

Environmental Science and Protection Technicians

SOC: 19-4042 • Career Profile Report

■ Key Facts

\$49,490

Median Salary

40,400

Employment

+4.0%

Growth Rate

■ Requirements & Salary Range

Education: Associate's degree

■ Automation Risk Assessment

Low Risk - 8.0% 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

6.3/10 - Good work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	6.2/10	Investigative	9.4/10
Artistic	5.6/10	Social	6.4/10
Enterprising	4.8/10	Conventional	6.4/10

■ Top Skills Required

Analytical skills, Attention to detail, Communication skills, Interpersonal skills, Problem-solving skills

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Environmental Science and Protection Technicians monitor, test, and protect **natural resources and the environment**. They collect samples, conduct analyses, and ensure compliance with environmental regulations. Their work is critical in pollution control, public health, conservation, and regulatory compliance.

This career is well suited for individuals who enjoy science, fieldwork, problem-solving, and environmental stewardship.

What Do Environmental Science and Protection Technicians Do?

These professionals collect data, conduct tests, and assist in environmental monitoring and protection programs.

Common responsibilities include:

- Collecting air, water, soil, and biological samples for analysis
- Conducting laboratory or field tests to evaluate pollutants or environmental hazards
- Monitoring compliance with environmental laws, standards, and regulations
- Maintaining records, reports, and documentation of findings
- Assisting in environmental impact assessments and remediation projects
- Operating and calibrating environmental monitoring equipment
- Collaborating with scientists, engineers, and regulatory agencies

Key Areas of Environmental Science and Protection

Technicians may focus on specific environments, hazards, or regulatory areas:

- Water and Air Quality Monitoring: Testing and reporting on pollution levels
- Soil and Waste Analysis: Evaluating contamination and assisting remediation
- Environmental Compliance: Ensuring organizations meet local, state, and federal regulations
- Hazardous Materials Handling: Monitoring and managing toxic substances safely
- Field Investigations and Research Support: Assisting scientists in environmental studies and data collection

Skills and Abilities Needed

These professionals combine technical, analytical, and observational skills.

Core Professional Skills

Personal Qualities That Matter

Education and Career Pathway

This role typically requires formal education and technical training:

- Associate or Bachelor's Degree: Environmental science, environmental technology, or related field
- On-the-Job Training: Gaining experience in field sampling, laboratory techniques, and equipment operation
- Certifications (optional): Environmental monitoring, hazardous materials handling, or safety certifications
- Continuing Education: Staying current with environmental laws, monitoring techniques, and technologies
- Specialized Training (optional): Focus on air, water, or soil quality monitoring and analysis

Where Do Environmental Science and Protection Technicians Work?

They are employed in organizations that monitor, manage, and protect the environment:

- Government and Regulatory Agencies
- Environmental Consulting Firms
- Research Institutions and Laboratories

- Manufacturing and Industrial Companies
- Conservation and Nonprofit Organizations

Work environments include field sites, laboratories, industrial plants, and offices.

Is This Career Difficult?

This career requires attention to detail, technical expertise, and problem-solving. Technicians must handle environmental samples carefully, comply with regulations, and work in varied field conditions.

Who Should Consider This Career?

This career may be a strong fit if you:

- Enjoy science, research, and fieldwork
- Are detail-oriented and analytical
- Can work independently or collaboratively
- Are interested in environmental protection and public health
- Want a career supporting sustainability and regulatory compliance

How to Prepare Early

- Take courses in biology, chemistry, environmental science, and earth science
- Participate in internships, volunteer work, or field studies in environmental monitoring
- Develop technical skills in sampling, testing, and data analysis
- Explore degree programs or certifications in environmental science or technology
- Gain hands-on experience with laboratory and field equipment

Environmental science and protection technicians monitor, test, and protect natural resources, ensuring compliance with regulations and supporting public health and environmental sustainability.

*Generated by StartRight • Data from U.S. Bureau of Labor Statistics & O*NET*

Source: <https://www.bls.gov/ooh/life-physical-and-social-science/environmental-science-and-protection-technicians.htm>