Green Infrastructure

Green infrastructure jobs can include a wide range of skill sets, ranging from construction, landscaping and groundskeeping, urban forestry, tree care, ecological restoration, maintenance and repair, mechanics, engineering and landscape architecture, among others. Green infrastructure is one of the most effective approaches to flood protection and helping communities stay healthy and safe, while also saving money that would've otherwise been spent to deal with stormwater damage. Additionally, green infrastructure projects add significant value for the community with diverse habitat and beautiful green spaces.

What is Green Infrastructure?

Green infrastructure utilizes plants and vegetation to: 1) absorb and filter runoff from heavy rainfall to prevent flooding and improve water quality; 2) protect natural green spaces and ecosystems; 3) help urban areas stay cool during hot summer days; 4) provide communities with opportunities for recreation and physical activities; 5) add economic value to the places we live.

Types of green infrastructure may include green roofs, bioswales, rain gardens, permeable pavement, parks, rows of trees along a street, wetlands, and more.

The Atlanta Department of Watershed Management currently has more than 1,400 employees, and almost half of those employees will be eligible for retirement in the next 5-10 years.

Overall, 4,950 new green infrastructure jobs are expected to be created in the Atlanta area by 2029.

This means that the City of Atlanta will be looking to hire new skilled workers in the coming years, which makes green infrastructure a great long-term career choice for young professionals.

EDUCATION & SKILL REQUIREMENTS

Careers may range from installer to designer to entrepreneur, where entry level positions often require a high school diploma or previous experience in landscaping. Careers focused on the design of green infrastructure such as landscape architects, horticulturalists, hydrologists, and engineers, typically require Bachelor’s or Master’s degrees and certification or accreditation programs. For career growth in green infrastructure, desirable certifications can include:

- Leadership in Energy and Environmental Design (LEED)
- Accreditation from the National Green Infrastructure Certification Program (NGICP)
- Experience with Geographic Information Systems (GIS)
LEARN MORE ABOUT GREEN INFRASTRUCTURE JOBS

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<tr>
<th>OCCUPATION</th>
<th>FUNCTION</th>
<th>PEOPLE STARTING IN THIS CAREER USUALLY HAVE</th>
<th>AVG. ATLANTA SALARY</th>
<th>AVG. U.S. SALARY</th>
<th>ACTIVITIES ON THE JOB</th>
<th>PROGRAMS THAT CAN PREPARE YOU IN ATLANTA</th>
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<tr>
<td>Landscaping and Groundskeeping Workers</td>
<td>Landscape or maintains grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following: sodding, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of concrete walk units.</td>
<td>High school diploma or equivalent No work experience 1 to 12 months on-the-job training</td>
<td>$34,110</td>
<td>$35,240</td>
<td>• Dispose of trash or waste materials. • Operate grounds maintenance equipment. • Drive trucks or other vehicles to or at work sites. • Irrigate lawns, trees, or plants. • Trim trees or other vegetation.</td>
<td>• Applied Horticulture/Horticulture Operations, General • Golf Course Operation and Grounds Management • Greenhouse Operations and Management • Geology and Geosciences • Ornamental Horticulture • Plant Nursery Operations and Management • Turf and Turfgrass Management</td>
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<tr>
<td>Septic Tank Servicers and Sewer Pipe Cleaners</td>
<td>Clean and repair septic tanks, sewer lines, or drains. May patch walls and partitions of tanks, replace damaged drain tile, or repair breaks in underground piping. Part of keeping the environment clean is cleaning up waste, whether natural or manufactured, and septic tank cleaners and sewer pipe cleaners play a key role in managing waste generated on location. In addition, natural disasters and waste can create environmental hazards and reduce efficiency of systems, leading to flooding and other negative environmental impacts.</td>
<td>High school diploma or equivalent No work experience 1 to 12 months on-the-job training</td>
<td>$37,590</td>
<td>$45,390</td>
<td>• Communicate with other construction or extraction personnel to discuss project details. • Drive trucks or truck-mounted equipment. • Inspect plumbing systems or fixtures. • Clean equipment or facilities. • Record operational or environmental data.</td>
<td>• Plumbing Technology/Plumbing Systems</td>
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<tr>
<td>Tree Trimmers and Pruners</td>
<td>Using sophisticated climbing and rigging techniques, cut away dead or excess branches from trees or shrubs to maintain right-of-way for roads, sidewalks, or utilities, or to improve appearance, health, and value of trees. Prune or treat trees or shrubs using hand saws, hand pruners, clippers, and power pruners. Works off the ground in the tree canopy and may use truck-mounted lifts.</td>
<td>High school diploma or equivalent No work experience Less than 1 month on-the-job training</td>
<td>$42,070</td>
<td>$47,450</td>
<td>• Operate grounds maintenance equipment. • Drive trucks or other vehicles to or at work sites. • Trim trees or other vegetation. • Clean equipment or supplies. • Climb ladders or vehicles to perform duties.</td>
<td>• Plant Nursery Operations and Management • Landscape and Groundskeeping • Turf and Turfgrass Management</td>
</tr>
<tr>
<td>First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers</td>
<td>Directly supervise and coordinate activities of workers engaged in landscaping or groundskeeping activities. Work may involve reviewing contracts to ascertain service, machine, and workforce requirements; answering inquiries from potential customers regarding methods, material, and price ranges; and preparing estimates according to labor, material, and machine costs.</td>
<td>High school diploma or equivalent Less than 5 years work experience No on-the-job training</td>
<td>$50,090</td>
<td>$53,270</td>
<td>• Establish work standards. • Plan employee work schedules. • Inspect buildings or grounds to determine condition. • Inspect work to ensure standards are met. • Supervise maintenance workers.</td>
<td>• Applied Horticulture/Horticulture Operations, General • Greenhouse Operations and Management • Landscaping and Groundskeeping • Ornamental Horticulture • Plant Nursery Operations and Management • Turf and Turfgrass Management</td>
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<tr>
<td>Environmental Science and Protection Technicians, Including Health</td>
<td>Environmental Technicians, Laboratory Technician, Public Health Sanitarian, Sanitarian, Water Quality Analyst, Water Quality Specialist</td>
<td>Perform laboratory and field tests to monitor the environment and investigate sources of pollution, including those that affect health, under the direction of an environmental scientist, engineer, or other specialist. May collect samples of gases, soil, water, and other materials for testing.</td>
<td>Associate’s degree No work experience No on-the-job training</td>
<td>$52,370</td>
<td>$50,550</td>
<td>• Confer with clients to exchange information. • Record research or operational data. • Prepare scientific or technical reports or presentations. • Direct natural resource management or conservation programs. • Develop environmental sustainability plans or projects.</td>
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<tr>
<td>Geoscientists, Except Hydrologists and Geographers</td>
<td>Engineering Geologist, Environmental Protection Geologist, Exploitation Geologist, Geologic Specialist, Geophysicist, Geoscientist, Hydrogeologist, Mine Geologist, Project Geologist</td>
<td>Study the composition, structure, and other physical aspects of the Earth. May use geological, physics, and mathematical knowledge in exploration for oil, gas, minerals, or underground water; or in waste disposal, land reclamation, or other environmental problems. May study the Earth’s internal composition, atmospheres, and oceans, and its magnetic, electrical, and gravitational forces. Includes mineralogists, paleontologists, stratigraphers, geologists, and seismologists.</td>
<td>Bachelor’s degree No work experience No on-the-job training</td>
<td>$64,430</td>
<td>$103,550</td>
<td>• Design research studies to obtain scientific information. • Conduct research to gain information about products or processes. • Interpret research or operational data. • Analyze geological or geographical data. • Research geological or geographical processes.</td>
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<td>Environmental Scientists and Specialists, Including Health</td>
<td>Environmental Analyst, Environmental Health and Safety Specialist, Environmental Programs Specialist, Environmental Protection Specialist, Environmental Scientist, Environmental Specialist, Hazardous Substances Specialist, Registered Environmental Health Specialist (REHS), Research Environmental Scientist</td>
<td>Conduct research or perform investigation for the purpose of identifying, abating, or eliminating sources of pollutants or hazards that affect either the environment or public health. Using knowledge of various scientific disciplines, may collect, synthesize, study report, and recommend action based on data derived from measurements or observations of air, food, soil, water, and other sources.</td>
<td>Bachelor’s degree No work experience No on-the-job training</td>
<td>$83,810</td>
<td>$81,240</td>
<td>• Develop environmental sustainability plans or projects. • Advise others about environmental management or conservation. • Complex environmental or climatological data. • Research environmental impact of industrial or development activities. • Provide technical information or assistance to public.</td>
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<td>Landscape Architects</td>
<td>AP BDC, Accredited Professional in Building Design and Construction, Architectural Engineer, Architectural Technician, Landscape Architect, Landscape Designer, Landscape Planner, Park Planner, Planner, Professional Landscape Architect (PLA)</td>
<td>Plan and design land areas for projects such as parks and other recreational facilities, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential sites.</td>
<td>Bachelor’s degree No work experience Internship/residency</td>
<td>$84,710</td>
<td>$74,980</td>
<td>• Create graphical representations of structures or landscapes. • Discuss designs or plans with clients. • Incorporate green features into the design of structures or facilities. • Inspect facilities or sites to determine if they meet specifications or standards. • Analyze physical, survey, or geographic data.</td>
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Source: CareerOneStop, U.S. Department of Labor, Employment and Training Administration (2022)
Arborists may work to cut away dead or excess branches from trees or shrubs to limit overgrowth, improve appearance, and maintain tree health; urban gardeners add value to their communities by growing plants that improve air, water, and soil quality, keep cities cool, and provide local, healthy food (Source: Matt Boman/Flickr, U.S. Department of Agriculture).

**RESOURCES TO LEARN MORE**

- Explore occupation profiles including information on salaries, required qualifications, training opportunities, and much more on the [Career One Stop](https://www.careeronestop.org) website and [O*NET Online](https://www.onetonline.org) website. Career One Stop also presents a summary of other common green infrastructure jobs, their respective education and training requirements, and any opportunities for training within your community. You can also click around the Certification Finder to explore certification programs and resources that will help you boost your qualifications for a green infrastructure job.

- Learn about apprenticeships and other pathways for green infrastructure careers on [Apprenticeship.gov](https://www.apprenticeship.gov), including guidance on where to find and how to access these opportunities.

- **Staying Green and Growing Jobs:** Green Infrastructure Operations and Maintenance as Career Pathway Stepping Stones ([Green for All and American Rivers, 2016](https://www.greenforall.org/))

- The [Interlocking Concrete Pavement Institute](https://www.icpi.org) continues to serve as the growing segmental concrete pavement industry’s information, technical, education, and workforce development resource.

- Background on the [Green Infrastructure Worker](https://www.workforwater.org) ([Work for Water](https://www.workforwater.org))

- Learn about the energy policies that are contributing to green infrastructure job growth in Atlanta:
  - **Strategic Plan 2022: A One Water Vision** ([City of Atlanta Department of Watershed Management, 2022](https://www.atlanta.gov/departments/water/strategic_plan/strategic_plan_2022)
  - **Green Infrastructure Strategic Action Plan** ([City of Atlanta Department of Watershed Management, 2018](https://www.atlanta.gov/departments/water/strategic_plan/strategic_plan_2018))

*This factsheet is part of a collaborative effort between Smart Growth America (SGA) and the Partnership for Southern Equity (PSE) to support Atlanta’s current and future workers’ participation in the growing clean economy. The factsheets include introductory information on jobs within the following clean economy sectors: (1) energy efficiency, (2) solar energy, and (3) green infrastructure.*