ENVIRONMENTAL SCIENCE

Environmental Science is a course of study that combines the areas of biological sciences and geography. Environmental scientists are concerned with the problem of natural and social environments.

TYPICAL SKILLS

The top four responses to a recent survey, which asked professionals to list "things students can do to get a job were:

- Develop public speaking skills, computer (keyboarding) skills, and networking skills.
- Compete with campus debate/forensics teams or Toastmasters.
- Get involved with the campus radio/TV stations or newspaper.
- Work as a paraprofessional in campus offices such as admissions, orientation, leadership, career services, health services or public information.

Students who can read, write, learn and think well and work with others will have an advantage over other applicants in a job pool as will those with a variety of experiences in the world of work. Although you may major in an area, you have learned a variety of skills that can address more than one specific field of interest. Your future occupation may relate more to your personal career interests, work values and transferable skills than any specific academic major. Bear in mind that the more willing graduates are to relocate, the more job opportunities they will have.

TYPICAL JOBS & CAREERS

AEROSPACE ENGINEER
Aeronautical engineers provide technical support and approved technical data for use in the repair, maintenance and modification of aircraft.

AGRONOMIST
An expert in soil management and field-crop production.

AIR & WATER QUALITY ANALYST
Environmental scientists analyze air and water quality to increase our understanding of the environment, and provide advice to ensure that harmful effects (pollution) on the environment are avoided, minimized and remedied.

AIR QUALITY CONTROLER
Environmental scientists carry out studies to increase our understanding of the environment, and provide advice to ensure that harmful effects on the environment are avoided, minimized and remedied.

ALTERNATIVE ENERGY DEVELOPER
Scientist or other professional who looks for ways to produce an economical and viable source of energy other than fossil fuels.

AQUA CULTURIST
Marine farm workers assist in operating marine or freshwater farms. This involves growing and harvesting fish, mussels, oysters or other shellfish in specially prepared areas.

AQUATIC BIOLOGIST
Marine biologists study plants and animals that live in sea water, and their relationships with each other and their environment.

BIOLOGIST
Biologist study the blood, breathing, circulation, digestion, excretion, hormone and skeletal muscle systems, body organs and the brain of animals and the structure and composition of plants in order to develop/determine productive uses.

BIO-STATISTICIAN
Provides statistical consulting services to clients to assist in model building and model validation for areas ranging from finance to marketing, medicine to sociology and apply statistical analyses and translate their results into clear and meaningful conclusions.

BIOTECHNOLOGIST
Modify the genes of living organisms to create or improve products from raw materials such as food or pharmaceuticals. They also develop factory processes to reduce pollution or treat waste products.

BOTANIST/HORTICULTURIST
Botanists research and examine plants and study the genetics, molecular biology and community relationships of marine and terrestrial plants and the effect the environment has on them. Horticultural consultants advise growers and organizations about topics like the technical, business, financial, social and environmental aspects of horticulture production and how to improve the quantity and quality of produce.

CAPTIVE ANIMINAL BIOLOGIST
*S*tudy animals and wildlife in captivity and the effect that captivity has on behavior, diseases, and life processes.

COMMUNITY RELATIONS SPECIALIST
Community relations specialists serve as advocates for businesses, governments, universities, hospitals, schools, and other organizations, and build and maintain positive liaisons between a community and the outside world.

CONSERVATION ADMINISTRATOR
Workers in this classification series are principally occupied in planning and promoting soil and water conservation programs and supervising the administrative functions of the programs. Managers serve as the principal administrative officer for a Soil Conservation District Board of Supervisors.

CONSTRUCTION MANAGER
Construction site managers organize and supervise the building and repair of projects such as roads, bridges, large and small buildings, tunnels, dams and wharves.

CORPORATE LAWYER
Corporate/government lawyers carry out or manage the legal work for a business or government organization.

EARTH SCIENTIST
Geologists study the structure and history of the Earth and earth processes. They also give advice on the development and use of the Earth's resources and land.

ECOLOGIST
Ecologists study the relationships among and between organisms and their environments, and the effects external influences such as population size and pollutants may have on these relationships.

ENERGY ANALYST
Assist engineering consultants with compilation of oil and gas energy information using statistical research analysis. They research energy areas for pricing forecast, gather, organize and analyze energy and related economic data, and prepare graphs, flowcharts and energy map presentations.

ENTOMOLOGIST
Study the breeding, physiology, and management of crops and use genetic engineering to develop crops resistant to pests and drought: Conduct research to develop new technologies to control/eliminate pests in infested areas and prevent their spread, as well as environmentally compatible technologies; Conduct research or engage in oversight activities aimed at halting the spread of insect-borne disease.

ENVIRONMENTAL EDUCATOR
Education officers research, plan and teach education programs to early childhood, primary or secondary school groups, tertiary groups and members of the public within museums, zoos, regional councils, non-profit organizations or large companies This person educates the public through a variety of ways about environmental issues including dangers and conservation.

ENVIRONMENTAL CONSULTANT
Environmental scientists carry out studies to increase our understanding of the environment, and provide advice to ensure that harmful effects on the environment are avoided, minimized and remedied.

ENVIRONMENTAL COMPLIANCE OFFICER
Ensures that regulations relating to the environment are communicated and carried out.

ENVIRONMENTAL EDUCATOR
Educates individuals and organizations regarding environmental issues and compliance procedures.

ENVIRONMENTAL ENGINEER
Environmental engineers plan, design and supervise the repair and construction of public infrastructure systems such as water and sewage treatment plants, landfills, storm water and river control works.

ENVIRONMENTAL LAWYER
Lawyer who specializes in environmental issues.

ENVIRONMENTAL LOBBYIEST
Lobbies governments for/against passage of bills dealing with environmental issues.

ENVIRONMENTAL PLANNER
Planners develop and administer plans that guide and control the physical, environmental and to some extent the social and economic development of urban and rural areas.

ENVIRONMENTAL POLICY ANALYST
Planners develop and administer plans that guide and control the physical, environmental and to some extent the social and economic development of urban and rural areas.

EXPLORATION GEOLOGISTS
Geologists study the structure and history of the Earth and earth processes. They also give advice on the development and use of the Earth's resources and land. Exploration geologists are particularly interest in finding mineable oil and gas and other mineral deposits.

FISHERIES & WILDLIFE MANAGER
Fisheries managers usually do not perform production activities; instead they hire and supervise farm workers, who perform most of the daily production tasks associated with raising fish for restocking or commercial purposes. They also establish output goals; determine financial constraints; monitor production and marketing; hire, assign, and supervise workers; determine crop transportation and storage requirements; and oversee maintenance of the property and equipment; maintain records for management and tax purposes.

FORESTER
Forest managers are responsible for the overall activities of forest silviculture and/or harvesting. They may work for forest management companies or for companies that own forests.

FUNDRAISER
Environmental professional who raises funds for specific projects by educating the public and enlisting their financial support.

GEOCHEMIST
Geochemists study the nature and distribution of chemical elements in ground water and Earth materials.

GRASS-ROOTS COORDINATOR
Responsible for coordinating efforts to educate members of specific organization/associations about key federal and state legislative issues and providing political education designed to effectively communicate and build relationships with elected officials.

GROUND WATER ENGINEER
Water and soil engineers manage and design irrigation, flood and erosion control systems, dams, foundations, earth-retaining structures and water conservation projects. They also analyze natural and seismic (earthquake) hazards and land slips.

HAZARDOUS MATERIALS SPECIALIST
Responsible for safe installation/removal/handling of hazardous materials such as asbestos, chemicals and toxins.

HYDROLOGIST
Manage and design irrigation, flood and erosion control systems, dams, foundations, earth-retaining structures and water conservation projects. Analyzes natural and seismic (earthquake) hazards and land slips.

INDUSTRIAL HYGENIST
Identifies, evaluates and controls health hazards in the workplace by minimizing exposure to chemical, biological, and physical hazards.

LAKE & RESERVOIR MANAGER
Hydrologist that specializes in non-moving water of lakes and reservoirs.

LANDSCAPE ARCHITECT
Landscape architects plan, design and advise on the construction of outdoor areas for functionality, beauty and compatibility with the natural environment. They plan the location of buildings, roads, and walkways, and the arrangement of flowers, shrubs, and trees.

LAND USE PLANNER
Evaluates land for the impact on the environment of a proposed land usage and provides reports to developers, government entities and individual. Looks for hazards and biological disruption of species. Planners develop and administer plans that guide and control the physical, environmental and, to some extent, the social and economic development of urban and rural areas.

LOBBYING ORGANIZER
Presents the views of the scientific community to congressional representatives at federal, state, and local levels. Distributes materials and disseminates information. Recruits volunteers, solicits funds, and organizes such efforts as rallies, letter-writing campaigns, and voter registration drives. Works for special and public interest groups or professional lobbyists.

LOBBYING RESEARCHER
Identifies information that can be used to support the positions and efforts of lobbyists. Conducts library research, attends conference and committee meetings, and writes reports. Works for special and public interest groups or professional lobbyists.

MASS TRANSIT PLANNER
Works with other specialist such as geographers, geologists, biologists, environmentalists and local, state and federal governments to assess and provide for transportation needs for large numbers of people.

MINER
Operates machinery--such as longwall shears, plows, and cutting machines--to cut or channel along the face or seams of coal mines, stone quarries, or other mining surfaces to facilitate blasting, separating, or removing minerals or materials from mines or from the earth's surface or machiner to install roof support bolts in underground mine. Oil and gas miners operate equipment to increase oil flow from producing wells or to remove stick pipe, casing, tools, or other obstructions from drilling wells. May also perform similar services in mining exploration operations.

MINERAL RESOURCE MANAGER
Scientist who controls mining and distribution of the earth’s minerals. Is aware of governing environmental laws and regulations. Many work as consultants to business firms or to government agencies, helping them comply with environmental policy, particularly with regard to ground-water contamination and flood control. Environmental scientists who determine policy may help identify how human behavior can be modified in the future to avoid such problems.

NATURAL RESOURCE ENGINEER
Natural resources engineers analyze natural resources such as the land, atmosphere, soil, water, plants and animals, and design technologies and systems that minimize the environmental impact of development.

NOISE CONTROL SPECIALISTS
Communicates local, state and federal noise ordinances to communities, corporations and industries and works with each to facilitate adherence to noise pollution standards.

OCEANOGRAPHER
Use knowledge of geology, geophysics, biology and chemistry, to study the motion and circulation of the ocean waters; the physical and chemical properties of the oceans; and how these properties affect coastal areas, climate, and weather.

ORGANIC CHEMIST
Studies composition, structure, and properties of substances and the interactions between them, searching for new ways to put knowledge to practical use and applying scientific principles and techniques to measure, identify, and evaluate

changes in matter. Works with carbon and its compounds and is responsible for developing commercial products, including drugs, plastics, and fertilizers.

PARK RANGER
Rangers supervise, maintain, enhance and protect conservation areas such as forests, coasts, wetlands, national parks, maritime parks, regional parks, reserves, and sites of historical or cultural importance.

RECREATION SPECIALIST
Recreation coordinators plan and manage community leisure programs and events at a variety of venues.

RECYCLE MANAGER
Oversees the collection and disposition of refuse for the purpose of recycling into usable products.

REMOTE SENSING SPECIALIST
Processes and analyzes spatial datasets (satellite and aerial imagery, DEMs, vector and raster data layers, etc.) using GIS and image processing tools for delivery to farmers, ranchers, land managers, and others. Works with science team to manage and maintain advanced remote sensing and GIS laboratory; designs and implements spatial analysis projects with direction from scientists working in remote sensing, agronomic modeling, precision agriculture, hydrology, climatology, biogeochemistry, and other environmental areas; create visual products from analyzed imagery and GIS data, including 3-dimensional views and animations; manage a complex set of image acquisition schedules, data archives, and end user details.

RISK MANAGER
Analyzes potential investment opportunities for the degree of risk associated with financing or investing in same.

RISK ANALYST
Assesses risks and possibility of losses that might arise from financial transactions and business operations undertaken by the institution. They also manage the organization's insurance budget.

SOIL/WATER CONSERVATIONIST
Provides technical assistance to farmers, ranchers, forest managers, state and local agencies, and others concerned with the conservation of soil, water, and related natural resources; develop programs for landowners designed for productive use of land without damaging it. Soil conservationists assist landowners with erosion problems. Water conservationists advise landowners and Federal, State, and local governments by advising on issues of water quality, preserving water supplies, groundwater contamination, and management and conservation of water resources.

SPILL ENGINEER
Oversees clean-up of toxic waste spills such as chemicals or petroleum products, making sure to adhere to local, state and federal regulations.

TECHNICAL WRITER
Writes 'how to" manuals to explain the function and workings of specific products.

TOXIC WASTE MANAGER
Safely and effectively oversees disposal of toxic wastes.

TOXICOLOGIST
Assess and control the level of impact toxic substances have on human well-being.

TRANSPORTATION ENGINEER
Design, plan and supervise the building and repair of structures such as roads, motorways, car parks, pavements, tunnels, freight terminals and traffic islands: may also research driver behavior and road safety.

URBAN/REGIONAL PLANNER
Develop long/short-term plans to best use land for the growth and revitalization of urban, suburban, and rural communities, while helping local officials make decisions concerning social, economic, and environmental problems. They may make decisions relating to establishing alternative public transportation systems, developing resources, and protecting ecologically sensitive regions; formulate plans relating to the construction of new community infrastructure; draft legislation on environmental, social, and economic issues; examine proposed community facilities to ensure that these facilities will meet the changing demands over time. They keep abreast and apprise community leaders and the public of economic and legal issues involved in zoning codes, building codes, and environmental regulations and ensure compliance by builders and developers.

WASTE MANAGEMENT SPECIALIST
Liquid and solid waste treatment plant and system operators, also known as wastewater treatment plant and system operators, remove harmful pollutants from domestic and industrial liquid waste so that it is safe to return to the environment. Solid wastes also includes landfill management, which manages waste sites for eventual reclamation and ability to build specialized habitats.

WILDLIFE BIOLOGIST
Ecologists study the relationships among and between organisms and their environments, and the effects external influences such as population size and pollutants may have on these relationships.

HIRING ORGANIZATIONS

Agribusiness
Army Corps of Engineers
City agencies
Communication agencies
Construction companies
Consulting agencies
Department of Agriculture
Department of Defense
Department of Energy
Department of Fish and Game
Department of Health Department of Natural Resources
Division of Water Services
Energy corporations
Engineering industry
Environmental consulting/engineering firms
Environmental Protection Agency
Fast-food industry
Federal government
Fish hatcheries
Geological industry
Grass-roots organizations
Hotel/Motel industry
Legal Services/ Law firms
Lobbyist/Special Interest groups
Management industry
Marketing firms
National Wildlife Federation
Non-profit agencies
Peace Corps
Petroleum industry
Pollution generating industries
Private industry
Public Service Company
Publishing agencies
Recycling agencies
Retail firms
Sierra/Audubon Association
Soil & Water Conservation Service
State government agencies
State Highway Department
State parks and recreation
Technical corporations
Transportation industry
Universities
U.S. Fish and Wildlife Service
U.S. Geological Survey
Waste Management Industry

Any corporation or enterprise that makes use of the environment or potentially has environmental impact of any kind may consider employing environmental science graduates.

CONSERSERVATION ORGANIZATIONAL HIRING

The Audubon Society
Ducks Unlimited
The Conservation Foundation
Izaak Walton League
The Nature Conservancy
The National Wildlife Federation
National Geographic Society
Sierra Club
The Wilderness Society

A complete listing can be found in the Conservation Directory, published on a yearly basis by the National Wildlife Federation.

UNIVERSITY-RELATED HIRING

Most permanent positions at universities require a Ph.D. and involve both teaching and research. These jobs are advertised in the leading research journals (e.g. Science) and the Chronicle of Higher Education. Some smaller colleges and junior colleges employ students with a master's degree for teaching in various departments. Many temporary positions (1-3 years) are filled by graduate students, but occasionally a staff member is hired as a technician with either a bachelor's or master's degree. Part-time jobs are also available for undergraduates in Biology and other departments, usually to assist with particular research projects. These jobs provide valuable work experience which will improve your chances of getting into the graduate school of your choice or a permanent position outside the University.

PEACE CORPS HIRING

The Peace Corps has many positions for which students with a bachelor's or master's level degree would be well qualified. Of course, they do not promise high salaries, but rather provide valuable experience, travel, and cultural opportunities. Former Peace Corps workers also receive job hunting help at the end of their term. For more information call, toll free (800) 424-8580 or contact: Peace Corps, McNamara Federal Building, 477 Michigan Avenue, Suite M74, Detroit, MI, 48226.

PROFESSIONAL ORGANIZATIONS

National Association of Environmental Professionals
P.O. Box 2086
Bowie, MD 20718
(301) 860-1140 fax: (301) 860-1141
www.NAEP.org
email: office@naep.org

North American Association for Environmental Education
410 Tarvin Road
Rock Spring, GA 30739
(706) 764-2926 fax: (706) 764-2094
www.naaee.org
email: email@naaee.org

Student Conservation Association, Inc.
PO Box 550
Charleston, NH 03603
(603) 543-1700 fax: (603) 543-1828
www.sca-inc.org
email: earthwork@sca-inc.org

U.S. Environmental Protection Agency Headquarters
1200 Pennsylvania NW
Washington, D.C. 20460-0003
(202) 260-2090
www.epa.gov/

U.S. Environmental Protection Agency
1-800-227-8917
www.epa.gov/region08

WEBSITES

4work Internships http://www.4work.com/

Biological and Medical Scientists Occupational Outlook Handbook, U.S. Dept of Labor
http://stats.bls.gov/oco/ocos047.htm

Biology Careers Page http://www.furman.edu/~snyder/careers/careers.html
Biology Jobs http://www.BiologyJobs.com

Biology Jobs and other science jobs http://www.scijobs.org

Biology Job Search Links http://www.slic.wsu.edu/bios/jobsearch.html

Biolinks.com job listings www.bioview.com

BioMedScientist jobs www.BiomedScientistJobs.com

BioSpace www.biospace.com

Bio View - company information and daily industry news, biotechnology & pharmaceutical employment site, job listings
http://www.bioview.com

Careers with the Agricultural Research Service www.ars.usda.gov/careers

Careers in Biology http://www.sicb.org/cib/

Careers in Biology from Emporia State University http://www.emporia.edu/biosci/carebiol.htm

Career Converter http://6steps.monster.com/step1/careerconverter

Career Fields http://career.berkeley.edu/Infolab/CareerFields.stm

Careers in Forensic Science www.aafs.org

Careers in Genetic Counseling http://www.nsgc.org/careers/index.asp

Center for Health Careers http://chc.hcwp.org/occubull.htm

careerMD http://www.careermd.com

Delaware http://www.udel.edu/CSC/mrk.html

Healthcare Career Resource Center: Site includes short history of medical careers, healthcare career information, and information on schools & scholarships http://library.thinkquest.org/15569/index.html

Internship Hotspots http://www.uncw.edu/stuaff/career/internhotspots.htm

Jobweb - search for internships www.jobweb.org

Journal of Cell Science http://jcs.biologists.org

Life Sciences World http://www.lifesciencesworld.com/

Links to many different career descriptions http://www.furman.edu/~snyder/careers/careerlist.html

Maritime Employment Opportunities http://www.maritimeemployment.com

Medical/Health Exploration http://www.nlm.nih.gov/services/medicaled.html#general

Medzilla www.medzilla.com

MonsterTRAK http://www.monstertrak.com

North Carolina biotechnology center http://www.ncbiotech.org/careers/jobs.cfm

Pre-Med Internship Opportunities http://www.rit.edu/%7Egtfsbi/Symp/premed.htm

Publish & Perish: Guide to On-line Employment and Career Links for the Biomedical Student http://www.his.com/~graeme/empco.html

Resource guide on careers in biotechnology http://www.bio.org/career/career1.html

Resources http://guide.symplicity.com/resources/profession_index_a_z.php

Sciencejobs.com: the best jobs from the leaders in bioscience http://www.sciencejobs.com

Science Careers and job hunting http://recruit.sciencemag.org

SciWeb - biotechnology career center http://www.biocareer.com/

The American Society of Forensic Sciences www.aafs.org

TIGR: The Institute for Genomic Research - Career Opportunities www.tigr.org/career

What is an Animal Behaviorist http://www.mhhe.com/biosci/pae/zoology/featarticle/animalbehave.mhtml

PROFESSIONAL ORGANIZATIONS &ASSOCIATIONS

American Association of Zoo Keepers http://www.aazk.org/default1.htm

American Aquarium and Zoo Association http://aza.org/

Association for Tropical Biology www.atbio.org

Bees & Beekeeping Homepage http://www.main.org/cahbs/

BioMolecular Engineering Research Center http://bmerc-www.bu.edu/

BioSpace.com http://www.biospace.com

BioTech on the Net http://www.bio.com

Biotechfind - Biotech Industry Search Engine and Career Center http://www.biotechfind.com/ back to the top

European Molecular Biology Organization http://www.embo.org/

Human Biology Association http://home.earthlink.net/~ckbarrett/hba/index.html

International Biometric Society http://www.tibs.org/

MedWeb from Emory University http://www.medweb.emory.edu/MedWeb/

Society for Mathematical Biology http://www.smb.org/

The American Institute of Biological Sciences http://www.aibs.org

The Company of Biologists Limited http://www.biologists.com/

US Geological Survey - Biological Resources http://biology.usgs.gov/

Women in Biology http://pingu.salk.edu/~forsburg/bio.html

PUBLICATIONS & PERIODICALS

ANON. 1982. The Environmental Jobs Handbook. Prospect Press.

Anon. 1992. The College Placement Annual. The College Placement Council, Inc.

Basta, Nicholas. 1991. Environmental Career Guide. J. Wiley & Sons.

Cleppter, H. 1979. Careers in Conservation, 2nd ed. J. Wiley & Sons.

CIEP Fund. 1989. Complete Guide to Environmental Careers. Island Press.

Gough, B.E. 1990. World Environmental Directory. Business Publishers.

Uleck, R.B., ed. 1982. Life Sciences lob Handbook. Prospect Press.

PUBLICATIONS THAT REGULARLY LIST ENVIRONMENTAL JOBS

American Institute of Biological Sciences Employment Newsletter
American Scientist
Earth Work
Ecological Society of American Newsletter
Environmental Opportunities
Environmental Science and Technology
Federal Register
Journal of Environmental Health
Journal of Soil and Water Conservation
Science
The Chronicle of Higher Education
The Federal Job Letter
The Wildlife Society Newsletter

This guide was put together to answer some of the questions commonly asked by students concerning their career options. Students majoring in environmental studies must be aware that job opportunities fluctuate with the economy, the public's awareness of environmental problems, and the current political administration, none of which are noted for stability. The job market for environmental studies graduates will probably increase for some time to come, but do not expect to walk out of graduation ceremonies and into a company car.

Thousands of jobs exist in a variety of environmental fields throughout the United States. The sheer size of the World Environmental Directory (965 pages) illustrates the number of potential positions in industry, government, universities, and the private sector. The job search will not be easy. After spending four or more years preparing yourself for a career, be prepared to spend some time searching for a job. This time, of course, can be reduced by starting your job or graduate school search at the beginning of your senior year rather than at the end. Hopefully, this guide will be of some help. Advisers, professors, graduate students, and the College Placement Office will all offer assistance, but the final responsibility is yours.

Q: What Kind Of Job Can One Apply For With A Degree In Environmental Studies?
The field of Environmental Studies is by nature very broad and diversified, which is part of the reason for the interdisciplinary scope of the Department's degree programs in Ecology (B.S.) and Environmental Biology (M.S. and Ph.D.) Job possibilities range from soil and water conservation and environmental consulting to waste water management, wildlife ecology, and remote sensing. For this reason one should not limit his/her search to those jobs that have a key work such as "environmental" in their titles. Keep an open mind and look on a broader scale for potential job opportunities where principles of environmental science can be or have been applied. By pursuing coursework in the Ecology track or an advanced degree in Environmental Biology you can prepare yourself for jobs that become available in the sample areas listed below (this is by no means an exhaustive listing).

Q: What About Jobs With State Governments?
Many state departments employ environmental scientists: State Highway Department, Department of Health, Department of Fish and Game, Department of Natural Resources, Department of Environmental Protection, Division of Water, Soil and Water conservation Service and others. The availability of jobs varies with the political administration that is in power and the economic condition of the State. A civil service exam usually is required. Job listings are available at the Campus Career Center (SAC) and the State Employment Agency (Downtown Louisville). Representatives of state agencies often participate in the Campus Career Fair held in October.

Q: What About Jobs With Municipal Governments?
Most cities advertise their job openings in the major newspapers of that city, and sometimes in the surrounding cities as well. The City of Louisville has a jobs hotline (574-3355). Jobs vary from environmental specialist in the city or county Department of Health to water quality specialist with the water treatment plant or Metropolitan Sanitary District to specialist in the biology of captive animals at the city zoo.

Q: What About Jobs With The Federal Government?
The Federal Government is certainly the largest employer in the United States and therefore seems to attract the most applications for positions. Unfortunately, most job opportunities in Environmental Studies exist outside the government (i.e., in private industry). The availability of jobs within the Federal Government varies from one political administration to the next; therefore the job picture at this time could be radically different than the job picture in four years. For most Federal Government competitive service jobs, you must apply through a local branch of the Office of Personnel Management (OPM). The OPM maintains Federal Job Information Centers in many cities across the United States (Dayton, OH is the closest office to Louisville). The OPM accepts applications for federal employment based on the number of jobs governmental agencies estimate they will fill in various locations over a period of time. Therefore, for some jobs, and for some regions of the country, the OPM may not accept applications for a period of time. The OPM evaluates the applications and furnishes them to the particular agency with the job vacancy. Your chances of being hired depend on your qualifications, the number of vacancies, and the number of people applying. Veterans are given preference, as are those individuals who are presently employed by a federal government agency and request a transfer to the agency with the job vacancy. By law, agency hiring officials may choose from among the top three applicants. The campus Career Center receives monthly listings of jobs available with the Federal Government.

Q: What About Jobs In The Private Sector?
There are literally hundreds of jobs in the private sector with a diversified list of different employers and positions. Prospective employers include energy firms, construction businesses, consultants, retail firms, agribusiness, and law firms. Generally, any corporation or enterprise which makes use of the environment or may potentially have some type of environmental impact may consider employees or environmental science-related positions. Most of the "job hunting" literature you will find in local bookstores is oriented towards giving advice on how best to obtain

a job in the private sector. We suggest you consult the listing of such publications in the local bookstore. There are professional job searching agencies which usually have some type of set fee or percentage of the salary of the job they find for you, should you finally take it. Most job search agencies only charge you if they are successful in obtaining a job for you. Many businesses come to college campuses to interview for available positions; others place advertisements in local newspapers and journals.

Q: What Kind Of Jobs Are Available With Conservation Organizations ?
Private conservation organizations are becoming larger, more sophisticated and more powerful as public awareness of environmental problems increases. Only a few years ago, conservation organizations limited themselves to the publication of magazines and newsletters and education of the public about environmental issues. Now many are involved in the active management of both species and habitats, acquisition of land, environmental consulting, research, monitoring of environmental problems, lobbying, public education and environmental law.

Some of the major organizations include: The Audubon Society; The Izaak Walton League, Ducks Unlimited; The National Wildlife Federation; The Sierra Club; The Conservation Foundation; The Wilderness Society; The Nature Conservancy; National Geographic Society; and many more. A complete listing can be found in the Conservation Directory, published on a yearly basis by the National Wildlife Federation.

Q: What Kind Of University Related Jobs Are Available?
As with state and federal jobs, the number and kind of university jobs is usually a reflection of the current economic situation. Most permanent positions at universities require a Ph.D. and involve both teaching and research. These jobs are advertised in the leading research journals (e.g. Science) and the Chronicle of Higher Education. Some smaller colleges and junior colleges employ students with a master's degree for teaching in various departments. Many temporary positions (1-3 years) are filled by graduate students, but occasionally a staff member is hired as a technician with either a bachelor's or master's degree. Part-time jobs are also available for undergraduates in Biology and other departments, usually to assist with particular research projects. These jobs provide valuable work experience which will improve your chances of getting into the graduate school of your choice or a permanent position outside the University. Jobs are advertised on the bulletin board inside the Biology Department office.

What Does The University Career Center Offer?

The Career Center, located at W310 Student Activities Center (6927), has many resources that may be of valuable assistance in your job hunt. The services offered are as follows:

(1) Campus interviews: many potential Environmental Studies employers contact this office to set up interviews on campus.

(2) Job Bulletin Board: a continually updated bulletin board listing jobs within and outside the University. It is advisable to check this source frequently.

(3) Workshops: examples of the types of workshops held in the past include: Preparing for the Interview, Writing Effective Resume's and Government Jobs.

(4) Literature: the office keeps a small library of materials, books, and periodicals that may be of assistance.

(5) Advice: although they are not specialists at finding Environmental Studies jobs, they do have a variety of special contacts, and sources of information and are always willing to offer assistance.

Are There Jobs Available With The Peace Corps?

The Peace Corps has many positions for which students with a bachelor's or master's level degree would be well qualified. Of course, they do not promise high salaries, but rather provide valuable experience, travel, and cultural opportunities. Former Peace Corps workers also receive job hunting help at the end of their term. For more information call, toll free (800) 424-8580 or contact: Peace Corps, McNamara Federal Building, 477 Michigan Avenue, Suite M74, Detroit, MI, 48226.

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s It Necessary For One To Go To Graduate School In Order To Get A Job In Environment Studies?

One must realize that in any scientific field, whether it be Biology, Chemistry, or Geology, it is desirable to have more specialized training than the general liberal arts background provides. This does not mean that a bachelor-level degree is meaningless, but that the number of jobs will be more limited and the competition from master's level people will be considerable. Graduate school gives one a more specialized training, usually some job-related experience, and the acquisition of some special skills. For this reason, a double major usually is not as advantageous as a master's degree (two general backgrounds are not equal to one more specialized degree). In most cases students would be better off concentrating their coursework in a specific environmental area or track and on getting into graduate school rather than spending extra time obtaining two degrees.