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Introduction

The purpose of this handbook is to provide answers to employment-related questions that are commonly asked by students who are enrolled in, or are considering enrolling in, Forest Science, Wildlife and Fisheries Science, and Wood Products. It includes information on permanent and seasonal employment, summer jobs, and internships, as well as information on the employment success of recent graduates. By consulting the employment resources noted in this handbook, and by reading about what our alumni do and where they are employed, you will learn about where your major in the School of Forest Resources may lead you.

Before we begin addressing your questions, we offer the following advice:

1. Think of career planning and preparation as an extra one-credit course you are taking each semester, and budget your time accordingly. Learning about employment opportunities takes time. Looking for a job takes time. These are tasks that are often easily postponed. Start now by making the time to become familiar with the resources identified in this handbook.

2. Look for a job even before you are in the market for one. Why? It is a great way to explore various career paths. Which of the job announcements appeal to you the most, and what qualifications do they require? That will give you some ideas on how you might select your elective courses, what kind of work experience you should seek while in school, and whether or not you need to start thinking about earning a graduate degree. Where are the jobs, how many are there, what are the starting salaries? Now is the time to find out.

3. Career Services in the MBNA Career Services Center at University Park (http://www.sa.psu.edu/career, phone 814-865-2377) is a resource that you should become familiar with. It is true that much of the on-campus recruiting that takes place at Career Services is geared toward students in engineering, business, and liberal arts, and that most employers who are looking to fill positions related to the majors in the School of Forest Resources contact the School or the faculty directly. However, Career Services has many resources you can use. Individual career counseling, assistance with résumé and cover letter preparation, and videotaped mock interviews are a few examples of the free help that is available at Career Services. Take advantage of it!

4. Begin developing references immediately. Just having taken a class with a professor is not adequate to ensure a reference. Establish professional contacts with faculty and others, and nurture these relationships throughout your college career and beyond. A good reference may be the difference between getting the job, or not.

Your thoughts on the content and usefulness of this handbook are important to us. Please direct your comments and questions to the Undergraduate Programs Office, School of Forest Resources, 113 Forest Resources Building, University Park, PA 16802; phone (814) 865-4237.

This handbook is available online at http://www.sfr.cas.psu.edu/Employment/Employment.html.
Q-1. What jobs are available?

There are lots of places to look for a job, and we identify many of them in the following list. Some of the resources listed below contain job announcements (including permanent and seasonal positions, internships, and graduate assistantships) and others are reference materials, places, people, and phone numbers. The list was compiled with the Penn State University Park student in mind, but many of the resources—including books, bulletins, and especially World Wide Web sites—are accessible at other campuses and locations as well. Remember that looking at job announcements is a good way to find out where your major may lead you, so check out these resources even though you might not currently be in the job market.

School of Forest Resources and other Penn State employment assistance

1. School of Forest Resources (SFR) Web Site — Job and internship announcements received by SFR faculty and staff are posted at [http://www.sfr.cas.psu.edu/Employment/Job_Announcements.htm](http://www.sfr.cas.psu.edu/Employment/Job_Announcements.htm). Our employment/career opportunities site, [http://www.sfr.cas.psu.edu/Employment/Employment.html](http://www.sfr.cas.psu.edu/Employment/Employment.html), also includes links to general career and job search databases, and companies, associations, organizations, and state and federal agencies that employ individuals with backgrounds in Forest Science, Wildlife and Fisheries Science, and Wood Products.

2. Hard-copy postings at University Park — Hard-copy announcements of permanent and seasonal jobs, internships, and graduate assistantships may be found in the Edwards Student Center, 108 Forest Resources Building, and in a binder on the bookshelf outside the student computer lab, 417 Forest Resources Building.

3. School of Forest Resources Faculty — Employers, especially those who are alumni, may call faculty members directly and ask them if they can recommend a student to fill a job vacancy. Likewise, faculty at other institutions may call their colleagues in the School and ask them if they can recommend a student for their graduate program. Once you are enrolled in the School of Forest Resources, make an effort to become known to faculty members in your areas of interest.

4. WoodPro — The Pennsylvania Wood Products Productivity Program created by the Wood Products Extension Program at Penn State in 2002 ([http://woodpro.cas.psu.edu/Welcome.htm](http://woodpro.cas.psu.edu/Welcome.htm)) offers wood products industries a connection to relevant, value-adding resources of Penn State and from around the world; its links also provide leads to information relevant to those seeking employment in the industry.

5. College of Agricultural Sciences Internship, Research, and Employment Opportunities — a database that can be searched by industry, location, or job description ([http://internships.cas.psu.edu/](http://internships.cas.psu.edu/))

6. Penn State Career Services — MBNA Career Services Center, details on page 1 of this handbook.

7. LionLink — a collaborative effort of the Penn State Alumni Association and the Division of Student Affairs; “a networking program designed to help Penn State students and alumni make professional connections and gain useful information to assist with career/life decisions and job searches” ([http://www.psualumcareer.com/career/](http://www.psualumcareer.com/career/))

Pennsylvania jobs

8. Commonwealth Workforce Development System — enables you to search for job openings, create a résumé, apply for jobs online, research career information, or request vocational rehabilitation services ([https://www.cwds.state.pa.us/](https://www.cwds.state.pa.us/))

9. Pennsylvania CareerLink — The Centre County office of Pennsylvania CareerLink is located at 1300 Benner Pike, Suite 2, State College, PA 16801; phone 814-272-5465.
10. **Pennsylvania state agencies** — Links to Pennsylvania state agencies can be found at [http://www.pa.gov/portal/server.pt](http://www.pa.gov/portal/server.pt)

11. **Phone Directory "Blue Pages"** — The "blue pages" of any phone directory lists government offices (city, county, state, and federal) in the region. You can look through these, pick out those related to your field of interest, and call to find out what the hiring practices and procedures are and what employment opportunities are available. Your call may be transferred one or more times before you speak to someone who may be able to help you.

**Federal employment**


**Other resources**

14. **Professional and Related Societies** — Each major in the School of Forest Resources is associated with a professional society that encourages student membership. Each society provides some type of employment listing and also sponsors local, regional, and national meetings at which students have the opportunity "network." For student membership information, contact the following:


15. **The Forest Products Journal** — published by the Forest Products Society (FPS), includes employment opportunities. FPS student members receive a free listing in the Graduating Student Directory published in the March issue of the journal.

16. **The Environmental Careers Organization (ECO)** — a national, nonprofit organization offering (very competitive) paid short-term environmental internships (12 weeks to 2 years) for undergraduates, graduate students, and recent graduates. The Web site ([http://www.eco.org/](http://www.eco.org/)) also includes career tips and career links.

17. **The Job Seeker** — a biweekly subscription bulletin ([http://www.thejobseeker.net/Home.htm](http://www.thejobseeker.net/Home.htm)) that lists employment opportunities by categories including forestry, biology, fisheries, conservation, environmental education, parks/recreation, and internships. The School of Forest Resources has a subscription and SFR students and alumni are eligible to access the site. Please contact Dana Whaley (dlg5035@psu.edu or 814-865-4237) to obtain a username and password; you must provide information on your major, Penn State ID number, and semester standing or year of graduation.

18. **Conservation Directory** — a book published by the National Wildlife Federation that includes names, addresses, and phone numbers of more than 4,000 organizations, agencies, colleges, and universities with conservation programs. Includes a subject index ranging from acid rain to zoology. Available in the Life Sciences References section of the Paterno Library. For more information, go to [http://www.nwf.org/conservationdirectory/](http://www.nwf.org/conservationdirectory/).
19. **Student Conservation Association (SCA) Resource Assistant (RA) Program** — The SCA is a nonprofit, educational organization and through its RA program places students in volunteer natural and cultural resource positions nationwide. The positions are usually with federal agencies, but some are in the private sector. The majority of positions are available in the summer, but some are available year-round. SCA and the cooperating agencies provide housing, a subsistence allowance, accident insurance, on-site training, and travel to and from the site. For more information, go to [http://www.thesca.org/](http://www.thesca.org/) or contact SCA Resource Assistant Program, 689 River Road, P.O. Box 550, Charlestown, NH 03603-0550; phone 603-543-1700.

20. **Wildlife and Fisheries Job Board** — is maintained by the Department of Wildlife and Fisheries Sciences at Texas A&M University. This site ([http://wfsc.tamu.edu/jobboard/index.htm](http://wfsc.tamu.edu/jobboard/index.htm)) includes employment, internship, volunteer, and graduate school opportunities.


22. **Harris Pennsylvania Industrial Directory** — an annual directory that lists addresses, phone numbers, and names of plant managers for companies in Pennsylvania. Published by Harris Publishing Company in cooperation with the Commonwealth of Pennsylvania, Department of Commerce. Available in the Paterno Library (University Park), and other Penn State library locations.

23. **MonsterCOLLEGE** — a site that helps college students and alumni find jobs, internships, and part-time work during school and after graduation ([http://college.monster.com/](http://college.monster.com/)). In addition to job postings, the site includes job search tips, alumni networks, and more.


**Q-2. What will I actually do "on the job"?**

To give you some idea of what different jobs might entail, here is a sample of **actual job titles and responsibilities** written by Forest Science, Wildlife and Fisheries Science, and Wood Products alumni in response to School of Forest Resources alumni employment surveys.

**Forest Science**

**conservation planner** (Georgia Land Trust) – coordinate, recruit, negotiate, and execute conservation easements

**consulting arborist** (SavATree) – acquire and maintain clients; make recommendations for the care of clients’ landscape trees and shrubs; manage the technicians who perform the work

**consulting forester** (Hale Forestry Company) – marking timber; setting up timber sales; supervising harvesting; appraisals; tree planting; meeting landowners

**consulting forester** (self-employed) – timber sales; appraisals; stewardship plans

**county forester** (VA Dept. of Forestry) – assist landowners with forest management on private land, enforce state fire and silvicultural laws, suppress wildland fires in work unit

**dendrician** (Bartlett Tree Experts) – pruning, cabling, and bracing of trees; plant health management; nutrition management; tree removals

**environmental trainee/surface mine conservation inspector** (PA DEP) – inspect quarries and surface mines
**environmental scientist** (Vertex Environmental) – assist in performing wetlands delineations for land development projects and preparing reports that describe the rationale and data to support those delineations

**erosion and sedimentation control technician** (Montgomery Co. Conservation District) – review erosion and sediment control plans for developments, provide permits

**forester** (Seneca Resources) – lay out boundaries and mark timber for timber harvest; supervise logging crews; GPS harvest boundaries; operate company GIS

**forester** (International Paper) – locate wood for harvest; lay out and prepare areas for timber sales; supervise loggers

**forest technician** (USFWS) – forest inventory; forest pest management; field surveys for gypsy moth; habitat and wildlife enhancement; forest analysis and forest cover type delineation

**forest technician** (Forecon, Inc.) – timber sale administration, management plan inventory and data collection, stand exams, harvesting operation inspections

**forest technician** (PA Game Commission) – establish permanent forest inventory and analysis plots, map work, GPS/GIS; data collection with Juniper, Impulse laser, diameter tape, compass, increment borer

**forester** (USFS) – conduct forest inventory and analysis program (that is, identify species, measure diameters and heights, and grade trees on sample plots); locate plots using GPS units, topographic maps, and aerial photos

**forester** (PA DCNR) – timber stand analysis, timber management, timber sale administration, road layout, GPS mapping, herbicide and fencing projects, fire suppression, recreation, and lease camp administration

**forester** (PA DCNR) – recreation forester, no timber management duties; fire suppression; GIS coordinator

**forester** (PA Game Commission) – manage game lands to promote timber management and wildlife habitat

**forester** (PA Game Commission) – timber sales, forest mapping and planning, GPS and GIS

**geoscientist** (Weston Solutions, Inc.) – site characterization; well sampling; report writing; operate treatment systems; project construction; database management

**GIS analyst** (Rayonier, Inc.) – oversee the maintenance of the GIS (geographic information system) that manages more than 420,000 acres of forestland

**GIS forester** (Collins Pine Company, Kane Hardwood) – manage the GIS (geographic information system) for 127,000 acres of forestland

**IPM monitor** (Bartlett Tree Experts) – diagnose and treat pest, disease, and cultural problems of trees and shrubs on client properties

**park ranger** (NPS) – law enforcement, resource management, public education, search and rescue, wildland fire fighter

**plant health care specialist** (Bartlett Tree Experts) – commercial tree care including pruning, pest and pathogen scouting, fertilizing, spraying, removals, and inventories

**procurement forester** (Walker Lumber Co.) – buy timber and logs to supply a sawmill; manage logging jobs and crews

**salesman** (American Lumber Co.) – trade hardwood lumber
service forester (PA DCNR) – support forest district programs such as Forest Resource Stewardship; wildfire protection; computer use and GIS technology application; educate, encourage, and assist private landowners and municipalities in proper establishment, management, and protection of their forest resources.

utility forester (ACRT) – contact landowners about tree trimming; supervise tree-trimming crews; evaluate trees for trim or removal to assure proper electric line clearance

watershed forester (Western Maryland Resource Conservation and Development Council, Inc.) – forest stewardship for private landowners; municipal forested watershed management; invasive species monitoring and control

Wildlife and Fisheries Science

agriculture and environmental science teacher (Central PA Institute of Science and Technology) – teach high school students about agriculture and environmental science

agriculture conservation technician (Lancaster Co. Conservation District) – work with farmers and landowners on nutrient management, conservation planning, developing and implementing conservation practices, public education

animal keeper (Elmwood Park Zoo) – perform tasks associated with the husbandry and maintenance of native and exotic animals

assistant avian rehabilitator, seasonal (The Raptor Trust) – medicinal treatment of sick or injured birds; feed and clean bird aviaries; educate visitors and volunteers on birds and their habitat

biologist aide, seasonal (PA Game Commission) – black bear capture and handling; radio telemetry

bird trainer (Natural Encounters, Inc.) – animal management and husbandry; animal training and behavior modification; show presentations; train new staff

county park ranger (NJ) – enforce park regulations, interact with public to mediate concerns, lock and unlock parks, make presentations on wildlife

ecologist (Ecotune Environmental Consultants) – wetland delineations, Phase 1 assessment, environmental permitting, mitigation design/monitoring, stream assessments

educator/naturalist (Hawks Aloft) – conduct education programs at schools using permanently injured raptors; conduct field research as needed in the summer

environmental education specialist, seasonal (PA Bureau of State Parks) – create and implement school and public environmental education program; facilitate teacher workshops; maintain trails

environmental scientist (EMC Engineering Services, Inc.) – wetland delineation, mitigation, and permitting; threatened and endangered species surveys

erosion and sedimentation control technician (Crawford Co. Conservation District) – review erosion and sedimentation plans; review and process water obstruction and encroachment permits and NDPES storm water permits; investigate wetland, water obstruction, and earth disturbance complaints

fisheries biologist (PA Fish and Boat Commission) – obtain funding to advance habitat projects for threatened and endangered fish, amphibians, and reptiles; monitor the ecological response of populations through sampling and disseminate findings to the public and other interested parties

fish culturist (PA Fish and Boat Commission) – propagate, care for, and stock trout
harbor seal research technician (Alaska Sea Life Center) – operating remote video system, manage database, summarize data, relate research to public, guide high school student independent projects, capture and handle seals, operate skiffs, assist as field surgical technician

lake habitat manager (PA Fish and Boat Commission) – supervise volunteers and state agency staff in construction of fish habitat enhancement structures, operate specialized habitat enhancement boats, process habitat enhancement plan packages

natural resource technician (Letterkenny Army Depot) – mainly run the hunting program but also wildlife surveys and studies, habitat management, and forestry

preservation compliance coordinator (County of Chester) – monitor farms with agricultural easements; GIS mapping; database management

water pollution biologist (PA DEP) – inspect underground storage tank facilities and emergency clean-up programs

watershed specialist (Columbia, Montour, and Northumberland Conservation Districts) – provide technical assistance to watershed groups through grant writing, meeting facilitation, education and outreach, chemical and biological monitoring; maintain communication among groups and other agencies

wildlife biologist aide (PA Game Commission) – assist elk biologist in all aspects of managing Pennsylvania elk herd; use radio telemetry to monitor movements of radio-collared elk, conduct population survey, assist at elk check station

wildlife biologist aide (PA Game Commission) – deer trapping; radio-collaring; locating collared white-tailed deer

wildlife habitat biologist (USDA Natural Resources Conservation Service) – complete habitat management plans for private landowners and provide technical assistance for getting the work completed

wildlife technician, seasonal (North Dakota Game and Fish Dept.) – manage public lands to benefit wildlife and hunting opportunities; handle wildlife depredation calls and complaints; noxious weed control; public outreach programs

wildlife technician (North Carolina Wildlife Resources Commission) – food plot and habitat management; wildlife surveys; hunter check stations

wildlife technician (USDA APHIS Wildlife Services) – work mainly with the oral rabies vaccine program and other wildlife pest management issues

zookeeper (Maryland Zoo) – animal husbandry; animal training; some medical care/procedures

Wood Products

commodities broker (Lumberman’s Merchandising Corp.) – buy and sell western softwood lumber

contractor sales representative (84 Lumber) – call on contractors to buy lumber and building materials from employer

dry kiln manager (Babcock Lumber Co.) – operate dry kilns, supervise kiln personnel, schedule kiln unloading and reloading

grader trainee (Gutchess Lumber) – training in lumber grading and learning the production of hardwood lumber
heavy timber structures designer (Pocopson Industries, Inc.) – incorporate heavy timber trusses/framing according to scope of contract, into structures designed by outside architects/engineers, follow projects through manufacturing and installation, provide technical support

inside sales (Lewis Lumber Products) – sell lumber via phone, aid outside salesmen

methods specialist engineer (Wood-Mode) – material utilization, computerized rough mill, and much more

production supervisor (Yorktowne Cabinets) – responsible for 60+ employees; sustain high efficiency and lumber yields; maintain high levels of quality and safety

sales (Hyma Devore Lumber Mill, Inc.) – sell kin-dried hardwoods, balance inventory, scale and grade logs, calculate earnings for loggers/haulers during biweekly pay period, some timber cruising

staff engineer/quality assurance inspector (PFS Corporation) – help manage a team of individuals who inspect engineered-wood facilities

supervisor/inspector/safety director (Industrial Timber and Land Co.) – inspect lumber, oversee crew, promote safety awareness

wood buyer (Lumberman’s Merchandising Corp.) – purchase hardwood plywood, imported plywood, particleboard, and MDF; negotiate contracts; survey dealer needs

While none of our recent graduates have chosen employment in the paper industry, opportunities include:

materials preparation production engineer for a paper company – manage stock preparation processes and crews, coordinate activities of vendors and oversee their activities

process engineer for a paper company – evaluate papermaking additives, product development, provide technical service to external customers, serve as paper machine foreman

Q-3. Does anyone come to campus (University Park) to interview students in my major?

Several employers visit the School of Forest Resources each year to interview Forest Science students and Wood Products students for summer and permanent positions. There are fewer on-campus interview opportunities for Wildlife and Fisheries Science students.

Many employers only interview students who meet certain criteria such as a minimum grade point average or semester standing; some employers meet with anyone who is interested. Some employers come to campus as guest speakers in classes (W P 490 - Wood Products Colloquium, for example).

All interview opportunities are shared with students via announcements in classes and notices sent to the student listservs.

The College of Agricultural Sciences hosts a career fair each fall semester; go to http://students.cas.psu.edu/ for details. The School of Forest Resources hosts a job fair in the spring, and invites potential employers to network with students and conduct onsite interviews and company presentations.
Q-4. When should I start looking for a job?

The School of Forest Resources usually starts receiving summer job notices in November, with the bulk of them coming in after January. But some summer jobs have deadlines as early as January! New information comes in almost daily, so check resources frequently. Notices are posted on the School of Forest Resources Web site (described in response to Q-1), and some are also distributed via student listservs and in-class announcements. Notices continue to come in through May, sometimes even after the spring semester has ended.

If you are looking for post-graduation employment, the earlier you start, the better. The School of Forest Resources receives employment information throughout the year, so check resources frequently. Employers who come to campus to interview students for summer and permanent positions have done so as early as October, so be prepared.

Career Services (described on page 1) identifies many things you can do before your senior year, such as testing your interests through courses, student professional organizations, and summer work; gathering information on various career paths; interviewing people in jobs that interest you; preparing a résumé. A one-credit course, AG 100 - Job Placement Skills and Strategies, is offered at the University Park Campus (usually in the spring semester) by a member of the Career Services staff. Consult Career Services for guidance in planning and executing your job search.

Q-5. Can I get academic credit for a summer job?

Regardless of whether they are advertised as such, many summer jobs can fulfill the requirements of an internship—a supervised, off-campus work experience related to your major. How to go about earning academic credit for an internship is outlined in the Internship Handbook that can be downloaded from the School’s Web page at http://www.sfr.cas.psu.edu/Students/Handbooks.html. Keep in mind that you are required to pay for internship credits as you would for any other Penn State course. Depending on the course work you have already completed, you may or may not be able to use internship credits to fulfill graduation requirements. Meet with your academic adviser to discuss whether an internship for credit is appropriate for you.

Q-6. What are "co-op" jobs, and are there any available for me?

"Co-op" or cooperative education usually refers to an arrangement whereby students gain hands-on experience by being gainfully employed by business, industry, or government for one or more periods of time before they graduate. In some professions such as engineering and science, cooperative education positions are relatively common. In natural resources, on the other hand, they tend to be rather scarce.

The federal government’s “co-op” program is called the Student Educational Employment Program (SEEP), which has two components:

- Student Temporary Employment Program (STEP): These positions are temporary but can range from summer jobs to positions that last for as long as you are a student. These employment opportunities do not necessarily relate to your academic field of study.

- Student Career Experience Program (SCEP): These positions offer you work experience directly related to your academic field of study, and integrate formal work periods and study periods. These positions require a formal commitment by you, your school, and the employing federal agency. You may be eligible for permanent employment after successfully completing your education and meeting work requirements. Probably the best way to search for a SCEP position is to contact the personnel offices of any federal agency you are interested in working for. This can be a big task, because as explained in the reply to the following question, the federal sector is very decentralized when it comes to hiring.

For more information on SEEP, go to http://www.opm.gov/employ/students/index.asp or call the U.S. Office of Personnel Management at 202-606-1800.
Q-7. What can you tell me about finding employment in the federal government?

The primary federal agencies that have conservation-related responsibilities and are potential sources of employment for Forest Science and Wildlife and Fisheries Science majors are as follows: Fish and Wildlife Service, Forest Service, National Park Service, Natural Resources Conservation Service, Army Corps of Engineers, Bureau of Land Management, Geological Survey (which includes a Biological Resources Division), and the Bureau of Indian Affairs. The primary federal agency that employs Wood Products graduates is the Forest Service. One place to start learning more about these agencies is to consult the Conservation Directory, a resource described in the answer to Q-1. Be aware that many people who work for the federal government began their careers in volunteer or seasonal positions.

The federal government is very decentralized when it comes to hiring. In some cases a regional office may be the right contact, or it might be some other unit in the agency. It is also not uncommon for federal agencies to designate a state employment office as the place to submit an application. Many of the resources identified in Q-1 include federal job announcements, and they will include information on how to apply. Another strategy is to contact the agencies yourself. This latter approach can be very time-intensive, especially if you are not limiting your search to one geographic area. The Conservation Directory is a good resource for getting familiar with how a particular agency is organized (regional offices, field stations, districts, and so forth), and for finding the addresses and phone numbers you need.

There is often no single deadline date for applications for summer or permanent employment with a federal agency. There is also no single federal application form. Most federal positions require submission of either a résumé or a form called the OF-612 (Optional Application for Federal Employment). Supplemental forms are sometimes also required. General application information as well as the opportunity for on-line application are available at the federal Office of Personnel Management Web site (http://www.usajobs.opm.gov/) described in response to Q-1.

One thing that is standard across all federal agencies is the General Schedule (GS) pay scale. With a high school diploma you qualify for the GS-2 level, which has a starting salary of $19,721. The starting salary for GS-5, the highest level you qualify for with a bachelor's degree and no experience, is $27,026. The starting salary for GS-9, the highest level you qualify for with a master's degree and no experience, is $40,949. All salary figures reported here are 2009 levels. For current GS pay scale information, go to http://fedjobs.com/pay/pay.html.

Q-8. What can you tell me about finding employment in a state agency?

States often have agencies that parallel those of the federal government. In Pennsylvania, the state agencies most likely to hire Forest Science and Wildlife and Fisheries Science graduates are the Game Commission, Fish and Boat Commission, Bureau of Forestry, and Bureau of State Parks; the latter two are units in the Pennsylvania Department of Conservation and Natural Resources. In Pennsylvania, a few Wood Products graduates are employed by the Bureau of Forestry.

In addition to the natural resources agencies, all states have a Cooperative Extension program that may offer employment opportunities for School of Forest Resources graduates.

In Pennsylvania, most permanent state positions are filled through the State Civil Service Commission (http://www.sccc.state.pa.us/). Position-specific tests are often required, and some are only given every few years when positions are "open." Some positions, such as wildlife biologist with the Game Commission, require a master's degree. Other positions, such as conservation officer trainee with the Game Commission, do not require a college degree at all—but the selection process for the conservation officer training program is highly competitive. The Pennsylvania State Civil Service Commission Web site lists a summary of civil service examinations; go to the site (noted above) and click on “Job Opportunities.” Most other states have similar opportunities, although some require residency. Check the School of Forest Resources Web site under Employment (described in response to Q-1) for links to state employment agencies or consult the Conservation Directory (described in response to Q-1) for names, addresses, and phone numbers of state agencies throughout the United States. The "blue pages" of a phone book are a source of contacts for a localized search.
State agencies are also potential sources of summer employment. The Pennsylvania Department of Conservation and Natural Resources has an internship program that includes fall, spring, and summer positions. Applications are available online [http://www.dcnr.state.pa.us/personnel/intern.aspx](http://www.dcnr.state.pa.us/personnel/intern.aspx) or from PA DCNR Bureau of Personnel, Intern Coordinator, Rachel Carson State Office Building, P.O. Box 8768, Harrisburg, PA 17105-8768; phone 717-787-8737. Your application information is entered into a computer database that matches you with suitable vacancies when they occur; you must renew your application annually. Application are generally accepted from January 1 to March 1 each year. If there is a particular state office that you would like to work with in the summer, it is also advisable to make direct contact; not all summer positions are filled via the aforementioned intern application process.

Q-9. I'm not interested in government employment (federal, state, or local); what other opportunities are there?

According to May 2007 data from the Bureau of Labor Statistics, about 62% of foresters were employed in federal, state, and local government; about 36% were employed in the private sector; about 2% were in education (that is, employed at colleges, universities, and professional schools), and less than 1% were in the nonprofit sector. Forestry jobs in the private sector include employment with sawmills, wood products manufacturers, logging companies, and the forest industry. Some foresters are self-employed, usually working as consultants or procurement foresters.

Bureau of Labor Statistics data for zoologists and wildlife biologists in May 2007 indicated about 64% were in federal, state, and local government; about 24% were in the private sector; about 5% were in education (that is, employed at colleges, universities, and professional schools); about 4% were in recreation; and about 3% were in the nonprofit sector. Private-sector employers for wildlife biologists include environmental consulting firms, wildlife game ranches, firms that focus on nuisance wildlife control, private zoos, nature centers, and museums.

Wood products jobs are overwhelmingly in the private sector (95%), with the remainder in trade associations, universities, and government.

Contacting employers in the private and nonprofit sectors usually takes a little more work on your part because there are no comprehensive listings available as there are for federal and state agencies. The School of Forest Resources Web site link to Employment Resources (described in response to Q-1) includes links to private-sector employers. Some additional miscellaneous listings are available. For example, state Cooperative Extension offices sometimes have listings of consulting foresters or wood-using industries. The ForestDirectory.com and the Harris Pennsylvania Industrial Directory (both described in response to Q-1) list non-government employers. The Conservation Directory (also described in response to Q-1) includes citizens’ groups.

Q-10. What has the job market been like for recent graduates?

For more than three decades, the School of Forest Resources has been conducting alumni surveys one to two years after graduation to learn about employment success. The information gathered has been useful in providing current and prospective students, parents, and faculty and staff with information about career opportunities. Data from several graduating classes is presented in Appendix A. A sample listing of the job titles that are included in the various employment categories is presented in Appendix B. The most recent data presented is that from the Class of 2006-07.

In October 2008, we mailed an employment survey to the Class of 2006-07; that is, students who graduated with a B.S. degree from the School of Forest Resources between August 2006 and May 2007. The survey was sent to 23 Forest Science (FORSC) alumni, 27 Wildlife and Fisheries Science (WFS) alumni, and five Wood Products (WP) alumni. Alumni also had the opportunity to complete the survey online. We attempted to contact all nonrespondents by phone or e-mail. The total survey response rate (mail survey plus follow-up) was 83% for FORSC, 89% for WFS, 100% for WP, and 87% overall.

In total, 100% of the Forest Science (FORSC) graduates from the Class of 2006-07 were using their degrees in professional pursuits (that is, professional employment or graduate school) a year or so after graduation (based on an 83% response rate). Equal numbers of 2006-07 FORSC alumni were employed in public forest management
and private forest management—about 24% in each sector. Of five FORSC alumni in public-sector forestry, three were with PA DCNR (one of these was a fixed-term position), one was a watershed forester in Maryland, and the other had a USDA Forest Service seasonal position in Montana. The average annual salary for public forest management positions was $32,500 (based on four reported salaries, one of which was seasonal and one of which was fixed-term).

Of five 2006-07 FORSC graduates employed in the private sector, three were currently working in Pennsylvania and one was in Washington state. The other private-sector forester did contract work; he was working in Minnesota at the time of the survey but had also worked in Pennsylvania. The average annual salary for public forest management positions was $32,500 (based on four reported salaries).

Nearly 14% percent of the FORSC alumni in the Class of 2006-07 were employed in general resource management. One FORSC alumnus worked as a resource conservation technician for a conservation district in Pennsylvania and the other worked with Bartlett Tree Experts in Massachusetts. No salary data was reported for either position. FORSC alumni pursuing additional education was 26.7% for the Class of 2006-07—the second highest level in 20 years. This is also a significant jump from the previous class year (2005-06) when only 4.5%—the lowest level reported in 20 years—were pursuing additional education at the time of the survey.

In total, 95% of the Wildlife and Fisheries Science (WFS) graduates from the Class of 2006-07 were using their degrees in professional pursuits (based on an 89% response rate). This is the seventh time in the past 20 years that this statistic has been greater than 90%.

WFS alumni employed in wildlife/fisheries management was 37%; only three times in the past 20 years has this statistic been higher. Of the 8 wildlife/fisheries jobs reported, two were with the PA Fish and Boat Commission and two were with the PA Game Commission (one of these was seasonal). Three other wildlife/fisheries jobs were in Pennsylvania as well: one with Letterkenny Army Depot, one with USDA Forest Service in Warren (seasonal) and one with USDA APHIS Wildlife Services. Only one wildlife/fisheries job was out of state—an aquarist with Sea Life in Legoland, California. The percentage of WFS graduates working in Pennsylvania was noticeably greater this year than in past years, when employment was more dispersed among other states. The average annual salary for positions in wildlife/fisheries management (based on four reported salaries, all full-time positions) was $32,500.

WFS employment in general resource management was 23% for the Class of 2006-07. All seven of the these positions were in Pennsylvania—three at the county level; three with private engineering firms or labs, and one with the Army Corps of Engineers. WFS employment in management/engineering/sales (nonwood industry) was 9.3%, the second lowest it has been in 11 years.

The percentage of WFS alumni pursuing additional education was 19%, comparable to most classes in the past 10 years. Blue-collar employment for 2006-07 WFS graduates was 5%, up from 0% the year before; unemployment was at 0%.

Employment of Wood Products (WP) graduates for the Class of 2006-07 was again excellent (based on a 100% response rate). Two WP alumni were employed with wood products firms in Pennsylvania (as a product manager and a grader trainee) and one was in a management trainee program with a wood products firm in Colorado. The average annual salary for wood products positions was $35,000 (based on two reported salaries). Two WP alumni (one male and one female) were serving in the U.S. Marine Corps.
Overall, School of Forest Resources employment statistics compare favorably to the following college-wide and university-wide data from surveys of December 2006 - August 2007 baccalaureate graduates conducted by Penn State Career Services:

<table>
<thead>
<tr>
<th></th>
<th>% Employed Full-time</th>
<th>% Employed Part-time</th>
<th>% Further Education</th>
<th>% Unemployed</th>
<th>Avg. Annual Salary*</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Ag Sciences</td>
<td>63.4</td>
<td>1.0</td>
<td>24.7</td>
<td>10.9</td>
<td>$36,167 (n = 61)</td>
</tr>
<tr>
<td>Penn State</td>
<td>62.4</td>
<td>3.8</td>
<td>22.2</td>
<td>11.6</td>
<td>$43,995 (n = 1718)</td>
</tr>
<tr>
<td>School of Forest Resources Aug.'06 - May '07 **</td>
<td>69.0</td>
<td>12.5</td>
<td>18.5</td>
<td>0.0</td>
<td>$34,600 (n = 12)</td>
</tr>
</tbody>
</table>

*Salary data shown only for graduates who accepted full-time employment very much or somewhat related to their career objective (n = number of responses on which average annual salary is based)
**SFR data collection methods and time periods do not directly match those of college and university data. Seasonal positions held by SFR alumni are reported here as "part-time"

Q-11. What is the job market expected to be like when I graduate?

There is, of course, no way to know for certain what the job market will be like four years from now, or even one year from now. The economy, the number of retirements, federal and state budgets, new or revised environmental legislation (for example, court decisions on endangered species, private property rights, and wetlands), and new developments in science and technology are some of the external factors that will come into play. Other personal factors, such as your own academic record and experience and whether you are willing to relocate, will also affect your employment opportunities.

Nevertheless, projections about the future job market are available. The Occupational Outlook Handbook (http://www.bls.gov/oco/) published by the U.S. Department of Labor, Bureau of Labor Statistics, is one source of information. Here are some excerpts from the 2008-09 edition:

- Employment of conservation scientists and foresters is expected to grow by 5 percent during the 2006-16 decade, more slowly than the average for all occupations.

- The federal government and some state governments expect a large number of workers to retire over the next decade. This is likely to create a large number of job openings for foresters and conservation scientists in government despite the projection for slower than average growth of this occupation in all state, local, and federal governments combined. However, the best opportunities for foresters and conservation scientists will be in consulting. Government and businesses are increasingly contracting out forestry and conservation services to companies that specialize in providing them.

- There will continue to be demand for biological scientists specializing in botany, zoology, and marine biology, but opportunities will be limited because of the small size of these fields. The outlook for caretakers in zoos and aquariums is not favorable due to slow job growth and keen competition for the few positions.
Employment Opportunities for College Graduates in the Food and Agricultural Sciences, 2005-2010 is another source of information and this report can be found on the Food and Agricultural Education Information System Web site at http://faeis.ahnrit.vt.edu under “Resource Links.” The report is produced through a cooperative agreement between The Cooperative State Research, Education, and Extension Service (CSREES) Higher Education Programs Office and Purdue University. Here are some excerpts from the 2004 national study:

- Employment opportunities for U.S. college graduates with expertise in the food, agricultural, and natural resources system are expected to remain strong through 2010.
- Expect strong employment opportunities for forest products salespersons.
- Expect relatively fewer opportunities for wildlife scientists.
- Expect good opportunities for forest managers.

Ultimately you must balance your interests with the reality of finding employment that will support your desired lifestyle. If you are concerned by the employment outlook for your chosen career path, consider that carefully. Ask yourself if you would rather pursue your natural resources interests as leisure time activities, and select a different career path that presents the kind of employment opportunities you are more comfortable with. On the other hand, do not let a competitive job market deter you from something you really want to do. Prepare yourself as best you can, and go for it!

Final Thoughts

Begin your job search early. It’s too important (and time-consuming) to delay until the semester you graduate. Remember that Penn State Career Services can be an excellent resource for many critical components of your job search—preparing cover letters and résumés, interviewing, and more. Cultivate professional relationships and contacts throughout your college career.

We conclude this handbook with a final piece of advice: always do your best on any "job"—whether it is a homework assignment, an exam, an extracurricular project, a volunteer position, a summer internship, or a permanent position. You will gain personal satisfaction from jobs well done, and you will leave a favorable impression on the people with whom you interact. People who know you and think favorably of you will serve as references (often needed in a job search); they may also be sources of job leads or even wind up hiring you themselves!
### APPENDIX A

#### Employment Survey Results

Table 1. Placement of 2006-07 School of Forest Resources baccalaureate graduates by major (surveyed one to two years after graduation)

<table>
<thead>
<tr>
<th>Employment Category</th>
<th>Forest Science (%)</th>
<th>Wood Products (%)</th>
<th>Wildl/Fish Science (%)</th>
<th>Total (%)</th>
<th>* Average Annual Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Forest Management</td>
<td>24.2</td>
<td>0</td>
<td>0</td>
<td>7.8</td>
<td>$32,500 (4)</td>
</tr>
<tr>
<td>Private Forest Management</td>
<td>24.2</td>
<td>0</td>
<td>0</td>
<td>11.5</td>
<td>$32,500 (4)</td>
</tr>
<tr>
<td>General Resource Management</td>
<td>13.7</td>
<td>0</td>
<td>23.0</td>
<td>18.2</td>
<td>$47,500 (1)</td>
</tr>
<tr>
<td>Wildlife/Fisheries Management</td>
<td>0</td>
<td>0</td>
<td>37.0</td>
<td>19.0</td>
<td>$32,500 (4)</td>
</tr>
<tr>
<td>Recreation Management</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Management/Engineering/Sales (wood products industry)</td>
<td>0</td>
<td>60.0</td>
<td>0</td>
<td>6.5</td>
<td>$37,500 (1)</td>
</tr>
<tr>
<td>Management/Engineering/Sales (non-wood products industry)</td>
<td>11.2</td>
<td>0</td>
<td>9.3</td>
<td>8.3</td>
<td>$35,000 (2)</td>
</tr>
<tr>
<td>Teaching/Clergy</td>
<td>0</td>
<td>0</td>
<td>6.7</td>
<td>1.8</td>
<td>$17,500 (1)</td>
</tr>
<tr>
<td>Military (Officer Status)</td>
<td>0</td>
<td>40.0</td>
<td>0</td>
<td>3.7</td>
<td>$47,500 (2)</td>
</tr>
</tbody>
</table>

| Total Professional Employment                      | 73.3               | 100.0             | 76.0                   | 76.8      |                          |
| Graduate Education                                 | 26.7               | 0                 | 18.7                   | 18.5      | $14,166 (3)             |

| Total Professional Pursuits                        | 100.0              | 100.0             | 94.7                   | 95.3      |                          |
| Blue-collar Employment                             | 0                  | 0                 | 5.3                    | 4.7       |                          |
| Unemployment                                       | 0                  | 0                 | 0                      | 0         |                          |

| Total                                             | 100                | 100               | 100                    | 100       |                          |

| Class Size (n)                                     | 23                 | 5                 | 27                     | 55        |                          |

| Response Rate (%)                                  | 83                 | 100               | 89                     | 87        |                          |

*Average annual salary based on number of responses given in parentheses.
Table 1. Placement of 2005-06 School of Forest Resources baccalaureate graduates by major (surveyed one to two years after graduation)

<table>
<thead>
<tr>
<th>Employment Category</th>
<th>Forest Science (%)</th>
<th>Wood Products (%)</th>
<th>Wildl/Fish Science (%)</th>
<th>Total (%)</th>
<th>* Average Annual Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Forest Management</td>
<td>37.0</td>
<td>0</td>
<td>0</td>
<td>13.5</td>
<td>$34,000 (3)</td>
</tr>
<tr>
<td>Private Forest Management</td>
<td>4.5</td>
<td>0</td>
<td>0</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>General Resource Management</td>
<td>19.2</td>
<td>0</td>
<td>12.1</td>
<td>14.3</td>
<td>$37,500 (4)</td>
</tr>
<tr>
<td>Wildlife/Fisheries Management</td>
<td>0</td>
<td>0</td>
<td>47.1</td>
<td>28.6</td>
<td>$27,500 (7)</td>
</tr>
<tr>
<td>Recreation Management</td>
<td>0</td>
<td>0</td>
<td>8.5</td>
<td>5.3</td>
<td>$22,500 (3)</td>
</tr>
<tr>
<td>Management/Engineering/Sales (wood products industry)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Management/Engineering/Sales (non-wood products industry)</td>
<td>21.3</td>
<td>50.0</td>
<td>8.2</td>
<td>13.9</td>
<td>$52,500 (2)</td>
</tr>
<tr>
<td>Teaching/Clergy</td>
<td>0</td>
<td>0</td>
<td>2.7</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Military (Officer Status)</td>
<td>4.5</td>
<td>50.0</td>
<td>2.7</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Total Professional Employment</td>
<td>86.5</td>
<td>100.0</td>
<td>81.3</td>
<td>83.7</td>
<td></td>
</tr>
<tr>
<td>Graduate Education</td>
<td>4.5</td>
<td>0</td>
<td>18.7</td>
<td>13.1</td>
<td>$20,000 (4)</td>
</tr>
<tr>
<td>Total Professional Pursuits</td>
<td>91.0</td>
<td>100.0</td>
<td>100.0</td>
<td>96.8</td>
<td></td>
</tr>
<tr>
<td>Blue-collar Employment</td>
<td>4.5</td>
<td>0</td>
<td>0</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>4.5</td>
<td>0</td>
<td>0</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Class Size (n)</td>
<td>29</td>
<td>2</td>
<td>51</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Response Rate (%)</td>
<td>83</td>
<td>100</td>
<td>80</td>
<td>82</td>
<td></td>
</tr>
</tbody>
</table>

* Average annual salary based on number of responses given in parentheses.
Table 2. Placement of 2004-05 School of Forest Resources baccalaureate graduates by major (surveyed one to two years after graduation)

<table>
<thead>
<tr>
<th>Employment Category</th>
<th>Forest Science (%)</th>
<th>Wood Products (%)</th>
<th>Wildl/Fish Science (%)</th>
<th>Total (%)</th>
<th>* Average Annual Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Forest Management</td>
<td>25.7</td>
<td>0</td>
<td>0</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>Private Forest Management</td>
<td>32.2</td>
<td>0</td>
<td>0</td>
<td>14.6</td>
<td>$30,000 (2)</td>
</tr>
<tr>
<td>General Resource Management</td>
<td>10.8</td>
<td>0</td>
<td>7.1</td>
<td>7.8</td>
<td>$34,100 (3)</td>
</tr>
<tr>
<td>Wildlife/Fisheries Management</td>
<td>0</td>
<td>0</td>
<td>21.4</td>
<td>9.8</td>
<td>$22,500 (3)</td>
</tr>
<tr>
<td>Recreation Management</td>
<td>8.6</td>
<td>0</td>
<td>7.1</td>
<td>7.3</td>
<td>$17,500 (1)</td>
</tr>
<tr>
<td>Management/Engineering/Sales (wood products industry)</td>
<td>3.3</td>
<td>80.5</td>
<td>0</td>
<td>9.8</td>
<td>$37,500 (3)</td>
</tr>
<tr>
<td>Management/Engineering/Sales (non-wood products industry)</td>
<td>0</td>
<td>19.5</td>
<td>26.3</td>
<td>13.4</td>
<td>$22,500 (1)</td>
</tr>
<tr>
<td>Teaching/Clergy</td>
<td>0</td>
<td>0</td>
<td>4.8</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Military (Officer Status)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total Professional Employment</td>
<td>80.6</td>
<td>100.0</td>
<td>66.7</td>
<td>76.9</td>
<td></td>
</tr>
<tr>
<td>Graduate Education</td>
<td>10.8</td>
<td>0</td>
<td>21.4</td>
<td>13.8</td>
<td>$30,000 (2)</td>
</tr>
<tr>
<td>Total Professional Pursuits</td>
<td>91.4</td>
<td>100.0</td>
<td>88.1</td>
<td>90.7</td>
<td></td>
</tr>
<tr>
<td>Blue-collar Employment</td>
<td>8.6</td>
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<td>11.9</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Class Size (n)</td>
<td>30</td>
<td>9</td>
<td>42</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>Response Rate (%) (Questionnaire + follow-up phone/e-mail)</td>
<td>83</td>
<td>67</td>
<td>59</td>
<td>69</td>
<td></td>
</tr>
</tbody>
</table>

* Average annual salary based on number of responses given in parentheses.
APPENDIX B
Job Titles and Employers

How did our alumni find these jobs? The most common sources of job leads mentioned by our employment survey respondents are:

- School of Forest Resources Web site
- School of Forest Resources faculty
- Summer employment or internship
- Personal contact, word-of-mouth
- Internet search
- On-campus interview
- Civil service announcement
- Newspaper ad

Listed here are some of the job titles and employers (with location indicated by state abbreviation in parentheses) that are included in the various employment categories in the tables in Appendix A.

Public Forest Management
- Forester – Florida Division of Forestry
- Forester – Pennsylvania DCNR Bureau of Forestry
- Forester – Pennsylvania Game Commission
- Forester – Virginia Department of Forestry
- Forest technician (seasonal) – Pennsylvania DCNR Bureau of Forestry
- Forest technician (seasonal) – USDA Forest Service (MT)
- Service forester – Pennsylvania DCNR Bureau of Forestry
- Watershed forester – Maryland Department of Natural Resources
- Wildland fire forester – Pennsylvania DCNR Bureau of Forestry

Private Forest Management
- Consulting forester – Hale Forestry Company (PA)
- Forester – Allegheny Wood Products (PA)
- Forester – BWP Hardwoods (PA)
- Forester – Emporium Lumber (PA)
- Forester – Ongley Hardwoods (PA)
- Forest technician – Forecon, Inc. (PA)
- GIS analyst – Rayonier, Inc. (WA)
- Procurement forester – Baillie Lumber Co. (PA)
- Procurement forester – Walker Lumber Co. (PA)

General Resource Management
- Agriculture Conservation Technician – Lancaster County Conservation District (PA)
- Americorps watershed ambassador – New Jersey Department of Environmental Protection
- Arborist – Bartlett Tree Experts (MA)
- Contract utility forester – PEPCO (MD)
- Environmental consultant – SWCA Environmental Consultants (TX)
- Environmental scientist – Criterion Labs (PA)
- Environmental scientist – Wallace & Pancher, Inc. (PA)
- Environmental technician – EarthTech (PA)
- Naturalist intern – Trees for Tomorrow (WI)
- Park ranger – U.S. Army Corps of Engineers (PA)
- Preservation compliance coordinator – County of Chester (PA)
- Resource conservation technician – Juniata County Conservation District (PA)
- Tree surgeon/arborist – Dickinson College (PA)
- Utility forester – Davey Resources Group (PA)
- Watershed coordinator – Clinton County Conservation District (PA)
- Watershed specialist – Clearfield County Conservation District (PA)
Wildlife/Fisheries Management

- Aquarist – SeaLife, Legoland (CA)
- Aquarist/ diver – Pennsylvania Fish and Boat Commission
- Animal keeper – National Zoological Park (DC)
- Assistant hatchery manager – McFarlane Pheasants, Inc. (WI)
- Biological aide (seasonal) – Pennsylvania Game Commission
- Biological technician – Florida Cooperative Fish and Wildlife Research Unit
- Fisheries biologist – Pennsylvania Fish and Boat Commission
- Fisheries biologist aide (seasonal) – Pennsylvania Fish and Boat Commission
- Fish culturist – Pennsylvania Fish and Boat Commission
- Fisheries technician – Wyoming Game and Fish
- Lake habitat manager – Pennsylvania Fish and Boat Commission
- Natural resource technician (hunting program) – Letterkenny Army Depot (PA)
- Ranch manager – White Stone Ranch (TX)
- Research technician (seasonal) – West Virginia University
- Wildlife biologist aide – Pennsylvania Game Commission
- Wildlife biologist/operations manager – Critter Control (PA)
- Wildlife conservation officer – Pennsylvania Game Commission
- Wildlife technician – North Carolina Wildlife Resources Commission (PA)
- Wildlife technician – USDA APHIS Wildlife Services (PA)
- Zookeeper (part-time) – Erie Zoo (PA)

Recreation Management

- American Park Network – NY
- Cavern naturalist (seasonal) – Penn’s Cave (PA)
- County park ranger – NJ
- Park ranger (seasonal) – U.S. Army Corps of Engineers (PA)
- Park ranger – Point Lookout State Park (MD)
- Ranch guide – TX
- Senior guide (seasonal) – Adventure Birding Company (AZ)

Management/Engineering/Sales (wood products industry)

- Foreman – Osmose (PA)
- Grader trainee – Gutchess Lumber (PA)
- Manager trainee – Armstrong Wood Products (CO)
- Methods specialist engineer – Wood-Mode (PA)
- Office/field coordinator – Pinebrook Homes (PA)
- Plant manager – a wood products company (ID)
- Project manager – Allegheny Millwork and Lumber Co. (PA)
- Supervisor/safety director – Industrial Timber and Lumber (NC)

Management/Engineering/Sales (non-wood-products industry)

- Consulting associate – Diversified Information Technologies (PA)
- Insurance agent – NH
- Insurance underwriter – Environmental Division, Zurich, Inc. (NJ)
- Landman – E.S. Calkins Oil and Gas (PA)
- Maintenance technician – Sanofi Pasteur (MA)
- Manager – Wagsworth Manor (PA)
- Manager/receptionist – Chadds Ford Animal Hospital (PA)
- Mechanical engineering technician – Portsmouth Naval Shipyard (ME)
- Production supervisor – Hanover Foods Corp. (PA)
- Senior system analyst – Penn State, Computer Science and Engineering Department
Teaching/Clergy
    Environmental educator (seasonal) – Jekyll Island 4-H Center (GA)
    Teacher, middle school/high school - FL

Military
    1st lieutenant – U.S. Army (Germany)
    2nd lieutenant – U.S. Marine Corps (PA)
    Management analyst – Letterkenny Army Depot (PA)
    National Guard, full-time – (PA)
    Student naval aviator – U.S. Marine Corps (TX)

Graduate Education
    Arkansas State University
    Case Western Reserve University (OH)
    East Stroudsburg University (PA)
    Mississippi State University
    Penn State University
    Purdue University (IN)
    Southern Illinois University
    Tennessee Tech University
    University of Delaware
    University of Louisiana
    University of Maine
    University of Tennessee
    Virginia Tech University
    Western Ontario University

Blue-collar Employment
    Bartender (PA)
    Boilermaker union (PA)
    Carpet cleaner (PA)
    Grocery store stocker (PA)
    Line cook (PA)
    Steel worker (PA)
# APPENDIX C
## Job Search Notes

<table>
<thead>
<tr>
<th>Position applied for:</th>
<th>Start date:</th>
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</thead>
<tbody>
<tr>
<td>Company name:</td>
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<tr>
<td>Contact person:</td>
<td>Phone:</td>
</tr>
<tr>
<td>Address:</td>
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<tr>
<td>Date application/résumé sent:</td>
<td>Date for follow-up:</td>
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<tr>
<td>Interview time/date:</td>
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<tr>
<td>Notes/Directions:</td>
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