A Biology degree can offer you opportunities to begin the educational process for more advanced positions such as medicine, dentistry, pharmacy, education and other careers. This degree contains experiences with biological and medical sciences through the study of living systems. Many of the biological careers require further education beyond a Bachelor’s degree. (DISCOVER, n.d.)

The National Association of Colleges and Employers (2011) reports that hiring for the Class of 2011 (all majors) nationally is up 5.9% with an average salary offer of $50,462. Hiring for the Midwest region is reported by The Collegiate Employment Research Institute (2010) as also increasing by 10% for Bachelor graduates with an average salary of $36,866, which is down from the past two years. The Midwest Colleges and Employers Association (2010) reports regional (12 state Midwest region) hiring is increasing by 9% with an average starting salary of $35,453 for all Bachelor degree recipients. Environmental Science majors nationally have an increase in hiring of 20% and all other science majors (not including mathematics, statistics, and chemistry) have an increasing in hiring of 13% (National Association of Colleges and Employers, 2011). Environmental Science majors are averaging a Regional starting salary of $39,010 (The Collegiate Employment Research Institute, 2010).

### Areas

<table>
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<tr>
<th>Areas</th>
<th>Employers</th>
<th>Preparation</th>
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<tbody>
<tr>
<td>Land and water conservation</td>
<td>• Federal, state, and local government</td>
<td>• Get a solid background in the basic sciences while obtaining a broad-based education.</td>
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<td></td>
<td>• Indian nations</td>
<td>• Obtain legal, real estate, and financial skills through coursework, internships or part-time jobs.</td>
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<td></td>
<td>• Utilities and timber companies</td>
<td>• Volunteer through the Student Conservation Association (SCA) and hold an office.</td>
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<td></td>
<td>• Consulting firms</td>
<td>• Keep up with new funding sources.</td>
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<td>• Nonprofit organizations</td>
<td>• Consider law school for careers as counsel to environmental organizations.</td>
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<td>• Land trust organizations such as The Nature Conservancy or Trust for Public Land</td>
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<tr>
<td>Fishery and wildlife management</td>
<td>• Federal, state, and local government</td>
<td>• Get a broad scientific education.</td>
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<td></td>
<td>• Marine sport fisheries</td>
<td>• Obtain skills in areas such as planning, administration, communications, and negotiation through coursework, internships or part-time jobs.</td>
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<td>• Utility companies</td>
<td>• Get experience and skills in computers, statistics and computer modeling.</td>
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<td></td>
<td>• Developers</td>
<td>• Join the Peace Corps as a segue into federal government positions.</td>
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<td>• Timber companies</td>
<td>• Get on government agencies' job registers.</td>
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<td>• Wildlife ranges</td>
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<td>• Scientific foundations</td>
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<td></td>
<td>• Zoological parks</td>
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<td></td>
<td>• Hunting and fishing clubs</td>
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Winona State University, Career Services, Winona, MN  55987  
Phone: 507-457-5340   Web:  www.winona.edu/career   Email:  career@winona.edu
## BIOLOGY: Environmental & Ecology

What can I do with this degree?

<table>
<thead>
<tr>
<th>AREAS</th>
<th>EMPLOYERS</th>
<th>PREPARATION</th>
</tr>
</thead>
</table>
| **PHOTOGRAPHY** | • National Park Service  
• Federal agencies  
• State, county or city parks  
• Resorts  
• Marinas  
• Privately owned facilities  
• Nonprofit organizations | • Get a broad-based education that will develop both technical and interpersonal skills.  
• Gain expertise in additional areas such as communications, writing, fund-raising, negotiation and computer applications.  
• Obtain working knowledge of a foreign language such as Spanish. |
| **FORESTRY** | • Federal, state, and local government  
• Consulting firms  
• Timber companies  
• Nonprofit organizations | • Obtain skills with computers, statistics, and accounting through coursework, internships or part-time jobs.  
• Develop good communication and public relations skills.  
• Get a minor or double major in a technical area (soil science, wildlife or surveying) or in an arts and science area (business, economics, political Science or computer science). |
## STRATEGIES

- Environmental studies and environmental science differ from each other in the amount of science coursework needed.
- An environmental study provides a broad base of hard sciences as well as liberal arts or social science coursework.
- Environmental science incorporates hard sciences and environmental sciences.
- Choice depends upon career focus, for example, administration or policy-making versus technical areas or research.
- Combine liberal arts skills with analytical skills to increase employability. Formally, obtain a double major in these areas or minor in one of these areas.
- Informally, obtain these skills through internships, co-ops, volunteer work, summer jobs or independent research projects.
- Be familiar with current environmental laws and regulations. Stay up-to-date with changing environmental legislation.
- Join related professional associations; read related literature and journals to keep up with new developments.
- Attend seminars, conferences and workshops sponsored by professional associations or public interest groups.
- Network and get to know people who are working in area of interest.
- Research agencies/organizations of interest before applying for a position.
- Learn local, state and federal government job application procedures.
- Obtain graduate degree for job security/advancement.

## LINKS

- National Council for Science and the Environment
- Environment Web Directory
- Environmental Education Directory
- Environmental Careers Organization
- The Ecological Society of America
- Cyber-Sierra Natural Resources Job Search
- Environmental Careers Resource Guide
- Enviro Link
- Environmental Career Center
- Environmental Jobs and Careers
- The Student Conservation Association

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The following is a representative sample of types of job positions relating to biology in the areas of environmental studies and ecology (not all possible options are listed):

### Biologist

Biologists are growing annually at a moderate rate of 1.2% (Economic Research Institute, 2010). Nationally there are 16,300 employed positions with an annual national salary averaging $65,000 (United States Department of Labor, 2009). In Minnesota there are 270 employed positions with an annual state salary averaging $68,500. Starting salaries average $42,500 nationally and average $43,500 in Minnesota. Non-research degrees require a Bachelor’s Degree but research positions typically require at least a Master’s Degree and even more often a Doctoral Degree (DISCOVER, n.d.).

### Ecologist

Ecologists are growing at a rapid rate of 2.8% (Economic Research Institute, 2010). Nationally there are 83,500 positions employed including 1,360 in Minnesota (United States Department of Labor, 2009). The annual salary averages $60,000 nationally and averages $63,000 in Minnesota. Starting salaries average $42,500 nationally and average $45,000 in Minnesota. A Bachelor’s degree is required for non-research positions with preferences for Master’s and Doctoral Degrees (DISCOVER, n.d.).
Pollution Control Technician
Pollution Control Technicians are growing annually at a rapid rate of 2.0% (Economic Research Institute, 2010). There are 113,400 positions in the nation and 2,140 positions in Minnesota (United States Department of Labor, 2009). The annual national salary averages $55,500 and averages $58,500 in Minnesota. Starting salaries average $44,000 nationally and average $46,500 in Minnesota. Most employers require at least 2 years of training and many prefer Bachelor Degrees (DISCOVER, n.d.).

Soil Conservationist
Soil Conservationists are growing annually at a moderate rate of 1.2% (Economic Research Institute, 2010). Nationally there are 16,800 employed positions with an annual national salary averaging $60,000 (United States Department of Labor, 2009). In Minnesota there are 590 employed positions with an annual state salary averaging $63,000. Starting salaries average $41,500 nationally and average $44,000 in Minnesota. Non-research degrees require a Bachelor’s Degree but research positions typically require at least a Master’s Degree and even more often a Doctoral Degree (DISCOVER, n.d.).

Wildlife Biologist
Wildlife Biologists are growing annually at a moderate rate of 1.3% (Economic Research Institute, 2010). Nationally there are 17,500 employed positions with an annual national salary averaging $60,000 (United States Department of Labor, 2009). In Minnesota there are 660 employed positions with an annual state salary averaging $63,000. Starting salaries average $42,500 nationally and average $45,000 in Minnesota. Non-research degrees require a Bachelor’s Degree but research positions typically require at least a Master’s Degree and even more often a Doctoral Degree (DISCOVER, n.d.).

Environmental Engineer
Environmental Engineers are growing annually at a rapid rate of 3.1% (Economic Research Institute, 2010). Nationally there are 50,600 employed positions with an annual national salary averaging $73,500 (United States Department of Labor, 2009). In Minnesota there are 530 employed positions with an annual state salary averaging $77,500. Starting salaries average $53,000 nationally and average $56,000 in Minnesota. Non-research degrees require a Bachelor’s Degree but research positions typically require at least a Master’s Degree and even more often a Doctoral Degree (DISCOVER, n.d.).

For additional information please visit the websites below:

- Career One Stop: http://www.careeronestop.org/
- O*Net Online: http://www.onetonline.org/

Midwest Colleges and Employers Association (2010). *Regional report college hiring 2010-2011.* Des Moines, IA: Author
Winona State University Biology Department (n.d.). *Biology Department.* Retrieved from http://www.winona.edu/biology/