundy Pond Road, P.O. Box 8700, St. John's, NL , A1B 4J6 or Fax: 709-729-6737. Closing Date: Open Until Filled.



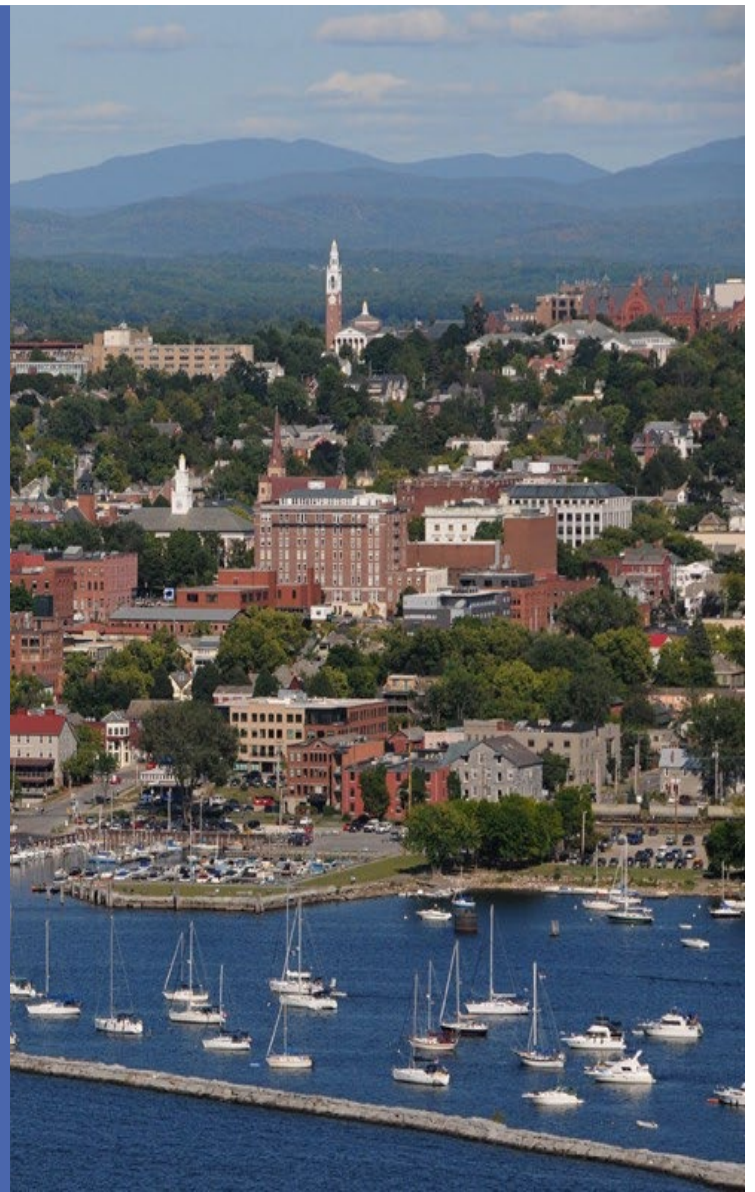
www.hiring.gov.nl.ca

JOINT MEETING OF THE
NORTHEAST FISH HEALTH
COMMITTEE AND AFS FISH
HEALTH SECTION

APPLYING RESEARCH:
BRIDGING THE GAP
BETWEEN AQUATIC
ANIMAL HEALTH
RESEARCH AND
INSPECTIONS

JULY 12TH – 15TH, 2021

HILTON LAKE CHAMPLAIN
BURLINGTON, VERMONT



Tentative Schedule at a Glance:

July 12th & 13th

- NEFHC Meeting
- NEFHC Fish Culture Chiefs Meeting
- FHS EXCOM Meeting

July 13th

- FHS Continuing Education Course (TBD)
- Icebreaker Opening Social

July 14th – 15th

- Special Sessions
 - “Fish Health Research/Topics in the Northeast US”
 - “Current Status of Fish Health Regulations and Testing Criteria for Aquatic Animal Movements in the Northeastern US & Canada”
- General Sessions and Case Study Reports
- Poster Session
- FHS Business Meeting
- Banquet