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<td>Authors</td>
<td>Tenhulzen, Alison; Black, Alyssa; Smith, Robert F</td>
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The potential for restoration of Tan Brook, an urban headwater stream in Amherst, Massachusetts
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The Tan Brook Student Conservation Group

MISSION: The goal of the Tan Brook Student Conservation Group is to educate undergraduate students at the University of Massachusetts-Amherst about freshwater sustainability. To accomplish this, the group will act to provide opportunities in original research, applied field and laboratory methods, and outreach. The initial goal for the group will be a collaborative project describing the ecological, historical, and social significance of the Tan Brook, which will result in an informative website and educational signage located at several locations in the town of Amherst and on University property where the Tan Brook enters campus. Ultimately, the group will contribute to multidisciplinary projects on applied and basic research about the sustainability of freshwater resources using the Tan Brook as the focus.

LONG-TERM GOALS:
1) Sustainability education/outreach
   - Promote the Tan Brook watershed as an outdoor classroom
   - Students will provide open source data and other materials about the Tan Brook watershed to be used in class exercises
   - Outreach activities will engage the local community about freshwater sustainability
2) Original research conducted by faculty, postdoctoral researchers, graduate and undergraduate students

Current Projects:

Current State of Tan Brook
- Tan Brook runs through the UMass-Amherst campus and the town of Amherst
- Like most headwater streams (Elmore and Kaushel, 2008), the Tan Brook is primarily underground (73%)
- Discharges into the UMass-Amherst campus pond
- Storm water overflow diverted to soccer fields west of campus, causing erosion (see Figure 3)
- Total watershed area = 3,190,839 m²
- 45.5% of the watershed is impervious
- 83% of the watershed is developed

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Thank you to Allison Roy and the Roy lab for their input, and to Chris Hewes for his data on the Tan Brook. This work was supported by National Science Foundation – Science, Engineering, and Education for Sustainability Fellowship, Award#: GEO-1211596.