



CITY OF NEWARK, NJ

DEPARTMENT OF WATER AND SEWER UTILITIES

Pequannock Watershed

Ecologist

Purpose:

The City of Newark, New Jersey, is seeking a skilled and dedicated Ecologist to support the management and restoration of the Pequannock Watershed's ecosystems. This position plays a critical role in ensuring the health and resilience of aquatic and terrestrial habitats, with a primary focus on protecting water quality and biodiversity. The ecologist will collaborate closely with foresters and water quality specialists to implement science-based ecological practices that enhance watershed health and sustainability.

The Community of Newark and its Pequannock Watershed

The City of Newark is a dynamic urban center made up of five distinct wards, over 25 vibrant neighborhoods, a bustling downtown, and a host of world-class cultural, recreational, and entertainment amenities. Located just 12 miles west of Midtown Manhattan, Newark serves as the largest city in New Jersey and the county seat of Essex County. With a population of over 300,000, Newark is one of the most ethnically and culturally diverse cities in the Tri-State area, boasting a Black majority population alongside significant representation from Hispanic, Latino, Asian, and Caucasian communities. Spanning 26 square miles along the Passaic River, Newark offers easy access to New York City, regional attractions, and transportation networks.

The Pequannock Watershed, a critical resource for Newark and its residents, encompasses over 35,000 acres of pristine forested land spanning multiple counties in Northern New Jersey. As the primary source of Newark's drinking water, the watershed is home to five major reservoirs—Charlotteburg, Echo Lake, Clinton, Canistear, and Oak Ridge—collectively providing millions of gallons of high-quality water daily to the City of Newark and several surrounding municipalities. Managed with a focus on ecological health, forest stewardship, and climate adaptation, the watershed plays a vital role in ensuring the sustainability of Newark's water supply and the surrounding environment. The forests and reservoirs of the Pequannock Watershed also contribute to regional biodiversity, carbon sequestration, and recreational opportunities, serving as a key natural asset for both the City and the Highlands community which hosts it.

Together, the City of Newark and the Pequannock Watershed demonstrate the interconnectedness of urban and natural systems, highlighting Newark's commitment to balancing growth with environmental stewardship.



Mayor Baraka's Agenda & City Governance Structure

Mayor Ras J. Baraka, currently serving his second four-year term, leads the City of Newark's executive branch with a commitment to the *Newark Forward* agenda. This agenda emphasizes creating an empowered, safer, collaborative, and equitable city while fostering sustainable practices that benefit both urban and natural environments.

As a critical part of the City's infrastructure, the Pequannock Watershed plays a pivotal role in achieving these goals by ensuring a reliable and high-quality drinking water supply for Newark's residents. The Forester will contribute to this vision by implementing forward-thinking forest management practices that protect water resources, promote ecological health, and support Newark's resilience to climate change.

The Mayor's administration has prioritized sustainability and innovation as key pillars of Newark's growth. Through transformative initiatives, the City is positioning itself as a leader in environmental stewardship. This role aligns with the Mayor's broader agenda to safeguard natural resources while advancing equity and opportunity for Newark's communities.

The City of Newark operates under a strong governance framework, with Mayor Baraka appointing the heads of 14 city departments, including the Department of Water and Sewer Utilities, which oversees watershed operations. Collaboration with the City Council, a nine-member legislative body elected to four-year terms, ensures alignment between legislative priorities and executive initiatives.

The Ecologist will play a crucial role in advancing the City's environmental and watershed management objectives, contributing to Newark's vision of sustainable resource stewardship and ecological resilience.

About Newark's Department of Water And Sewer Utilities

The Department of Water and Sewer Utilities is responsible for the planning, operation, maintenance, and modernization of Newark's water supply, treatment, transmission, and distribution, as well as the wastewater and stormwater collection infrastructure. With jurisdiction over the city's water system, from source to tap, the Department is committed to advancing equitable access to high-quality water services for Newark's residents, businesses, and visitors. In alignment with Mayor Ras J. Baraka's *Newark Forward* agenda, the Department supports sustainable resource management, climate adaptation, and infrastructure resilience as key pillars of its operations.

The Department oversees more than 400 million gallons of finished water storage across its reservoirs, over 35 of miles of water distribution and sewer pipelines, and state-of-the-art treatment facilities. It also manages initiatives to modernize infrastructure, improve efficiency, and protect natural resources, including innovative approaches to watershed and source water protection.

With the support of the Mayor Ras Baraka and the Director of Water and Sewer Utilities, Kareem Adeem, Newark seeks forward-thinking leaders who can help the Department achieve its mission of providing safe, reliable, and sustainable water and sewer services. This includes addressing emerging challenges such as climate change, aging infrastructure, and environmental protection to safeguard Newark's water resources for generations to come. Therefore, Newark is seeking candidates who can lead with vision, recommend strategic improvements, and implement innovative solutions to meet the evolving needs of the city and its residents.



Job Duties and Responsibilities¹

- Design and execute projects to restore and maintain the health of aquatic and terrestrial ecosystems within the Pequannock Watershed, prioritizing water quality improvement and biodiversity conservation.
- Perform ecological surveys and collect data on species populations, water quality, and habitat conditions to guide management decisions and evaluate project success.
- Conduct regular assessments of watershed ecosystems, including vegetation, wildlife, and aquatic habitats, to identify risks such as invasive species, habitat loss, or ecological imbalances.
- Collaborate with forestry, water quality and watershed management teams to ensure ecological practices, such as riparian buffer restoration and nutrient control, directly contribute to improved water quality.
- Plan, manage and contribute to projects to enhance habitats for native species, including streambank stabilization, wetland restoration, and reforestation.
- Partner with foresters to align forest and ecological management strategies, ensuring activities such as timber harvesting or invasive species control support ecosystem health.
- Stay informed of and ensure compliance with federal, state, and local environmental regulations related to endangered species, wetlands, and water quality.
- Train and oversee staff or interns involved in ecological projects, fostering their development in ecological practices and data collection techniques.
- Integrate emerging ecological science and technology into watershed management practices to address climate change impacts, invasive species, and other evolving challenges.
- Design charts, maps or graphs from raw data and work effectively with multidisciplinary teams, including foresters and water quality specialists.
- Identify, classify and inventory plant or animal populations within the area
- Design experiments, collect samples, evaluate soil suitability and topography, perform surface water analysis, conduct research and prepare grant and permit applications for projects

¹ **Disclaimer:** The duties and responsibilities outlined for this position are not exhaustive and may evolve based on the needs of the Pequannock Watershed and the Department of Water and Sewer Utilities. The forester is expected to cross-train in all aspects of watershed operations, including but not limited to reservoir management, water quality monitoring, and ecological restoration activities. This role requires a flexible and collaborative professional who is willing to step in and address departmental needs as they arise to support the overall mission of protecting Newark's water resources and ensuring operational excellence.



Knowledge, Skills and Abilities

The ideal candidate will be a highly skilled and motivated professional with expertise in ecology and a passion for protecting and restoring natural ecosystems. This individual will demonstrate strong technical skills, a collaborative mindset, and a commitment to achieving water quality and ecological health goals.

The ideal candidate will have:

- Knowledge of cartography and the principles of ecology, botany, environmental sciences, the conservation of natural and living resources
- Knowledge of ecosystem processes, habitat restoration techniques, wetlands ecology and biodiversity conservation principles, with a focus on watershed ecosystems.
- Knowledge of experimental design and sampling methods
- Proficiency in ecological survey methods, water quality monitoring, and statistical analysis for environmental data
- Effectively prioritize tasks, set goals, follow direction, communicate verbally and in written format, keep accurate records, and synthesize facts to reach a logical conclusion
- Ability to hike 5 – 10 miles through wooded and/or steep terrain and carry 30 lbs of equipment over the course of the day
- Familiarity with environmental regulations and permitting processes related to wetlands, endangered species, and water quality standards.
- Capacity to address emerging ecological challenges, such as climate impacts and invasive species, with innovative and adaptive strategies.
- Comfort and ability to work outdoors in diverse conditions and terrains, including conducting ecological surveys and supervising restoration activities.
- Skills to train and mentor staff, fostering professional growth and a collaborative work environment.



Minimum Qualifications

Bachelor's degree in Ecology, Horticulture, Environmental Science, Chemistry, Biology or a related field. A master's degree is preferred.

- **Preferred Experience:**

- At least two years of professional experience in ecological restoration, habitat management, watershed ecology and/or developing and conducting studies of natural or environmental resources, natural resource utilization or conservation planning.
- Experience with data analysis and environmental monitoring techniques.
- Supervisory or mentorship experience is a plus.

- **Licenses/Certifications:**

- Appointees will be required to possess a valid driver's license in New Jersey if vehicle operation is necessary to perform essential duties of the position.

Compensation & Benefits

The salary for this position will align with industry standards and depends on experience and qualifications. The City of Newark also offers an attractive benefits package (including insurance for health, dental, vision, and life insurance).