

## **Environmental Engineering**

**Education and Training:** College

**Salary:** Median—\$66,480 per year

**Employment Outlook:** Excellent

### **Definition and Nature of the Work**

Environmental engineers strive to solve environmental problems such as water and air pollution, waste disposal, and public health issues. As engineers, they use advanced principles of biology, chemistry, and environmental science to protect wildlife and natural resources as well as human life.

Environmental engineers are qualified to work on a variety of serious environmental issues. For example, they can design municipal water supply and industrial wastewater treatment systems; assess recycling and reclamation processes; conduct hazardous waste management studies; and consult on the environmental effects of various construction projects. They may be required to inspect and evaluate industrial and municipal facilities and programs to assess their compliance with environmental regulations. They may work with environmental scientists, planners, hazardous waste technicians, engineers, and other specialists to address environmental problems.

On a larger scale, environmental engineers work on global issues such as the problem of acid rain, global warming, air and water pollution, and ozone depletion. They may prepare, review, and revise environmental regulations and recommendation reports and monitor the progress of certain environmental programs. They also advise industries and government agencies about the efficacy of environmental policies and standards.

The majority of environmental engineers work for architectural and engineering firms and consult on the environmental impact of large construction projects. The second-largest concentration of environmental engineers work for state and local governments.

### **Education and Training Requirements**

A bachelor's degree in engineering is required for any position in environmental engineering. Colleges and universities that offer bachelor's degrees in environmental engineering can be found on the Association of Environmental Engineering and Science Professors Web site (<http://www.aeesp.org>). They also list master's and doctoral programs in environmental engineering, or in environmental science and technology.

Like other engineers, environmental engineers must be licensed. The licensed engineer is then known as a professional engineer (PE). To be licensed, an engineer must have a degree from an accredited engineering program, four years of relevant work experience, and a passing score on a state examination. The first part of the examination, however, can be taken right after graduation from college. Once passing this exam, the engineer is then called an engineer in training (EIT) or engineer intern (EI). The American Academy of Environmental Engineers offers a specialty certification program in this field, which requires not only a bachelor's degree in environmental engineering or a related engineering specialty, but a professional engineer's license and eight years of advanced education in environmental engineering.

Environmental engineers must be knowledgeable in various types of computer programs, such as analytical and scientific software, compliance software, and graphic imaging and CAD technology.

### **Getting the Job**

Because this field is in great demand, there are more jobs than qualified applicants. There should be numerous opportunities found at job fairs, Internet job sites, and professional job placement agencies. College job placement offices can also provide leads on employment opportunities.

### **Advancement Possibilities and Employment Outlook**

As environmental engineers gain experience, they can become responsible for larger and more important projects. They can also supervise other environmental engineers or technicians on large-scale projects.

The job outlook for environmental engineers is very favorable, as growth for this field is expected to increase much faster than the average through 2014. The demand will increase because businesses need to comply with stringent and complicated environmental regulations. Companies will also want to formulate a plan to prevent future environmental problems, which will further spur demand for qualified environmental engineers.

### **Working Conditions**

Environmental engineers generally work a standard forty-hour week in comfortable offices, laboratories, or industrial plants. They may be required to travel and work onsite if they are working on a particular project. Dealing with serious environmental issues that affect the health of humans and animals can result in stress.

### **Earnings and Benefits**

The median annual salary for environmental engineers is \$66,480, according to the Bureau of Labor Statistics. The starting salary for an environmental engineer with a bachelor's degree is \$47,384. The top engineers in the field can make more than \$100,000 per year.

Because of the high demand for environmental engineers, benefit packages for this profession can be very generous. Health, dental, and life insurance, 401K plans, and paid vacations can be expected for any position in this field.

### **Where to Go for More Information**

American Academy of Environmental Engineers  
130 Holiday Ct., Ste. 100  
Annapolis, MD 21401  
(410) 266-3311  
<http://www.aaee.net>

Association of Environmental Engineering and Science Professors  
2303 Naples Ct.  
Champaign, IL 61822  
(217) 398-6969  
<http://www.aeesp.org>

(<http://careers.stateuniversity.com/pages/52/Environmental-Engineer.html>)