

Natural Resource Jobs in Nevada

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During this current economic crisis, many people are concerned about whether or not they will still have a job in the next one to two years. As difficult as these times may be in the nationwide job market, high school and college students must still evaluate which career choices will give them the best chance at not only getting a job, but also allow them to use their passions, strengths, and interests to achieve great things well into the future. Even more mature career-seekers may find themselves looking for a new career due to layoffs and/or budget cuts. Parents may also be trying to help their children evaluate career choices during this challenging economic environment. This article aims to help those career-seekers of any age by providing information regarding some potential natural resource career choices available in Nevada.

When embarking on a career search, most books and articles tell the reader to follow a couple steps to help them in making a decision. One of the first steps in the process is to “know thyself.” Enjoying the outdoors and having an affinity for science and/or math are two basic inclinations that may predict whether or not someone will enjoy a career in natural resources. Unfortunately, some people pursue degrees in soil science or range management and find out after graduation that they really dislike being outside. So first, it is important to identify interests, values (i.e. how important salary is), and skills and abilities that would indicate what type of career might fit best. The second step in the process is to explore those career options that fit into the previously identified interests, values, and skills.

There are numerous types of natural resource jobs that are available in Nevada through private companies, non-profit organizations, as well as through local, state, and federal agencies. Table 1 provides a basic list of different natural resource occupations currently held in Nevada. Accompanying this list are estimates of the number of positions throughout the state as reported by the Nevada Department of Employment, Training, and Rehabilitation. Within these basic career groups there are numerous job titles, and these titles vary depending upon the company or the agency doing the hiring. Table 2 provides a list of common natural resource job titles used by state and federal agencies here in Nevada as well as average annual salary ranges for the positions. It is important to note that the salary ranges have been provided by state and federal agencies and do not necessarily reflect the salary ranges possible through private companies. Generally compensation in the private sector is similar to or greater than the government sector. Also, a few of the positions below, such as geologists, geoscientists, hydrologists, and mining engineers are hired in greater numbers by private consulting, mining, and engineering firms than by the government sector.

Table 1. Nevada Workforce Informer Natural Resource Careers and Job Numbers in Nevada

| Career | Number of Jobs in NV | Career | Number of Jobs in NV |
|-------------------------------------|-----------------------------|---|-----------------------------|
| Biological Scientists | 204 | Forestry, Conservation, Logging Workers | 64 |
| Biological Technicians | 107 | Geoscientists | 411 |
| Conservation Scientists | 130 | Hydrologists | 299 |
| Foresters | 27 | Natural Science Managers | 209 |
| Forest and Conservation Technicians | 363 | Zoology and Wildlife Biologists | 186 |
| | | Total | 2,000 |

Table 2. State and Federal Job Titles and Average Annual Salary Ranges in Nevada^{1,2}.

| Job Title | Average Annual Salary Range | Job Title | Average Annual Salary Range |
|--|------------------------------------|--|------------------------------------|
| Agriculturalist ² | \$41,906-\$74,082 | Hydrology Technician ¹ | \$27,026-\$35,135 |
| Agricultural/Civil Engineer ¹ | \$49,544-\$91,801 | Mining Engineer ¹ | \$59,383-\$91,801 |
| Agricultural/Civil Engineering Technician ¹ | \$27,026-\$53,234 | Nursery Specialist ² | \$41,906-\$67,693 |
| Agricultural Inspector ² | \$27,896-\$47,606 | Park Interpreter ² | \$42,639-\$64,707 |
| Biologist ¹ | \$33,477-\$108,483 | Park Ranger ² | \$36,416-\$61,951 |
| Biologist ² | \$36,416-\$74,082 | Park Ranger Technician ² | \$27,896-\$49,699 |
| Conservation Aid ² | \$24,888-\$40,110 | Parks Regional Manager ² | \$54,204-\$81,140 |
| Conservation Educator ² | \$41,906-\$74,082 | Park Supervisor ² | \$42,639-\$67,693 |
| Conservation Educator (Staff) ² | \$51,866-\$77,569 | Plant Industry Regional Manager ² | \$54,204-\$81,140 |
| Conservation Staff Specialist ² | \$45,560-\$70,804 | Plant Pathologist ² | \$47,606-\$70,804 |
| Ecologist ¹ | \$27,026-\$77,194 | Predator and Rodent Control ² | \$30,192-\$43,639 |
| Fish Biologist ¹ | \$49,544-\$64,403 | Range Management Specialist ¹ | \$33,477-\$77,194 |
| Fish Hatchery Supervisor ² | \$42,639-\$70,804 | Range Technician ¹ | \$27,026-\$53,234 |
| Fish Hatchery Technician ² | \$35,475-\$56,627 | Soil Conservationist ¹ | \$40,949-\$64,403 |
| Forester ¹ | \$33,477-\$77,194 | Soil Scientist ¹ | \$49,544-\$77,194 |
| Forester ² | \$41,906-\$74,082 | Wildlife Area Supervisor ² | \$42,639-\$70,804 |
| Forestry Manager ² | \$54,204-\$81,140 | Wildlife Area Technician ² | \$35,475-\$56,627 |
| Geologist ¹ | \$33,477-\$91,801 | Wildlife Biologist ¹ | \$33,477-\$77,194 |
| Hydrologist ¹ | \$33,477-\$91,801 | Wildlife Staff Specialist ² | \$51,866-\$77,569 |

¹. Data provided by federal agencies for current positions in Nevada (Bureau of Land Management, Forest Service, Natural Resources Conservation Service).

². Data provided by State of Nevada Department of Personnel for current positions in Nevada.

To further explore whether any of these careers are a good fit, it is also important to understand the hiring trends and the likelihood of getting a job following graduation. At first glance, the immediate future may look a little dire for those students who just graduated or are about to graduate with a degree in natural resources. The State of Nevada has been limiting hires over the last year and is reducing budgets for many of the State's agencies. Federal agencies have experienced only slight changes to their budgets under the last four years of the Bush Administration, but it is unclear what effect the Obama administration will have on the budgets for the Departments of Agriculture and Interior. Regardless of the appropriations to these agencies in the short term, the Nevada Department of Employment, Training, and Rehabilitation has projected growth in several natural resource categories in the next ten years (Table 3). In addition to the projected growth in natural resource careers, there is a trend of general aging and retirements for those already employed in the sector. State and Federal Agencies in Nevada report high percentages of their natural resource workforce over the age of 50: BLM (39%), USFS (35%), NRCS (44%), State of NV (41%). These figures indicate a large number of vacancies are likely in the next ten to 15 years due to retirements alone. Also, for some careers, such as Range Management Specialists, fewer students are graduating that qualify for

these positions. The Range Science Education Council estimates that for each qualified range graduate there are ten vacant positions. Opportunities for the future look good for students pursuing degrees in the field of natural resources.

Table 3. Nevada Workforce Informer Ten Year Growth Outlook.

| Career | Percent Increase | Career | Percent Increase |
|-------------------------------------|-------------------------|---|-------------------------|
| Biological Scientists | 15.2% | Forest, Conservation, and Logging Workers | 25.0% |
| Biological Technicians | 11.2% | Geoscientists | 31.4% |
| Conservation Scientists | 8.5% | Hydrologists | 36.1% |
| Foresters | 18.5% | Natural Science Managers | 16.7% |
| Forest and Conservation Technicians | 10.7% | Zoology and Wildlife Biologists | 18.8% |

Another step in career exploration is to determine the amount of education and experience that is required in order to be a qualified candidate for a natural resource position. Usually if the job title uses the words “technician” or “aid,” then a bachelor’s degree is not required, but an associate’s degree or some college experience is usually favored by employers. As a general rule, the remaining job titles shown in the tables above will most likely require a bachelor’s degree, usually in a field of study identical to or similar to the job title. For example, a Forester position with the State of Nevada will require a bachelor’s degree in forestry, range management, fire science, or a closely related field. It is important when selecting a college major and institution that you check with the agency or company that you want to work for to ensure that the degree will qualify you for the position. Every organization has a different system for evaluating qualification criteria. For some professions, especially those in consulting and research, a master’s degree or even a doctorate degree can increase promotion and earning potential.

Several institutions in the Nevada System of Higher Education offer degrees which will qualify students for natural resource positions. The University of Nevada, Las Vegas offers bachelor’s degrees in biological science, geology, environmental geology, and earth science. Bachelor’s degrees offered by the University of Nevada, Reno include: animal science – emphasis in rangeland livestock production, biology, ecohydrology, environmental science, environmental studies, forest and rangeland management, geological engineering, geology, hydrogeology, mining engineering, and wildlife ecology and conservation. Nevada State College (Henderson) offers bachelor’s degrees in biology and environmental and resource science. Great Basin College (main campus Elko) offers a bachelor’s degree in resource management and an associate’s degree in agriculture – emphasis in natural resources.

Work experience also has a large role to play in the educational training of natural resource professionals and in increasing the potential for hire by employers. It is highly recommended that students take advantage of summer employment opportunities within their field of interest. Federal agencies hire students through the Student Temporary Employment Program (STEP) and the Student Career Experience Program (SCEP). Both of these programs may also allow students to work part-time while enrolled in their coursework and full-time during the summers. The Great Basin Institute and Nevada Conservation Corps also provide summer internships. State and local agencies hire students for a variety of summer positions including: fish hatchery interns, stream survey technicians, conservation aids, and weed control technicians just to name a few. Consultants, mining companies, and non-profit organizations (i.e. The Nature

Conservancy and Eastern Nevada Landscape Coalition) offer summer positions for students. Another form of experience often considered is time spent farming and/or ranching. Students who come from an agricultural background are frequently highly sought after by employers for their skills in driving ATV's, driving 4-wheel drive manual transmission trucks, pulling trailers, working in the backcountry, camping out, reading maps, handling livestock, and general experiences with natural resource oriented projects. Most high school and college graduates no longer possess these skills, and once hired, cannot safely operate machinery, cannot independently conduct field missions, or make other decisions costly to their employers.

High school students can further prepare for a career in natural resources by taking four years of science courses (emphasizing biology, chemistry, and physics), and four years of math courses. The Nevada Section Society for Range Management offers a one-week Nevada Youth Range Camp in June, which allows students to explore a variety of natural resource fields. 4-H and FFA experience in natural resources, range management, and soils can also help students prepare for their future college major.

Hopefully this article has piqued the interest of high school and college students and their parents. Private companies and government agencies need highly qualified Nevada students to graduate with degrees in natural resource fields. Many employers, especially those in the rural areas of Nevada, find it hard to recruit and retain employees that come to Nevada from out of state. Students who grow up in the Great Basin may often better understand the natural resources, political climate, and culture of the region. They are more likely to stay in Nevada and enjoy a career that requires working outside, coordinating with various interest groups, collecting and analyzing data, writing reports, and making decisions about natural resource management. With numerous challenges facing management of Nevada's rangelands, forests, and agricultural lands, why not choose to play a part in developing the management solutions of the future?

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