

## Nathaniel B. Weston

Department of Geography and the Environment, Villanova University  
Villanova, PA 19085  
nathaniel.weston@villanova.edu; 610.519.8009

### Education

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2005 Ph.D. in Marine Science, University of Georgia  
1997 B.A. in Environmental Science, Hampshire College

### Professional Experience

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|---|--------------|
| <b>Assistant Professor</b><br>Department of Geography and the Environment, Villanova University, Villanova, PA  | 2008-present |
| <b>Visiting Adjunct Professor</b><br>Department of Biology, Villanova University, Villanova, PA   | 2007-2008    |
| <b>Postdoctoral Scientist</b><br>Department of Biology, Villanova University, Villanova, PA   | 2006-2008    |
| <b>Postdoctoral Fellow</b><br>Patrick Center for Environmental Research, The Academy of Natural Sciences, Philadelphia, PA  | 2005-2006    |
| <b>Research Technician</b><br>Plum Island Ecosystem Long Term Ecological Research (PIE-LTER), The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA | 1998-2000    |
| <b>Teaching Assistant</b><br>The Semester in Environmental Science, The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA                           | 1997         |
| <b>Research Technician</b><br>Arctic LTER (ARC-LTER), Toolik Lake, AK   | 1997         |

### Peer-Reviewed Publications (\* Undergraduate Student)

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**Weston, N.B.**, M.A. Vile, D.J. Velinsky and S.C. Neubauer. 2011. Accelerated microbial organic matter mineralization following salt-water intrusion into tidal freshwater marsh soils. *Biogeochemistry* 102: 135-151.

- Weston, N.B.**, A.E. Giblin, G. Banta, C.S. Hopkins and J. Tucker. 2010. The effects of varying salinity on ammonium exchange in estuarine sediments of the Parker River, Massachusetts. *Estuaries and Coasts* 33: 985-1003.
- Giblin, A.E., **N.B. Weston**, G.T. Banta, J. Tucker and C.S. Hopkins. 2010. The effects of salinity on nitrogen losses from an oligohaline estuarine sediment. *Estuaries and Coasts* 33: 1054-1068.
- Porubsky, W.P., **N.B. Weston**, and S.B. Joye. 2009. Benthic metabolism and the fate of dissolved inorganic nitrogen in intertidal sediments. *Estuarine, Coastal and Shelf Science* 83: 392-402.
- Edmonds, J.W. **N.B. Weston**, S.B. Joye, X. Mou and M.A. Moran. 2009. Microbial community response to seawater amendment in low-salinity tidal sediments. *Microbial Ecology* 58: 558-568.
- Weston, N.B.**, J.T. Hollibaugh and S.B. Joye. 2009. Population growth away from the coastal zone. Thirty years of land use change and nutrient export in the Altamaha River, GA. *Science of the Total Environment* 407: 3347-3356.
- Edmonds, J.W., **N.B. Weston**, S.B. Joye and M.A. Moran. 2008. Variation in prokaryotic community composition as a function of resource availability in tidal creek sediments. *Applied and Environmental Microbiology* 74: 1836-1844.
- Weston, N.B.**, S.B. Joye, W.P. Porubsky, V. Samarkin, M. Erickson and S.E. MacAvoy. 2006a. Porewater stoichiometry of terminal metabolic products, sulfate, and dissolved organic carbon and nitrogen in estuarine intertidal creek-bank sediments. *Biogeochemistry* 77: 375-408.
- Weston, N.B.**, \*R.E. Dixon and S.B. Joye. 2006b. Ramifications of increased salinity in tidal freshwater sediments: Geochemistry and microbial pathways of organic matter mineralization. *Journal of Geophysical Research - Biogeosciences* 111: G01009.
- Weston, N.B.** and S.B. Joye. 2005. Temperature-driven decoupling of key phases of organic matter degradation in marine sediments. *Proceedings of the National Academy of Sciences* 102: 17036-17040.
- Joye, S.B., W.P. Porubsky, **N.B. Weston**, and R.Y. Lee. 2003. Benthic microalgal production and nutrient dynamics in intertidal sediments. In: Rullkötter, J. (Ed.), *BioGeoChemistry of Tidal Flats, Proceedings of a Workshop held at the Hanse Institute of Advanced Study, Delmenhorst, Germany, May 14-17, 2003*. Forschungszentrum Terramare Berichte 12: 67-70.
- Weston, N.B.**, J.T. Hollibaugh, J. Sandow and S.B. Joye. 2003. Nutrients and dissolved organic matter in the Altamaha river and loading to the coastal zone.

*Proceedings of the 2003 Georgia Water Resources Conference*, held April 23-24, 2003, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia.

\*Schmitt, C., **N.B. Weston** and C. Hopkinson. 1998. Preliminary evaluation of sedimentation rates and species distribution in Plum Island Estuary, Massachusetts. *Biological Bulletin* 195:232-233.

**Weston, N.B.**, S. Carini, A. Giblin, G. Banta, C. Hopkinson and J. Tucker. 1996. Estimating denitrification in sediments of the Parker River estuary, Massachusetts. *Biological Bulletin* 191: 334-335.

Carini, S., **N.B. Weston**, C. Hopkinson, J. Tucker, A. Giblin and J. Vallino. 1996. Gas exchange rates in the Parker River estuary, Massachusetts. *Biological Bulletin* 191: 333-334.

### **Other Publications** (\* Undergraduate Student)

\*Prsa, T. 2010. How will sea-level rise impact microbes in Delaware River marsh soils? *Estuary News* 20: 11-14.

Science Nation. 2011.

[http://www.nsf.gov/news/special\\_reports/science\\_nation/marshescoasts.jsp](http://www.nsf.gov/news/special_reports/science_nation/marshescoasts.jsp)

### **Manuscripts in Preparation**

**Weston, N.B.** and C.H. Hopkinson. Diel oxygen transects used to model estuarine respiration and production. In preparation for *Limnology and Oceanography Methods*.

**Weston, N.B.** Changing suspended sediment concentrations in rivers of the East and Gulf Coasts of the United States. In preparation for *Estuaries and Coasts*.

**Weston, N.B.** and M.A. Vile. Response of the sulfate-reducing microbial community in tidal freshwater marsh soils to salt-water intrusion. In preparation for *Applied Environmental Microbiology*.

### **Teaching Experience**

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Villanova University, Villanova, PA

MSE 2000      Our Warming Planet

Fall 2011

|                       |   |             |
|-----------------------|---|-------------|
| GEV 4500              | Statistics and Experimental Design in<br>Environmental Science, lecture | Spring 2011 |
| GEV 4310              | Seminar in Environmental Issues, lecture                                | Spring 2011 |
| GEV 1050              | Environmental Science I, lecture and laboratory                         | Fall 2010   |
| GEV 4320/<br>BIO 9104 | Microbial Processes in the Environment, lecture<br>and laboratory       | Spring 2010 |
| GEV 1050              | Environmental Science I, lecture and laboratory                         | Fall 2009   |
| GEV 1051              | Environmental Science II, lecture and laboratory<br>(co-taught)         | Spring 2009 |
| GEV 4000              | Seminar in Environmental Issues, lecture                                | Spring 2009 |
| GEV 1050              | Environmental Science I, lecture and laboratory<br>(co-taught)          | Fall 2008   |
| BIO 6950/<br>6952     | Advanced Topics in Biology “Life on the Edge”<br>lecture and laboratory | Fall 2007   |
| BIO 2106              | General Biology II, laboratory  | Spring 2007 |

Marine Biological Laboratory, Woods Hole, MA

Teaching Assistant, Semester in Environmental Science                      Fall 1997

Hampshire College, Amherst, MA

Teaching Assistant, Coalition for Essential Schools                                      Summer 1996

### **Academic Advising & Mentorship**

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Environmental Science & Studies Majors Advisees

|    |           |
|----|-----------|
| 31 | 2011-2012 |
| 27 | 2010-2011 |
| 23 | 2009-2010 |
| 14 | 2008-2009 |

Undeclared Science Advisees

|    |           |
|----|-----------|
| 15 | 2010-2011 |
| 2  | 2009-2010 |

#### Undergraduate Senior Thesis/Project Advisor

|                          |           |
|--------------------------|-----------|
| Nicole Poletto (thesis)  | 2011-2012 |
| Andrew Galtieri (thesis) | 2011-2012 |
| Stefan Goodridge         | 2011      |
| Andrew Gordon            | 2011      |
| Michael Mangiante        | 2011      |
| Kara Chatham             | 2011      |
| Eric Au                  | 2011      |
| Luis Dominguez           | 2011      |
| Si Xue Lin               | 2011      |
| Justin Stephens          | 2011      |
| Michael Patson           | 2011      |
| Neil Mehta               | 2011      |
| Angela Bagnasco (thesis) | 2010-2011 |
| Justin Meschter          | 2010      |
| Michael Gill             | 2009      |
| Tatjana Prša             | 2007-2008 |

#### Undergraduate Independent Project Advisor

|                 |      |
|-----------------|------|
| Margaret Garcia | 2012 |
| Melanie Pingoy  | 2011 |
| Justin Stephens | 2010 |
| Angela Bagnasco | 2009 |

#### Undergraduate Summer Research Students

|                          |      |
|--------------------------|------|
| Cynthia Troy (GEV Award) | 2011 |
|--------------------------|------|

|                              |      |
|------------------------------|------|
| Eric Au                      | 2011 |
| Justin Walsh                 | 2011 |
| Margaret Garcia              | 2011 |
| Melanie Pingoy               | 2010 |
| Justin Stephens (VURF Award) | 2010 |
| Neil Mehta                   | 2010 |
| John Ufferfilge              | 2010 |
| Michael Patson (VURF Award)  | 2009 |
| Justin Meschter              | 2009 |
| Mariozza Santini             | 2008 |
| Paul Weibel                  | 2007 |

#### Masters Committee Member

|  |           |
|--|-----------|
| Shirley Lang, Biology, Villanova University      | 2008-2011 |
| Katherine Shepard, Biology, Villanova University | 2009-2011 |

#### Research Experience for Undergraduate (REU) Supervisor

|  |      |
|--|------|
| Amanda Foskett, Academy of Natural Sciences                        | 2006 |
| Ray Dixon, University of Georgia                                   | 2005 |
| Tiffany Roberts, University of Georgia                             | 2004 |
| Catherine Schmitt, Ecosystems Center, Marine Biological Laboratory | 1998 |

#### **Selected Presentations** (\* Undergraduate Student ‡ Graduate Student)

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- \*Walsh, J., **N.B. Weston**. 2011. Comparative rates of four metabolic processes. Undergraduate Research Grants Program, Villanova University (Poster).
- \*Garcia, M., **N.B. Weston**. 2011. Microbial degradation of crude oil in salt and freshwater marsh sediment. Undergraduate Research Grants Program, Villanova University (Poster).

- Weston, N.B.** 2011. Sea-Level Rise and Salt-Water Intrusion in Tidal Freshwater and Salt-Marshes: Coupled Biogeochemical and Plant Responses. Society of Wetlands Scientists, Prague, Czech Republic (Oral Presentation).
- Weston, N.B.** 2011. Changing Suspended Sediment Concentrations in Rivers Draining to Coastal Wetlands Along the East and Gulf Coasts of the United States. Society of Wetlands Scientists, Prague, Czech Republic (Oral Presentation).
- Weston, N.B.** 2011. Response of salt-marsh and tidal freshwater marshes in the Delaware River estuary to sea-level rise and salt-water intrusion. Delaware Estuary Science and Environmental Summit, Cape May, NJ (Oral Presentation).
- \*Meschter, J., **N.B. Weston**. 2011. Sediment and heavy-metal deposition in tidal freshwater and saltwater marshes in the Delaware River estuary: Temporal and spatial patterns of deposition and possible impact of sea-level rise on rates of deposition. Delaware Estuary Science and Environmental Summit, Cape May, NJ (Oral Presentation).
- Weston, N.B.**, M.A. Vile, S.C. Neubauer and D.J. Velinsky. 2010. Accelerated microbial organic matter mineralization following salt-water intrusion into tidal freshwater marsh soils. Society of Wetland Scientists, Salt Lake City, UT (Oral Presentation).
- Weston, N.B.** 2010. Declining suspended sediment concentrations in rivers draining to the East and Gulf Coasts of the United States. Society of Wetland Scientists, Salt Lake City, UT (Poster Presentation).
- \*Meschter, J. and **N.B. Weston**. 2010. Delivery of sediments and heavy metals to tidal marshes along the Delaware River Estuary. Society of Wetland Scientists, Salt Lake City, UT (Poster Presentation).
- \*Patson, M., \*J. Meschter and **N.B. Weston**. 2010. Impact of sea-level rise and salt-water intrusion on plant growth and seed-bank recruitment in oligohaline marshes of the Delaware River Estuary. Society of Wetland Scientists, Salt Lake City, UT (Poster Presentation).
- Weston, N.B.**, M.A. Vile, S.C. Neubauer and D.J. Velinsky. 2009. Sea-Level Rise and Salt-Water Intrusion Limit Vertical Accretion Potential in Tidal Freshwater Marshes of the Delaware River Estuary. Coastal and Estuarine Research Federation. Portland, OR (Oral Presentation).
- \*Patson, M., J. Meschter and **N.B. Weston**. 2009. Impact of Sea Level Rise and Salt Water Intrusion on Plant Growth and Seed-bank Recruitment in Oligohaline Marshes of the Delaware River Estuary. Undergraduate Research Grants Program, Villanova University (Poster).
- Weston, N.B.**, M.A. Vile, S.C. Neubauer and D.J. Velinsky. June 2009. Climate change, sea level rise and salt-water intrusion in tidal freshwater marshes of the Delaware River Estuary. Society of Wetland Scientists. Madison, WI (Oral Presentation - *Invited*).

- Weston, N.B.** May 2009. Linking impacts of climate change to carbon and phosphorus dynamics along a salinity gradient in tidal marshes. Environmental Protection Agency Meeting, Seattle, WA (Oral Presentation).
- Weston, N.B.** March 2009. The impacts of climate change and sea level rise on tidal marshes in the Delaware River Estuary. Ursinus College, Collegeville, PA (Oral Presentation – *Invited*).
- Weston, N.B.**, M.A. Vile, S.C. Neubauer and D.J. Velinsky. January 2009. The impact of climate change and sea level rise on tidal freshwater marshes of the Delaware River Estuary. Partnership for the Delaware River Estuary Science and Environmental Summit, Cape May, NJ (Oral Presentation).
- \*Prša, T., **N.B. Weston** and M.A. Vile. January 2009. Changes in metabolic activity and community composition of sulfate reducing bacteria in tidal freshwater marsh soils in response to climate change and saltwater intrusion. Partnership for the Delaware River Estuary Science and Environmental Summit, Cape May, NJ (Poster Presentation – Best Student Poster Award).
- \*Prša, T., **N.B. Weston** and M.A. Vile. May 2008. Impact of rising sea levels and salinity intrusion on the metabolic activity and community composition of sulfate reducing bacteria in tidal freshwater marsh sediments. Society of Wetland Scientists, Washington, DC (Poster Presentation – Honorable Mention for best student poster).
- Neubauer, S.C., C.B. Craft, M.A. Vile and **N.B. Weston**. May 2008. Tidal freshwater wetland responses to climate change. Society of Wetland Scientists, Washington, DC (Poster Presentation).
- ‡Burke-Scoll, M.J., R.K. Wieder, M.A. Vile, K.D. Scott, **N.B. Weston** and D.H. Vitt. May 2008. Biological N<sub>2</sub> Fixation in an Alberta, Canada bog. Society of Wetland Scientists, Washington, DC (Oral Presentation).
- Weston, N.B.**, M.A. Vile, D.J. Velinsky, S.C. Neubauer and S.B. Joye. 2007. Shifting Pathways and Magnitude of Organic Matter Mineralization in Tidal Freshwater Marshes Following Sea-Level Rise. Estuarine Research Federation, Providence, RI (Oral Presentation).
- Giblin, A., **N.B. Weston**, J. Tucker, G. Banta, \*A. Bernhard and C. Hopkinson. 2007. Salinity Effects of Nitrogen Cycling in Estuaries. Estuarine Research Federation, Providence, RI (Oral Presentation).
- Weston, N.B.**, M.A. Vile, D.J. Velinsky, S.B. Joye and S.C. Neubauer. 2007. Rising sea-levels and salinity intrusion into tidal freshwater marshes: Shifting microbial communities and pathways of organic matter mineralization. American Society of Limnology and Oceanography, Santa Fe, NM (Oral Presentation).
- Hopkinson, C.S., **N.B. Weston**, J.J. Vallino and R.H. Garritt. 2007. Estuarine ecosystem metabolism and the importance of allochthonous subsidies. American Society of Limnology and Oceanography, Santa Fe, NM (Oral Presentation).



- Edmonds, J.W., **N.B. Weston**, X. Mou, S.B. Joye and M.A. Moran. 2007. Linking the response of the microbial community structure to carbon mineralization rates during sea water intrusion into freshwater estuarine sediments. American Society of Limnology and Oceanography, Santa Fe, NM (Oral Presentation).
- Weston, N.B.** 2006. Ramifications of Rising Sea Levels and Salinity Intrusion into Tidal Freshwater Marshes: Shifting Microbial Communities and Pathways of Organic Matter Mineralization. Department of Biology, Villanova University, Villanova, PA (Oral Presentation – *Invited*).
- Weston, N.B.**, M.A. Vile and S.B. Joye. 2006. Ramifications of Rising Sea Levels and Salinity Intrusion into Tidal Freshwater Marshes: Shifting Microbial Communities and Pathways of Organic Matter Mineralization. BIOGEMON, Santa Cruz, CA (Oral Presentation).
- Hopkinson, C.S., **N. Weston**, J. Vallino, and R.H. Garritt. 2006. Estuarine ecosystem metabolism as driven by gradients in DOM sources and bioavailability, and residence time. Estuarine Research Federation, Victoria, BC (Oral Presentation).
- Weston, N.B.**, \*R.E. Dixon and S.B. Joye. 2005. Microbial and geochemical ramifications of salinity intrusion into tidal freshwater sediments. Patrick Center for Environmental Research, Academy of Natural Sciences, Philadelphia, PA. (Oral Presentation – *Invited*).
- Weston, N. B.** and Joye, S. B. 2005. Seasonal variation in the breakdown of HMW-DOM in estuarine sediment: Coupling between the hydrolytic/fermentative and terminal metabolic microbial communities. American Society of Limnology and Oceanography, Salt Lake City, UT (Oral Presentation).
- Joye, S.B., Lee, R.Y., Porubsky, W.P. and **Weston, N. B.** 2005. Environmental controls on denitrification in temperate and tropical shallow sediments. American Society of Limnology and Oceanography, Salt Lake City, UT (Oral Presentation).
- Porubsky, W.P., **N.B. Weston**, and S.B. Joye, 2003. Examination of denitrification and dissimilatory nitrate reduction to ammonium as pathways for the reduction of inorganic nitrogen in saltmarsh sediment. Estuarine Research Federation, Victoria, BC (Oral Presentation).
- Weston, N.B.**, S.B. Joye and W.P. Porubsky. 2003. Shallow marsh groundwater biogeochemistry and dissolved organic matter lability. American Society of Limnology and Oceanography, Salt Lake City, UT (Oral Presentation).
- Joye, S.B., **N.B. Weston**, W.S. Moore, and W.P. Porubsky. 2003. Groundwater as source of nutrients and organic matter in freshwater and marine ecosystems. American Society of Limnology and Oceanography, Salt Lake City, UT (Oral Presentation).

**Weston, N.B.**, W.P. Porubsky and S.B. Joye. 2002. Seasonal patterns of porewater nutrients, dissolved organics, redox species and gases in estuarine sediments. American Society of Limnology and Oceanography, Victoria, BC (Oral Presentation).

Porubsky, W.P., **N.B. Weston**, R.Y. Lee and S.B. Joye. 2002. Diel and seasonal patterns of benthic fluxes of nutrients, gases, and dissolved organics from temperate intertidal sediments. American Society of Limnology and Oceanography, Victoria, BC (Oral Presentation).

Joye, S.B., S.E. MacAvoy, W.P. Porubsky and **N.B. Weston**. 2001. Groundwater inputs and sediment biogeochemical processes in Georgia and South Carolina coastal ecosystems. American Society of Limnology and Oceanography, Victoria, BC (Oral Presentation).

**Weston, N.B.**, S.A. Carini, A.E. Giblin, G.T. Banta, C.S. Hopkinson and J. Tucker. 1997. Estimating Denitrification in the Sediments of the Parker River Estuary, Massachusetts. Estuarine Research Federation, Providence, RI (Poster Presentation).

## **Professional Service and Memberships**

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2011-2012

Past Chair, Biogeochemistry Section, Society of Wetland Scientists

Member: *American Society of Limnology and Oceanography, American Geophysical Union, Coastal and Estuarine Research Federation, Society of Wetland Scientists*

Reviewer: *Geoderma, Global Change Biology, Estuaries and Coasts, Biogeochemistry, Ecological Engineering*

Grant Reviewer: *New York Sea Grant, Maryland Sea Grant*

Scientific Committee, Society of Wetland Scientists meeting, Prague, Czech Republic

Symposium Organizer, Society of Wetland Scientists meeting, Prague, Czech Republic

2010-2011

Chair, Biogeochemistry Section, Society of Wetland Scientists

Member: *American Society of Limnology and Oceanography, American Geophysical Union, Coastal and Estuarine Research Federation, Society of Wetland Scientists*

Delaware Estuary – EPA Climate Ready Estuaries Program workgroup member

Partnership for the Delaware Estuary wetlands workgroup member

Reviewer: *Wetlands, Ecological Applications, Soil Biology and Biochemistry, Estuaries and Coasts, Geochimica et Cosmochimica Acta, Limnology and Oceanography Methods, Marine Ecology Progress Series*

Grant Reviewer: *Society of Wetland Scientists Student Grant*

Ad-Hoc Editor: *Ecological Applications*

Proposal Panel Review: *Environmental Protection Agency Science to Achieve Results (STAR) Graduate Fellowship*

## 2009-2010

Chair-Elect, Biogeochemistry Section, Society of Wetland Scientists

Symposium Chair and Organizer: "Wetlands in a Changing World", Society of Wetland Scientists Meeting, Salt Lake City, UT

Grant Reviewer: National Science Foundation - Geomorphology

National Science Foundation - Ecosystems

National Science Foundation – Long Term Research in Environmental Biology

Delaware Estuary – EPA Climate Ready Estuaries Program workgroup member

Partnership for the Delaware Estuary wetlands workgroup member

Reviewer: *Biogeochemistry, Aquatic Botany, Wetlands*

Member: *American Society of Limnology and Oceanography, American Geophysical Union, Coastal and Estuarine Research Federation, Society of Wetland Scientists*

## 2008-2009

Delaware Estuary – EPA Climate Ready Estuaries Program workgroup member

Partnership for the Delaware Estuary wetlands workgroup member

Reviewer: *Biogeochemistry, Wetlands, Limnology and Oceanography, Science of the Total Environment, Marine Chemistry, Sedimentology, Aquatic Biology, 6<sup>th</sup> Edition of The Economy of Nature*

Member: *American Society of Limnology and Oceanography, American Geophysical Union, Coastal and Estuarine Research Federation, Society of Wetland Scientists*

Conference Moderator: Partnership for the Delaware River Estuary Science and Environmental Summit, Cape May, NJ

Grant Reviewer: National Science Foundation

## **Departmental Service**

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2011-2012

Advisor for Environmental Studies and Environmental Science Majors

2010-2011

Department Curriculum Committee

Advisor for Environmental Studies and Environmental Science Majors

Organized Departmental Seminar Series

Post-doctoral Scholar Search Committee

Comprehensive Science Advisory Committee

2009-2010

Department Curriculum Committee

Advisor for Environmental Studies and Environmental Science Majors

2008-2009

Department Curriculum Committee

Initiated and Organized Departmental Seminar Series

Advisor for Environmental Studies and Environmental Science Majors

Environmental Program Review Committee

## **College & University Service**

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2011-2012

Undeclared Science student advisor

Earth Day Committee

“Choices That Matter” Freshman Orientation Facilitator

Arts & Sciences Field Research Safety Committee

Reunion University presentation on ‘Global Change’ for Villanova alumni

2010-2011

Undeclared Science student advisor

“Choices That Matter” Freshman Orientation Facilitator

Earth Day Committee

Arts & Sciences Field Research Safety Committee

2009-2010

“Choices That Matter” Freshman Orientation Facilitator

Earth Day Committee

2008-2009

Earth Day Committee

## **Community Service**

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2010-2011

Taught pre-kindergarten science class at Russell Byers Charter School, Philadelphia

2009-2010

Taught 2 fourth-grade science classes at Russell Byers Charter School, Philadelphia

## **Teaching Activities**

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2009-2010

Attended VITAL Food for Thought Discussion “The Survey Course: Entry or Exit?”

## **Grants and Awards**

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### ***Funded***

*Funding Source*

*Project Title*

*Award*

*Dates*

*Weston*

*13 of 16*

*CV*

|  |   | <i>Amount</i> |           |
|--|---|---------------|-----------|
| YSI Foundation   | Determining the effects of land use and climate change on estuarine metabolism: development of a new method for analyzing macro-tidal coastal systems               | \$25,000      | 2012      |
| Academy of Natural Sciences  | Delaware Estuary Tidal Wetlands Monitoring  | \$20,000      | 2011-2012 |
| Department of Geography and the Environment Summer Research Fellowship awarded to Cynthia Troy | Increased nitrous oxide production by microbial denitrifiers brought about by stress due to salinity, pH, toxicity and moisture in estuarine and agricultural soils | \$5,000       | 2011      |
| Villanova Undergraduate Research Fellowship awarded to Justin Stephens                         | Acidification dynamics of mountaintop peatlands in response to N, SO <sub>4</sub> <sup>2-</sup> , and Fe deposition in the Endless Mountains region, PA             | \$5,500       | 2010      |
| National Science Foundation, DEB   | RUI: Integrating the Effects of Sea Level Rise on Tidal Freshwater and Salt Marsh Stability in the Delaware River Estuary   | \$283,589     | 2010-2012 |
| Villanova Undergraduate Research Fellowship awarded to Michael Patson                          | Impact of sea level rise and salt water intrusion on plant growth and seed-bank recruitment in oligohaline marshes of the Delaware River Estuary                    | \$5,081       | 2009      |
| Villanova University Summer Research Fellowship and Research Support Grant                     | The Impacts of Climate Change and Sea Level Rise on Tidal Freshwater Marshes of the Delaware River Estuary  | \$11,350      | 2009      |

**Pending**

| <i>Funding Source</i> | <i>Project Title</i> | <i>Award Amount</i> | <i>Dates</i> |
|-----------------------|----------------------|---------------------|--------------|
|-----------------------|----------------------|---------------------|--------------|

**Declined**

| <i>Funding Source</i> | <i>Project Title</i> | <i>Award Amount</i> | <i>Dates</i> |
|-----------------------|----------------------|---------------------|--------------|
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| National Science Foundation | CAREER: Climate change, biogeochemical cycling, greenhouse gas exchange, and ecosystem services in tidal marshes | \$686,060 | 2012-2017 |
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|------------------------------|---|-----------|-----------|
| Department of Energy, CAREER | Climate Change and Oil Spills in Tidal Marshes: The Impacts of Temperature, Sea-level Rise, Salt-Water Intrusion and Hydrocarbon Contamination on Carbon Cycling, Greenhouse Gas Emissions and Microbial Community Structure and Function | \$750,000 | 2011-2016 |
|------------------------------|---|-----------|-----------|

|  |  |           |      |
|--|--|-----------|------|
| Department of Energy, National Institute for Climate Change Research | The impact of climate change on sediment delivery to coastal freshwater wetlands: can tidal marshes keep pace with sea-level rise? | \$124,776 | 2009 |
|--|--|-----------|------|

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|------------------------------|---|-----------|-----------|
| Department of Energy, CAREER | Climate Change and Carbon Cycling in Tidal Marshes: The Impact of Temperature, Sea Level Rise and Salt-Water Intrusion on Carbon Gas Emissions and Microbial Community Structure and Function | \$856,927 | 2010-2015 |
|------------------------------|---|-----------|-----------|

|                             |   |           |           |
|-----------------------------|---|-----------|-----------|
| National Science Foundation | Collaborative Research; RUI: Integrating the Effects of Sea Level Rise and Salt Water Intrusion on Tidal Freshwater | \$403,081 | 2009-2012 |
|-----------------------------|---|-----------|-----------|

|                             |   |           |               |
|-----------------------------|---|-----------|---------------|
| National Science Foundation | Marsh Stability<br>RUI: Coupling Microbial<br>Populations and Community<br>Compositions to<br>Biogeochemical Rates: Climate<br>Change and Salinity Intrusion<br>into Tidal Freshwater Marshes | \$401,432 | 2008-<br>2011 |
|-----------------------------|---|-----------|---------------|