

## Graduate Degree Program Self-Study: Department Overview

Department 

<b>Watershed Sciences (WATS)</b>
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After evaluating the completed self-study documents for all of the graduate degree programs in your department, what changes, if any, would you recommend? Please respond as concisely as possible in the table box below, limiting your response to no more than 2 pages, 12-point font.

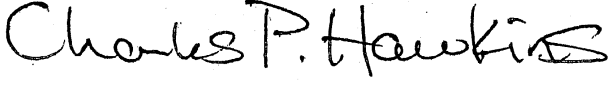
In general, the WATS faculty are pleased with the graduate programs we have developed with limited faculty, and our graduate students are also pleased with the quality of their education. 100% of all current PhD and MS students stated that they were either very satisfied or satisfied with the overall quality of their graduate education. However, our self-assessment of our three degree areas (Ecology, Watershed Sciences, and Fisheries) show that we need to work on three primary challenges as we move forward.

1. We need to improve our mentoring to ensure that more of our students complete their graduate degrees within the time frame we expect (2.5 years for a Master's student and 5 years for a PhD student). Across our 3 degree areas, average times to completion for students graduating during the last 3 years were 6.3 years for PhD students (N = 4) and 3.5 years for MS students (N = 21). Our programs are not unique in the amount of time it takes students to complete graduate degrees. Nationally, the median time to complete a PhD in the biological sciences is 9 years beyond the BS/BA and that for the earth sciences is 11 years (NAS 1997). In our 5-year plan we will propose ways to maximize the likelihood that graduate students can complete their degrees within a time frame that both ensures sufficient opportunity to develop the technical competency to be competitive in the job market and moves students into their careers in a timely way.
2. We need to secure more funding to support our graduate programs. The WATS faculty are near the top of USU faculty in generating extramural funding to support research and graduate education. It is unlikely our per capita receipt of grant funding can increase substantially. To enhance our graduate program, which is a recommendation of our recent (March 2012) external evaluation, we will need to both add faculty and secure new sources of funding.
3. We need to add expertise in each of our degree areas: Ecology, Watershed Sciences, and Fisheries Science. Even though we are a small department with 8 E&G faculty, we are able to successfully offer degrees in each of these disciplines because they complement one another. Furthermore, we take advantage of faculty and graduate course work offered by sister departments on campus, especially Wildland Resources, Environment and Society; Biology; Geology; Civil and Environmental Engineering; Mathematics and Statistics; and Plant, Soils and Climate. However, we have critical gaps in our expertise that we must fill if we are to substantially grow our graduate programs. Chief among them are fisheries ecology, environmental contaminants/toxicology, and riparian ecology/management.

The National Academy of Sciences. 1997. Adviser, Teacher, Role Model, Friend: On Being a Mentor to Students in Science and Engineering. National Academy Press, Washington, D.C.

Please use the signature block below to indicate approval by the department head.

**Department Head Approval:**

Charles P. Hawkins		8 March 2012
<b>Printed Name</b>	<b>Signature</b>	<b>Date</b>

By **March 1, 2012**, submit electronic copies of this department overview document **and** the self-study documents for all graduate degree programs, with a copy to your academic dean, to:

Dr. Mark McLellan

Vice President for Research and Dean of the School of Graduate Studies

[Mark.McLellan@usu.edu](mailto:Mark.McLellan@usu.edu)

**Subject: Grad Program Review: (insert department name here)**