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# Butte County Mosquito and Vector Control District

## POLICY MANUAL

**POLICY TITLE:** Job Description - Vector Ecologist / Fish Biologist

**POLICY NUMBER:** 6180

### 6180.1 Nature of Work

**6180.1.1** Under the direction of the District Manager and direct supervision of the Assistant Manager and/or Entomologist II, this position provides professional biological and entomological services and provides for the production of *gambusia affinis* (mosquitofish) for the Butte County Mosquito and Vector Control District.

### 6180.2 Illustrative Tasks

**6180.2.1** Assists the Entomologist II with studies and surveys of mosquito sources, vector populations ecology and species distribution; establishes systems of vector population measurements and collects, identifies, records, and evaluates findings; does biological and chemical laboratory work and makes evaluations; prepares reports, including maps, graphs, and analysis for program evaluation and development; and oversees any technical phases of program development and planning.

**6180.2.2** Evaluates effectiveness of vector control operations and control methods, conducts studies, develops modifications of operational techniques, and provides assistance in the introduction of new methods and techniques; and provides scientific consultation to program operations.

**6180.2.3** Assists with evaluations of pesticides used in mosquito and vector control; establishes, if possible, resistance levels. Compares efficacy of materials in both the lab and in the field. Calibrates spray equipment and analyzes droplet size to determine effectiveness and efficiency; assist District pilots with aircraft characterization studies.

**6180.2.4** Works with and provides consultation in entomology and ecology of vectors and fisheries production relative to mosquito control with public and private organizations involved in activities which have a bearing on vector control and/or medical entomology; provides consultation to District personnel and the public.

**6180.2.5** Participates in the conduct of a public relations and community education program; attends and addresses community meetings, and prepares educational material for the District's management, the Public Information Officer and/or the Public Education Coordinator for distribution.

**6180.2.6** Performs general insect/arthropod/arachnid identification for members of the public; provides educational material to members of the public to assist in the reduction of a pest and/or nuisance.

**6180.2.7** Keeps informed of current developments in vector control, reads professional literature, and participates in professional associations; works with the California Department of Public Health and universities if needed and/or requested.

**6180.2.8** Monitors and proposes laboratory and fisheries expenditures for consideration by the Entomologist II or District Manager.

**6180.2.9** Develops recommendations for the District Manager and Entomologist II regarding maintenance and improvement of the laboratory facility, equipment, and the fisheries department.

**6180.2.10** Assists with the promotion, solicitation, and assists with studies to enhance the District's Integrated Vector Management Program.

**6180.2.11** Organizes and coordinates mosquito, yellowjacket, tick, and mosquito-borne disease surveillance programs.

**6180.2.12** Responsible for the safe keeping of an inventory of laboratory and fisheries equipment.

**6180.2.13** Responsible for the maintenance of the ponds, tanks, and equipment used by the District for mosquitofish production.

**6180.2.14** Must maintain a safe and clean work environment in the lab and the fisheries department.

**6180.2.15** Performs related work and other assigned tasks/assignments as directed by management in a timely and efficient manner.

### **6180.3 Secondary Illustrative Tasks**

**6180.3.1** Due to work volume, financial and staffing constraints, and other unknown and/or unanticipated conditions, at times, this position may be assigned other tasks, including field surveillance and control operations; clerical and/or office operations; mechanical and maintenance operations; public education and outreach operations; and other operations as needed, requested, and/or required.

### **6180.4 Knowledge, Abilities, and Skills**

**6180.4.1** Knowledge of the duties and responsibilities of the Butte County Mosquito and Vector Control District.

**6180.4.2** Working knowledge of entomology, including natural history and ecology of vectors.

**6180.4.3** Thorough knowledge of biological and physical sciences.

**6180.4.4** Thorough knowledge of mosquitofish.

**6180.4.5** Working knowledge of research techniques and investigative methods.

**6180.4.6** Ability to identify insects and insects of medical importance and arthropods/arachnids and arthropods/arachnids of medical importance.

**6180.4.7** Ability to interpret and apply applicable rules and regulations.

**6180.4.8** Ability to direct, supervise, advise, and coordinate various operational functions of the District.

**6180.4.9** Ability to plan general surveys and specific duties.

**6180.4.10** Ability to apply scientific principles to practical situations.

**6180.4.11** Ability to establish and maintain effective working relationships with other employees and the public.

**6180.4.12** Ability to speak effectively before public groups and personnel and to prepare reports and correspondence.

**6180.4.13** Knowledge of the proper use and safety of laboratory and field equipment.

**6180.4.14** Basic knowledge of chemical application calibration techniques.

**6180.4.15** Basic knowledge of pesticide safety and handling.

**6180.4.16** Basic knowledge of federal, state, and local laws and regulations pertaining to driving, vector control, and disposal/storage of hazardous material.

## **6180.5 Working Conditions**

**6180.5.1** The Vector Ecologist / Fish Biologist I may be exposed to pesticides, communicable diseases, and other health hazards; inclement weather conditions, and verbal confrontations from the public. The Vector Ecologist / Fish Biologist must be willing to occasionally work non-standard work schedules including evenings, weekends, and holidays.

## **6180.6 General Requirements**

**6180.6.1** The Vector Ecologist / Fish Biologist must possess sufficient education and/or experience to perform the technical and scientific tasks assigned. Must possess as a minimum, a Bachelor's degree in the field of entomology, biological sciences, or pest management or with a Bachelor's degree and have successfully completed a minimum of five years of work experience within a mosquito and vector control district. Must be knowledgeable of and have experience in research techniques, scientific data collecting and the use of pesticides.

**6180.6.2** Possess or qualify for and immediately obtain and retain during the course of employment a valid California Driver's license, and have and maintain a safe driving record as required by the District's insurance carrier.

**6180.6.3** Possession of valid certificates of the California Department of Public Health's certified technician in Mosquito and Vector Control categories A, B, C, and D, or must obtain within 12 months of employment and must be maintained throughout employment for this position.

**6180.6.4** Have the ability to meet any requested experience and or education necessary to obtain any required licenses or certifications and retain such licenses or certification during the course of employment.

**6180.6.5** Be able to provide clear verbal communication and be able to hear, read, understand and speak English.

**6180.6.6** Be able to read and comprehend written instructions, including detailed technical instructions for repair, calibration, and operation of mechanical and electrical equipment, all spray equipment and safe handling instructions on pesticide labels.

**6180.6.7** Be able to work safely with power and hand tools and is required, at all times, to wear any personal protective clothing and gear necessary for safe handling of those tools.

**6180.6.8** Be willing to learn new and different skills and abilities as required by the District. A Vector Ecologist / Fish Biologist may be assigned other tasks, as required by changing District programs and needs, and must be willing to take on new challenges as necessary.

**6180.6.9** Not obtain outside employment, if in the District Manager's judgment it will conflict with the District program, or reduce the Vector Ecologist / Fish Biologist's ability to satisfactorily perform the required duties of the position.

### **6180.7 Physical Requirements**

**6180.7.1** Employees are responsible for maintaining their physical condition in a state that will allow them to be able to perform the duties of their position and to be in a physical condition that does not increase the danger or likelihood of injury on the job.

**6180.7.2 Body Movements:** Must have full mobility and use of both arms. Must have the ability for full extension above the head to lift or remove equipment during normal daily activity. Must have full range of motion to climb and hike into trapping areas that may include use of hands, legs and feet. Must have full mobility to assist in surveillance and suppression programs which involves climbing up and down steep brushy, muddy terrain to survey and to place traps and use other equipment in mosquito and tick habitat. Must have the ability and range of flexibility to reach over the head, reach below the knees and to bend over or squat down. Must be able to move quickly in fieldwork areas known to be inhabited with venomous snakes, other potentially dangerous vectors and animals. Must be able to swim and/or tread water.

**6180.7.3 Constant:** Activity or condition existing 2/3 or more of the time. Must be able to conduct field operations, to carry equipment weighing up to 50 pounds. Be able to inspect vector breeding sources and test control measures by climbing or hiking into areas to locate and spray breeding areas. Have mobility of arms to reach and legs to walk and dexterity of hands and fingers to grasp and manipulate small objects. Must be able to work in weather ranging from below freezing to above 100° Fahrenheit while wearing the appropriate personal protective equipment for eye protection, hearing protection and wear a respirator if required.

**6180.7.4 Frequently:** Activity or condition existing from 1/3 to 2/3 of the time. Lifts, carries and uses equipment and supplies weighing up to 50 pounds. Standing and sitting for extended periods while running laboratory tests and performing office duties. The position requires the frequent operation of a computer keyboard ranging in length from short to extended periods of time. Be able to operate a motor vehicle with a standard or automatic transmission.

**6180.7.5 Occasionally:** Activity or condition existing up to 1/3 of the time. Requires being able to climb over or through fences, climb ladders, squat, bend over and lift equipment up to 25 pounds above the head. Be able to climb and hike areas to survey vector habitat or test control materials in rice fields, pastures, wetlands, flood control channels and similar areas with rough terrain.

**6180.7.6 Vision:** The position requires adequate vision (which may be corrected) to read, write, drive during the day and at night and safely perform the essential functions of the job under the conditions listed above.

#### **6180.8 Post Offer Requirements**

**6180.8.1** Qualifying person must pass a post-offer physical examination for his or her ability to perform the essential functions of the job and a drug screening at District expense.

#### **6180.9 Other Information**

**6180.9.1** Anyone employed as Vector Ecologist / Fish Biologist at the time these amendments are adopted shall be considered to have met the education/experience requirements for this position.

**6180.9.2** The District Manager and the Board of Trustees reserves the right to change or amend this job description at their pleasure.

Adopted January 2015