January 2019
Class Code: A-53 / A-58
FLSA: NON-EXEMPT

ASSISTANT VECTOR ECOLOGIST/VECTOR ECOLOGIST

DEFINITION

Under direction (Assistant Vector Ecologist) or direction (Vector Ecologist), performs professional entomological work related to the surveillance and control of vertebrate and terrestrial invertebrate vectors which impact public health; plans, organizes and administers assigned vector control and related disease detection/management programs; serves as a technical advisor to District staff and the public in assigned program areas; designs, participates in and monitors research projects; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives direction (Assistant Vector Ecologist) or direction (Vector Ecologist), from the Director of Scientific Technical Services. Exercises no direct supervision over staff.

CLASS CHARACTERISTICS

Assistant Vector Ecologist: This is the entry-level classification in the Vector Ecologist series. Initially under close supervision, incumbents with basic vector ecology knowledge learn and perform routine entomological work. As experience is gained, assignments become more varied, complex, and difficult; close supervision and frequent review of work lessen as an incumbent demonstrates skill to perform the work independently. Positions at this level usually perform most of the duties required of the positions at the Vector Ecologist level but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

Vector Ecologist: This is the fully qualified journey-level classification in the Vector Ecologist series. Positions at this level are distinguished from the Assistant Vector Ecologist by the performance of the full range of duties as assigned, working independently, and exercising judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit.

Positions in the Vector Ecologist class series are flexibly staffed; positions at the Vector Ecologist level are normally filled by advancement from the Assistant Vector Ecologist level; progression to the Vector Ecologist level is dependent on (i) management affirmation that the position is performing the full range of duties assigned to the classification; (ii) satisfactory work performance; (iii) the incumbent meeting the minimum qualifications for the classification including any licenses and certifications; and (iv) management approval for progression to the Vector Ecologist level.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Job functions and performance are subject to provisions contained within the Personnel and Salary Resolution and Memorandum of Understanding applicable to the specified job classification. Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

Positions at the Assistant Vector Ecologist level may perform some of these duties and responsibilities in a learning capacity.

- Develops implements and manages a variety of programs related to vector ecology and disease control including the vertebrate pathology laboratory, and flea-borne typhus control program.
- Procures, designs, constructs and maintains devices used to trap mosquitoes, rodents, birds and other organisms.
- Develops procedures for the placement of traps and the collection and handling of specimens collected.
- Develops procedures for and monitors the processing of organisms/animals, laboratory work and the submission of specimens and blood sera for analysis; investigates resistance of vectors to pesticides and related materials.
- Identifies and examines organisms submitted to the laboratory by District staff, hospitals and the public; provides results and consultation to control and eliminate problems; educates District staff on the status, biology and control of pests in the county.
- Manages the dead bird program; performs necropsies and tissue collection; communicates requests for samples to the public.
- Conducts mosquito, tick and flea surveillance; responds to human cases of mosquito-borne viruses and flea-borne typhus; investigates public health problems and prepares documentation for abatement proceedings.
- Investigates possible poisonings; consults with veterinarians and physicians on poisoning diagnoses and treatment protocols.
- Formulates, tests and evaluates vector control materials and methods; conducts calibrations and equipment performance evaluations ensuring compliance with federal and state laws.
- As assigned by management, provides technical and functional direction to part-time and seasonal staff; reviews and controls quality of work; trains employees in work methods, use of tools and equipment, and relevant safety precautions.
- Provides training, workshops and technical consultation service to District staff, agencies and the public; coordinates external classes to prepare technicians for state examinations and to fulfill continuing education accreditation requirements.
- Participates in joint agency special and research projects.
- Compiles and evaluates data accrued from the programs managed and generates technical reports and program recommendations.
- Reviews scientific journals, research and technical reports and attends scientific conventions to obtain state of the art information related to vector ecology.
- Submits written and oral reports for management to present to the Board of Trustees on technical matters and program status.
- Observes and complies with all District and mandated safety rules, regulations, and protocols.

- Performs other duties as assigned.

QUALIFICATIONS

Positions at the Assistant Vector Ecologist level may exercise some of these knowledge and abilities statements in a learning capacity.

Knowledge of:

- Insects, pathogens, ecology, and epidemiologic principles related to vector-borne diseases of the region.
- Principles, practices and methods of pesticides application and effects and hazards to animal and plant life.
- Methods and techniques of implementing a comprehensive vector ecology and disease prevention program.
- Scientific methods and protocols used to detect and determine the cause of a diverse range of vector transmitted diseases.
- Surveillance and investigative methods and techniques.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- Current and state-of-the-art theories and practices of vector and related disease control and surveillance and long-range issues related to vector control.
- Principles and practices of biological, chemical and physical sciences.
- Research techniques and investigative methods including data interpretation and biostatistics.
- Principles and procedures of technical report writing, and preparation of correspondence and presentations.
- Applicable Federal, State, and local laws, regulatory codes, ordinances, and procedures relevant to assigned areas of responsibility.
- Principles of mathematics and biostatistics.
- Record-keeping principles and procedures.
- District and mandated safety rules, regulations, and protocols.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Ability to:

- Plan and implement a comprehensive vector ecology and disease detection and prevention program.
- Evaluate program effectiveness and adjust as necessary.
- Coordinate services with local government to an integrated approach to vector transmitted diseases.
- Conduct surveillance and investigations on program operations.
- Perform laboratory testing on a diverse range vector transmitted diseases which impact public health.
- Conduct research and prepare findings and recommendations.
- Prepare clear and concise scientific and technical reports, correspondence, and other written materials.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Effectively represent the department and the District in meetings with governmental agencies; community groups; various business, professional, and regulatory organizations; and in meetings with individuals.

- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:
Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Education:

- Assistant Vector Ecologist/Vector Ecologist: Equivalent to a bachelor's degree from an accredited college or university with major coursework in entomology, zoology, biologist or a related field.

Experience:

- Assistant Vector Ecologist: Two (2) years of experience in vector ecology.
- Vector Ecologist: Five (5) years of experience in vector ecology.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California driver's license by time of appointment.
- Possession of, or ability to obtain, certification in Public Health Vector Control Categories A – D, as required by the Calif. Department of Public Health, within one year of appointment and maintained throughout employment with the District.

PHYSICAL DEMANDS

When assigned to an office/laboratory environment, must possess mobility to work in a standard office/laboratory setting and use standard office/laboratory equipment, including a computer; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone; ability to stand and walk between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 25 pounds.

When assigned to field work, must possess mobility to work in changing site conditions; possess the strength, stamina, and mobility to perform light to medium physical work; to sit, stand, and walk on level, uneven, or slippery surfaces; to reach, twist, turn, kneel, and bend; to operate a motor vehicle and visit various District sites; vision to observe biological and environmental conditions. The job involves fieldwork requiring frequent walking in operational areas to provide surveillance and environmental analysis, with exposure to hazardous materials in some site locations. Employees must possess the ability to lift, carry, push, and pull materials and objects averaging a weight of 50 pounds, or heavier weights, in all cases with the use of proper equipment and/or assistance from other staff.

Employees must wear and use the proper Personal Protective Equipment (PPE).

ENVIRONMENTAL CONDITIONS

Employees work in an office and laboratory environment with moderate noise levels, controlled temperature conditions, and exposure to hazardous physical substances within the laboratory. Employees also work in the field and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, mechanical and/or electrical hazards, vermin, insects, parasites, and hazardous chemical substances and fumes. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.