

Environmental Engineers

SOC: 17-2081 • Career Profile Report

■ Key Facts

\$104,170

Median Salary

39,400

Employment

+4.0%

Growth Rate

■ Requirements & Salary Range

Education: Bachelor's degree

■ Automation Risk Assessment

Low Risk - 17.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■■ Work-Life Balance

6.6/10 - Good work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	8.2/10	Investigative	8.8/10
Artistic	6.4/10	Social	5.2/10
Enterprising	5.8/10	Conventional	6.6/10

■ Top Skills Required

Communication skills, Creativity, Interpersonal skills, Math skills, Problem-solving skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Environmental Engineers are problem-solving professionals who apply **engineering principles to protect human health and the natural environment**. They design systems and solutions that address pollution, waste management, water quality, air emissions, and sustainability challenges. By combining engineering, science, and environmental policy, they help communities and industries reduce environmental impact while meeting regulatory and safety standards.

This career is well suited for individuals who enjoy technical problem-solving, applied science, and creating practical solutions to complex environmental challenges.

What Do Environmental Engineers Do?

Environmental engineers develop and implement engineering solutions to environmental problems.

Common responsibilities include:

- Designing water and wastewater treatment systems
- Developing air pollution control technologies
- Planning solid and hazardous waste management systems
- Conducting environmental impact and risk assessments
- Monitoring environmental systems and performance data
- Ensuring compliance with environmental laws and regulations
- Preparing technical reports and engineering plans

Major Areas of Environmental Engineering

Environmental engineers often specialize in one or more focus areas:

- Water and Wastewater Engineering: Treating drinking water and managing sewage systems.
- Air Quality and Emissions Control: Reducing industrial and transportation pollution.
- Solid and Hazardous Waste Management: Safely handling and disposing of waste materials.
- Environmental Remediation: Cleaning up contaminated soil and groundwater.
- Sustainability and Green Engineering: Designing environmentally efficient systems and processes.

Skills and Abilities Needed

Environmental engineers combine technical engineering skills with environmental awareness.

Core Professional Skills

Personal Qualities That Matter

Education and Licensing Pathway

Becoming an environmental engineer typically requires formal engineering education:

- Bachelor's Degree (required): Environmental engineering or a related engineering field
- Engineering Fundamentals Exam (FE): First step toward professional licensure
- Professional Engineer (PE) License (often required): For advanced responsibility and leadership roles
- Master's Degree (optional): Specialization or career advancement
- Continuing Education: Required to maintain licensure and stay current

Where Do Environmental Engineers Work?

Environmental engineers are employed across public and private sectors:

- Engineering and Environmental Consulting Firms
- Government and Regulatory Agencies
- Manufacturing and Industrial Companies

- Utilities and Water Authorities
- Construction and Infrastructure Projects
- Research Institutions and Universities

Work often combines office-based design with field inspections and site visits.

How Much Do Environmental Engineers Earn?

Earnings vary by education, licensure, and industry:

- Entry-Level Engineers: Typically earn competitive engineering salaries
- Licensed or Experienced Engineers: Often earn higher compensation
- Senior or Project Engineers: May earn more with leadership responsibilities

Compensation commonly includes benefits and professional development support.

Is This Career Difficult?

Environmental engineering is intellectually demanding and responsibility-heavy. Engineers must balance technical constraints, regulatory requirements, environmental protection, and cost considerations. The challenge lies in designing solutions that are both environmentally effective and economically feasible.

Who Should Consider Becoming an Environmental Engineer?

This career may be a strong fit if you:

- Enjoy math, science, and engineering problem-solving
- Want to protect public health and the environment
- Are interested in infrastructure and sustainability
- Prefer applied, real-world engineering work
- Want a stable and impactful engineering career

How to Prepare Early

- Take advanced math, chemistry, physics, and environmental science courses
- Learn basic engineering and data analysis tools
- Participate in environmental or engineering clubs
- Seek internships or co-op programs in engineering firms
- Explore accredited environmental engineering degree programs

Environmental engineers turn science into solutions—designing systems that safeguard water, air, and land while enabling communities and industries to grow responsibly and sustainably in a changing world.