

Annual Report 2017-2018



**Center for Land Use
and Sustainability**

SHIPPENSBURG UNIVERSITY

ANNUAL REPORT SUMMARY

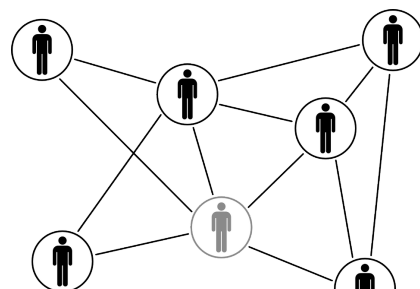
14 Presentations

at conferences or meetings in past year



 **1 NEW**
Instagram
account

1 Bench
sponsored
by the CLUS on the
Cumberland Valley
Rail Trail



**2 NETWORKING
EVENTS FOR
STUDENTS**

BY THE NUMBERS (SINCE 2015):

\$1.9 MILLION
AWARDED IN
GRANTS AND
CONTRACTS



**14 RESEARCH
PROJECTS**

4 Surveys
to support
research



**19 Students
Involved**

14 undergraduate and
5 graduate students



1 Bike Share

Program supported
by CLUS scientists



**10 AFFILIATE
SCIENTISTS**
working
on CLUS
research
projects



1 Soil Pit
at the SU
Campus Farm



16 Reports
completed in
past year



Learn more on our website: www.centerforlanduse.org

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LETTER FROM THE DIRECTOR

“The research we do makes a difference on campus and in our communities.”

- Dr. Claire Jantz



Welcome to the second annual report from the Center for Land Use and Sustainability. As we release this year's annual report, we have just celebrated the inauguration of Shippensburg University's 17th President, Dr. Laurie Carter. We are excited to join with President Carter in #makingwaves that will take us to new places.

The annual report gives us a chance to look back and celebrate our accomplishments, as well as an opportunity to look ahead to the future. With the launch of the new sustainability major in the Department of Geography-Earth Science, we have renewed our commitment to our core objectives: providing high-impact, interdisciplinary learning experiences for students; professional development opportunities for students, faculty, and professionals; and community engagement from the local to the global level.

Our research projects support agencies, institutions, and communities in their pursuit of sustainability initiatives. We believe that sustainability can only be achieved by having people from different backgrounds working on the same problem and we are deeply committed to an interdisciplinary and inclusive approach to applied research.

We continue to be successful in pursuing and winning external grants and contracts, and the CLUS is almost entirely funded with these external funds. Since our re-launch in 2015, we have been awarded \$1.9 million in external funding, most recently winning a contract to conduct a Natural Resource Condition Assessment for the Appalachian National Scenic Trail. We have been successful partly due to the grant-writing talents of our faculty and staff, but also because of our partnerships and networks. This year we are launching a strategic planning initiative, engaging with students, faculty, staff, administrators, and community partners to chart the course for the future.

In closing, the work of the CLUS students, faculty, and staff represent signature Ship. We offer students a laboratory where they can learn about the practical aspects of sustainability and land use; they participate in cutting edge research that makes a difference in their community and in the world.

Thank you to all of our partners and supporters- here's to another great year!

Claire Jantz

MISSION STATEMENT



The mission of the Center for Land Use and Sustainability is to support science-based solutions to interdisciplinary sustainability challenges. Our vision is to become a nationally recognized interdisciplinary center that leverages the expertise of SU faculty, staff, and students to promote sustainable land use, economic development, cultural and natural resource management, and communities at local, regional, and global scales. The CLUS has three main goals:

- **Promote Interdisciplinary Research:** *To promote applied interdisciplinary research on issues related to land use and sustainability.*
- **Support Sustainable Solutions:** *To support affordable, sustainable solutions in our local, regional, and global communities.*
- **Provide Professional Development:** *To create professional development opportunities for faculty and staff, and high-impact learning experiences for students.*

Our research projects provide real-world opportunities for students to learn and apply knowledge from the classroom, while making connections and supporting communities.

In summer 2018, the CLUS plans to undergo strategic planning efforts to better define our mission, vision, and goals. With help from a faculty and community steering committee, we hope to identify areas for growth and create strategies for continued success in the future.

The CLUS has become a laboratory where students and faculty at Shippensburg University can learn about sustainability through applied interdisciplinary research.

OUR TEAM

Dr. Claire Jantz, Director

Dr. Jantz has served as Director of the CLUS since the 2015 revitalization. She has extensive expertise in land use and land cover change analysis and modeling, and interdisciplinary research. When she is not teaching or conducting research, Dr. Jantz enjoys spending time with family and friends, using the Cumberland Valley Rail Trail, and supporting community events.



Antonia Price, CLUS Project Manager

Antonia has a background in community outreach, science education, and enjoys communicating science to diverse audiences. She provides administrative support through grant writing, budget and timeline oversight, outreach efforts, and developing materials and reports. In her spare time, Antonia enjoys traveling, gardening, and spending time with her family.

Alfonso Yáñez Morillo, CLUS Research Analyst

Alfonso specializes in landscape ecology and connectivity and has over 14 years experience applying GIS to a wide range of environmental consultancy projects. His focus areas include environmental impact assessments, land use change, planning evaluation, forest fires, and ecological flows regimes. Alfonso enjoys archery, hiking, and spending time outdoors.



Dr. George Pomeroy, CLUS Associate Director

Dr. Pomeroy served as Director of the Center for Land Use (CLU) from 2005-2015. He teaches courses and conducts research related to land use and community planning, focusing on both the U.S. and comparative contexts. Dr. Pomeroy is an active member of the community both on and off campus, supporting a wide variety of efforts related to planning and sustainability.

Dr. Scott Drzyzga, CLUS GIScience Director

Dr. Drzyzga is an experienced specialist in geographic information science and technology, a certified Geographic Information Systems Professional (GISP), and unmanned aircraft systems (drone) pilot. He enjoys working with students in the classroom and field, supporting community conservation efforts, and participating in state efforts to standardize and improve spatial data.



OUR EXPERTISE

We rely on the expertise of our affiliated scientists to conduct research and complete projects; as the CLUS grows, so does our expertise. Current areas of expertise include:

- Applied history and archaeology
- Community sustainability
- Geographic Information Systems (GIS)
- Global Navigation Satellite Systems
- Unmanned Aircraft Systems (Drones)
- Physical and environmental sciences
- Sustainable business practices
- Land use planning, economics, and transportation

In addition to consulting on the areas above, we provide community analyses, map production and compilation, workshops, and professional training. Recent projects have involved developing surveys, gathering community input, and research related to historic preservation and land use.

Learn more on our website: <https://centerforlanduse.org/about/our-expertise/>

PROJECT HIGHLIGHTS

LOYSVILLE VILLAGE MUNICIPAL AUTHORITY SURVEY

In late 2017, the CLUS administered a confidential household survey on behalf of Lovysville Village Municipal Authority (LVMA) and Entech Engineering. The purpose of this survey was to gather household data in anticipation of applying for grants and loans to support infrastructure upgrades in the community. Over the course of three months, our team developed a survey instrument, gathered data, and analyzed results.



3 month project



5 undergraduate and
2 graduate students
involved



90% response rate
to the survey



Who was involved?

This project was led by Dr. Dorlisa Minnick (Social Work & Gerontology) and involved students from Biology, History, Social Work, Sociology, and Geography-Earth Science.

What was the impact of this work?

The data collected by our students and staff will be used in grant and loan applications to support infrastructure upgrades in the community, reducing the financial burden on community members.

“This short project was a wonderful opportunity to involve students from across campus. Our interdisciplinary team was able to receive an extremely high response rate to the survey, allowing us to gather the necessary data to support the community.”

- Antonia Price

CUMBERLAND COUNTY PLANNING COMMISSION SURVEY

What was the impact of this work?

We were able to help the Cumberland County Planning Commission (CCPC) receive public feedback on the draft goals and objectives of the Comprehensive Plan. CCPC used survey results to update the 2017 comprehensive plan, ensuring that plans for the future would align with the vision and values of the community.



6,200 postcards
mailed to residents



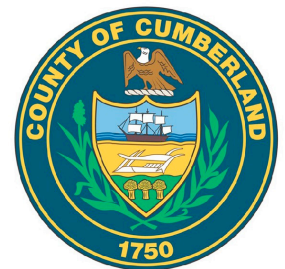
Received 2,992
completed
surveys



179 page survey
analysis delivered
to CCPC by CLUS

“I had full confidence that the CLUS’ multidisciplinary team could address virtually any need we had as part of the project. We are privileged in Cumberland County to have such a trusted partner right here in our own backyard.” - Kirk Stoner, AICP; Director of Planning

Cumberland County was the fastest growing county in Pennsylvania from 2000-2016. To prepare for future growth, the county and 33 municipal governments worked to develop the Cumberland County Comprehensive Plan, a long range policy document that establishes goals and objectives for the orderly development of the county.



The CLUS conducted an online survey of residents on behalf of the Cumberland County Planning Commission in Spring 2017 with the purpose of gathering public feedback on the goals and objectives laid out in the draft comprehensive plan.

To view the 2017 Cumberland County Comprehensive Plan, visit:

www.ccpa.net/DocumentCenter/View/28869

Dr. Dorlisa Minnick, Assistant Professor of Social Work and Gerontology, believes social and environmental justice are inextricably tied together in order to build sustainable communities. She has experience in designing, implementing, and disseminating results from community assessments focused on the social environments of marginalized populations.



DELAWARE RIVER BASIN MODELING

The Delaware River Basin (DRB) provides water resources for roughly 5% of the US population – over 15 million people. There are significant challenges facing water resources in the DRB including water quality, population growth and associated land cover change, emerging energy industries, and the potential for sea level rise, flooding, and drought with climate change.

What was the impact of this work?

Our team developed tools that support conservation practitioners and decision makers in prioritizing watersheds for restoration and protection within the Delaware River Watershed Initiative, helping to protect water resources for the future.

What was the approach for this project?

CLUS staff, students, and faculty held a series of workshops to understand the regional vision and values of the DRB. After a basin-wide survey with over 120 responses, our team held a final workshop with conservation professionals to incorporate this information and develop future land use scenarios for the DRB in 2070.

To learn more, visit: <https://drbproject.org/>



7 high-resolution data for **43** counties
students involved in project
4 affiliate scientists
1 interactive map
3 alternative scenarios of future land use



The results from this work include 3 scenarios of land use in 2070: baseline, corridors, and centers

Land use scenarios are plausible stories of how a region can change over time; by considering multiple scenarios, you can explore a range of possible futures.

“...from a social work scientist perspective, I most often engage in research with community members [as opposed to experts] as stakeholders. So even though we use similar methodology when it comes to community-based research, I learnt a different perspective on community research from our interdisciplinary work... the CLUS staff and faculty are wonderful people to work with as they are adept at the necessary collaborative processes needed to implement effective interdisciplinary research!” - Dr. Dorlisa Minnick

INVENTORY OF HISTORIC PRESERVATION ORDINANCES IN PA



MILLERSVILLE



This project was a collaboration between Shippensburg University and Millersville University.

Dr. Steven Burg (above), History and Philosophy, Shippensburg University

Dr. George Pomeroy, Geography-Earth Science, Shippensburg University

Dr. Angela Cuthbert, Geography, Millersville University

Dana Edsall, Geo-graphic Laboratory, Millersville University

The Pennsylvania General Assembly has empowered local governments to protect and preserve historic resources as part of the local planning and zoning process through the enactment of two different statutes with preservation provisions: The Historic District Act (HDA) of 1961, and the Pennsylvania Municipalities Planning Code (MPC) Act of 1968.

This research project provided the first comprehensive inventory and analysis of historic preservation ordinances using HDA and MPC in Pennsylvania municipalities. Documenting the types of historic resource provisions is critical for facilitating an understanding of the ways communities with local ordinances are applying general provisions of the law to protect historic resources.

What was the impact of this project?

The research team developed an inventory of historic preservation regulations, a socio-demographic and spatial analysis, and set of related outcomes to analyze the extent and effectiveness of historic preservation regulations at the municipal level throughout the Commonwealth.

A set of 15 policy considerations were identified relating to the extent and geographic pattern of historic preservation, and methods utilized by municipalities for preservation. These recommendations will be presented to the PA state legislature with the purpose of clarifying or bringing greater uniformity to the state's historic preservation statutes.

To view the final report developed by the CLUS, visit:
www.rural.palegislature.us/publications_reports.html

3 students involved
(2 at Shippensburg and
1 at Millersville)

294 municipalities
with historic preservation
regulations (11.5%)

15 policy
recommendations



“Putting the research together and meeting with others working on the project from MU gave me a behind-the-scenes look at what goes into GIS. It made me think that I’d enjoy using GIS as part of a career... If you have an opportunity to do something in another discipline, go for it! Interdisciplinary work and study open up new avenues for you that you may have never considered otherwise. Don’t be afraid to try new things!” - James Hughes (graduate student, History)

GIS SUPPORT FOR KITTATINNY RIDGE

The Kittatinny Ridge Coalition is an alliance of organizations, agencies, and academic institutions working with municipal officials and private landowners to conserve the natural, scenic, cultural, and aesthetic resources of the Kittatinny Ridge and Corridor. Shippensburg University is an active member, and in 2017 the CLUS began providing GIS support services to the Coalition.

Project 1: Parcel Prioritization

CLUS students prepared a parcel analysis along the Kittatinny Ridge to support management efforts and protecting land with the most significant impact. This project involved three steps:

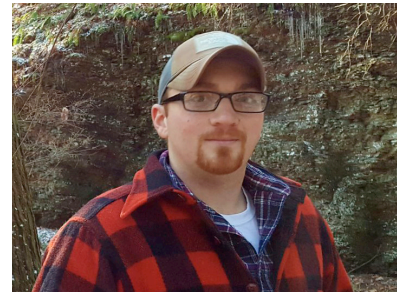
- Create and maintain a series of GIS data sets to support research and conservation activities
- Calculate a series of baseline landscape metrics for the Kittatinny Ridge
- Identify the most important parcels along the Kittatinny Ridge for protection

Project 2: Story Map Development (<https://arcg.is/Sf9qS>)

CLUS students also developed a story map to analyze land cover dynamics along the Kittatinny Ridge. This resource will be used to guide management decisions, facilitate community outreach and education, and as a baseline for ongoing preservation efforts.



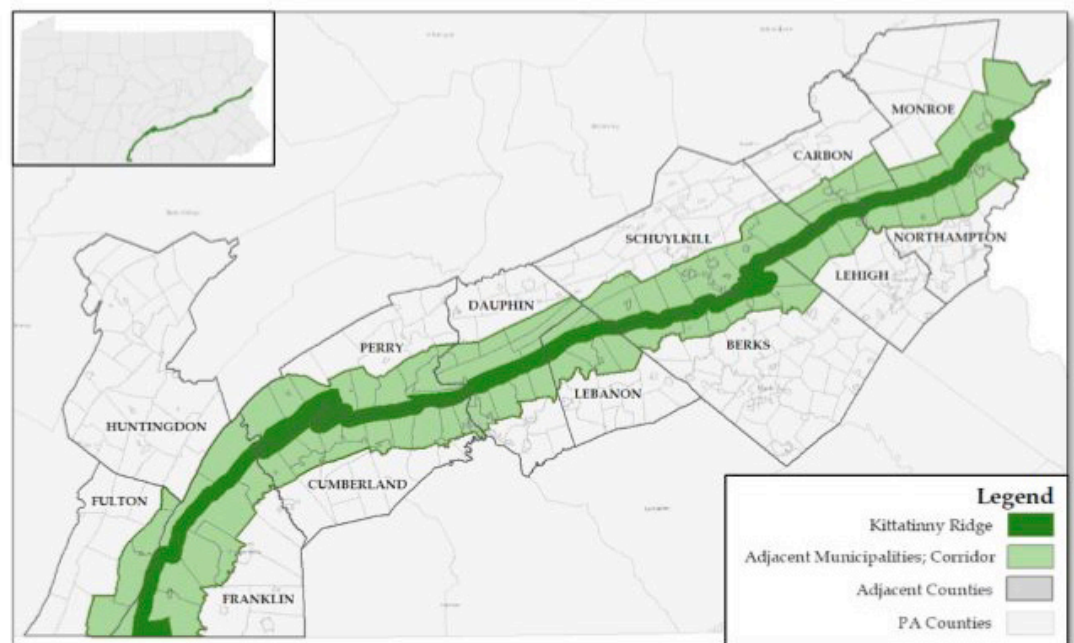
Jackie Rosenberger



Jonathon Chester



Troy Alleman



The Kittatinny Ridge (illustrated in green) stretches across 12 counties in Pennsylvania's Appalachian Highlands (US Census Bureau 2016; US Census Bureau 2017)

RESEARCH GRANTS AND SERVICE CONTRACTS

Assessment of Natural Resource Condition for the Appalachian National Scenic Trail (ME, NH, VT, MA, CT, NY, NJ, PA, MD, WV, VA, TN, NC, GA)
(8/1/18-12/31/20)*

National Park Service (via CESU)

C. Jantz, T. Hawkins, P. Jantz (Northern Arizona University)- \$150,000 (total anticipated award)

Mapping support for Pennsylvania Parks and Forests Foundation Infrastructure Report

(12/1/17-3/2/18)

Pennsylvania Parks and Forests Foundation

C. Jantz, C. Papinchak- \$1,008.50

Archaeological Geophysics at Camp Security

(11/1/17-4/20/18)

The Friends of Camp Security

P. Marr, J. Zume, S. Cornell- \$7,360.00

Median Household Income Survey for Loysville Village Municipal Authority (9/25/17-2/28/18)

Entech Engineering

D. Minnick- \$19,463.75

How will forest ecosystems and hydrologic processes in the Delaware River Basin be affected by climate change and land cover change?

(1/20/17-1/19/20)

Delaware Watershed Research Fund

C. Jantz, S. Drzyzga, T. Hawkins, C. Woltemade, P. Jantz (NAU)- \$485,924.00

Inventory and Analysis of Historic Preservation Ordinances in Pennsylvania Municipalities

(1/20/17-1/20/18)

Center for Rural Pennsylvania

S. Burg, G. Pomeroy, A. Cuthbert (Millersville University)- \$49,694.00

Mapping Historic Features of Prehistoric Cultural Features in the Carbaugh Run Natural Area

(1/1/17-12/31/17)

South Mountain Partnership

P. Marr, J. Wah (Matapeake Soil)- \$13,500.00

Story Map of South Mountain Partnership Mini-Grants (1/1/17-12/31/17)

South Mountain Partnership

C. Jantz- \$2,000.00

Community Survey for Cumberland County

(11/18/16-9/1/17)

Greater Harrisburg Association of Realtors

D. Minnick- \$4,984.00

GIS Project for the Kittatinny Ridge Coalition

(11/8/16-8/31/17)

National Audubon Society, Inc.

C. Jantz- \$4,920.00

Poconos- Kittatinny Cluster Land Protection Focus Selection (9/14/16-8/31/17)

Pinchot Institute for Conservation

C. Jantz- \$55,602.79

On-line GIS tool for Upper Delaware Scenic & Recreational River- National Park Service (via CESU)

(9/14/16-12/31/21)

C. Jantz- \$130,101.88

Cultivating Sustainability through General Education Coursework, Professional Development, and High-Impact Co-Curricular Programming and Career Development at SU (1/1/16-11/30/16)

National Science Foundation (Via SERC at Carleton College)

S. Cornell, N. Thomas- \$49,826.80

A Land Cover Mapping, Modeling and Monitoring System for the Delaware River Basin - In Support of Maintaining and Restoring Water Resources

(1/1/15-6/30/17)

William Penn Foundation

C. Jantz, S. Drzyzga, J. O'Neil-Dunne (University of Vermont Spatial Analysis Lab), P. Claggett (USGS)

\$1,015,000.00

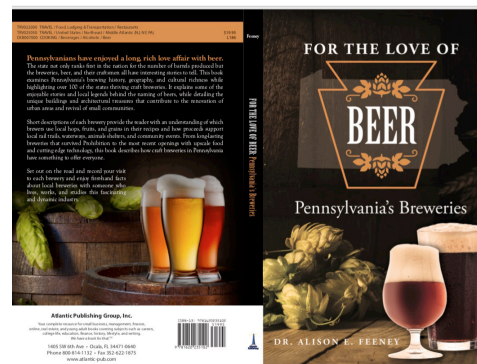
*Anticipated dates, contracting in progress

RELATED WORK BY AFFILIATE SCIENTISTS

EXPLORATORY PROJECT ON FERMENTATION SCIENCE

Dr. Alison Feeney (Geography-Earth Science) has been advocating for an interdisciplinary fermentation science program at Shippensburg University as an “exploratory professional education or continuing education [resource] to meet the demands of the industry.” She is confident that a beer brewing center and degree would be the perfect addition to the school and community.

Dr. Feeney believes that diversity is exactly what this area needs for the future and “the lack of diversity is due to both individual and social barriers. The perceived part [is] that women aren’t supposed to be drinking, along with actual barriers and cultural aspects.” She believes that breaking past these barriers will bring a new perspective to the industry and provide opportunities for future students.



Dr. Feeney's book *For the Love of Beer: Pennsylvania's Breweries* will be available in June 2018 on Amazon

“I hope to help guide the future of brewed beverages and build partnerships between breweries, related to industries and higher education throughout the state.”- Dr. Alison Feeney

CUMBERLAND VALLEY RAIL TRAIL - CAMPUS COMMITTEE

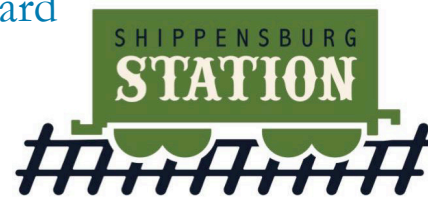
Once the route of the Cumberland Valley Railroad, the Cumberland Valley Rail Trail (CVRT) was completed between Shippensburg and Newville in 2006. In 2017 the trail was extended across a new bridge at Fogelsanger Road and through campus to a new trailhead at Fort Street. The extension of the trail into the heart of SU presents a wonderful opportunity in terms of providing opportunities for students and forging stronger connections to the surrounding community.

Dr. Allen Dietrich-Ward (History and Philosophy) is leading a campus-wide CVRT Coordinating Committee. In addition to thinking “big thoughts” about future uses for the trail, the group will form action-oriented working groups to handle integrating the trail into academic and student service activities.



Concept for “Shippensburg Station” Railroad Museum

“The CLUS provides a perfect institutional home for the CVRT campus committee as we have a shared commitment to developing a sustainable campus and community.”
- Dr. Dieterich-Ward



STUDENT INVOLVEMENT

STUDENT PERSPECTIVE

Our students play a vital role in conducting research and communicating with collaborators. We involve students in each of our projects, supporting their time through grants and contracts.

“By far the best professional decision I have made while at SHIP.”
- Jonathon Chester (Geography-Earth Science ‘18)

“The best things I gained from my time with the CLUS are the practical experiences working in a field I’ll try and pursue and the satisfaction of knowing I’ve done work that directly benefits communities.” - James Hughes (Graduate student, History ‘19)

“CLUS helped me by providing me the tools, skills, and opportunities to explore those options and fine-tune my career goals.” - Carla Johns (Geography-Earth Science ‘16)

OPPORTUNITIES FOR STUDENTS

Applied Interdisciplinary Research

Through our research projects, students have the opportunity to directly apply knowledge from the classroom in a real world setting. Our Graduate and Undergraduate Student Fellows play a crucial role in completing research by working with collaborators, compiling and analyzing spatial data, interacting with the community, and developing maps and other products.

Networking

The CLUS has a vast network of partners and collaborators. Students have the opportunity to develop professional networks through research projects, attending conferences and meetings, and in informal networking events organized by the CLUS and partners.

Internships

Many Shippensburg University students have the opportunity to be placed in internships while seeking their degrees. The CLUS along with many of our partners and collaborators seek interns or new employees. We can help students find internships on campus or in community organizations with work related to their studies.



Two of our CLUS Student Fellows recently became licensed drone pilots. We hope to increase opportunities for student involvement in Unmanned Aircraft System projects in the future



In 2017, a soil pit was developed at the SU Campus Farm for educational purposes. This resource is used in the classroom and for professional development workshops offered by Soil Hub (which students can attend for free)

CAMPUS INITIATIVES



Encompass the globe through communications

In February 2018, Compass Communications, an interdisciplinary student group consisting of Haley Krause, Kristin Thorpe, and Kenny Landy, began working with the CLUS. For their Technical Writing II class, they were asked to pick an organization that needed assistance in promoting their presence. During the semester, the students worked collaboratively with the CLUS to design updated promotional materials including brochures, merchandise, and events to spread awareness to Ship students. The recommendations from the students will tie directly into strategic planning efforts of the CLUS in summer 2018.



The CLUS is a proud supporter of the Cumberland Valley Rail Trail- enjoy the new bench!



CLUS affiliate scientists supported the SU Bike Share program in 2017- over 1,800 rides in the 1st year!

RECENT GRADUATES

Troy Alleman

Troy plans to graduate in May 2018 with a B.S. in Geo-Environmental Studies and minor in Public Administration. He is interested in hydrology and hydrogeology and water resource management. His wide-ranging skills include interpersonal communication, planning, cartography, GIS, spatial analysis, and finding creative solutions to unique problems. Troy supported has supported many research projects during his time as an Undergraduate Student Fellow.

Jonathon Chester

Jonathon is pursuing a B.S. in Geo-Environmental Studies and a Certificate in GIS, and plans to graduate from Shippensburg University in May 2018. Upon graduation, he hopes to pursue a career which integrates GIS with land conservation and management. As an Undergraduate Student Fellow, Jon played a crucial role in the Upper Delaware Scenic & Recreational River project by communicating with collaborators, gathering data, and documenting processes.

Jackie Rosenberger

Jackie plans to graduate in May 2018 with a B.S. Biology and a minor in Geographic Information Science. She is interested in using GIS for wildlife management and conservation. As a CLUS Undergraduate Student Fellow, she worked with the Kittatinny Ridge Coalition to build a geographic database of environmental data sets to support conservation of native habitat and wildlife.

**Thank you students, and
good luck in graduate
school!**

GRADUATE INVOLVEMENT

Patricia Newdeck

Trish has over 10 years of experience as an environmental consultant where she executed site investigation and remedial action plans for chemical and petroleum clients. She is pursuing her M.S. in Geoenvironmental Studies from Shippensburg and has an interest in a land use planning or conservation career. Currently, Trish interns with The Nature Conservancy, works as a graduate assistant, and a CLUS student fellow. She dedicates her spare time to adventuring on land and water with her teenage sons.




While at the CLUS, Trish developed a story map to highlight the location of grants awarded through the South Mountain Partnership (SMP). This resource will be used to increase awareness of all the SMP funded research, outreach, and restoration projects being conducted in the region. Learn more on the CLUS website, or by visiting the story map: <https://arcg.is/GH5br>.

“The SMP Mini-Grant Story Map project required analytical, GIS and visual design skills, so the project was an exciting opportunity to merge my passion for science, art, and nature... Story Maps are a powerful visual tool for broadcasting a range of information, in this case the wonderful accomplishments of the SMP Mini-Grant Projects.” - Patricia Newdeck



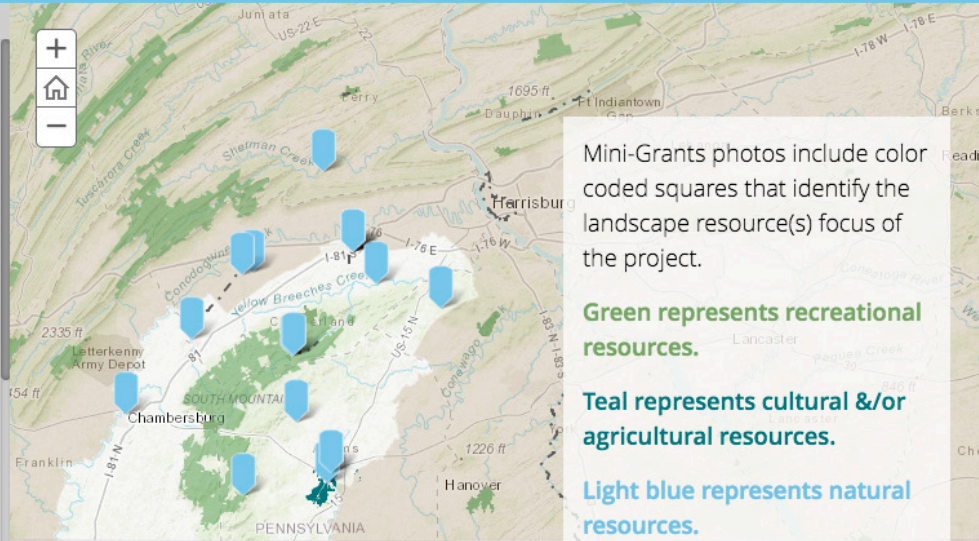

“I am thrilled with the story map because in a visually interesting way it shows the important on-the-ground projects completed by our partners throughout the region and it was designed to be updated each grant round so that new projects can be included.” - Katie Hess, SMP Director



South Mountain Partnership

[Intro](#) [Landscape](#) [Map](#) [Mini-Grants](#) [Recipients](#)

[Access](#) [Guides](#) [Outreach](#) [Restoration](#) [Study](#)



Mini-Grants photos include color coded squares that identify the landscape resource(s) focus of the project.

Green represents recreational resources.

Teal represents cultural &/or agricultural resources.

Light blue represents natural resources.

OUR ALUMNI



Caitlin Lucas

Caitlin graduated in May 2017 from the Geoenvironmental Studies program with certification in GIS. She has expertise in mapping, and is pursuing a career in GIS applicable to conservation and environmental remediation. During her time with the CLUS, Caitlin gathered GIS-contact data, produced several maps, conducted analyses, and researched land use change related to energy.

Carla Johns

Carla graduated from Shippensburg University in 2016 with a B.S. degree in Geography and concentration in Human-Environmental Studies. Upon graduating, she was hired as the PA Grassroots Field Specialist for the Chesapeake Bay Foundation. During her time at the CLUS, she researched Sustainable Community Certification for Chambersburg Borough, which was recognized in 2017 as a certified gold community by Sustainable Pennsylvania.



PARTNERS AND COLLABORATORS



PENNSYLVANIA
Parks & Forests
FOUNDATION



NORTHERN
ARIZONA
UNIVERSITY



CHESAPEAKE WATERSHED



University of Vermont
Spatial Analysis Lab



SELECT DOCUMENTS AND PUBLICATIONS

- C. Woltemade (2016). Meteorologic, Hydrologic, and Geographic Characterization of Historic Floods in the Delaware River Basin. *Middle States Geographer* 49:63-73.
- A. Fritchey, C. Johns, C. Jantz, and P. Wolgemuth (2017). Sustainable Pennsylvania Community Certification Audit for the Borough of Chambersburg. (Final Report)
- C. Jantz, S. Drzyzga, A. Yáñez Morillo, J. Barth, A. Price, C. Lucas (2017) DRB2070 Version 2 Baseline & Alternative Land Use Scenarios.
- D. Minnick, A. Price, and C. Jantz (2017). Cumberland County, PA Comprehensive Plan: Household Opinion Survey Analysis on Draft Goals and Objectives. (Final Report)
- C. Jantz and A. Price (2017). Delaware River Basin- Land Use Dynamics 2017 Final Report: In Support of Maintaining and Restoring Water Resources (Final Report).
- C. Jantz, A. Price, S. Drzyzga, P. Claggett, and J. O’Neil-Dunne (2017). A Framework for Long-term Land Cover Change Monitoring in the Delaware River Basin. (Feasibility Study)
- S. Burg, G. Pomeroy, A. Price, A. Cuthbert, and D. Edsall (2018). Inventory and Analysis of Historic Preservation Ordinances in Pennsylvania Municipalities. (Final Report)

FEATURED NEWS ARTICLES

- | | | |
|---|--|--|
| January 27, 2017 Plan Ahead: Cumberland County seeking input for Comprehensive Plan- <i>CCPC Project, ABC27 News</i> | July 30, 2017 Creating a clean slate in state parks, forests, hit with graffiti is no easy task- <i>Sustainability, Pittsburgh Post-Gazette</i> | November 28, 2017 A high-tech crystal ball maps future development on the Delaware River- <i>DRB Project, Delaware Currents</i> |
| March 11, 2017 Ship U adapts to survive as state colleges face crisis- <i>CLUS, Public Opinion Online</i> | August 23, 2017 Borough of Chambersburg Recognized as a Certified Sustainable Municipality- <i>Sustainability, Chambersburg Borough</i> | December 8, 2017 Cumberland County: A battle between growth and open space <i>CCPC Project, The Sentinel</i> |
| July 7, 2017 Cumberland County’s comprehensive plan update available for review- <i>CCPC Project, The Sentinel</i> | September 1, 2017 Bike sharing program introduced at SU- <i>Bike Share, The Slate Online</i> | January 17, 2018 CAEDC announces Rail Trail grant for Shippensburg. <i>CVRT, Cumberlink</i> |
| July 13, 2017 Sustainability Program approved at SU- <i>Sustainability, Ship News</i> | October 3, 2017 Boxcar to be restored, added to Cumberland Valley Rail Trail- <i>CVRT, ABC27</i> | April 27, 2018 GIS mapping useful for Upper Delaware projects. <i>UPDE, The News Eagle</i> |
| July 24, 2017 Sustainability Program approved at SU- <i>Sustainability, Herald Mail Media</i> | October 4, 2017 Cumberland Valley Trailhead Centerpiece has Arrived- <i>CVRT, SU Tv News</i> | Learn more: https://centerforlanduse.org/news/ |

OUR FUTURE

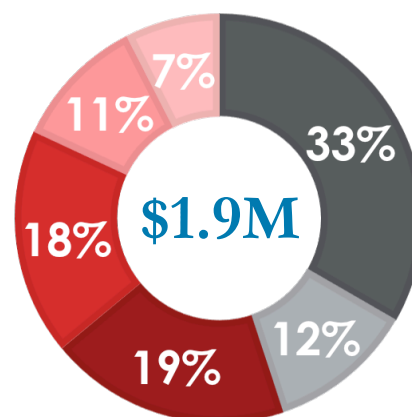
The CLUS is expanding, in terms of affiliated scientists, student involvement, and recently awarded projects. The center is fully funded through June of 2019 by a combination of grants, contracts, indirect cost sharing, and other revenue streams, then has minimal funding secured through December 2021. It is extremely important for the CLUS to stabilize funding streams in order to continue providing opportunities to SU students and support to faculty and the community.

Strategic planning efforts are underway at the CLUS to assess strengths and prioritize future directions and initiatives. We plan to revise our vision, mission, and goals to better communicate the work that we do and our role in the community.

With our revitalization in 2015, we aligned our vision with the 2013-2018 Academic Master Plan. In looking toward the future, we will continue to align our organization within the broader institutional vision of Shippensburg University, supporting the 2016-2021 Strategic Plan and mission where “student learning and personal development through highly effective and innovative teaching, complemented by a wide variety of out-of-class experiences, continue to serve as the hallmarks of a Shippensburg University education.”

Stay tuned for the new location of the CLUS, as our office will be moving in 2018!

- Subcontracts
- Indirect Costs
- William Penn Foundation
- Delaware Watershed Research Fund
- National Park Service
- All other grants



This chart summarizes our funding sources from January 2015- June 2019



Prepared by Antonia Price and Haley Krause
(CLUS Technical Writing Intern), Spring 2018



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