

# Boards & Commissions Application



I am interested in serving on the following boards/commissions. (Please indicate the order of preference).

1. Environmental Performance Standards Advisory Com 2. \_\_\_\_\_

As an applicant/member of a Council-appointed Board or Commission, your name, address, and phone number will be available to the press and public. Information will be kept on file for three years. Public discussion of information contained herein may occur in the meeting at which appointments are considered by the City Council.

☐ Mr. ☐ Mrs. ☐ Ms. ☐ Miss. ☒ Dr.

(Please type or print clearly)

Name: Schmitt-Harsh Mikaela Date: November 14, 2016  
(Last) (First) (M.I.)

Home Address: 1251 Lincolnshire Drive, Rockingham, VA Zip Code: 22802

Phone Number: 540-433-1408 Alternate Phone: \_\_\_\_\_

Occupation: Professor Employer/Organization: James Madison University

E-mail: schmi2ml@jmu.edu Harrisonburg resident for 3 years.

Were you referred by anyone: ☐ Yes ☒ No Name of Referring Party: \_\_\_\_\_

How did you hear about volunteering on a board or commission? ☐ Cable ☐ Website ☐ Council Meeting  
☒ Other: JMU listserv email

## Why do you wish to serve on a board or commission?

I'm interested in the Environmental Performance Standards Advisory Committee for a number of reasons. First, it will provide a number of opportunities to learn about local issues, including the environmental initiatives pursued by the City of Harrisonburg. Second, with a degree in environmental science and research foci directed toward urban sustainability, I would like to provide service to my community and lend my knowledge of interdisciplinary science to the Committee. Finally, I'd like to have a voice in local issues and believe that serving on this Committee is a good first step.

## What relevant experience or education do you have to this board or commission?

I have a dual master's degree in public affairs and environmental science, and a PhD in environmental science. My research is broadly focused on the social-ecological dynamics of urban forests and urban community greenspaces. This work includes examination of the ecosystem services (e.g., carbon sequestration, stormwater benefits, air pollution remediation) provided by urban greenspaces and how private and public urban greenspaces are managed.

**What other interests or concerns do you have regarding the community?**

I am in hopes that this Committee will address two issues that I'm interested in learning more about. First, I am interested in learning more about the long-term care of street trees and other trees in parks and other public spaces. Second, I'm interested in learning about the strategies the City is currently employing (or hoping to employ) to combat climate change and local urban heat islands.

**Please list any past or present community involvement e.g. City Council, Board and Commissions, Citizen Academy, etc. in Harrisonburg or elsewhere:**

Not applicable

**-Please return completed application to the City Manager's Office-**

*Applicants are encouraged to attach a resume or other supporting information that may be helpful to Council in considering their application.*

409 S. Main Street, Harrisonburg, VA 22801

Tel:(540)432-7701 Fax:(540)432-7778 E-mail:Erica.Kann@harrisonburgva.gov

**Supplemental Questions for Environmental Performance Standards Advisory Committee (EPSAC)  
Application**

- 1) The EPSAC will be meeting up to once per month. Meetings will typically take place between 5-7pm. Are you typically available during these times? ☒ Yes ☐ No
- 2) City Council is seeking EPSAC members to represent broad stakeholder interests within the city. If you will be participating on the EPSAC as a representative of a business, group, or organization, please provide the name of the business, group, or organization and indicate what stakeholder category the group represents. If more than one, please list all.
- A. Residents, civic leagues, homeowners associations.
  - B. Institutional and tax exempt entities including colleges and churches.
  - C. Business community including residential, commercial and industrial property owners, malls, and business groups.
  - D. Professional engineers, real estate developers, and construction contractors.
  - E. Special interest groups that represent economic development, environmental or outdoor recreation.
  - F. Others, education professionals from the local schools and city staff

Business, Group, or Organization Name	Category
---------------------------------------	----------

<i>Example X Homeowners Association</i>	<i>A</i>
---	----------

James Madison University	B
--------------------------	---

--	--

--	--

--	--

--	--

# Mikaela Schmitt-Harsh

James Madison University ◦ Interdisciplinary Liberal Studies  
Maury Hall MSC 1105 ◦ Harrisonburg, VA 22807  
507-382-1438 ◦ schmi2ml@jmu.edu

## Education

---

### Indiana University, School of Public and Environmental Affairs (SPEA)

Bloomington, IN

- Doctor of Philosophy in Environmental Science (GPA: 3.95) May 2012  
Minor: *Human Dimensions of Global Environmental Change*
- Master of Public Affairs ◦ *Comparative and International Affairs* December 2007
- Master of Science in Environmental Science ◦ *Natural Resource Management* December 2007

### Gustavus Adolphus College

St. Peter, MN

- Bachelor of Arts ◦ *Biology* (GPA: 3.74) May 2005

## Professional Experience

---

**Assistant Professor**, James Madison University, Department of Interdisciplinary Liberal Studies (IdLS) and  
**Affiliate Professor**, James Madison University, Department of Biology, *August 2014 – present*

- Development and instruction of a number of biology and environmental studies courses, including IDLS 395 Urban Ecology for Teachers (F2016), ISCI 173 Life and Environmental Science for Teachers (S2016, F2016), BIO 426/526 Topics in Biology – Agroecology (S2016), GSCI166 Environment in Context (S2015), and GBIO103 Contemporary Biology (F2014)
- Management of a research program focused on plant community dynamics in urban areas, and the impact of human institutions (e.g., informal and formal rules, norms, and regulations) on tree composition and structure. Supervision of student researchers is integrated into this research program.
- Lead coordinator of the Science Core Curriculum Review, Department of IdLS (F2016–present)
- Primary faculty advisor for 30 to 35 students per year

**Robert A. Oden, Jr. Postdoctoral Fellow for Innovations in the Liberal Arts**, Carleton College, Environmental Studies Program, *August 2012 – July 2014*

- Developed and instructed a number of environmental studies courses for majors and nonmajors students, including ENTS 372 Coffee Ecologies and Livelihoods (S2014), ENTS 275 Urban Ecology (S2014), ENTS 272 Remote Sensing of the Environment (W2013, W2014), and ENTS 247 Agroforestry Systems (F2012)
- Maintained active research lines with scholars at the Center for Institutions, Population and Environmental Change (CIPEC) at Indiana University. Focal research areas included (1) assessment of urban households' decisions about tree planting and removal, (2) assessment of tree community composition in private and public urban forests, and (3) assessment of ecosystem services and functions in private and public urban forests.
- Dissemination of research findings, including publications in *Urban Forestry & Urban Greening*, *Journal of Applied Geography*, *Photogrammetric Engineering & Remote Sensing*, and the *Journal of Environmental Studies and Sciences*

**Doctoral Research Associate**, Indiana University, Center for Research in Environmental Sciences, *August 2011 – August 2012*

- Researcher for a large, interdisciplinary research project that included scholars from Indiana University, Princeton University, and Oberlin College. This project, funded principally by the National Science Foundation, focused on the vulnerability and coping strategies of smallholder farmers in Zambia to climate change. Data analysis and dissemination of findings is ongoing.

**Associate Instructor**, Indiana University, School of Public and Environmental Affairs, *August 2009 – July 2012*

- Primary instructor for E162 Environment and People (F2009, S2010, F2010, S2011, F2011) and E527 Applied Ecology (S2011)

**Teaching Assistant**, Indiana University, School of Public and Environmental Affairs, *August 2005 – June 2007*

- Assisted in the development and instruction of graduate-level courses in SPEA, including V596 Sustainable Development (F2007), V578 Comparative and International Affairs (S2007), V669 Economic Development, Globalization, and Entrepreneurship (S2007), and V517 Public Management Economics (F2006)

### **Other Professional Experience and Affiliations**

---

**CIPEC Research Affiliate**, Indiana University, Center for the Study of Institutions, Population and Environmental Change, *August 2012 – present*

- Researcher for a number of ongoing collaborative projects, including projects focused on (1) quantifying social-ecological dynamics of urban forests, (2) examining the coping strategies of smallholder farmers in rural Zambia to climate change, and (3) quantifying the ecosystem services and functions of private and public urban forests in the Midwest, U.S.

**Research Intern**, Resources for the Future, *June 2007 – August 2007*

- Part of a 3-person research team focused on investigating the regulatory oversight of forest tree biotechnology and scientists' views of the regulations. Lead coordinator for the development and dissemination of an online survey to scientists knowledgeable in forest biotechnologies, breeding, ecology, and regulation. The survey (and informal interviews) assessed scientists' views on the policies and statutes regulating commercial development of forest tree biotechnology in the United States.

### **Fellowships, Awards, and Honors**

---

- Member, Bloomington Urban Forestry Research Group, "Excellence in Research Award" from the Indiana University Office of Sustainability (2012)
- Recipient, "Best Student-Authored Paper in Environmental Science", Annual Association of SPEA PhD Students Conference, Bloomington, IN, April 22 (2011)
- Recipient, SPEA PhD Fellowship, Indiana University (2008–2009)
- Recipient, SPEA Merit Award, Indiana University (2005–2007)
- Recipient, Trustee Scholarship, Gustavus Adolphus College (2001–2005)
- Recipient, Norelius Service Scholarship, Gustavus Adolphus College (2001–2005)
- Recipient, Evelyn Anderson Scholarship, Gustavus Adolphus College (2001–2005)

## Research Awards and Grants

---

- 2016 James Madison University Provost Research Award, “Edible landscapes: Mapping urban fruit and nut trees”. PI: **M. Schmitt-Harsh** [\$5,000]
- 2011–2012 Indiana University Office of Sustainability, “The impact of institutional mechanisms on sustainable urban development”. PI: B. Fischer. Co-PIs: **M. Schmitt-Harsh**, S. Mincey, and R. Thureau [\$15,000]
- 2009–2012 National Science Foundation Doctoral Dissertation Improvement Grant (Geography and Spatial Sciences, #0927491), “Land-cover change and carbon sequestration under diverse land management regimes: Implications for forest protection and restoration in Guatemala”. PIs: T. Evans and **M. Schmitt-Harsh** [\$11,880]
- 2009 Indiana University Tinker Field Research Grant, “Land-cover change and carbon sequestration under diverse land management regimes: Implications for forest protection and restoration in Guatemala”. PI: **M. Schmitt-Harsh** [\$1,500]
- 2009 Indiana University Office of the Vice President for International Affairs, “Pre-dissertation travel grant”. PI: **M. Schmitt-Harsh** [\$1,500]

## Peer-Reviewed Journal Publications

---

- In review **Schmitt-Harsh, M.**, S. Sweeney, and T. Evans. Labor sharing as a coping strategy in dryland agroecosystems. *World Development*.
- 2016 **Schmitt-Harsh, M.**, and J. Harsh. Engaging nonscience majors in urban ecology: Recommendations for course design. *Journal of Environmental Studies and Sciences*. DOI 10.1007/s13412-016-0410-9.
- 2016 Harsh, J., and **M. Schmitt-Harsh**. Implementation of instructional strategies to develop graphing skills in the college science classroom. *American Biology Teacher* 78(1): 49-56.
- 2015 McCord, P.; M. Cox, **M. Schmitt-Harsh**, and T. Evans. Crop diversification as a smallholder livelihood strategy within semi-arid agricultural systems near Mount Kenya. *Land Use Policy* 42: 738-750.
- 2013 **Schmitt-Harsh, M.**, S. Mincey, M. Patterson, B. Fischer, and T. Evans. Private residential urban forest structure and carbon storage in a moderate-sized urban area in the Midwest United States. *Urban Forestry & Urban Greening* 12: 454-463.
- 2013 Mincey, S.K., **M. Schmitt-Harsh**, and R. Thureau. Zoning, land use, and urban tree canopy cover: The importance of scale. *Urban Forestry & Urban Greening* 12(2): 191-199.
- 2013 **Schmitt-Harsh, M.** Landscape change in Guatemala: Driving forces of forest and coffee agroforest expansion and contraction from 1990 to 2010. *Journal of Applied Geography* 40: 40-50.
- 2013 **Schmitt-Harsh, M.**, S. Sweeney, and T. Evans. Classification of coffee-forest landscapes using Landsat TM imagery and spectral mixture analysis. *Photogrammetric Engineering & Remote Sensing* 79(5): 457-468.
- 2013 **Schmitt-Harsh, M.**, and J. Harsh. The development and implementation of an inquiry-based poster project on sustainability in a large non-majors environmental science course. *Journal of Environmental Studies and Sciences* 3: 56-64.
- 2012 **Schmitt-Harsh, M.**, T. Evans, E. Castellanos, and J.C. Randolph. Carbon stocks in coffee agroforests and mixed dry tropical forests in the western highlands of Guatemala. *Agroforestry Systems* 86(2): 141-157.
- 2010 Fleischman, F., K. Boenning, G. Garcia-Lopez, S. Mincey, **M. Schmitt-Harsh**, K. Daedlow, M.C. Lopez Perez, X. Basurto, B. Fischer, and E. Ostrom. Disturbance, response, and persistence in self-

organized forested communities: Analysis of robustness and resilience in five communities in Southern Indiana. *Ecology & Society* 15(4): 9.

- 2009 Strauss, S., **M. Schmitt**, and R. Sedjo. Forest scientist views of regulatory obstacles to research and development of transgenic forest biotechnology. *Journal of Forestry* 107(7): 350-357.

### Other Refereed Publications

---

- 2013 Evans, T., D. Robinson, and **M. Schmitt-Harsh**. Limitations, challenges, and solutions to integrating carbon dynamics with land-use models. In *Land Use and the Carbon Cycle: Advances in Integrated Science, Management, and Policy*, eds, D.G. Brown, D.T. Robinson, N.H.F. French, and B.C. Reed. Cambridge University Press, Cambridge, UK.
- 2011 **Schmitt-Harsh, M.**, T. Evans, and S. Sweeney. Historic land use and social policy affecting large-scale changes in forest cover in the Midwest United States. In *Engineering Earth: The Impacts of MegaEngineering Projects*, ed, Stanley D. Brunn. Springer Science and Business Media, Dordrecht, the Netherlands.

### Environmental Education Materials (\*Denotes undergraduate coauthor)

---

- 2016 **Schmitt-Harsh, M.**, K.C. Walters, \*H. R. Marchese, and \*S. Wolf. Trees of James Madison University: A walking tour of the diversity of trees on the JMU campus.

### In Preparation

---

- Mincey, S., **M. Schmitt-Harsh**, M. Patterson, T. Evans, and B. Fischer. *To be submitted 2016*. The relative influence of social institutions on the structure of residential urban forests. *Urban Ecosystems*.

### Conference Presentations and Proceedings (\*Denotes undergraduate coauthor)

---

- Mincey, S.K., and **M. Schmitt-Harsh**. 2016. *Youth and green jobs: Addressing the potential for urban forestry*. Partners in Community Forestry Conference, Indianapolis, IN, November 16-17.
- Schmitt-Harsh, M.** 2016. *Discussion of interdisciplinary course-based undergraduate research experiences (CUREs)*. Association for Environmental Studies and Sciences (AESS) Annual Meeting and Conference, Washington, DC, June 8-11.
- Harsh, J., A. Maltese, J. Esteb, and **M. Schmitt-Harsh**. 2015. *Development of a performance-based measure to assess the scientific thinking skills of undergraduate researchers*. Annual Meeting of the National Association for Research in Science Teaching (NARST), Chicago, IL, April 10-14.
- Harsh, J., J. Esteb, A. Maltese, and **M. Schmitt-Harsh**. 2014. *Assessing the development of undergraduate researchers' scientific thinking skills using performance data*. Annual Meeting of the National Association for Research in Science Teaching (NARST), Pittsburgh, PA, March 30-April 2.
- \*Jaquette, M., and **M. Schmitt-Harsh**. 2013. *Mapping coffee plantations in Puerto Rico*. Student Research Symposium and Celebration, Carleton Interdisciplinary Science and Math Initiative (CISMI), Carleton College, Northfield, MN, October 23, 2013.
- Schmitt-Harsh, M.**, S.K. Mincey, M. Patterson, B.C. Fischer, and T. Evans. 2013. *Private residential urban forest structure and carbon storage in a moderate-sized urban area in the Midwest, U.S.* Association for Environmental Studies and Sciences (AESS) Annual Meeting and Conference, Pittsburgh, PA, June 19-22.
- Schmitt-Harsh, M.**, and J. Harsh. 2013. *Improving college science students' data skills through a short-term stream sampling and graphing unit*. Annual Meeting of the National Association for Research in Science Teaching (NARST), Rio Grande, Puerto Rico, April 5-10.

- Schmitt-Harsh, M.**, S.K. Mincey, M. Patterson, T. Evans, and B.C. Fischer. *Carbon storage and ecosystem services of urban trees in Bloomington, IN as a function of development age*. Ecological Society of America (ESA) 97<sup>th</sup> Annual Conference, Portland, OR, August 5-10.
- Mincey, S.K., **M. Schmitt-Harsh**, M. Patterson, B.C. Fischer, and T. Evans. 2012. *Analysis of private residential urban forest structure and management in Bloomington, Indiana: A social-ecological systems (SES) perspective*. Ecological Society of America (ESA) 97<sup>th</sup> Annual Conference, Portland, OR, August 5-10.
- Harsh, J., and **M. Schmitt-Harsh**. 2012. *The development and implementation of an inquiry-based poster project on sustainability in a large non-majors environmental science course*. Ecological Society of America (ESA) 97<sup>th</sup> Annual Conference, Portland, OR, August 5-10.
- Schmitt-Harsh, M.**, and J. Harsh. 2012. *The development and implementation of an inquiry-based poster project on sustainability in a large non-majors environmental science course*. National Science Teachers Association (NSTA) National Conference, Indianapolis, IN, March 29-April 1.
- Schmitt-Harsh, M.** 2011. *Carbon pools in coffee agroforests and dry tropical forests in the western highlands of Guatemala*. Association for Environmental Studies and Sciences (AEISS) Annual Meeting and Conference, Burlington, VT, June 23-26.
- Schmitt-Harsh, M.** 2011. *The role of coffee agroforests as tropical forests in storing carbon and mitigating climate change*. Annual Association of SPEA PhD Students Conference, Bloomington, IN, April 22.
- Schmitt-Harsh, M.**, T. Evans, and E. Castellanos. 2011. *Carbon dynamics and land-cover change in shade-grown coffee and tropical forest systems in Guatemala*. Association of American Geographer (AAG) Annual Meeting, Seattle, WA, April 12-16.
- Thurau, R., S.K. Mincey, and **M. Schmitt-Harsh**. 2010. *Spatial distribution and socio-economic contexts of urban tree canopy cover in Bloomington, IN*. International Conference on Urbanization and Global Environmental Change, Tempe, AZ, October 15-17.
- Fleischman, F.D., K. Boenning, S.K. Mincey, **M. Schmitt-Harsh**, K. Daedlow, G.A. Garcia-Lopez, M.C. Lopez Perez, X. Basurto, B. Fischer, and E. Ostrom. 2009. *Disturbance, response, and persistence in self-organized forested communities: Over-time analysis of five communities in Southern Indiana*. Workshop on the Workshop (WOW4) Conference, Bloomington, IN, June 3-6.
- Schmitt-Harsh, M.** 2009. *Implications of biophysical and institutional factors on aboveground biomass in Guatemala: Use of a mixed ecological-spatial approach*. Annual Association of SPEA PhD Students Conference, Bloomington, IN, February 27.
- Schmitt-Harsh, M.** 2008. *Reforestation and the impact of the U.S. Conservation Reserve Program in Indiana*. West Lakes Meeting of the Association of American Geographer, Bloomington, IN, November 13-15.

### Invited Presentations

---

- Schmitt-Harsh, M.** 2014. *The vulnerability and resilience of coffee growers to seasonal food insecurity*. Carleton Connects Program, Northfield, MN, February 26.
- Schmitt-Harsh, M.** 2010. *The utility of inquiry-based poster projects in assessing student learning outcomes*. Brown Bag Teaching and Learning Seminar, School of Public and Environmental Affairs, Bloomington, IN, November 2.
- Schmitt-Harsh, M.** 2008. *The integration of mathematical approaches in science curricula: Carbon trading*. The Central Indiana Education Service Center (CIESC) Project SEAM Content Workshop, Butler University, Indianapolis, IN, March 7.



## Service

---

### Referee Activity:

Journals: *Agriculture, Ecosystems & Environment*, *Agroforestry Systems*, *Journal of Applied Geography*, *Journal of Environmental Management*, *Journal of Land Use Science*, *Photogrammetric Engineering & Remote Sensing*, *Urban Ecosystems*, and *Urban Forestry & Urban Greening*

Textbooks: Author of Pearson Mastering biology content (since 2016)

### Service to the University:

2016–present	Lead coordinator of the Science Core Curriculum Review, Interdisciplinary Liberal Studies Department, James Madison University
2015–present	Faculty advisor for the Students with Diabetes club, James Madison University
2014–present	Committee member of the IdLS Core Revision Committee, James Madison University
Nov 2012	Panelist (invited) for the Workshop on “Environmental Careers and the Gender Gap: A Conversation”, Carleton College
Oct 2012	Co-leader of a Soils Workshop for undergraduate students engaged in the Carleton Farm, Carleton College
2012–2014	Committee member of the Environmental Studies Curriculum Committee, Carleton College
2012–2014	Faculty representative for the Food Alliance, Carleton College
2011–2012	Member of the Academic Initiatives Working Group, Office of Sustainability, Indiana University
2009–2011	Graduate Student Representative for the Graduate Dean’s Student Advisory Council, Indiana University
2006–2007	Graduate Student Representative for the SPEA Academic Fairness Committee, Indiana University

### Service to the field:

2013–2014	Committee member of the Professional Development Committee, Association for Environmental Studies and Sciences (AESS)
-----------	---

### Professional Affiliations

---

*Association of American Geographers (AAG)*, *Association for Environmental Studies and Sciences (AESS)*, *Ecological Society of America (ESA)*, *International Society of Arboriculture (ISA)*, *National Association of Biology Teachers (NABT)*