

Air Force Officer Job Descriptions & Qualifications

43MX - MEDICAL ENTOMOLOGIST

Specialty Summary. Develops and administers medical pest management and entomologic programs, and conducts biologic surveys. Identifies and maintains surveillance of pests, disease vectors, and other animals of medical importance. Advises medical personnel on vector-borne disease epidemiology. Recommends control measures for insects and other arthropods, rodents, birds, weeds, nematodes, and other pests. Recommends procedures to ensure minimal environmental impact from pest control operations. Ensures measures to provide for occupational safety and health of pest controllers are adequate. Engages in entomologic, epidemiologic, pest management, environmental, and other related research. Related DoD Occupational Group: 6H.

Duties and Responsibilities:

Develops and administers medical entomologic programs. Formulates policies, plans and procedures for all medical entomologic aspects of military public health programs, with emphasis upon epidemiology, surveillance, evaluation, and control procedures development and recommendations. Develops medical entomologic portion of training programs for preventive medicine activities. Instructs technicians in collection, handling, identification, prevention, and control of disease-associated arthropods, other noxious or toxic animals, and poisonous plants. Advises surgeons at all levels of military capabilities and programs for prevention or control of arthropod and other animal-associated epidemics. Writes and maintains medical entomologic regulations and forms.

Develops and administers medical pest management programs. Formulates policies, plans, and procedures for USAF medical pest management programs. Ensures that pest control operations do not present unacceptable risks to human health and the environment. Ensures adequate pest control in combat situations and natural disasters. Resolves technical problems in all aspects of pest management, such as pest biology, control measures, pesticides, and pest control equipment. Formulates integrated pest management plans and provides integrated pest management technology transfer to the field. Determines pest management certification and training requirements and assists in pest management curriculum development. Acquires, manages, and reports pest management data base. Assists in the preparation and maintenance of pest management regulations and forms. Assists in managing noxious weed control programs.

Conducts surveys of animals associated with disease and recommends control measures.

Selects survey sites and modifies materials and equipment based on habits of animals concerned. Installs traps to collect animals, classifies collections, and determines the significance and medical importance of the populations. Ascertain measures required for prevention, control, or eradication of arthropod pests and vectors and other animals known to affect the health and morale of personnel. Performs studies in support of environmental impact and assessment preparation.

Conducts research in medical biology. Engages in exploratory laboratory and field studies concerning population dynamics, and distribution and host associations of arthropods and other animals of known medical or pest importance. Investigates relationship of environment of disease-associated animals. Collects, compiles, and evaluates data on to the development of animal control measures. Develops and tests effectiveness of pesticidal

compounds and formulations and their distribution systems and modes of action. Explores the physiologic effect of pesticides on insects rodents, and man. Prepares comprehensive interpretive research reports pertaining to medical biology.

Coordinates pest management and medical biologic activities with military and civilian agencies. Maintains close coordination with DoD medical entomologists, pest managers, and related professionals. Maintains liaison with municipal authorities, public health organizations, and other federal agencies concerning control of diseases or infections transmitted by animals prevalent in off-base areas to which Air Force personnel are exposed. Attends and participates in meetings of professional societies and associations regarding solutions of medical biologic problems and interchange of ideas for improved pest control equipment, methods, and techniques.

Specialty Qualifications:

Knowledge. Knowledge is mandatory of arthropod and rodent control measures and medical entomology.

Education. For entry into this specialty, a Master’s degree in entomology or Master’s degree in zoology or biology with a qualifying thesis in entomology is mandatory.

Training. None.

Experience. For award of AFSC 43M3, a minimum of 24 months of experience is mandatory in medical entomology assignment.

Other. None.

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