

Curriculum Vitae (abridged)

Thomas Patrick Feeney

Professor
Graduate Program Coordinator
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Education

- 1997 Ph.D. Geography
University of Georgia, Athens, Georgia
Concentration: Geomorphology
Minor Areas: Hydrology; karst
- 1986 M.S. Geography
Western Kentucky University, Bowling Green, Kentucky
Concentration: Hydrology
- 1984 B.S. Water Resources
State University of New York - College at Oneonta, Oneonta, New York
Minor: Geography: Environmental Planning and Development
Minor: Astronomy/Physics

Professional Experience

- 2011 – present Professor. Department of Geography and Earth Science,
Shippensburg University.
- 2003 – 2011 Associate Professor. Department of Geography and Earth Science,
Shippensburg University.
- 1997 - 2003 Assistant Professor. Department of Geography and Earth Science,
Shippensburg University.
- 1996 - 1997 Instructor. Department of Geography, University of Georgia.
- 1992 - 1996 Graduate Teaching Assistant (Instructor of Record). Department of
Geography, University of Georgia.
- 1991-1992 Instructor. Department of Geography and Geology, Western Kentucky
University.
- 1987 - 1991 Senior Environmental Analyst. New York State Tug Hill Commission,
Watertown, New York.

Doctoral Dissertation

1997 "The Geomorphic Evolution of Limestone Pavements and Alvar Grasslands in Northeastern New York State." The University of Georgia, Athens, Georgia.

Masters Thesis

1986 "Mechanisms Responsible For Sinkhole Flooding on an Urban Karst Terrain: South Sunrise - Media Drive Sinkhole, Bowling Green, KY.," Western Kentucky University, Bowling Green, Kentucky.

Selected Publications

Feeney, T.P. and K. Schmid. "Regional Geology Field Trip of the Cumberland Valley Karst," in *The Caves of Pennsylvania: Guidebook to the 2013 NSS National Convention* edited by K.A. Opatka-Metzgar and T.J. Metzgar. National Speleological Society. p. 279-291. 2013.

Feeney, T.P. "Earth's Surface Landforms" *21st Century Geography: A Reference Handbook*. edited by J.P. Stoltman, SAGE Publications. Vol. 1; p. 3-12. 2012.

Hurd T.M., A. Brookhart-Rebert, T.P. Feeney, M.H. Otz, I. Otz . "Fast, Regional Conduit Flow to an Exceptional Value Spring Creek: Implications For Source Water protection in Mantled Karst of South Central Pennsylvania." *Journal of Cave and Karst Studies*. Vol. 72, No. 3, p.129-136. December 2010.

Feeney, T.P. "Source Water Protection Plan, Shippensburg Borough Authority: PWS #7210043." Approved by Pennsylvania Department of Environmental Protection, Harrisburg, Pennsylvania. June 2010.

Feeney, T.P. Invited review of the International Proceedings on Epikarst: Special Publication #9, Karst Waters Institute *in Journal of Cave & Karst Studies*, Vol. 66, No. 3. December 2004.

Railsback, L.B., P.A. Bouker, T.P. Feeney, E.A. Goddard, K.E. Goggin, A.S. Hall, B.P. Jackson, A.A. McLain, M.C. Orsega, M.A. Rafter, J.W. Webster "A Survey of the Major-Element Geochemistry of Georgia Groundwater." *Southeastern Geology*, Vol. 36, No. 3, p. 99-122. November 1996.

Feeney, T. P. "The Role of Grikes in Limestone Pavement Formation in Northern New York State, USA." in *Karren Landforms*, eds. J.J. Fornos and A. Gines. Universitat de les Illes Balears: Palma de Mallorca, Spain. p. 53-62. Aug 1996.

Leigh, David S. and T. P. Feeney "Paleochannels Indicating Wet Climate and Lack of Response to Lower Sea Level, Southeast Georgia." *Geology* , Vol. 23, No. 8, p. 687-690. August 1995.

Selected Conference Presentations (with Abstracts)

* with Shippensburg student

Pressley, K. * and Feeney, T.P. “Anisotropic Groundwater Flow Conditions in Pennsylvania’s Cumberland Valley Carbonates,” Northeast Regional Meeting of the Geological Society of America, Albany, N.Y. 2016.

Bartle, S., * T.P. Feeney, and T.M. Hurd, “An Assessment of Using Aquatic Subterranean Organisms and Fluorescent Proteins as Basic Tracers in the Cumberland Valley Karst Region of South Central Pennsylvania,” Geological Society of America National Meeting. Baltimore, MD. 2015.

Feeney, T.P. “Direct Surface Water Recharge to Cleversburg Sink Cave, South Central Pennsylvania,” Geological Society of America National Meeting. Denver, CO. 2013.

Feeney, T.P. and Mark Mishler*, “The Potential for Allogenic Recharge to Cleversburg Sink Cave, South-Central Pennsylvania,” Joint Meeting of the Northeast and North-Central Regions of the Geological Society of America, Pittsburgh, PA. March 2011.

Feeney, T.P. and Jeremiah Greenland*, “The Hydrologic Response of a Shallow Cave System in Pennsylvania’s Cumberland Valley,” Joint Meeting of the Northeast and Southeast Regions of the Geological Society of America, Baltimore, MD. 2010.

Hurd, T.M. and T.P. Feeney, “Characterization of Groundwater Flow Between Recharge Features and Carbonate in Cumberland County Pennsylvania with Fluorescent Dye Tracing,” Joint Meeting of the Northeast and Southeast Regions of the Geological Society of America, Baltimore, MD. 2010.

Feeney, T.P. and G. Lasako*. “Spring Hydrograph Analysis Along a Carbonate Mantle Boundary,” Association of American Geographers National Meeting, Las Vegas, NV. 2009.

Feeney, T.P., “Hydrograph Response of a Partially Mantled Carbonate Spring,” Association of American Geographers National Meeting, Boston, MA. 2008.

Feeney, T.P., “The Importance of Property-Owner Interviews in Sinkhole Collapse Remediation,” Northeast Regional Meeting of the Geological Society of America, Camp Hill, PA. 2006.

Lindsey, B. D., T.M. Hurd, T.P. Feeney, M. Otz, I. Otz, and A. Brookhart, “Multi-Velocity Transport of Water through Mantled Karst Aquifers: The Potential Effect on Aquifers Used For Water Supply,” Northeast Regional Meeting of the Geological Society of America, Camp Hill, PA. 2006.

Feeney, T.P., “Source Water Protection in the Cumberland Valley, PA,” Pennsylvania Geographical Society Annual Meeting, Greensburg, PA. October 2005. *Session Chair.*

Feeney, T.P., "Sleuthing the Origin of Bedrock Fractures in Epikarst," Association of American Geographers National Meeting, Denver, CO. April 2005.

*Fruchtl, B. and T.P. Feeney, "Carbonate Load and Denudation Estimates From a Mantled Karst Landscape, Pennsylvania," Association of American Geographers National Meeting, Philadelphia, PA. March 2004.

Feeney, T.P. "Topographic Depressions in a Pennsylvania Colluvial Apron: Is it Karst?" Association of American Geographers National Meeting, New Orleans, LA. March 2003.

Feeney, T.P. "Mapping of a Pinnacled Bedrock Surface," Association of American Geographers National Meeting, New York, NY. March 2001.

*Dee, Robin C. and T.P. Feeney, "Carbonate Water Chemistry of a Shallow Cave System in the Cumberland Valley, PA," Association of American Geographers National Meeting, New York, NY. March 2001.

Feeney, T.P., C. Reschke, J. Jones, "The Effect of Vehicle Ruts on Thin Alvar Grassland Soils: LaCloche Island, Ontario." Association of American Geographers National Meeting, Pittsburgh, PA. April 2000.

Feeney, T.P. "The Effect of Carbon Dioxide Variability on Chemical Sedimentation on Pavement Karst." Geological Society of America Annual Meeting, Denver, Colorado. October 1999.

Feeney, T.P. "Glaciated Karst in Northern New York State: The Chaumont Barrens Preserve." Geological Society of America Annual Meeting, Toronto, Ontario, Canada. October 1998.

Feeney, T.P. "The Evolution of Pavement Karst in Northwestern New York State." Joint Meeting of Friends of Karst and the International Geological Correlation Program (IGCP) Project #379: Karst Processes and the Global Carbon Cycle, Bowling Green, Kentucky. September 1998.

Feeney, T.P. "Pavement Karst Denudation in Northwestern New York State." Association of American Geographers National Meeting, Boston, Massachusetts. March 1998.

Feeney, T.P. "Defining The Source of Alvar Grassland Flooding: The Chaumont Barrens, New York." Middle States Division of the Association of American Geographers Annual Meeting, Buffalo, New York. October 1997.

Feeney, T.P. "Pre-Wisconsinan Karst Landforms and The Formation of Limestone Pavements." Association of American Geographers National Meeting, Fort Worth, Texas. April 1997.

Feeney, T.P. "Alvar Grassland Soils in Northern New York State." Southeastern Division of the Association of American Geographers Annual Meeting, Athens, Georgia. November 1996.

Feeney, T.P. "Flooding of Rare Natural Grasslands in Northern New York State." Association of American Geographers National Meeting, Charlotte, North Carolina. April 1996.

Feeney, T.P. "A New Look at the Evolution of Limestone Pavements." Southeastern Division of the Association of American Geographers Annual Meeting, Knoxville, Tennessee. November 1995.

Feeney, T.P. "Spring Response as an Indicator of Conduit and Diffuse Flow Components in a Karst Aquifer: Lost River Karst Aquifer, Kentucky." Southeastern Division of the Association of American Geographers Annual Meeting, Greensboro, North Carolina. November 1993.

Invited Conference Presentations

Feeney, T.P. "Direct Surface Water Recharge to the Cumberland Valley Karst: Cleversburg Sink Cave," Pennsylvania Groundwater Symposium. State College, PA. May 2016.

Feeney, T.P. "Water Level Fluctuations in Cleversburg Sink Cave," National Speleological Society Mid-Appalachian Region annual meeting. Keynote Speaker. 14 May 2011

Feeney, T.P. "The Watershed Hydrology of Carbonate Springs in Pennsylvania's Cumberland Valley," Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry, State-wide Annual Conference. State College, PA. 27 January 2009.

Student-Faculty Research Grants Shippensburg University

Mar 2018 with Tyler Anne Buck. "Analysis of Specific Conductivity and Major Ions in Green Spring, Pennsylvania."

Mar 2016 with Katie Pressley. "Anisotropic Groundwater Modeling in the Cumberland Valley, South-Central PA." Shippensburg University Institute of Public Service, Graduate Research Advisory Committee.

Mar 2015 with Doulton Campbell. "Synchronized Analysis of Three Limestone Springs in Pennsylvania's Cumberland Valley." Shippensburg University Institute of Public Service, Undergraduate Research Advisory Committee.

- Oct 2014 with Dana Heston. "Construction of a Traditional Darcy Apparatus to Measure Hydraulic Conductivity" G. Bryan Salzmann Award.
- Oct 2013 with D.Predecki, and J.Richardson Sarah Bradley
"Magnesium Concentration in Horse Valley Reservoir Raw Water Supply."
Shippensburg University Institute of Public Service, Undergraduate Research Advisory Committee.
- Oct 2011 with Chad Drzewiecki
"Potential Dissolution of Calcite Cave Formations in a Flooded Pennsylvania Cave System." Shippensburg University Institute of Public Service, Undergraduate Research Advisory Committee.
- Oct 2009 with Alexander Reed
"A Geologic and Hydrologic Characterization of the Tayamentasachta Spring: Tayamentasachta Environmental Center, Greencastle, PA." Shippensburg University Institute of Public Service, Undergraduate Research Advisory Committee.
- Mar 2009 with Saidet Sulduitti
"The Assessment of Fecal Coliform Bacteria in Cumberland Valley Springs." Shippensburg University Institute of Public Service, Graduate Research Advisory Committee.
- Feb 2009 with Gary Lasako
"A Comparison of Spring Response Along a Carbonate Mantle Boundary." Shippensburg University Institute of Public Service, Graduate Research Advisory Committee.
- Feb 2008 with Gary Lasako
"The Analysis of Suspended and Dissolved Materials in Green Spring, Cumberland County, PA." Miklausen-Likar Research Grant.
- Feb 2006 with John Pikera
"The Carbonate Water Chemistry of Big Spring, Cumberland County, PA." Miklausen-Likar Research Grant.
- Mar 2004 with Brenda Fruchtl
"Carbonate Load and Denudation Estimates From a Mantled Krast Landscape, PA." Shippensburg University Institute of Public Service, Graduate Research Advisory Committee.
- Jan 2003 with Bruce Lindsey
"Carbonate Water Laboratory Analysis of Dykeman Spring, Shippensburg, PA." Miklausen-Likar Research Grant.

- Nov 2002 with Kevin Wehnau
 “The Water Quality of the Orrs Bridge Road Spring.” Shippensburg University Institute of Public Service, Graduate Research Advisory Committee. \$
- Nov 2002 with Repp Glaettli
 “The Influence of Surface Water on the Groundwater Flow of Dykeman Spring.” Shippensburg University Institute of Public Service, Graduate Research Advisory Committee.
- Mar 2001 with Robin Dee
 “The Physical Hydrology and Water Chemistry of Cleversburg Cave, Southampton Township, Cumberland Co., PA.” Miklausen-Likar Research Grant.
- Sep 2000 with Bob Hockersmith.
 “Phosphorous Management at Organic Farm Sites.” Shippensburg University Institute of Public Service, Graduate Research Advisory Committee.

M.S. Graduate Thesis Committees

- In progress* Joshua Trott (Advisor)
 “Determination of a Carbonate Spring’s Recharge Area Using Stable Isotopes: Tayamentasachta Spring, PA.”
- In progress* Tara Leeking-Wolf (Committee Member)
 “Source Area Determination with Intrinsic Tracers in a Karst Flow System: Organic Fluorophores, Stable Isotopes, and Biological Indicators.”
- In progress* Dylan Baumbach (Committee Member)
 “Comparing Water Quality and Biologic Communities Across Carbonate and Non-carbonate Geology in Two Agriculturally Influenced Streams in the Cumberland Valley of Pennsylvania.”
- Aug 2018 Corry Shaffer (Advisor)
 “Discharge Determination of a Submerged Carbonate Spring Using Die Dilution.”
- May 2017 Ma Kun (Committee Member)
 “Polycyclic Aromatic Hydrocarbon (PAH) Identification and Transport to Karst Springs and Sediment: Determination by 3-D Fluorescence Excitation Emission Matrix Analysis (EEM) and Potential Ecological Effects”

- Jan 2017 Robert Koroncai (Committee Member)
“Locating and Mapping the Barrier Island Freshwater/Saltwater Interface with the Use of Ground Penetrating Radar, Wallops Island, Virginia.”
- June 2016 Joe Galella (Committee Member)
“Slackwater Sedimentation at Laughlin Milldam, Newville, Pennsylvania.”
- Dec 2015 Michael Stefanic (Committee Member)
“The Geologic and Economic History of Phosphate Minerals Located at South Mountain, Mount Holly Springs, PA”
- Dec 2014 Graham Markowitz (Committee Member)
“Alterations in Channel Geometry, Shear Stress, and Bedload Sediments within a Reconstructed Stream Channel.”
- May 2014 Lucas Hershey (Committee Member)
“Combustible Gas Concentrations in Soil at Natural Gas Extraction Sites”
- Dec 2013 Neal Kerrigan (Committee Member)
“Geophysical Investigation of a Stream Restoration Site for Possible Impacts on Underlying Subsurface Geology.”
- Nov 2011 Griffith Jones (Committee Member)
“Water Quality Improvement and Nitrate Removal in Craig’s Marsh, Shippensburg, PA.”
- Nov 2009 Jeffery Humpton (Committee Member)
“Monitoring and Evaluation of a Small Urban Stream Restoration Project in Harrisburg, Pennsylvania.”
- Nov 2009 Gary Lasako (Advisor)
“Investigating the Influence of Geology on Carbonate Spring Response in the Cumberland Valley, Pennsylvania”
- Nov 2009 James Manuel (Committee Member)
“The Implementation of a Long-Term Monitoring System on the Restored Conococheague Creek Following the Removal of Birch Run Dam.”
- Jul 2007 Ashley Brookhart (Committee Member)
“Benthic Assessment of Water Quality and Fluorescent Dye Tracing of Contributing Areas to Karst Spring in the Great Valley of Pennsylvania.”
(MS student in Biology Department)
- Dec 2006 Brandy Vos (Committee Member)
“Floodplain Management Programs in a Tri-State Regional Area: A Comparison of Elements and Implementations.” 106 p.

- May 2006 Jinnieth Woodward (Committee Member)
 “The Ability of a Spring-Fed Wetland to Lower Nitrate Concentrations in an Agricultural Area.” 64 p.
- May 2005 John Balay (Committee Member)
 “The Development and Application of a Comprehensive Monitoring Methodology for Evaluating Fluvial Geomorphic Stability Within a Restored Stream Channel in South-central Pennsylvania.” 77 p.
- Dec 2004 Bruce Lindsey (Advisor)
 “Hydrology of a Carbonate Spring in the Cumberland Valley, Pennsylvania.” 139 p.
- Dec 2004 Brenda Fruchtl (Advisor)
 “Carbonate Load and Denudation Estimates From a Mantled Karst Landscape, Pennsylvania.” 94 p.
- May 2004 William Bechtel (Advisor)
 “Hydrology of Boiling Springs – A Comparison of Drought, Wet, and Normal Conditions.” 66 p.
- Dec 2001 Todd D. Grote (Committee Member)
 “Baseflow Geochemistry of a Fluvial Watershed: Burd Run, South-Central Pennsylvania.” 106 p.
- Jul 2001 Robin C. Dee (Advisor)
 “Water Chemistry of the Cleversburg Sink Cave System: Cumberland Valley, Pennsylvania.” 93 p.
- Nov 1999 John E. Herrmann (Committee Member)
 “A Stream Meandor Restoration Study on an Small Ungaged Stream in South Central Pennsylvania.” 82 p.
- Sep 1998 Lynette M. Ward (Committee Member)
 “Analysis of the James River Regional Flow Management Plan.” 52 p.

Graduate Student Research

Non-Thesis Track Directed Research (GEO 546)

- In progress* Troy Alleman “Abnormally High Specific Conductance of Natural Waters in a Carbonate Spring: Green Spring, PA.”
- In progress* Tyler Costlow “Comparison of Water Chemistry, Land Use and Geology on the East and West Branches of Antietam Creek near Waynesboro, PA”

- Spr 2018 Tyler-Anne Buck "Analysis of Specific Conductance and Major Ions at Green Spring, PA"
- Fall 2017 Mike Dofner "Seasonal Trends of Nitrate Concentration and Load in Green Spring, PA"
- Spr 2016 Katie Pressley "Anisotropic Groundwater Modeling in the Cumberland Valley, South-Central, PA"
- Fall 2015 Mike Stoehr "Determining Flow Connections in the Cumberland Valley: A Time-of-Travel Study at Ott Road."
- Spr 2015 Brianne Campbell "Identification of Aquatic Fluorophores in a Carbonate Spring: Cumberland County, PA"
- Spr 2015 Dana Heston "Using Chloride and Bromide Mass Ratios and Binary Mixing Curves to Evaluate Anthropogenic Influences on Groundwater in Lycoming and Wayne Counties, PA."
- Spr 2014 Corey Pelow "The Effects of Urban Development on a Spring-Fed Stream in Cumberland Co, PA."
- Spr 2013 Abdoul Koroney "Groundwater Exploration Using Shallow Geophysical Methods: Gunter Valley, Franklin, Co. PA"
- Fall 2012 Rick Kaiser "Baseflow Recession Analysis of a Small Private Fish Hatchery: Green Spring, Cumberland Co., PA."
- Spr 2011 Mark Mishler. "The Potential for Allogenic Recharge to Cleversburg Sink Cave System, Cumberland County, PA."
- Spr 2010 Nathan Bennett. "Stratigraphic and Spatial Analysis of the Council Run Natural Gas Field, Northwestern PA."
- Fall 2009 Jeremiah Greenland. "Determination of Static Water Elevations in Cleversburg Sink Cave and Swope Spring."
- Fall 2009 Saidet Saldutti. "The Assessment of Fecal Coliform Bacteria in Cumberland Valley Springs."
- Spr 2007 Mike Yankovich. "The Clay Mineral Composition of Sediment in Carnegie Cave, Cumberland County, PA."
- Spr 2006 John Pikera. "The Carbonate Geochemistry of Big Spring, PA"

- Spr 2006 Joe Sassaman. "The Distribution of Topographic Depressions in the Cumberland Valley of South-Central Pennsylvania,"
- Fall 2003 Alan Miller. "Mapping Karst Feature Distribution in South-Central Pennsylvania with GPS and GIS."
- Spr 2003 Berkley Myers. "The Productivity of Municipal Water Supply Wells in the Shippensburg Borough Authority."
- Spr 2003 Justin Gindlesperger. "Temporal study of Groundwater Levels on the Shippensburg University Campus."
- Spr 2003 Repp Glaettli. "The Influence of Surface Water on the Groundwater Flow of Dykeman Spring."
- Sum 2002 Brandy Thoman. "The Agricultural Effects on Groundwater Quality in Karst Environments."
- Spr 2001 Bob Hockersmith. "The Nutrient Management Planner as a Liaison Between Policy and Implementation in The Chesapeake Bay Watershed."
- Fall 2001 Asha Withers. "Analysis of Soil Phosphate Levels in Fields Presently Under Agricultural Land Uses Within the Gettysburg National Military Park
- Fall 2000 Brent Ramsey. "Stormwater Runoff Assessment of the Shippensburg University Campus"
- Sum 2000 Rick Mader. "The Carbonate Water Chemistry of Boiling Spring, PA."
- Fall 1999 Jeremy Dixon. "The Soils of San Salvador Island, Bahamas."
- Spr 1999 Chip Fohl. "The Geographic Distribution of Sinkholes in the Cumberland Valley."

Undergraduate Research (Semester research course: results presented at Minds at Work)

- Spr 2016 with Douulton Campbell
"Synchronized Analysis of Three Limestone Springs in Pennsylvania's Cumberland Valley"
- Spr 2015 with Trey Miller
" Historic Sources of Domestic Water in Cumberland County, PA"

Fall 2011 with Chad Drzewiecki
"Potential Dissolution of Calcite Cave Formations in a Flooded Pennsylvania
Cave System." In progress

Fall 2009 with Alexander Reed
"A Geologic and Hydrologic Characterization of the Tayamentasachta Spring:
Tayamentasachta Environmental Center, Greencastle, PA."