Industry Sector Opportunities: Women Working in Environmental Protection
Fact Sheet

Environmental protection is a key industry in the green economy. It encompasses a variety of activities that encourage healthy, sustainable places: promoting the efficient use of resources, addressing changes in Earth's climate, cleaning up old industrial sites, eliminating the spread of contaminants into the air and waterways, etc. This well-established and growing industry offers a wide range of occupational opportunities and career paths for women with differing interests and skill sets.

A Closer Look at the Sector
The environmental protection sector covers activities related to the following areas:

- **Air and Water Quality:** This work includes improving and maintaining the quality of air and water through ensuring compliance with state and federal guidelines, adherence to proper permitting processes, and strategic planning for development projects.
- **Climate Change Adaptation:** These activities encompass the work of both public and private organizations to better understand, respond to, and mitigate global climate change. The work includes modifying operations, laws, and public policies to reduce greenhouse gas emissions, promote sustainable agriculture, and improve water resource management.
- **Environmental Justice:** Organizations focused on environmental justice seek to mitigate disproportionately high adverse health or environmental effects of policies or programs on low-income people and people of color, and to prevent discrimination in federally funded programs dealing with health or the environment. This work often connects to community development and political activism.
- **Environmental Remediation:** Environmental remediation generally refers to the removal of waste and contaminants from the soil, air, or water. It includes cleaning up postindustrial brownfields and Superfund sites, removing asbestos from existing construction, and waste water treatment.
- **Forestry and Wildlife Conservation:** A more traditional focus of environmental protection, conservation includes habitat protection and restoration and resource management to maintain ecosystem diversity.

**Market Drivers.** Government investments in preservation, conservation, remediation, research, and other aspects of environmental protection are a major support for the industry and its work. The United States has many laws, such as the Clean Air Act (passed 1970, amended 1990), the Endangered Species Act (1973), and the Pollution Prevention Act (1990), that require monitoring and supporting such activities. The U.S. Environmental Protection Agency (EPA), which administers these laws, has allocated over $7 billion in funds through the American Recovery and Reinvestment Act for clean diesel technology, waterways improvements, job training for site remediation, and accelerated cleanup efforts in a variety of locations—creating hundreds of jobs in the process. States also support efforts to improve environmental conditions. For example, Washington and North Carolina have State Environmental Policy Acts that ensure that the environmental impacts of development projects, such as the construction of roadways or public structures, are considered before the projects begin.

In addition to these regulatory drivers for environmental protection, there is also strong public appreciation of the industry’s activities. A 2007 study showed that 48 percent of the Americans surveyed believed that climate change does or will in the near future have serious impacts. Gallup has conducted a poll about environmental protection and economic growth since 1984. In the majority of survey waves, it found that Americans strongly favored the environment as a priority over economic development. Some studies have found that protecting the environment may not hinder economic growth or the health of the economy in general. For example, findings from an in-depth investigation by Bezdak, Wendling, and DiPerna showed a positive impact of environmental protection efforts on employment levels.

**Labor Needs.** There are a diversity of occupations within the environmental protection sector, including legal professionals, enforcement officers, scientists, engineers, cleanup workers, and many others. The major industries employing environmental
Due to a current lack of a consistent, national means of documenting jobs in the green economy, it is difficult to provide an exact number of environmental protection workers or to assess the workforce needs for the industry. However, the U.S. Bureau of Labor Statistics (BLS) found that based on May 2008 data there were over 250,000 workers in eight environmental occupations, including forestry, conservation, and environmental science. This covers just a few of the many jobs in this industry. The Occupational Information Network (O*NET) lists 29 occupational codes within its environmental protection category, totaling over 3 million employees. O*NET projects growth of 13 of those 29 occupations by 14 to 20 percent or more by 2018. Demand for climate change analysts, for example, is expected to grow by approximately 20 percent by 2018.

There are environmental protection workers all across the country. The nation’s rich variety of natural resources and the need to provide healthy living environments for humans mean that rural, suburban, and urban areas offer jobs in this industry. According to the BLS, in 2009, the most environmental protection workers were employed in California, followed by Texas, Florida, Wisconsin, and Minnesota (depending on the specific professions included).

**Career Options**

**Career Pathways.** Careers in environmental protection generally require technical skills and subject-matter knowledge in science, technology, engineering, and math (STEM). Many positions require higher education; however, there are also opportunities for those with less education and training. For instance, an environmental scientist/specialist typically requires a bachelor’s degree in biology or a similar subject, while forest or conservation workers typically require only a high school diploma. Oftentimes, regardless of initial credential required, on-the-job training is necessary. Many of the jobs in this industry require working outdoors, but others involve working in a laboratory, office, or education facility.

The industry offers career paths for workers with a diverse set of interests, abilities, and credentials. For example, a site cleanup technician may advance to become a project manager and may go on to found a consulting business. A meteorologist might begin her career by weather forecasting and then move on to become an academic, studying how the weather affects the dispersal of air pollution. Environmental protection also offers opportunities for individuals to cross industries, building upon past experience. An attorney, for instance, might specialize in litigation or advocacy related to environmental justice. A health care professional might become a community educator, focusing on the health effects of exposure to lead and pollutants. With wages ranging from approximately $30,000 to over $80,000 per year, the industry also presents excellent opportunities for economic self-sufficiency.

**Role of Workforce Professionals, Training and Education Providers, and Advocates**

Those in workforce development can assist potential environmental protection workers in the following ways:

- Keep current about changing labor market data, as well as new and emerging green occupations.
- Work closely with employers in the area to understand their hiring needs and their plans for growth.
- Provide a range of green career options for job hunters that are appropriate for their current or enhanced skills and education levels.
- Work with community partners, employers, and women job seekers to address the obstacles that may arise for women before and during employment in a non-traditional career, and to dispel gender myths and stereotypes.
- Evaluate the income needs of an individual to develop a career progression that will lead to self-sufficiency and economic security.
- Link efforts with Small Business Development Centers, women’s centers, and other economic development entities to meet the needs of potential environmental protection entrepreneurs or future business owners.
End Notes


vii Ibid. 5-6.

viii O*NET Online. “Browse by Green Economy Sector: Environmental Protection.” http://online.onetcenter.org/find/green?n=5&g=Go

ix Ibid. “Summary Report for: 19-2041.01 - Climate Change Analysts.” http://online.onetcenter.org/link/summary/19-2041.01


xi Ibid. “Summary Report for: 19-2041.00 - Environmental Scientists and Specialists, Including Health.” http://online.onetcenter.org/link/summary/19-2041.00#Education

xii Ibid. “Summary Report for: 45-4011.00 - Forest and Conservation Workers.” http://online.onetcenter.org/link/summary/45-4011.00


To listen to the teleconference that accompanies this fact sheet, and for further information about “A Woman’s Guide to Green Jobs” and other Women’s Bureau initiatives supporting green jobs, including Women and Green Jobs Roundtables and green training projects, please visit the USDOL Women’s Bureau Web site at: http://www.dol.gov/wb/.
Additional Resources
The list below provides additional resources. The list is not exhaustive, and inclusion on this list does not represent an endorsement of any institution or program. As Web links can change, further Internet searches may be necessary to find the latest information.

Green Jobs and Labor Market Information

Government Resources
- National Center for O*NET Development. The Center researched green economic sectors, demand occupations, enhanced skills occupations, and new and emerging occupations, which have been added to the O*NET system. [http://www.onetcenter.org/green.html](http://www.onetcenter.org/green.html) and [http://online.onetcenter.org/help/bright/](http://online.onetcenter.org/help/bright/)
- Career Information Delivery System (CIDS). State systems for information on employment opportunities. CIDS may be found at community colleges, universities, or employment offices.
- CareerOneStop. This site provides an outline of green careers. [http://www.careeronestop.org/GreenCareers/GreenCareers.aspx](http://www.careeronestop.org/GreenCareers/GreenCareers.aspx)
- Green Jobs, Workforce3One Communities. This site compiles an ongoing list of training programs, evaluations, and other green economy information. [http://greenjobs.workforce3one.org/page/resources/1000916955604530872](http://greenjobs.workforce3one.org/page/resources/1000916955604530872)
- U.S. Department of Labor, Bureau of Labor Statistics is working with agencies across the Department to produce green jobs data. See: [http://www.bls.gov/green/home.htm](http://www.bls.gov/green/home.htm)

Non-Government Resources

Non-Government Resources
- Small Business Environmental Home Page. A resource for small businesses to learn about a variety of environmental topics. [http://www.smallbiz-enviroweb.org/default.aspx](http://www.smallbiz-enviroweb.org/default.aspx)

Industry and U.S. Environmental Policy Information

Government Resources
- U.S. Environmental Protection Agency. Information on careers with EPA, current research, regulations, and environmental concerns. [http://www.epa.gov/](http://www.epa.gov/)
- EPA’s Office of Superfund Remediation and Technology Innovation, Technology Innovation and Field Services Division. This site provides information on projects underway, training opportunities, industry-specific news and information, and vendor opportunities. [http://www.clu-in.org/](http://www.clu-in.org/)

Non-Government Resources
- Green For All. This site offers a collection of news and industry information for policymakers and job seekers. [http://www.greenforall.org/](http://www.greenforall.org/)

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