



MARIN/SONOMA MOSQUITO AND VECTOR CONTROL DISTRICT

JOB DESCRIPTION

Job Title: **Biologist**

Date: February
1st, 2026

Reports to:
Scientific Programs Manager (SPM)

SUMMARY

Under direct supervision of the Scientific Programs Manager (SPM), the Biologist supports surveillance and control efforts for mosquitoes, ticks, and other medically significant arthropods and animal reservoirs. This position conducts laboratory and field work that advances the District's mission to protect public health and comfort by reducing disease-carrying vector populations. The Biologist works under supervision and follows established guidelines for vector control operations and laboratory procedures.

SCOPE OF POSITION

The Biologist performs laboratory and field activities in support of vector surveillance, control evaluation, and research programs, including but not limited to, mosquito, tick, and other vector monitoring, molecular testing, insectary operations, and support of public health investigations.

SPECIFIC DUTIES AND RESPONSIBILITIES

Includes, but is not limited to:

Field/Efficacy

- Set, maintain, and retrieve mosquito traps across diverse habitats
- Retrieve, Collect and process dead wild birds for arbovirus surveillance
- Design and conduct field trials evaluating control products and equipment
- Assist in conducting studies and evaluations of the impact, efficacy and resistance to control products used for adult and larval mosquito control, in both laboratory and field settings
- Collect, record and interpret field study results as needed or as assigned
- Support tick surveillance projects, including project design, data collection, and analysis
- Assist in research activities conducted by District staff and collaborators in laboratory and field settings

Laboratory/Molecular Assays

- Sort and Identify insects, adult and larval mosquitoes, and other vectors to species
- Prepare samples for pathogen testing including pooling and data entry
- Perform RNA/DNA extractions and qPCR assays and prepare reports
- Maintain quality control and data accuracy for molecular assays

Insectary/Mosquitofish

- Maintain mosquito colonies for research, control evaluation, and education
- Record colony hatch cycles and schedule adult emergence for experimental and educational needs
- Assist with maintaining mosquito fish populations and assist with distribution

Administrative

- Ensure accurate data entry into databases and spreadsheets
- Prepare annual reports of work completed in the laboratory
- Provide guidance to seasonal laboratory staff
- Maintain laboratory cleanliness and efficiency

WORK HOURS

- 40- (forty) hour workweek, Monday through Friday, 7:00 a.m. – 3:30 p.m.
- Hours may vary according to daily work schedule.
- Overtime is rare but it can occur.

WORKING CONDITIONS

- to work in all types of weather and around foul water sources (wastewater, stagnant ponds, etc.)
- Processing animal tissues and bodily fluids within the field setting will be necessary; therefore, safety precautions must

be followed.

CERTIFICATION

- Must obtain the Vector Control Technician certifications issued by the California Department of Public Health as stipulated in the Memorandum of Understanding between the District and District employees.
- Ongoing attendance at continuing education classes to maintain certification.

PROBATIONARY PERIOD

A one-year probation is required.

PREREQUISITES

Knowledge, Ability and Skills

- Knowledge of zoonotic diseases, epidemiology, scientific methods and field research experience is helpful.
- An interest in fish biology, environmental ecology, wetland issues and public health is encouraged.
- Ability to exhibit excellent speaking, writing, math, and public relation skills.
- Ability to communicate effectively, verbally and in writing, with colleagues and supervisors is required.
- Ability and willingness to follow directions.
- Ability to organize time efficiently.
- Good public relations skills are essential.

Education

- Bachelor's degree in biology, entomology or other science-related fields.

Experience

- Background in biology (aquatic/wildlife/environmental), entomology or ecology is required.
- Experience in producing written reports based upon scientific methodology and presentation of such work at regional and statewide conferences is required.
- Experience in caring for and handling birds is beneficial.

Driver's License

- Valid California Driver's License.
- Must be insurable under the guidelines set by the District's insurance carrier as District vehicle is provided for travel.

Physical Requirements

- Ability to pass the pre-employment physical and drug test.
- Ability to be vaccinated for various diseases to which an employee may be exposed in the course of duties
- Ability to periodically lift 50 (fifty) pounds.
- Must be able to swim.

Periodically – Activity or condition exists up to 25 percent of the time

Occasionally- Activity or condition exists from 25 to 50 percent of the time.

Regularly – Activity or condition exists from 50 to 75 percent of the time.

Frequently – Activity or condition exists 75 percent or more of the time.

