

# Successful interactions with academia and watershed groups to meet agency needs.

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# Outline

- Background
- Service learning in the biological sciences
- Matching students with opportunities
- Outreach
- Managing pitfalls
- Recommended practices
- Further research



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# Background

- The mission of higher education: **produce trained graduates.**
- To meet program goals, students are often asked to participate in experiential learning (internships) or service learning.
- Successful partnerships are grounded in the integration of agency needs, student outcomes, and program goals.



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# Service and Experiential Learning

- Service learning ties community needs to course structure- the course informs student service, and the service creates dialogue between the agency and the college. (Heffernan, 2001)
- Experiential learning provides students hands-on application of knowledge and skills learned in the classroom (Wurdinger and Carson, 2010)
- Both build competencies in problem solving, interpersonal communication, reflection, and KSAs for future employment.



# Building partnerships with academia and watershed groups

- You have data collection needs and...
  - insufficient trained staff
  - Insufficient time to complete work
  - Insufficient funds
- Partnering with academia is a way to meet these needs and provide valuable on-the-job training for future environmental scientists
- Citizen scientists – including students- have contributed to data collection and verification across many different fields (Follett et al. 2015)



# The match is essential

- Successful collaborations require consensus building between agency personnel and teaching faculty prior to involving students/citizen scientists.
- Agency personnel: Explicitly defined expectations and deliverables
- Faculty member: Clear course goals and objectives with measures in place that assess student performance
- Agency personnel and faculty member write up internship documents prior to initiating search for suitable students
- Arrange meeting/telecom with student to interview



# Supporting agency needs

- Agencies have field sampling mandates and (usually) small budgets- hire an intern or service scholar to help you meet your goals.
- Local citizen scientists – particularly retirees from technical fields- have a lot to offer agency personnel in terms of life experience and finding solutions to complex problems.



Photo by B Acord/USACOE

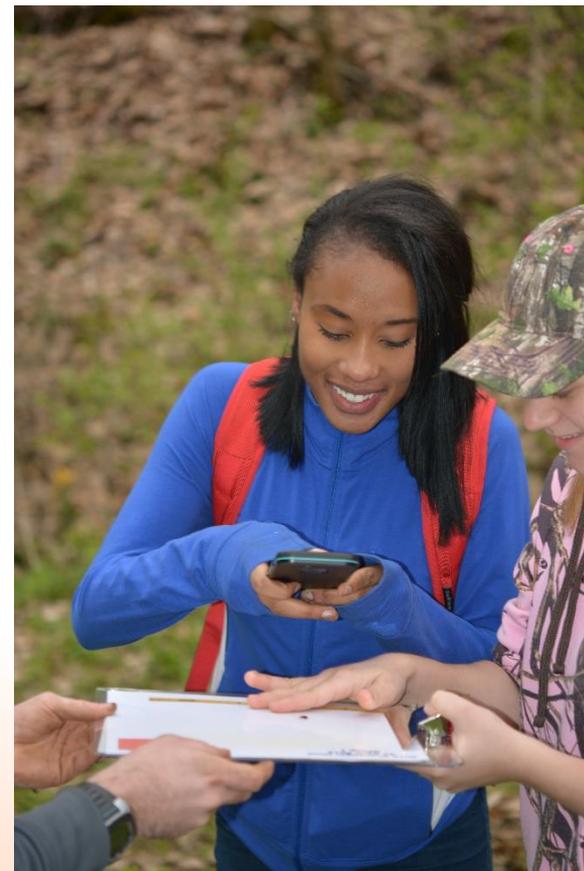
# Managing pitfalls with student workers

- Remember that the student is there to build competencies and KSAs.
- Regular communication between faculty member, field supervisor, and student is essential for successful results.
- Early assessment of student progress keeps students on track.
- Aim for highest workload at the beginning of the semester, tapering towards the middle, and end with writing before final exams.



# Future research

- WVWC is undertaking a study to learn how agency personnel view undergraduate student internships.
- Results of the study will be presented at the 2017 AMAAB meeting as well as the Ecological Society of America meeting in Portland, OR.
- Please consider participating – everyone is welcome. The more the better!



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# Questions?

