Careers in Water Resources

Environmental Career Day
NJDEP, Trenton, NJ
February 7, 2014
Outline of Today’s Talk

• Graduate School Admissions
• Academic careers
• Consulting careers
• Tips for getting a job
• Questions
Graduate School Admissions

Why Graduate School?

Should You Go To Grad School? A Wee Test

☐ F I am a compulsive neurotic.

☐ ☐ I like my imagination crushed into dust.

☐ ☐ I enjoy being a professor's slave.

☐ ☐ My idea of a good time is using jargon and citing authorities.

☐ ☐ I feel a deep need to continue the process of avoiding life.
GPA and GRE Scores

• Review your formal transcript from your school
• Try to anticipate any questions that may come up during your interview
  – Why did you grades drop the fall semester of your sophomore year?
  – Why did you get a “C” in chemistry?
  – What does a class in Wine Tasting have to do with your degree in Environmental Science?
• Take the GRE’s or LSAT, MCAT, and/or GMAT (law, medical, and business)
• Study for these exams
Letters of Recommendation

- Permits the hiring committee to begin thinking of you as a person
- The quality of the letters rests on the quality of your relationships with professors
- Make a good impression on professors
- Make research contacts with faculty
- Seek out experiences that will set you apart from other students, possibly Americorps Ambassador
Who should I ask to write my letters of recommendation?

• Ask faculty, administrators, and supervisors who know you well and are in a professional capacity in which they can evaluate your qualifications for graduate study.

• Your letter writers should know your work and be able to provide examples to support their points.

• They should hold a positive view of you and be able to describe your potential for academic and professional work.

• Aim for a set of letters from several individuals who can describe your range of skills.

• Letters should cover your academic and scholastic skills, research abilities and experiences, and applied experiences (e.g., co-operative education, internships, related work experience).
Admissions Essay

• This is your opportunity to speak up for yourself
• Be creative and informative as you introduce yourself
• Explain why you want to attend graduate school
• Explain why each program is a perfect match to your skills
• Think about your audience – scholars who are searching for the kind of motivation that implies a dedicated and intrinsic interest in their field of study
• They are also looking for someone who will be productive and interested in their work
Admissions Essay (cont’d)

• Explain your relevant skills, experiences and accomplishments in your essay
• Focus on how your education and occupational experiences led you to this program
• Describe how this program will benefit you and how your skills can benefit the faculty within the program
• Describe where you see yourself in the program
• Describe how it fits into your future goals
• Be specific: What do you offer?
• Some programs use interviews to get a look at finalists
• Sometimes what looks like a great match on paper is not in person
• The interview is your opportunity to determine how well a fit the program is for you
• IN OTHER WORKS, “you’re interviewing them” as much as they are interviewing you.
Typical Academic Careers

Assistant Professor

Associate Professor

Professor

Professor II

Director or Dean

Ph.D. Required
Other Academic Careers at Land Grant Colleges

Assistant Extension Specialist

Associate Extension Specialist

Extension Specialist

Specialist II

Ph.D. Required

Director or Dean
County Agents

County Agent III = Assistant Professor

M.S. Required

County Agricultural Agents

County Environmental and Resource Management Agents

County 4H Agents
“Integrated” means to bring the three components of the Land Grant University knowledge system (research, education, and extension) together around a problem area or activity.
Through integrated programming, the Land Grant Universities can deliver solutions to today’s problems and yield quick measurable outcomes.
Integration on a Watershed Scale

1. Secure base funding to conduct a research project in a watershed
2. Direct extension programming into the same watershed to compliment research effort
3. Get the students involved – this is the education
Here is an example
Research

- Water quality and quantity modeling
- BMP identification and design
- Development of a Regional Stormwater Management Plan
Education

• Design projects for bioresource engineering senior design
• Undergraduate independent studies
• Graduate research
Extension Activities

- Stakeholder committee
- Stormwater management in your backyard program
- How to Build a Rain Garden Adult Program
- “Messy Town” Children’s Program
- Restore-a-Waterway Program
RCE Water Resources Program

- Christopher C. Obropta, Ph.D., P.E. (Associate Extension Specialist in Water Resources)
- Lisa Galloway Evrard (Senior Program Coordinator)
- Steve Yergeau, Ph.D. (Senior Program Coordinator)
- Jeremiah Bergstrom, L.A. (Senior Project Manager)
- Kyle Gourley (Program Associate)
- Sara Mellor (Program Associate)
- Jessica Brown (Program Associate)
- Rosana Da Silva (Program Associate)
- Six to ten undergraduate student intern
- Presently, no graduate students
Rutgers Cost for Graduate Student

- Salary = $28,047 (10 month) or $31,973 (12 month)
- 8% Raise for Year 2
- Salary = $30,290 (10 month) or $34,531 (12 month)
- Fringe = 28.8%
- Tuition (in-state): $14,543 (Yr 1) and $11,068 (Yr 2)

- Total cost for two year master’s student = $100,749 (10 month) to $111,268 (12 month)

- So why doesn’t the RCE Water Resources Program have any graduate students?
CONSULTING

If you’re not a part of the solution, there’s good money to be made in prolonging the problem.
Consulting Careers

• More Money, More Money, More Money!
• It’s all about billable time
• Professional development is your responsibility
• After a few years, easy to move and boost your salary
Opportunities

- Litigation support
- Stormwater management
- Watershed restoration
- Water quality monitoring
- Environmental impact statement
- Site assessment
- Site cleanup
- Low Impact Development (LID)
- Sustainable communities
Tips for Getting A Job

DREAM JOB
When you just know what do you want to do in your life.
Keys to getting a job

- Dress for success – hide tattoos, no piercing except your ears
- Leave your cell phone in the car
- Shake hands at the beginning and end of interview
- Know something about the organization
- Bring examples of your work and good copy of your resume
- Clean up your electronic dirt – face book, girls gone wild, boys gone wild, etc.
- Don’t forget to send a thank you note
Resume

• Clearly identify where you went to school, what degree you received, what was your thesis topic and who was your advisor

• Describe what you did at your previous employment – don’t just list where you worked

• Have references ready if asked

• ALWAYS SEND A COVER LETTER and

• DON’T FORGET TO SPELL CHECK.
Describing your experience

- Used the Enviroscape model to educate school children and taught project WET lessons to 4th grade children
  
  Or

- Developed and delivered K-12 water resources educational programming that addressed the NJ State Science Core Curriculum
  
- Conducted SVAP surveys
  
  Or

- Assessed the health of New Jersey waterways using visual assessment tools
  
- Conducted macroinvertebrate analyses
  
  Or

- Evaluated the biological integrity of New Jersey’s waters through analysis of the macroinvertebrate community
Questions?

Christopher C. Obropta, Ph.D., P.E.
Associate Extension Specialist in Water Resources
Associate Professor in Department of Environmental Sciences
obropta@envsci.rutgers.edu
www.water.rutgers.edu

Or contact

Lisa Galloway Evrard
Senior Program Coordinator
evrard@rci.rutgers.edu