

A silhouette of a person using a chainsaw to trim a tree.

EXPLORING THE GREEN INFRASTRUCTURE WORKFORCE

A silhouette of a person using a shovel to plant a tree.

A NATUREWORKS ISSUE BRIEF—EXECUTIVE SUMMARY

Public interest in making cities more environmentally resilient and more pleasant places to live has increased investments in “green infrastructure” initiatives across the country. Studies have documented their ecological, economic, community, health, and other public benefits. But until now, there has been little examination of the workforce needed to install and maintain green infrastructure systems. There is particular interest in understanding the potential to provide employment opportunities for low-income residents and other underserved populations of urban areas.

This issue brief attempts to answer key questions about current and emerging workforce trends related to the rise in green infrastructure activities. It summarizes the results of research conducted by Jobs for the Future (JFF) as part of NatureWORKS, a national initiative to understand the jobs, careers, skills, credentials, and potential of the U.S. green infrastructure workforce. The study was funded by the U.S. Forest Service’s National Urban and Community Forestry Grant Program as recommended by the National Urban and Community Forestry Advisory Council, NUCFAC.

Research Focus

As green infrastructure planning, design, and construction have evolved, the term “green infrastructure” has come to mean somewhat different things to different stakeholders. For the purposes of this research, JFF developed a definition that encompasses both traditional types of green infrastructure (such as parks, urban forests, greenways, and other forms of “nature in the city”) and more recent innovations in stormwater management (such as rain gardens, green roofs, pervious pavement, bioswales, planter boxes, rainwater harvesting, and more).

JFF’s research for this report focused on occupations involved in the direct installation, maintenance, and inspection (IMI) of green infrastructure (GI) systems and their first-line supervisors. Examples are forest and conservation workers, roofers, tree trimmers, and landscaping workers. These jobs provide entry-level opportunities for people with little or no postsecondary education or training.

Key Findings

- 1. The workforce devoted to GI-IMI activities is relatively small.** GI-IMI work is generally carried out by individuals who comprise a small proportion of broader, traditional occupation groups, such as construction, landscaping, and water quality protection workers, and who often spend most of their time on traditional industry activities. In fact, it is not yet possible to identify any jobs in the 30 occupations NatureWORKS studied that are focused exclusively on GI-IMI tasks. The overall proportion of workers involved in GI-IMI work across the 30 occupations is about 6 percent of total employment for these jobs—equating to roughly 239,000 individuals nationwide.

- 2. The barriers to entry are low and GI-IMI represents a valuable opportunity for people seeking good entry-level jobs.** Typically, the only educational requirement is high school completion. Wages are in line with other entry-level positions; the median wage across the 30 occupations involved in GI-IMI work is \$15.78 per hour. Further, there are opportunities for career growth within each of the industries that employ green infrastructure workers, particularly in management and business ownership.
- 3. The 30 occupations involved in GI-IMI work project good growth through 2020, but the ability of GI initiatives to spur job creation hasn't yet reached the level that many advocates had hoped.** The evolution of some portions of the GI workforce is still in its early stages—specifically, people who work in green stormwater management, such as those who construct and maintain rain gardens or green roofs.
- 4. As the number and scope of GI initiatives increases, opportunities for developing distinct green infrastructure jobs will increase as well.** Already some contractors have decided to specialize in green infrastructure activity, such as installation of pervious pavement or green roofs, and are building niche businesses.
- 5. Efforts to create a national GI certification program may help upskill workers and professionalize the workforce.** Existing GI-related certifications and credentials have not been adopted broadly; they focus on a wide variety of skills and have varying levels of industry involvement.

Recommendations

As the field of green infrastructure continues to emerge and evolve, there are clear opportunities for stakeholders to promote the development of a strong GI-IMI workforce. The brief recommends specific steps for those interested in expanding GI-IMI job opportunities, including:

- ▶ **The green infrastructure community at large** would benefit from more structured connections and collaboration around current and future workforce opportunities in local labor markets. In many regions, the public workforce development system is well positioned to lead such efforts because of its existing cross-sector relationships and ability to convene diverse stakeholders. The philanthropic community can play a key role in leading these efforts at both the national and local levels.
- ▶ **Education and training providers** can play a critical role in preparing young people and adults for careers in sectors that install, maintain, and inspect GI systems. They also can provide insight into the specific on-ramps and advancement opportunities related to these jobs—and the cross-sector skills that can enable GI workers to advance within their respective industries and in their careers, more broadly.
- ▶ **Employers**—both private employers and the municipal governments that employ workers who contribute to GI projects—can play a key role in helping to professionalize and diversify the green infrastructure workforce. There is an important opportunity for municipal governments to lead the way by setting strong positive examples for other employers through their hiring practices.
- ▶ **Policymakers** can expand both the knowledge and implementation of green infrastructure at the county, municipal, and regional levels. By setting goals around the percentage of city contractors with green infrastructure credentials and for the involvement of minority and women-owned businesses, policymakers can also help professionalize and diversify the GI-IMI workforce.