

Appendix F: Resources to Engage Students in Watershed Characterization Projects

Appendix F includes resources for students and their faculty mentors wishing to complete watershed characterization maps as a guided research or course project.

A peer-reviewed article, [Watershed Characterization to Enhance Student Learning and Build Capacity for Community-Led Watershed Planning and Management](#) (Meierdiercks et al. 2025), presents the Fishkill Creek Watershed Characterization mapping process as a case study. The project team included university staff (Clarkson University's Beacon Institute staff), a regional watershed partner (Hudson River Watershed Alliance), an undergraduate GIS student (Siena University, faculty mentor (Siena University), and volunteer members of the Fishkill Creek Watershed Alliance. The article describes the process of completing the initial watershed characterization maps through an academic-community partnership, lessons learned, and how partnering with a local watershed group can be mutually beneficial to both the faculty-student team and the watershed group.

The guidance document, [Watershed Characterization Guidance Document for Students and their Mentors](#) (Meierdiercks 2025), was written by Dr. Katherine Meierdiercks from Siena University to provide additional process details to help students and their faculty mentors in creating watershed maps in support of community-led watershed characterization, planning, and management. Appendix 1 of the student and mentor guidance document shares resources on best practices and additional guidance for collaboration and academic-community partnerships.

Pace University's Pocantico River Watershed Characterization is also a valuable case study for engaging undergraduate students in a watershed characterization. This work was led by a team of undergraduate students, with Dr. Michael Rubbo from Pace University's Department of Environmental Studies and Science serving as the faculty lead. The project included gathering existing information, conducting new studies to better understand ecological conditions, and understanding community perspectives. At a [2026 "Breakfast Webinar: A Student-Led Characterization of the Pocantico River Watershed,"](#) Dr. Rubbo discussed the benefits and challenges of this approach, and shared suggestions for improving these techniques. The Pocantico River Watershed Characterization is available as an [ESRI StoryMap](#), designed to share information with municipal officials, environmental leaders, and community members, as well as a [PDF report](#).