Indian River Mosquito Control District

Commissioner Janice Broda ♦ Commissioner Anna Kirkland ♦ Commissioner Thomas Lowther
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The Indian River Mosquito Control District is accepting resumes for the following:

UAS Pilot/Vector Ecologist

Salary Range of $68,099 to $119,612

- Paid Time Off
  Medical and Annual leave accrual
  11 Paid & 2 Floating Holidays
- Florida Retirement System (investment or pension)
- Group Life Insurance
- Medical, Dental, and Vision Insurance
- Voluntary 457(b) deferred compensation retirement plan

Position Open until filled.

Please submit your resume to Human Resources
Contact:

Human Resources

Indian River Mosquito Control District
5655 41st Street, Vero Beach, FL 32967
(772) 562-2393

hr@irmcd.org

Under Florida law, email addresses are public records. If you do not want your e-mail address released in response to a public record request, do not send electronic mail to this entity. Instead, contact this office by phone.

Indian River Mosquito Control District Position Description

UAS PILOT/VECTOR ECOLOGIST

Department: **Operations** Rev: **08/18/2026**

Reports To: Executive Director FLSA: **Exempt** Pay Grade: **11**

General Scope of Work: The UAS Pilot / Vector Ecologist performs integrated mosquito surveillance, management, and research activities using unmanned aircraft systems (UAS), field-based entomological methods, and data analysis. This position combines licensed UAS operations, mosquito biology, vector surveillance, pesticide application, field ecology, and data management to support effective and environmentally responsible mosquito control programs.

The position is responsible for planning and conducting UAS missions for mosquito management and surveillance; identifying mosquito habitats; collecting and processing entomological samples; analyzing vector populations and disease-risk indicators; and using spatial and ecological data to guide control operations.

Essential Functions (without accommodations): The listed essential functions are intended to be representative of the tasks performed within this position. The omission of an essential function does not preclude the District from assigning duties not listed herein if such functions are a logical assignment to the position.

- Assists the Aerial Supervisor with UAS flights with capabilities to work independently as needed.
- Processes and reports the data generated from drone missions to the Aerial Supervisor.
- Performs maintenance tasks and software updates for UAS to ensure operational readiness and safety as needed.
- Assists Aerial Supervisor with Crew Resource Management (CRM) and provides training for District personnel acting as Visual Observers.
- Executes sound decision-making and judgment to uphold safety and regulatory compliance.
- Investigates any available or emerging new UAS technologies that could benefit the District's mission.
- Participates with the Aerial Supervisor in interdepartmental communications necessary for the smooth and safe execution of aircraft missions.
- Attend outreach events as needed to present on UAS operations.
- Operate UAS platforms for mosquito surveillance, habitat assessment, mapping, and control operations in accordance with FAA regulations and agency policies.
- Conduct aerial applications of approved mosquito-control products using agricultural treatment UAS.
- Assist in planning flight routes, application areas, treatment parameters, and operational logistics based on mosquito surveillance data and environmental conditions.
- Perform pre-flight and post-flight inspections, equipment maintenance, calibration, and troubleshooting of UAS and treatment systems.
- Maintain accurate flight, application, maintenance, and pesticide-use records.
- Monitor weather, terrain, vegetation, and other environmental factors affecting safe and effective UAS operations.
- Assist the Aerial Supervisor in maintaining UAS standard operating procedures and assist with training other personnel in UAS operations and safety.
- Assist in coordinating aerial control activities with ground-based mosquito control operations.
- Conduct mosquito surveillance using traps, larval surveys, ovitraps, landing counts, and other established entomological methods.

- Identify mosquito species and developmental stages using morphological and/or molecular methods as appropriate.
- Evaluate mosquito abundance, distribution, immature mosquito habitat, and seasonal population trends.
- Investigate sites that house immature mosquitoes and identify environmental factors contributing to vector production.
- Collect, preserve, label, and maintain mosquito specimens and associated field data.
- Assist with mosquito-borne disease surveillance and pathogen testing programs.
- Assist in Research & Laboratory Support.
- Maintain accurate laboratory records, sample inventories, and quality-control documentation.
- Assist with research projects evaluating mosquito-control products, application methods, UAS technology, and integrated vector management strategies.
- Interpret and communicate scientific findings to support operational decision-making.
- Use GIS and spatial data to map mosquito populations, habitats, treatment areas, and disease-risk indicators.
- Integrate UAS imagery, surveillance data, environmental data, and operational records to identify priority control areas.
- Assist the GIS Specialist in maintaining databases and generating maps, reports, and statistical summaries for mosquito-control activities.
- Evaluate treatment effectiveness and make recommendations for improving control strategies.
- Prepare technical reports, presentations, and documentation for supervisors, partner agencies, and regulatory organizations.
- Conduct extensive fieldwork under varying environmental conditions.
- Assist with mosquito-control operations, including trapping, larviciding, adulticiding, source reduction, and surveillance.
- Safely handle pesticides, biological specimens, laboratory materials, and field equipment in accordance with applicable regulations.
- Participate in emergency response activities related to mosquito-borne disease outbreaks, hurricanes, flooding, or other events that may increase vector populations.
- Communicate effectively with residents, municipalities, public-health agencies, and other stakeholders regarding mosquito surveillance and control activities.
- Perform tasks of other job descriptions as deemed necessary to fulfill the District's functions.

Typical Requirements

Education/Experience

- Bachelor's degree in Entomology, Biology, Ecology, Environmental Science, Public Health, or a closely related field; Master's degree preferred (or 3 years of related experience).
- Experience operating UAS platforms, performing photogrammetry or other remote-sensing technologies.
- Experience applying treatment materials via UAS for agricultural or mosquito control purposes preferred.
- Experience with GIS, geospatial mapping, and analysis.
- Experience collecting and managing biological or environmental samples.
- Experience with mosquito-borne pathogen surveillance

Licenses and Certifications

- Possession of a valid Public Health Pest Control license from the Florida Department of Agriculture and Consumer Services. Must be maintained through employment.
- Possession of a valid Florida Driver's License. Must be maintained through employment. Must be insurable with the District's insurance carrier.
- Must obtain an Aerial Applicator License from the Florida Department of Agriculture within 12

months of obtaining position.

Knowledge, Abilities, and Skills

- Knowledge of standard equipment, tools, techniques, and procedures used in an integrated mosquito management control program.
- Knowledge of mosquito biology, ecology, surveillance, and integrated mosquito management.
- Strong computer skills and ability to learn specialized GIS, UAS, and data-analysis software, with proficiency in computerized data management, analysis and reporting.
- Ability to independently plan and execute UAS missions.
- Ability to identify common mosquito species and recognize important habitats.
- Knowledge and proficiency in computer data entry, time management, and project planning.
- Knowledge of state, federal, and local laws governing mosquito control and pesticide applications, storage, and record keeping. Knowledge of the rules for the safe handling of pesticides and equipment used for inspection and for ground and aerial larviciding treatments.
- Knowledge of calibration of various treatment application equipment.
- Possess up-to-date knowledge of aviation and drone-specific regulations from the FAA and state authorities.
- Ability to work independently while collaborating effectively with field, laboratory, and administrative personnel.
- Ability to adapt quickly to changing operational priorities and mosquito-control needs.
- Understanding of the ethical and legal considerations when performing drone operations around public and controlled airspaces.
- Knowledge of electronic and mechanical systems pertinent to drone operation and maintenance. Skilled in diagnosing and resolving technical problems.
- Proficiency in operating various types of UAS platforms, including multi-rotor and fixed-wing drones. Skilled in navigating complex flight parameters and handling emergency situations.
- Be aware of the environmental surroundings, hear heavy equipment back-up warning signals, visually inspect the surrounding area for potential hazards, and avoid wildlife.
- Ability to read maps and interpret aerial photographs to locate specified positions.
- Effectively interact and communicate with the public and District staff; communicate detailed reports and observations; follow detailed verbal instructions; read and understand chemical label instructions written in English.
- Must have good math, reading, and writing skills as well as computer, communication, and customer relations skills.
- Ability to safely work outdoors for extended periods in hot, humid, and variable weather conditions.
- Perform skilled tasks without direct supervision.
- Work flexible hours, when necessary, including nights, weekends, and holidays.
- On occasion, attend out-of-town meetings, classes, and other events, some of which

Work Environment/Physical Requirements:

The physical demands and work environment characteristics described here are representative of those that an employee must meet to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform essential functions.

- **Physical Requirements:** Moderate physical activity is required on an occasional basis, including lifting up to 50 pounds, reaching and pulling with arms, stooping, kneeling, and bending frequently, and walking for long distances, and climbing over and around natural obstacles. Excellent vision at both close and distance is frequently required.

- **Work Environment:** This position involves work in both inside and outside environmental conditions and may encounter wildlife, noise, vibration, proximity to moving parts, working in high places, exposure to chemicals, fumes, odors, and oils, and may be required to wear a respirator. The work environment varies but includes warehouses, office buildings, vehicles, mangroves, and fields. Regular exposure to all types of weather is required, as the position involves working outside and being exposed to sun, rain, mud, and insects. Frequent local travel is required. Noise level is usually low, but there is occasional exposure to moderate noise when around motors. Working with and around chemicals, which are stored, handled, applied/used, and disposed of according to exact labeling instructions, is frequently required.

I have read and understand this job description.

Signature: _____ *Date:* _____