My backstory

- B.S. Chemistry 2002
- Ph.D. Water Resources 2006
- Postdoc Civil & Environmental Engineering 2006-2008
- Assistant Professor, Castleton State College (VT) 2008 – 2009
- Research Associate, Biological & Environmental Engineering 2009 – 2011
- Assistant Professor 2011-2015
- Associate Professor 2015-present

Expectations vary a lot

- Teaching & service loads vary
- Startup varies, $5k to over $100k
- Every four-year college values undergrad research
- Do not lower expectations of the level of research you will do, just the means, and the time frame
Get as much information as you can

- Network with colleagues at other PUIs - Find out what searches and res. statements are like in their field.
- Show your res. statement to colleagues and solicit feedback! Definitely at least show it to your advisor(s)

Investigate

- Does the college or department you're applying to require students to do UG research?
- Do they have students staying over the summer doing research? Is this supported financially?
- Do they have resources relevant to your research?
- Are there nearby universities with relevant facilities?
- Potential collaborators?

Things we worry about when reading a chemistry research statement

- Does _____ know what they're getting into? i.e., are they being realistic?
- Has _____ thought about how undergraduate students would go about doing this research?
- Does ____ have the adaptability and breadth to continue doing research five or ten years from now?
- Will ____ be able to get funding? Publish peer-reviewed papers with undergraduate student co-authors?

Format, writing, etc

- Sort-of like a grant proposal:
  - Organized with separate goals or specific aims
  - Say in general terms what you will do and why it’s important first, and don’t dive into the details until later
  - Don’t assume that people will see some connection that you think is obvious unless you explicitly state it! E.g., will make use of an instrument that they have, potential collaborators, suitability of project for UG students, etc.

- Aspects that are not at all like a grant proposal:
  - Possibly no experts in your specific area of research
  - Leave out the detailed background junk
  - Long-term potential of overall research program is important
  - Write accessibly, in active first person
Bird's-eye example
8 page total, Biochemistry

Nice things to note:
• Consistent organization into separate sections: Project 1, Project 2, Project 3
• Explicitly has sections about UG researchers and possible funding sources
• Somewhat long, but focused on the right things

Bird's-eye examples
3 page total, Biochemistry

Hit all the points: importance of work, UG research, funding, publishing, collaborators, relevant equipment at SUNY Cortland, specific first-person about what will do in lab, only took 3 pg!

Challenge for reviewers: One big block of text with few labeled sections
Search committee was concerned about: Only one project. Breadth / adaptability?

Group Activity
Writing a Research Statement

Form groups of three or four people
Everyone think up three possible projects, or specific aims, if possible
Pick one specific aim / research project from someone in your group, and discuss as a group:
• How is this specific aim publishable and fundable? Where?
• How is it a feasible aim for a small college with limited resources?
• How is it a good research project for undergraduate students?
• If this aim doesn't work out, would your other two aims still be viable avenues of research? Why? It can't hurt to specifically state this kind of thing in the Research statement.