

## CURRICULUM VITAE

### ROBINSON W. FULWEILER

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#### a. PROFESSIONAL PREPARATION

<u>Institution</u>	<u>Major</u>	<u>Degree and Year</u>
University of Vermont, Burlington, VT	International Studies	BA, 2000
University of Rhode Island, Narragansett, RI	Oceanography	MS, 2003
University of Rhode Island, Narragansett, RI	Oceanography	Ph.D., 2007

#### b. APPOINTMENTS

2017-present	Coastal Institute Senior Fellow, Graduate School of Oceanography, University of Rhode Island
2017-present	Associate of Harvard Forest, Harvard University
2016-present	Director of the Boston University Marine Program
2016-present	Associate of the Department of Organismic and Evolutionary Biology, Harvard University
2014-present	Associate Professor, Joint Appointment in Earth and Environment and Biology, Boston University
2012-present	Visiting Scientist, EPA, Narragansett, RI
2013-2015	Visiting Scientist, University of Western Australia
2010-2015	Associate Director, Marine Sciences Program, Boston University
2011-2014	Assistant Professor, Joint Appointment Earth and Environment and Biology, Boston University
2010-2013	Adjunct Faculty, Department of Oceanography and Coastal Sciences, Louisiana State University, Baton Rouge, LA
2010-2013	Adjunct Faculty, Graduate School of Oceanography, University of Rhode Island
2010-2014	Assistant Professor, Affiliated Appointment (non-tenure), Biology Department, Boston University
2008-2014	Assistant Professor, Earth Sciences, Boston University
2007-08	Postdoctoral Research Associate, Louisiana State University, Baton Rouge, LA
2007-08	Research Assistant/Teaching Fellow, Graduate School of Oceanography, University of Rhode Island

#### c. SELECT POST GRADUATE AWARDS AND HONORS

2016	Association for the Sciences of Limnology and Oceanography (ASLO) Fellow
2016	Selected to take part in the UNOLS Research Training Cruise with Deep-Submergence Assets.
2015-2016	Bullard Fellow, Harvard University
2015	Rising Star Award, University of Rhode Island Distinguished Alumni

- 2012-2014 Sloan Research Fellow in Ocean Sciences. This fellowship is given to individuals “*who show the most outstanding promise of making fundamental contributions to new knowledge.*” Ocean Sciences was introduced as an award category in 2012.
- 2013 Cronin Award from the Coastal and Estuarine Research Federation (CERF). This award recognizes the “*significant accomplishments of an estuarine scientist who is in the early stages of his/her career development and who has shown great promise with work carried out during the first six years past the Ph.D.*”
- 2013 The Neu Family Award for Excellence in Teaching in the College of Arts and Sciences. This award honors “*extraordinary dedication and effectiveness in the classroom and beyond.*”

#### **d. MENTORING AND TEACHING EXPERIENCE**

##### ***Postdoctoral Mentoring***

John Angell, Postdoctoral Researcher (2016-present)

Silvia Newell, Postdoctoral Researcher (2011-2014). Currently: Associate Professor of Earth and Environmental Science, Wright State University

Priyanka Chowdhury, Postdoctoral Researcher (2014-2015). Currently: Assistant Professor, Keene State

##### ***Graduate students (completed)***

Sarah Foster, MS (2010-2012). Currently: Ph.D. candidate in my laboratory.

Joanna Carey, Ph.D. (2009-2013). Currently: Assistant Professor, Babson College

Amanda Vieillard, MS (2011-2013). Currently: Ph.D. student at the University of Auckland.

Lindsey Fields, Ph.D., co-advised w/ C. Oviatt at GSO/URI for her last year (2012-2013). Currently: University of Georgia College of Engineering Instructor, Consultant with Carter and Sloope Consulting Engineers

Elise Heiss, Ph.D. (2009-2014) Currently: Assistant Professor of Chemistry at King’s College.

Timothy Maguire, Ph.D. (2013-2017) Currently: Postdoctoral Researcher at the Great Lakes Water Research Institute.

Hollie E. Emery, Ph.D. (2010-2018) Currently: Postdoctoral Researcher in the Department of Organismal and Evolutionary Biology at Harvard University.

##### ***Graduate students (in progress)***

Alia Al-Haj, Ph.D student (2017-present); Emily Chua, Ph.D. candidate (2015-present); Sarah Foster, Ph.D. candidate (2012-present); Claudia Mazur, Ph.D. student (2017-present); Nick Ray candidate (2015-present).

##### ***High school and Undergraduate Research Mentor (past five years)***

Undergraduate Research Opportunity Program (UROP): Primary mentor for 15 student projects

Undergraduate Directed Studies: 8 students

Undergraduate Honors Thesis: Primary Mentor (8); Committee Member (6)

Undergraduate Laboratory Volunteers: 36

High School Internships: 7

##### ***Courses Taught***

2015 Bigfoot: Nitrogen, the Ocean, and You, Kilachand Honors Course

2009-14,18 Marine Biogeochemistry, ES/BI 423/623

- 2008-2018\* Introduction to Oceanography, ES 144 (\*did not teach this in 2015 & 2017)
- 2008, 2012 Invited Lecturer; Lund University (Lund, Sweden), Global Biogeochemical Cycles
- 2011 Coastal Biogeochemistry, ES/BI 558
- 2011 Advanced Topics in (Bio)Geochemical Cycles
- 2007 Invited Lecturer; Louisiana State University for Estuarine Ecology (OCE 4372).
- 2006-2007 Invited Lecturer; University of Rhode Island, Graduate School of Oceanography for Coastal Marine Ecosystems (OCG 689).
- 2005 Invited Lecturer; University of Rhode Island, Graduate School of Oceanography for Biological Oceanography (OCG 561).
- 2003-2005 Teaching Assistant at the University of Rhode Island, Graduate School of Oceanography for Biological Oceanography (OCG 561). Duties include planning and preparing field and laboratory exercises.
- 2000–2001 Teaching Assistant at the University of Rhode Island Biological Science Department: General Zoology – Fall '00 and Spring '01. Duties included planning and preparing lectures and labs.

#### e. PUBLICATIONS

*Note: Starting in 2012, my approach to co-authorship when postdoctoral associates or students from my lab are first author is to list myself as last author. (<sup>S</sup>postdoc, \*graduate student, <sup>¥</sup>undergraduate student)*

#### Journal Articles Submitted:

- \*Maguire, T.J. & **Fulweiler, R.W.** Vertical composition of historic urban land-use impacts contemporary silica export. *Limnology and Oceanography Letters*

#### Journal Articles in Review:

- \*Foster, S.Q. & **Fulweiler, R.W.** Estuarine sediments exhibit dynamic and variable biogeochemical responses to hypoxia. *Journal of Geophysical Research: Biogeosciences*

Pandolfi, J.M., Martinetto, P., Saunders, M.I., Lovelock, C.E., Thomas, J., **Fulweiler, R.W.**, Duarte, C. M. Reefbase, sampling intensity and the apparent frequency of coral bleaching. *Coral Reefs*

- \*Ray, N.E., \*Maguire, T.J., \*Al-Haj, A.N., <sup>¥</sup>Henning, M.C., **Fulweiler, R.W.** Low greenhouse gas emissions from oyster aquaculture. *Nature Sustainability*

#### Journal Articles Published:

58. Zakem, E.J., \*Al-Haj, A., Church, M.J., van Dijken, G.L., Dutkiewicz, S., \*Foster, S.Q., **Fulweiler, R.W.**, Mills, M.M. and Follows, M.J. (2018). Ecological control of nitrite in the upper ocean. *Nature Communications* 9: 1206.
57. Snelgrove, P.V., Soetaert, K., Solan, M., Thrush, S., Wei, C.L., Danovaro, R., **Fulweiler, R.W.**, Kitazato, H., Ingole, B., Norkko, A. and Parkes, R.J., (2018). Global Carbon Cycling on a Heterogeneous Seafloor. *Trends in Ecology & Evolution* 33(2): 96-105.
56. \*Emery, H.E. & **Fulweiler, R.W.** (2017). Incomplete tidal restoration may lead to persistent high CH<sub>4</sub> emission. *Ecosphere*.8(12).
55. \*Maguire, T. J., & **Fulweiler, R. W.** (2017). The fate and effect of dissolved silicon within wastewater treatment effluent. *Environmental Science & Technology*, 51(13): 7403-7411.

54. Fagherazzi, S., Viggato, T., \*Vieillard, A. M., Mariotti, G., & **Fulweiler, R. W.** (2017). The effect of evaporation on the erodibility of mudflats in a mesotidal estuary. *Estuarine, Coastal and Shelf Science*, 194” 118-127.
53. \*Maguire, T. J., Templer, P. H., Battles, J. J., & **Fulweiler, R. W.** (2017). Winter climate change and fine root biogenic silica in sugar maple trees (*Acer saccharum*): Implications for silica in the Anthropocene. *Journal of Geophysical Research: Biogeosciences*, 122(3), 708-715.
52. \*Chua, E., Savidge, W., Short, T., Cardenas-Valencia, A., & **Fulweiler, R. W.** (2016). A Review of the Emerging Field of Underwater Mass Spectrometry. *Frontiers in Marine Science*, 3, 209.
51. Downing, J.A., Cherrier, C.T., **Fulweiler, R.W.** (2016) Low ratios of silica to dissolved nitrogen supplies to rivers arise from agriculture not reservoirs. *Ecology Letters* 19 (12): 1414-1418.
50. Gil, Y., David, C.H., Demir, I., Essawy, B.T., **Fulweiler, R.W.**, Goodall, J.L., Karlstrom, L., Lee, H., Mills, H.J., Oh, J., Pierce, S.A., Pole, A., Tzeng, M.W., Villamizar, S.R., Yu, X. (2016) Towards the geoscience paper of the future: best practices for documenting and sharing research from data to software provenance. *Earth and Space Science* 3 (10): 388-415.
49. **Fulweiler, R.W.**, Emery, H. E., Maguire, T. J. (2016) A workflow for reproducing mean benthic gas fluxes. *Earth and Space Science* 3 (8): 318-325.
48. §Newell, S. E., McCarthy, M. J., Gardner, W. S., & **Fulweiler, R. W.** (2016). Sediment Nitrogen Fixation: a Call for Re-evaluating Coastal N Budgets. *Estuaries and Coasts* 39 (6): 1626-1638.
47. \*Heiss, E.M. & **Fulweiler, R.W.** (2016) Coastal water column ammonium and nitrite oxidation are decoupled in summer. *Estuarine, Coastal and Shelf Science: Volume 178*: 110-119.
46. Humphries, A.T., Ayvazian, S.G., Carey, J., Hancock, B.T., Grabbert, S., Cobb, D., Strobel, C.J., **Fulweiler, R.W.** (2016) Directly measured denitrification reveals oyster aquaculture and restored oyster reefs remove nitrogen at comparable high rates. *Frontiers of Marine Science – Marine Biogeochemistry* 3, 74.
45. \*Foster, S.Q. and **Fulweiler, R.W.** (2016) Sediment Nitrous Oxide Fluxes Are Dominated by Uptake in a Temperate Estuary *Frontiers of Marine Science – Marine Ecosystem Ecology* 3, 40.
44. §Newell, S. E., \*Pritchard, K.R., \*Foster, S.Q., **Fulweiler, R.W.** (2016) Molecular evidence for sediment nitrogen fixation in a temperate New England Estuary. *PeerJ* 4:e1615
43. \*Maguire, T.J., **Fulweiler, R.W.** (2016) Urban Dissolved Silica: Quantifying the role of groundwater and runoff in wastewater effluent. *Environmental Science & Technology* 50 (1): 54-61.
42. Carey, J. C., **Fulweiler, R.W.** (2015) Human appropriation of biogenic silicon – the increasing role of agriculture. *Functional Ecology* 30: 1331-1339.
41. Duarte, C. M., **Fulweiler, R.W.**, Lovelock, C.E., Martinetto, P., Saunders, M.I., Pandolfi, J.M., Gelcich, S. (2015) Ocean Calamities: Delineating the Boundaries between Scientific Evidence and Belief. *Bioscience* online first, DOI: [10.1093/biosci/biv088](https://doi.org/10.1093/biosci/biv088). (In response to Jacquet et al. (2015) Ocean Calamities: Hyped Litany or Legitimate Concern?).

40. \*Carey, J. C., Moran, S. B., Kelly, R. P., Kolker, A. S., & **Fulweiler, R. W.** (2015). The Declining Role of Organic Matter in New England Salt Marshes. *Estuaries and Coasts* 1-14.
39. **Fulweiler, Robinson W.**, \*Elise M. Heiss, \*Mary Kate Rogener, §Silvia E. Newell, Gary R. LeClerc, Sarah M. Kortebein, and Steven W. Wilhelm (2015) Examining the impact of acetylene on N-fixation and the active sediment microbial community. *Frontiers in Microbiology* 6.
38. **Fulweiler, R. W.**, Oczkowski, A. J., Miller, K. M., Oviatt, C. A., & Pilson, M. E. Q. (2015). Whole truths vs. half truths—And a search for clarity in long-term water temperature records. *Estuarine, Coastal and Shelf Science* 157: A1-A6. (Invited)
37. Duarte, Carlos M., **Robinson W. Fulweiler**, Catherine E. Lovelock, Paulina Martinetto, Megan I. Saunders, John M. Pandolfi, Stefan Gelcich, and Scott W. Nixon. (2015) Reconsidering ocean calamities. *BioScience* 65 (2): 130-139.
36. **Fulweiler, R.W.**, \*Maguire, T.J., Carey, J.C. and Finzi, A.C. (2015). Does Elevated CO<sub>2</sub> Alter Silica Uptake in Trees? *Frontiers in Plant Science* 5:793.
35. \*Foster, S.Q. & **Fulweiler, R.W.** (2014) Spatial and historic variability of benthic nitrogen cycling processes in an anthropogenically impacted estuary. *Frontiers of Marine Science – Global Change and the Future Ocean* 56: 1-16.
34. \*Vieillard, A. & **Fulweiler, R.W.** (2014) Tidal pulsing alters nitrous oxide fluxes in a temperate intertidal mudflat. *Ecology* 95 (7): 1960-1971.
33. \*Fields, L., Nixon, S.W., Oviatt, C.A., **Fulweiler, R.W.** (2014) Benthic metabolism and nutrient regeneration in hydrographically different regions on the inner continental shelf of Southern New England. *Estuarine, Coastal Shelf Science* 148: 14-26.
32. \*Carey, J.C. & **Fulweiler, R.W.** (2014) Silica uptake by *Spartina*—evidence of multiple modes of accumulation from salt marshes around the world. *Frontiers of Plant Science* 5:186.
31. Fagherazzi, S., Mariotti, G., \*Banks, A.T., Morgan, E.J., **Fulweiler, R.W.** (2014). The relationships among hydrodynamics, sediment distribution, and chlorophyll in a mesotidal estuary. *Estuarine, Coastal and Shelf Science* (144): 56-64.
30. \*Carey, J.C. & **Fulweiler, R.W.** (2014) Salt marsh tidal exchange increases residence time of silica in estuaries. *Limnology and Oceanography* 59(4), 2014, 1203-1212.
29. \*Emery, H.E. & **Fulweiler, R.W.** (2014) The Impact of *Phragmites australis* on Salt Marsh Greenhouse Gas Emissions and Global Warming Potential. *Aquatic Botany* (116): 83-92.
28. **Fulweiler, R.W.** and \*Heiss, R.W. (2014) (Nearly) A Decade of Directly Measured Sediment N<sub>2</sub> Fluxes – What Can Narragansett Bay Tell Us about the Global Ocean Nitrogen Budget? *Oceanography* 27 (1):184–195. (Invited)
27. Cole, L.W. & **Fulweiler, R.W.** (2013) First, do no harm. *Frontiers in Ecology and the Environment* 11: 59.

26. **Fulweiler, R.W.**, Brown, S., Nixon, S.W., Jenkins, B. (2013) Denitrification and Nitrogen Fixation are Coupled in Heterotrophic Marine Sediments. *Marine Ecological Progress Series* 482: 57-68.
25. \*Carey, J.C. & **Fulweiler, R.W.** (2013) Watershed Land Use Alters Riverine Silica Cycling. *Biogeochemistry* (1-3): 525-544.
24. \*Carey, J.C. & **Fulweiler, R.W.** (2013) Nitrogen Enrichment Increases Net Si Accumulation in a Temperate Salt Marsh. *Limnology and Oceanography* 58 (1): 99-111.
23. \*Carey, J.C. & **Fulweiler, R.W.** (2012) The Terrestrial Silica Pump. *PLoS ONE* 7(12): e52932.
22. \*Viellard, A. & **Fulweiler, R.W.** (2012) Impacts of Long-term Fertilization on Salt Marsh Tidal Creek Benthic Nutrient and N<sub>2</sub> Gas Fluxes. *Marine Ecological Progress Series* 471: 11-22.
21. \*Carey, J. & **Fulweiler, R.W.** (2012) Human Activities Directly Alter Watershed Dissolved Silica Fluxes. *Biogeochemistry* 111: 125-138.
20. **Fulweiler, R.W.** & Nixon, S.W. (2012) Net Sediment N<sub>2</sub> Fluxes in a Southern New England Estuary - Variations in Space and Time. *Biogeochemistry* 111:111-124.
19. **Fulweiler, R.W.**, Rabalais, N.N., Heiskanen, A.S. (2012) The Eutrophication Commandments. *Marine Pollution Bulletin* 64: 1997-1999.
18. \*Heiss, E.M., Fields, L., & **Fulweiler, R.W.** (2012) Directly Measured Net Denitrification Rates in Offshore New England. *Continental Shelf Research* 45: 78-86.
17. Nixon, S.W. & **Fulweiler, R.W.** (2012) Environmental Footprints and Shadows in an Urban Estuary, Narragansett Bay, RI (USA). *Regional Environmental Change* 12: 381-394.
16. <sup>‡</sup> Vieillard, A., **Fulweiler, R.W.**, Hughes, Z., Carey, J.C. (2011) The Ebb and Flood of Silica: Quantifying Dissolved and Biogenic Silica Fluxes from a Temperate Salt Marsh. *Estuarine, Coastal and Shelf Science* 95 (4): 415-423.
15. **Fulweiler, R.W.**, \*Emery, H., \*Heiss, E.M., Berounsky, V. (2011) Assessing the Role of pH in Determining Water Column Nitrification Rates in a Coastal system. *Estuaries and Coasts* 34: 1095-1102.
14. Bargu, S., White, J.R., Chunyan, L., Czubakowski, J., **Fulweiler, R.W.** (2011) Effects of Freshwater Input on Nutrient Loading, Phytoplankton Biomass, and Cyanotoxin Production in an Oligohaline Estuarine Lake. *Hydrobiologia* 661 (1): 377-389.
13. **Fulweiler, R.W.**, Nixon, S.W., Buckley, B.A. (2010). Spatial and Temporal Variability of Benthic Oxygen Demand and Nutrient Regeneration in an Anthropogenically Impacted New England Estuary. *Estuaries and Coasts* 33 (6): 1377-1390.
12. Rivera-Monroy, Victor H., Peter Lenaker, Robert R. Twilley, Ronald D. Delaune, Charles W. Lindau, William Nuttle, Emad Habib, **Robinson W. Fulweiler**, and Edward Castañeda-Moya. Denitrification in Coastal Louisiana: A Spatial Assessment and Research Needs. *Journal of Sea Research* 63, no. 3 (2010): 157-172.

11. **Fulweiler, R.W.** Fantastic Fixers. (2009) *Science* 326: 377-378. (*Invited*).
10. White, John; **Fulweiler, Robinson**; Li, Chunyan; Bargu, Sibel; Walker, Nan; Twilley, Robert; Green, Sara. (2009). Mississippi River Flood of 2008 - Observations of a Large Freshwater Diversion on Physical, Chemical and Biological Characteristics of a Shallow, Estuarine Lake. *Environment, Science, and Technology* 43: 5599-5604.
9. **Fulweiler, R.W.** & Nixon, S.W. (2009). Responses of benthic-pelagic coupling to climate change in a temperate estuary. *Hydrobiologia* 629: 147-156.
8. Groffman, P. M., Butterbach-Bahl, K., **Fulweiler, R.W.**, Gold, A.J., Morse, J.L., Stander, E.K., Tague, C., Tonitto, C., Vidon, P. (2009) Challenges to incorporating spatially and temporally explicit phenomena (hotspots and hot moments) in denitrification models. *Biogeochemistry* 93:1-5.
7. Fennel, K., Brady, D., DiToro, D., **Fulweiler, R.W.**, Gardner, W.S., Giblin, A., McCarthy, M.J., Rao, A., Seitzinger, S., Thouvenot-Korppoo, Tobias, C. (2009) Modeling denitrification in aquatic systems. *Biogeochemistry* 93:159-178.
6. Nixon, S.W., **Fulweiler, R.W.**, Buckley, B.A., Granger, S.L., Nowicki, B.L., Henry, K.M. (2009). The impact of changing climate on phenology, productivity, and benthic-pelagic coupling in Narragansett Bay. *Estuarine, Coastal, and Shelf Science* 82: 1-18. (*Invited Feature*).
5. **Fulweiler, R.W.**, Nixon, S.W., Buckley, B.A., Granger, S.L. (2008). Net Sediment N<sub>2</sub> Fluxes in a Coastal Marine System – Experimental manipulations and a Conceptual Model. *Ecosystems* 11: 1168-1180.
4. **Fulweiler, R.W.**, Nixon, S.W., Buckley, B.A., Granger, S.L. (2007). Reversal of the net nitrogen flux in coastal marine sediments. *Nature* 448: 180-182.
3. **Fulweiler, R.W.** & Nixon, S.W. (2005) Terrestrial vegetation and the seasonal cycle of dissolved silica in a southern New England Coastal River. *Biogeochemistry* 74: 115-130.
2. **Fulweiler, R.W.** & Nixon, S.W. (2005) Annual export of nitrogen, phosphorus, and suspended solids from a southern New England Watershed. *Biogeochemistry* 76: 567-593.
1. **Fulweiler, R.W.**, Nixon, S.W., Buckley, B., Granger, S. (2003) Export of organic carbon from a minimally developed southern New England watershed. In: B.A. Brebbia (ed.) *River Basin Management II*, Wessex Institute of Technology. Southampton, UK.

Book Chapters:

8. **Fulweiler, R.W.** (In review) The Oligotrophication of Narragansett Bay, In *Fundamental of Ecosystem Science*. Editors: K.C. Weathers, D.L. Strayer, G.E. Likens. (*Invited*)
7. Groffman, P.M., Rosi, E.J., **Fulweiler, R.W.** (In review) The Nitrogen Cycle, In *Fundamental of Ecosystem Science*. Editors: K.C. Weathers, D.L. Strayer, G.E. Likens. (*Invited*)
6. Giblin, A.E., **Fulweiler, R.W.**, Hopkinson, C.S. (In review) The Role of Marshes in Coastal Nutrient Dynamics and Loss, In *Marshes: Function, Dynamics, and Stresses*. Editors: Z. Hughes & D. Fitzgerald.

5. **Fulweiler, R.W.** & Bartoli, M. (2012) Variation Among Estuarine Geochemistry and Productivity, In Volume 1: Features/Classification of Estuaries and Coastal Waters. Editors: E. Wolanski and D. McLusky, Elsevier (*Invited*).
4. Fagherazzi S., FitzGerald D.M., **Fulweiler R.W.**, Hughes Z., Wiberg P.L., McGlathery K.J., Morris J.T., Tolhurst T.J., Deegan L.A., Johnson D.S. (2013) Ecogeomorphology of Tidal Flats, Treatise on Geochemistry, Volume 12 Ecogeomorphology. Editors: Butler D., Hupp C., Executive Editor: Shroder J. Elsevier.
3. Fagherazzi S., FitzGerald D.M., **Fulweiler R.W.**, Hughes Z., Wiberg P.L., McGlathery K.J., Morris J.T., Tolhurst T.J., Deegan L.A., Johnson D.S. (2013) Ecogeomorphology of Salt Marshes, Treatise on Geochemistry, Volume 12 Ecogeomorphology. Editors: Butler D., Hupp C., Executive Editor: Shroder J. Elsevier.
2. Nixon, S.W. & **Fulweiler, R.W.** (2009). Nutrient Pollution, Eutrophication, and the Degradation of Coastal Marine Ecosystems. In: C.M. Duarte, J. Culberston et al. (ed). Global Loss of Coastal Habitats: Rates, Causes, and Consequences. Bilbao: Fundacion BBVA. 184 p.
1. Nixon, S.W., B. A. Buckley, S.L. Granger, L. A. Harris, A.J. Oczkowski, **R.W. Fulweiler**, and L.W. Cole. (2008). Nutrient (N and P) inputs to Narragansett Bay: past, present, and future. In: B. Costa-Pierce, A. Colt, and A. Desbonnet (eds.) Science for Ecosystem-based Estuarine management: Narragansett Bay in the 21st Century. Springer Verlag, NY.

Theses:

- Fulweiler, R.W.** (2007) The Impact of Climate Change on Benthic-Pelagic Coupling and the Biogeochemical Cycling of Narragansett Bay, R.I. Ph.D. thesis in Oceanography, Narragansett, University of Rhode Island: p. 265.
- Fulweiler, R.W.** (2003) An assessment of carbon, nutrient, and total suspended solids export from the Wood-Pawcatuck Watershed to Little Narragansett Bay. Masters thesis in Oceanography. Narragansett, University of Rhode Island: p. 165.

Technical Reports/Workshop Proceedings:

- Fulweiler, R.W.** and Ferrini, V. (2016) Coastal Ecosystems in Developing submergence science for the next decade (DESCEND-2016).
- Gawarkiewicz, G., J. Nelson, R. He, **R. W. Fulweiler**, J. Goff, T. Grothues, and E. LaBrecque, (2011) Shelf/Slope Processes: Science opportunities and issues relating to the OOI Pioneer Array. OOI/NSF Technical Report, 57 pp.
- Nixon S.W., Buckley B., Granger S., Harris L., Oczkowski A., Cole L., and **Fulweiler R.** (2005) Anthropogenic Nutrient Inputs to Narragansett Bay: A Twenty-five Year Perspective. A report to the Narragansett Bay Commission and Rhode Island Sea Grant. Narragansett, RI. 30 p.
- Nixon, S.W., Olsen, S.B., Buckley, E., **Fulweiler, R.** (2004) Lost to the Tide: The importance of Freshwater Flow to Estuaries. Final Report submitted to the Coastal Resources Center. Narragansett, RI: University of Rhode Island, Graduate School of Oceanography.  
[http://www.crc.uri.edu/download/2\\_LosttotheTide\\_Nixon\\_2004.pdf](http://www.crc.uri.edu/download/2_LosttotheTide_Nixon_2004.pdf).



Popular Press and Science Outreach:

**Fulweiler, R. W.** (2017). The Signal and the Noise: Lessons from GE Hutchinson. *Limnology and Oceanography Bulletin*, 26(1), 9-10.

**Fulweiler, R.W.** (2017) Hot Vents and Cold Seeps.  
<https://www.thenakedscientists.com/articles/features/hot-vents-and-cold-seeps>

**Fulweiler, R.W.** (2016): Blog for BU Experts on Alvin Dive:  
<https://medium.com/boston-university-pr/taking-a-dive-on-a-deep-sea-sub-alvin-343bda0e1ba7#.mehqzzcw1>

**Fulweiler, R.W.** (2013): Blog for Nitrogen News about N impacts on sea turtles in Hawaii:  
<http://www.nitrogennews.com/interactivemap/hawaii.html>

**Fulweiler, R.W.** (2012) Nitrogen News: Nitrogen Impacts on New England Salt Marsh  
<http://www.nitrogennews.com/interactivemap/massachusetts.html>

**Fulweiler, R.W.** (2012) Big Foot: Nitrogen Part IV:  
<http://www.thenakedscientists.com/HTML/articles/article/bigfoot-the-nitrogen-problem/>

**Fulweiler, R.W.** (2012) No Smoke Detectors in the Sea: The Nitrogen Story Part III:  
<http://www.thenakedscientists.com/HTML/articles/article/no-smoke-detectors-in-the-sea/>

**Fulweiler, R.W.** (2011) Breathless: The Nitrogen Story Part II:  
<http://www.thenakedscientists.com/HTML/articles/article/breathless/>

**Fulweiler, R.W.** (2011) The Wheels on the Bus: The Nitrogen Story for the Naked Scientist:  
<http://www.thenakedscientists.com/HTML/articles/article/the-wheels-on-the-bus/>

**Fulweiler, R.W.** (2007) The Louisiana Wetlands: An Introduction; Science Tales from the Red Stick for the Naked Scientist:  
<http://www.thenakedscientists.com/HTML/articles/article/thelouisianawetlandsanintroduction/>

**Fulweiler, R.W.** (2007) Climate change and the Marine Nitrogen Cycle for the Naked Scientist:  
<http://www.thenakedscientists.com/HTML/>.

**Fulweiler, W.** (2004) The Importance of Land and Sea. Wood-Pawcatuck Watershed Report. Vol 21(1).

Media Coverage of Research:

Story on Narragansett Bay Temperature Increase and communicating w/ the press:  
<http://www.bu.edu/today/2015/communicating-climate-change-research/>

Story on Fulweiler's research on nitrogen:  
<http://www.bu.edu/today/2013/fulweilers-message-in-a-bottle/>

Fulweiler speaks on Fox News about Sewage Spill in Hull, MA:  
<http://www.myfoxboston.com/video?clipId=8536323&auto>

Story on Fulweiler's research on salt marshes and tidal flats:

<http://www.bu.edu/cas/magazine/spring12/fulweiler/>

Interview (8/22/10) with the Naked Scientist's Helen Scales on Gulf of Mexico spill and the Louisiana

Wetlands: <http://www.thenakedscientists.com/HTML/podcasts/show/2010.08.22/>

Interview (6/13/10) with the Naked Scientist's Ben Valsler on evaluation the impact of the Gulf Horizon Oil Spill on Louisiana Wetlands.

<http://www.thenakedscientists.com/HTML/podcasts/show/2010.06.13/>

Interview (6/9/10) with Mark Strassman from CBS news:

<http://www.cbsnews.com/video/watch/?id=6566045n&tag=related;photovideo>

Interview (2/2/08) with the Naked Scientist's Dr. Chris Smith on the importance of wetlands in Louisiana,

"Wet and Wild," <http://www.thenakedscientists.com/HTML/podcasts/show/2008.02.03/>.

Lane, Nick (2007). What's in the Rising Tide? *Nature* 449, 778-780 (2007).

Interview with Rhode Island Public Radio's Nancy Cook, "Climate change changing Narragansett Bay,"

<http://www.wrni.org/wrni/news/archive/070926-bay1.asp>.

Nature Podcast: July 12, 2007. <http://www.nature.com/nature/podcast/v448/n7150/nature-2007-07-12.mp3>.

## **f. PRESENTATIONS**

### Invited Seminars at Universities and Research Centers:

- 2018 Annual Nixon Lecture, Graduate School of Oceanography, University of Rhode Island, Narragansett, RI: "*So many estuaries, so little time: Narragansett Bay as a model for coastal systems under change.*"
- 2016 Bigelow Laboratory for Ocean Sciences, Boothbay, ME: "*All the Nitrogen Fixation We Cannot See.*"
- 2016 Environmental Protection Agency, Boston, MA: "*Sentinels of Change – Are Salt Marshes in Long Island Sound Keeping Pace with Sea Level Rise?*"
- 2016 University of Georgia – Jointly hosted seminar: Marine Sciences and Odum School of Ecology, Athens, GA: "*Coastal Nitrogen Cycling Dynamics - Exploring Variations in Space and Time.*"
- 2016 Harvard Forest, Petersham, MA: "*The Terrestrial Silica Pump-Exploring the Role of Vegetation in Altering the Flux of Si to the Coastal Ocean.*"
- 2015 Marine Biological Laboratory, Woods Hole, MA: "*Shore to Shelf Nitrogen Cycling Dynamics – Exploring Variations in Space and Time.*"
- 2014 University of Delaware, College of Earth, Ocean, and Environment, Newark, DE: "*Climate Change Impacts on Nitrogen Cycling in the Coastal Ocean.*"

- 2014 Michigan State University, Ecology, Evolutionary Biology, and Behavior Department; Lansing, MI: “*The Where, the Who, and Maybe the Why of N-Fixation Coastal Marine Systems.*”
- 2013 Woods Hole Oceanographic Institute, Marine Chemistry and Geochemistry Seminar; Woods Hole, MA: “*Have We Underestimated the Importance of Sediment N Fixation?*”
- 2013 MIT, Microbial Systems Seminar Series; Cambridge, MA: “*Have We Underestimated the Importance of Sediment N Fixation?*”
- 2013 Mediterranean Institute for Advanced Studies (IMEDEA); Mallorca, Spain: “*Climate, Carbon, and Heterotrophic Sediment N Fixation.*”
- 2013 University of North Carolina–Chapel Hill; Chapel Hill, NC: “*Climate, Carbon, and Heterotrophic Sediment N Fixation.*” (\*Invited for Gussenhoven Lecture)
- 2012 University of Massachusetts–Boston; Boston, MA: “*Harmful Algal Blooms and Benthic Nutrient Mineralization – A Positive Feedback Loop or a Dead End?*”
- 2012 Lund University; Lund, Sweden: Lecturer for Global Biogeochemical Cycles: “*The Global Nitrogen Cycle – Today and Tomorrow.*”
- 2012 Marine Biological Laboratory; Woods Hole, MA: “*A Different Kind of Dam: The Influence of Terrestrial Vegetation on Silica Export to Coastal Waters.*”
- 2012 Rutgers University, Marine Science Institute; Brunswick, NJ: “*Climate, Carbon, and Heterotrophic Sediment N Fixation.*”
- 2011 Graduate School of Oceanography/University of Rhode Island; Narragansett, RI: “*Climate, Carbon, and Heterotrophic Sediment N Fixation.*”
- 2011 University of Florida; Environmental Engineering; Gainesville, FL: “*Climate Induced Changes of Benthic-Pelagic Coupling and Biogeochemistry in a New England Estuary (and beyond...).*”
- 2010 University of Virginia; Department of Environmental Sciences; Charlottesville, VA: “*Sediment N<sub>2</sub> and Greenhouse Gas Fluxes from Shore to Shelf – Seasonal Patterns and Environmental Controls.*”
- 2010 California Institute of Technology, Environmental Science and Engineering Seminar; Pasadena, CA: “*Climate Change Impacts on Biogeochemical Cycling in a Temperate Estuary.*”
- 2009 Carey Institute of Ecosystem Studies; Millbrook, NY: “*Climate Induced Changes of Benthic-Pelagic Coupling and Biogeochemical Cycling in Narragansett Bay, RI.*”
- 2009 Woods Hole Oceanographic Institute, Woods Hole, MA: “*The Impact of Changing Climate on Phenology, Productivity, and Benthic-Pelagic Coupling in Narragansett Bay.*” (co-Presentation w/ Dr. Scott W. Nixon).
- 2009 Virginia Institute of Marine Science; Gloucester Point, VA: “*Climate Change Impacts on Biogeochemical Cycling in a Temperate Estuary.*”

- 2008 Massachusetts Institute of Technology; Earth, Atmospheric & Planetary Sciences; Cambridge, MA: “*Climate Induced Changes of Benthic-Pelagic Coupling in Narragansett Bay, RI.*”
- 2007 Princeton University; Ecology and Evolutionary Biology; Princeton, NJ: “*Climate Induced Changes of Benthic-Pelagic Coupling in Narragansett Bay, RI.*”
- 2007 Louisiana State University; Department of Oceanography and Coastal Science; Baton Rouge, LA: “*Climate Induced Changes of Benthic-Pelagic Coupling in Narragansett Bay, RI.*”
- 2007 Florida State University; Oceanography Department; Tallahassee, FL: “*Climate Induced Changes of Benthic-Pelagic Coupling in Narragansett Bay, RI.*”
- 2007 University of Texas at Austin Coastal Marine Lab; Port Aransas, TX: “*Climate Induced Changes of Benthic-Pelagic Coupling in Narragansett Bay, RI.*”
- 2007 University of Connecticut; Marine Science Department; Avery Point, CT: “*Climate Induced Changes of Benthic-Pelagic Coupling in Narragansett Bay, RI.*”
- 2006 Natural and anthropogenic modifications of the Si cycle along the land-ocean continuum: Worldwide Ecological, Biogeochemical and Socio-economic consequences (Si-Webs) Conference; Brest, France.

Invited Conference Lectures: (§postdoctoral associate, \*graduate student, ¥undergraduate student)

- 2018 **Fulweiler, R.W.**, Krause-Jense, Dorte, Richardson, Katherine. Understanding Eutrophication: How far have we come and where do we go from here? EUTRO 2018, Nyborg, Denmark
- 2017 **Fulweiler, R.W.** From Forests to the Sea – Exploring the role of forests in watershed Si export. Annual Harvard Forest Ecology Symposium, Petersham, MA.
- 2016 **Fulweiler, R.W.** This I Believe: Musings from eighteen years in marine science. Keynote Talk at the Society for Women in Marine Science Fall Symposium, Woods Hole, MA.
- 2016 **Fulweiler, R.W.** Nitrogen Cycling in Modern Estuaries - Tales of Ruin and Resilience, *Plenary* Talk at the Estuarine Coastal Sciences Association Conference, Bremen, Germany.
- 2015 **Fulweiler, R.W.** Triaging the Coastal Ocean, *Plenary* Talk at the Coastal Estuarine Research Federation Conference, Portland, Oregon.
- 2015 \*Maguire, T.J. & **Fulweiler, R.W.** City Shortcuts: Documenting Si Export Pathways in an Urban Ecosystem. Geological Society of America, Baltimore, Maryland.
- 2013 **Fulweiler, R.W.** & \*Emery, H.E. Greenhouse Gas Fluxes in Tidal Restricted and Restored Salt Marshes. Salt Marsh Symposium: Symposium on C/N Cycling and Ecosystem Valuation of Tidal Wetlands in the Northeast. Waquoit Bay National Estuarine Research Reserve, East Falmouth, MA.
- 2013 **Fulweiler, R.W.** The Immortal Life of Nitrogen. Darwin Festival. Salem State University. Salem, MA. (*Sponsored by the Charles Albert Read Trust*).

- 2012 **Fulweiler, R.W.** “Times They Are a-Changin’ - Examining Long-term Changes and Short-term Variations in Benthic-pelagic Coupling and Sediment N Cycling in the Coastal Ocean.” 2<sup>nd</sup> International Council for the Exploration of the Seas (ICES) and the North Pacific Marine Science Organization (PICES) Conference for Early Career Scientists. Mallorca, Spain.
- 2011 **Fulweiler, R.W.**, White, J.R., Twilley, R.R. The Impact of Flood-Pulse Disturbance on Lake Ponchartrain Sediment Biogeochemistry (Invited Speaker). North American Benthological Society Annual Meeting; Linking Landscapes: Watersheds to the Ocean. Providence, Rhode Island.
- 2011 **Fulweiler, R.W.** N Fixation in Marine Sediments. (Invited Speaker, declined). International Society for Environmental Biogeochemistry – “Frontiers in Biogeochemistry”. Istanbul, Turkey.
- 2010 **Fulweiler, R.W.**, Heiskanen, A., Rabalais. Symposium Summary: We know a lot, we have more to Learn, but what more do we need to know to take action? (*Invited Plenary Talk*). EUTRO 2010 - Research and Management of Eutrophication in Coastal Ecosystems; Nyborg, Denmark.
- 2009 **Fulweiler, R.W.** & Nixon, S.W. The History and Future of Urban Water Use in Providence, RI. (*Invited Talk*). Workshop on History of Urban Ecological Imprint, CNRS/UPMC. Paris, France.

Invited Workshops/Panels/Symposia:

- 2017 Changes in Narragansett Bay – A conversation among citizens and scientists; 16<sup>th</sup> Annual Ronald C. Baird Sea Grant Science Symposium. University of Rhode Island, Graduate School of Oceanography, Narragansett, RI: “*Narragansett Bay – Living and dying by the choices we’ve made.*”
- 2017 Changes in Narragansett Bay – A conversation among citizens and scientists; 16<sup>th</sup> Annual Ronald C. Baird Sea Grant Science Symposium. University of Rhode Island, Graduate School of Oceanography, Narragansett, RI: “*Owning the Grand Challenge/Opportunity.*”
- 2017 State of Narragansett Bay & Its Watershed, Narragansett Bay Estuary Program, Providence, RI: “*Narragansett Bay as a Sentinel Estuary.*”
- 2016 Invited participant in the Developing Submergence Science for the Next Decade (DESCEND 2016).
- 2012 Invited participant to Earth Cube Early Career Strategic Visioning Workshop; Invitation reads, “*you have been identified by the NSF as a leading early career scholar/professional relevant to the future of EarthCube.*”
- 2011 NSF Workshop on Ocean Observatory Initiative (*Invited*)
- 2009 SEP Career Panel – University of Vermont (*Invited*)

Conferences: (#research technician, §postdoctoral associate, \*graduate student, ¥undergraduate student)

- 2017 \*Chua, E., Cardenas-Valencia, A., Short, T., Savidge, W. and **Fulweiler, R.W.** Characterization of a porewater sampling device for in situ measurements in permeable marine sediments. (Ignite Talk) Coastal & Estuarine Research Federation (CERF). Providence, RI.
- 2017 \*Emery, H., §Angell, J., Tawade, A. and **Fulweiler, R.W.** Salt marsh microbial community change and trace greenhouse gas fluxes under precipitation intensification. (Oral) Coastal & Estuarine Research Federation (CERF). Providence, RI.
- 2017 \*Foster, S.Q. and **Fulweiler, R.W.** Impacts of low oxygen on sediment biogeochemical fluxes in a shallow, temperate estuary. (Poster) Coastal & Estuarine Research Federation (CERF). Providence, RI.
- 2017 \*Maguire, T. and **Fulweiler, R.W.** Legacy of Urban Fills Alters Current Coastal Groundwater Si Concentrations. (Oral) Coastal & Estuarine Research Federation (CERF). Providence, RI.
- 2017 \*Ray, N. and **Fulweiler, R.W.** Does oyster-mediated sediment nutrient regeneration influence phytoplankton community structure? (Oral) Coastal & Estuarine Research Federation (CERF). Providence, RI.
- 2017 ¥Yacano, M., \*Foster, S.Q., and **Fulweiler, R.W.** Assessing the Role of Macroalgae on the Silicon Cycle in Two Temperate Estuaries (Oral) Coastal & Estuarine Research Federation (CERF). Providence, RI.
- 2017 \*Chua, E.J., Rodrigo, M., Savidge, W., Cardenas-Valencia, A.M., Short, R.T., **Fulweiler, R.W.** Determination of suitable sediments for deployment of a novel porewater sampling underwater mass spectrometer. (Poster) Harsh Environment Mass Spectrometry Workshop. Oxnard, California.
- 2016 \*Chua, E.J., Short, R.T., Cardenas-Valencia, A.M., Savidge, W., **Fulweiler, R.W.** Development of an in situ porewater sampler coupled to an underwater mass spectrometer for high-resolution biogenic as measurements in permeable sediments. (Oral) New England Estuarine Research Society (NEERS), Block Island, RI.
- 2016 \*Ray, N.E., ¥Henning, M.C., #Al-Haj, A.N., **Fulweiler, R.W.** N<sub>2</sub>O and CH<sub>4</sub> Fluxes from oyster aquaculture. (Oral) New England Estuarine Research Society (NEERS), Block Island, RI.
- 2016 \*Maguire, T.J., and **Fulweiler, R.W.** Urban Dissolved Silica: The impact of wastewater effluent on the coastal ocean. (Oral) New England Estuarine Research Society (NEERS), Block Island, RI. [*\*\*won Ketchum Award for best graduate talk*]
- 2016 ¥Yacano, M.R., \*Foster, S.Q., **Fulweiler, R.W.** Assessing the role of macrophytes in silicon cycling. (Oral) New England Estuarine Research Society (NEERS), Block Island, RI.
- 2015 \*Buckley, S., Kelly, R., Moran, B., and **Fulweiler, R.W.** The Effect of Anthropogenic Stressors on Long Island Sound Salt Marshes. (Oral) Coastal Estuarine Research Federation, Portland, OR.

- 2015 \*Emery, H.E. and **Fulweiler, R.W.** Salt marshes in a changing climate: greenhouse gas emissions, carbon cycling, precipitation change. (Oral) Coastal Estuarine Research Federation, Portland, OR.
- 2015 \*Foster, S.Q. and **Fulweiler, R.W.** Evidence of phosphorus limitation on sediment nitrous oxide uptake in a shallow, temperate estuary. (Poster) Coastal Estuarine Research Federation, Portland, OR.
- 2015 Humphries, A., Ayvazian, S., and **Fulweiler, R.W.** The role of oyster restoration and aquaculture in nitrogen removal within a Rhode Island Estuary. (Oral) Coastal Estuarine Research Federation, Portland, OR.
- 2015 <sup>¥</sup>Lauto, R., Hattenrath-Lehmann, T., Gobler, C., and **Fulweiler, R.W.** The impact of harmful algal bloom organic matter on sediment denitrification. (Oral) Coastal Estuarine Research Federation, Portland, OR.
- 2015 \*Maguire, T.M. and **Fulweiler, R.W.** Waste water and urban runoff – significant anthropogenic sources of silica to coastal ecosystems. (Oral) Coastal Estuarine Research Federation, Portland, OR.
- 2015 <sup>§</sup>Chowdhury, P.R. and **Fulweiler, R.W.** Effect of oyster aquaculture on elemental cycling and nitrous oxide fluxes: Insights from ionomics and gene expression. (Poster) Ecological Society of America, Baltimore, MD.
- 2015 \*Buckley, S.B., and **Fulweiler, R.W.** Greenhouse gas emissions in Long Island Sound Salt Marshes. (Oral) New England Estuarine Research Society (NEERS), Bristol, RI.
- 2015 \*Foster, S.Q. and **Fulweiler, R.W.** Environmental controls on sediment nitrous oxide fluxes in an anthropogenically impacted coastal ecosystem. (Oral) New England Estuarine Research Society (NEERS), Bristol, RI. [<sup>\*\*</sup>won Ketchum Award for best graduate talk]
- 2015 \*Maguire, T.J. and **Fulweiler, R.W.** Urban Runoff – An overlooked yet significant source of silica to coastal habitats. (Oral) New England Estuarine Research Society (NEERS), Bristol, RI.
- 2014 Carey, J.C. and **Fulweiler, R.W.** Salt Marshes as Sources and Sinks of Silica. (Oral, *Invited*). American Geophysical Union, San Francisco, CA.
- 2014 Fagherazzi, S., Viggato, T., \*Vieillard, A., **Fulweiler, R.W.** The effect of evaporation and nutrient enrichment on the mudflats in a mesotidal estuary. American Geophysical Union, San Francisco, CA.
- 2014 **Fulweiler, R.W.**, <sup>§</sup>Newell, S.E., \*Heiss, E.M., <sup>¥</sup>Rogener, M.K., LeCleur, G.R., Wilhelm, S.W. The Observer Effect: Quantifying the Impact of the Acetylene Reduction Assay on Marine Sediment N-Fixers. (Oral) Joint Aquatic Sciences Meeting. Portland, OR.
- 2014 Carey, J.C., Ayvazian, S., Hancock, B., Brown, D.S., **Fulweiler, R.W.** Investigating the Role of Oysters in Altering Net N<sub>2</sub> Fluxes Using a Novel *In-Situ* Experimental Design. (Poster) Ocean Sciences Meeting. Honolulu, HI.
- 2014 **Fulweiler, R.W.**, \*Heiss, E.M., <sup>§</sup>Newell, S.E., M.K., LeCleur, G.R., Wilhelm, S.W. Assessing Acetylene Impacts on Marine Sediment N-fixers. (Oral) Ocean Sciences Meeting. Honolulu, HI.

- 2014 \*Heiss, E.M., **Fulweiler, R.W.** The Role of Nitrification in Estuarine Water Column Nitrous Oxide Production and Consumption. (Poster) Ocean Sciences Meeting. Honolulu, HI.
- 2014 §Newell, S.E., McCarthy, M.J., Gardner, W.S., **Fulweiler, R.W.** Disentangling sediment N<sub>2</sub> Fluxes: A Call for Re-Evaluating the Coastal Marine N Budget. (Poster). Ocean Sciences Meeting. Honolulu, HI.
- 2013 Ayvazian, S., Carey, J., Hancock, B., Brown, S., **Fulweiler, R.W.** Oyster Reef Restoration and Aquaculture Impacts on Denitrification and the Benthic Community. (Poster) Coastal Estuarine Research Federation. San Diego, CA.
- 2013 Brawley, J.W., Weeks, M.V., Hare, M., **Fulweiler, R.W.**, Murphy, D., Reitsma, J. A Study on the Effects of Cultured vs. Wild Oysters (*Crassostrea Virginica*) on Nitrogen Cycling And Ecosystems with Two Similar, Eutrophic Estuaries in Cape Cod, MA. (Oral) Coastal Estuarine Research Federation. San Diego, CA.
- 2013 Fields, L., Nixon, S.W., Oviatt, C., **Fulweiler, R.W.** Responses of Benthic-Pelagic Coupling to Anthropogenic and Climate-Driven Ecosystem Changes in a Temperate Estuary. (Oral) Coastal Estuarine Research Federation. San Diego, CA.
- 2013 \*Foster, S.Q. & **Fulweiler, R.W.** Trends in Sediment Nutrient Cycling Dynamics and Net Ecosystem Metabolism Over Twenty Years in Waquoit Bay, MA. (Oral) Coastal Estuarine Research Federation. San Diego, CA.
- 2013 **Fulweiler, R.W.** & Nixon, S.W. Guiding Light. (Oral) Coastal Estuarine Research Federation. San Diego, CA.
- 2013 §Newell, S., McCarthy, M.J., Gardner, W.S., **Fulweiler, R.W.** The Enigmatic Nitrogen Cycle: Disentangling Sediment N<sub>2</sub> Fluxes in a Temperate Estuary. (Oral) Coastal Estuarine Research Federation. San Diego, CA.
- 2013 **Fulweiler, R.W.** & Heiss, E.M. A Decade of Net Sediment N<sub>2</sub> Fluxes - What can Narragansett Bay tell us about the Global Ocean Nitrogen Budget? (Oral) Scott W. Nixon Symposium - Science Worth Noticing. Graduate School of Oceanography, University of Rhode Island, Narragansett Bay, RI.
- 2013 \*Carey, J.C. & **Fulweiler, R.W.** Land Use Change Directly Alters Riverine Dissolved Silica Fluxes. (Oral) Association for the Sciences of Limnology and Oceanography. New Orleans, LA.
- 2013 Cramer, C.B. & **Fulweiler, R.W.** Video Fluxes: An Interpretation for Education and Outreach. (Oral) Association for the Sciences of Limnology and Oceanography. New Orleans, LA.
- 2013 \*Emery, H.E. & **Fulweiler, R.W.** Anthropogenic Impacts on Salt Marsh Greenhouse Gas Emissions. (Oral) Association for the Sciences of Limnology and Oceanography. New Orleans, LA.
- 2013 \*Fields, L., Nixon, S.W., **Fulweiler, R.W.** Rapid Response of Benthic-Pelagic Coupling to Climate Driven Ecosystem Changes in a Temperate Estuary. (Oral) Association for the Sciences of Limnology and Oceanography. New Orleans, LA.



- 2013 \*Foster, S.Q. & **Fulweiler, R.W.** Effects of Increasing Eutrophication on Sediment N<sub>2</sub>O and N<sub>2</sub> Fluxes in a Shallow Coastal Ecosystem. (Oral) Association for the Sciences of Limnology and Oceanography. New Orleans, LA.
- 2013 \*Heiss, E.M. & **Fulweiler, R.W.** Pelagic Nitrification in Varying Environments: How Rates Change Along an Estuary-to-Shelf Gradient. (Oral) Association for the Sciences of Limnology and Oceanography. New Orleans, LA.
- 2013 \*Vieillard, A.M. & **Fulweiler, R.W.** High-resolution Nitrous Oxide Fluxes from a Temperate Intertidal Mudflat. (Talk) Association for the Sciences of Limnology and Oceanography. New Orleans, LA.
- 2013 †Rogener, M., \*Heiss, E.M., Ireland, T., Murray, R., **Fulweiler, R.W.** Short and Long-term Temporal Variations of Manganese, Iron, and N<sub>2</sub> Fluxes Across the Sediment Water Interface in a Temperate Estuary. (Oral) Association for the Sciences of Limnology and Oceanography. New Orleans, LA.
- 2012 \*Carey, J.C. & **Fulweiler, R.W.** Land Use Change Directly Alters Dissolved Silica Export to Coastal Systems. (Oral) Coastal Estuarine Research Federation. Mar Del Plata, Argentina.
- 2012 \*Vieillard, A.M., Deegan, L.A., **Fulweiler, R.W.** Influence of Long-term fertilization on Salt Marsh Tidal Creek Nitrogen Removal. (Poster). Coastal Estuarine Research Federation. Mar Del Plata, Argentina.
- 2012 \*Carey, J.C. & **Fulweiler, R.W.** Watershed Land Use – A Major Control on Silica Export to Marine Waters. (Oral) New England Estuarine Research Society. Block Island, Rhode Island. [\*\*won Ketchum Award for best graduate talk]
- 2012 \*Emery, H.E. & **Fulweiler, R.W.** Decreased Salt Marsh Greenhouse Gas Emissions Associated with *Phragmites Australis*. (Talk). New England Estuarine Research Society. Block Island, Rhode Island.
- 2012 Fields, L., Nixon, S.W., Granger, S., **Fulweiler, R.W.** An Apparent Rapid Response of Benthic-Pelagic Coupling to Ecosystem Changes in Mid-Narragansett Bay, Rhode Island. (Talk). New England Estuarine Research Society. Block Island, RI.
- 2012 \*Foster, S.Q. & **Fulweiler, R.W.** Net N<sub>2</sub> Flux and Nutrient Cycling Dynamics Over a Trajectory of Increasing Eutrophication in Waquoit Bay, MA. (Talk). New England Estuarine Research Society. Block Island, RI.
- 2012 \*Heiss, E.M. & **Fulweiler, R.W.** Water Column Nitrification From Shore to Shelf. (Talk). New England Estuarine Research Society. Block Island, RI.
- 2012 †Rogener, M.K., \*Heiss, E.M., **Fulweiler, R.W.** Metals, Mud, and the Nitrogen Cycle – The Impact of Mn and Fe on Sediment N<sub>2</sub> Fluxes in a Temperate Marine Ecosystem. (Talk). New England Estuarine Research Society. Block Island, RI. [\*\*won Rankin Award for best undergraduate talk]

- 2012 \*Vieillard, A.M. & **Fulweiler, R.W.** Are Tidal Flats Funny? Nitrous Oxide Fluxes and the Wetting and Drying of Tidal Flat Sediments. (Talk). New England Estuarine Research Society. Block Island, RI.
- 2011 **Fulweiler, R.W.**, Gobler, C., \*Heiss, E.M., Wall, C. Harmful Algal Blooms and Benthic Nutrient Remineralization: A Positive Feedback Loop or a Dead End? (Talk) Sixth Symposium on Harmful Algae in the U.S. Austin, Texas.
- 2011 \*Carey, J.C. & **Fulweiler, R.W.** Exploring the Role of Silica Limitation in Nutrient-Enriched Marshes. (Talk) Coastal Estuarine Research Federation: Daytona Beach, FL.
- 2011 \*Emery, H.E. & **Fulweiler, R.W.** The Effects of Phragmites Invasion, Tidal Restriction and Marsh Restoration on the Greenhouse Gas Emissions in a New England Salt Marsh System (Poster). Coastal Estuarine Research Federation: Daytona Beach, FL.
- 2011 \*Foster, S.Q. & **Fulweiler, R.W.** Effects of Low Oxygen on Sediment Nitrous Oxide Flux in a Shallow Coastal Ecosystem. (Talk) Coastal Estuarine Research Federation: Daytona Beach, FL.
- 2011 \*Heiss, E.M. & **Fulweiler, R.W.** Directly Measured Net N<sub>2</sub> Fluxes in Offshore New England Sediments. (Talk) Coastal Estuarine Research Federation: Daytona Beach, FL.
- 2011 \*Vieillard, A.M., **Fulweiler, R.W.**, Carey, J.C., Hughes, Z.J., Fagherazzi, S., Deegan, L.A., Fitzgerald, D.M. The Ebb and Flood of Silica in a New England Salt Marsh. (Talk) Coastal Estuarine Research Federation: Daytona Beach, FL.
- 2011 \*Heiss, E.M. & **Fulweiler, R.W.** Net Sediment N<sub>2</sub> Fluxes in the Coastal New England Ocean: Evidence of Direct Denitrification (Poster). Graduate Climate Conference: Woods Hole, MA.
- 2011 \*Carey, J. & **Fulweiler, R.W.** The Impact of Nutrient Enrichment on Si Accumulation in Two Temperate Salt Marshes. (Talk). IBiS: Isotopes in Biogenic Silica, Antwerp, Belgium.
- 2011 **Fulweiler, R. W.**, \*Heiss, E. M.; Morgan, E. J. Hitting a Moving Target - Sediment Heterotrophic Activity in a Changing Coastal Ocean Ecosystem. (Talk). American Society of Limnology and Oceanography (ASLO), San Juan, Puerto Rico.
- 2010 **Fulweiler, R.W.**, \*Heiss, E.M., Morgan, E. Sediment Nitrous Oxide Fluxes from Shore to Shelf. (Talk). American Geophysical Union (AGU), San Francisco, CA.
- 2010 †Vieillard, A.M. & **Fulweiler, R.W.**, Deegan, L., Fagherazzi, S., Fitzgerald, D. Effects of Fertilization on Benthic and Pelagic Silica Fluxes in a New England Salt Marsh. (Talk). New England Estuarine Research Society. Provincetown, MA. [*\*\*won Rankin Award for best undergraduate talk*]
- 2010 \*Carey, J. & **Fulweiler, R.W.** Dissolved Silica in Salt Marsh Porewater Profiles – Do Concentrations Vary along a Nutrient Gradient? (Talk). New England Estuarine Research Society. Provincetown, MA.
- 2010 \*Heiss, E.M. & **Fulweiler, R.W.** Sediment N<sub>2</sub> Fluxes from Estuary to Offshore Along and Anthropogenic Gradient. (Talk). New England Estuarine Research Society. Provincetown, MA.

- 2010 <sup>‡</sup>Gifford, S. & **Fulweiler, R.W.** Using nitrogen and carbon isotopes to compare wild and captive penguin colonies. (Poster). Seventh International Penguin Conference. Boston, MA.
- 2010 Brown, S. M., **Fulweiler, R. W.**, Nixon, S. W., Tahmassian, A., Fogarty, C. E., Jenkins, B. D. Elucidating Controls on Nitrogen Fixation and Denitrification in Estuarine Sediments by Coupling Gene Activity and Biogeochemical Flux Measurements. (Poster). American Society for Limnology and Oceanography. Portland, OR.
- 2009 Brown, S. M., **Fulweiler, R. W.**, Nixon, S. W., Tahmassian, A., Fogarty, C. E., Jenkins, B. D. Coupling Gene Expression and Biogeochemical Measurements to Understand Controls on Estuarine Sediment Nitrogen Cycling Processes. (Poster). EPSCoR National Conference. Washington, D.C.
- 2009 Brown, S. M., Fogarty, C. E., **Fulweiler, R. W.**, Nixon, S. W., Jenkins, B. D. Using Gene Expression and Biogeochemical Measurements to Understand Controls on Estuarine Sediment Nitrogen Cycling Processes. (Talk). American Society for Limnology and Oceanography. Nice, France.
- 2009 **Fulweiler, R.W.**, Granger, S.L., Buckley, B.A., Van Keuren, A., Nixon, S.W. Downstream Changes in Groundwater N<sub>2</sub> Concentrations of Constructed Subterranean Wetlands. (Poster). RCN Denitrification Workshop, University of Rhode Island, Narragansett, RI.
- 2008 Nixon, S.W. & Fulweiler, R.W. Oligotrophication – Coming to an estuary near you? (Talk). American Society of Limnology and Oceanography (ASLO); Orlando, FL.
- 2008 Twilley, R.R., **Fulweiler, R.W.**, Lenaker, P., Bond, D.C., Baker, J., and Rich, S. Hot Flashes in Dynamic Coastal Landscapes: Tracking the Fate of Nitrogen in Coastal Louisiana. (Poster). American Society of Limnology and Oceanography (ASLO); Orlando, FL.
- 2008 **Fulweiler, R.W.** Reversal of the net N<sub>2</sub> Flux in Narragansett Bay. (Talk). RCN Denitrification Workshop; Horn Point Laboratory, Cambridge, MD (*Invited*).
- 2007 **Fulweiler, R.W.** & Nixon, S.W. The Impact of Climate Change on Benthic Remineralization and Sediment Net N<sub>2</sub> Flux. (Talk). Estuarine Research Federation (ERF); Providence, RI.
- 2006 **Fulweiler, R.W.** & Nixon, S.W. Climate-induced Alteration of the Coastal Marine N Cycle. (Poster). RCN Denitrification Workshop; Institute for Ecosystem Studies (IES); Millbrook, NY.
- 2006 **Fulweiler, R.W.** & Nixon, S.W. Climate Induced Changes of Benthic-Pelagic Coupling in Narragansett Bay, R.I. (Talk). New England Estuarine Research Society (NEERS); Groton, CT.
- 2006 **Fulweiler, R.W.** & Nixon, S.W. Impact of Climate Induced Oligotrophication on Benthic-Pelagic Coupling in Narragansett Bay (Talk). Research and Management of Eutrophication in Coastal Ecosystems. Nyborg, Denmark.
- 2005 **Fulweiler, R.W.** & Nixon, S.W. Denitrification in organic rich coastal sediments under varying levels of hypoxia (Talk). Estuarine Research Federation (ERF); Norfolk, VA.

- 2004 **Fulweiler, R.W.** & Nixon, S.W. A Different Kind of Dam: Terrestrial Vegetation and the Annual Flux of Silica to Little Narragansett Bay. (Talk). New England Estuarine Research Society (NEERS); Block Island, RI.
- 2004 **Fulweiler, R.W.** & Nixon, S.W. Terrestrial vegetation and the seasonal cycle of dissolved silica in a southern New England coastal river. (Talk). American Society of Limnology and Oceanography (ASLO) and The Oceanography Society (TOS) Ocean Research Conference; Honolulu, HI.
- 2003 **Fulweiler, R.W.** & Nixon, S.W. Carbon, Nitrogen, and the Black Hole of New England: Examining Thirty years of C and N Export from the Wood-Pawcatuck Watershed, R.I. (Poster). Estuarine Research Federation (ERF): Estuaries on the edge, convergence of ocean, land, and culture; Seattle, WA.
- 2003 **Fulweiler, R.W.** & Nixon, S.W. Export of Organic Carbon from a Minimally Developed Southern New England Watershed (Talk). Wessex Institute of Technology: River Basin Management II; Las Palmas, Gran Canaria.
- 2002 Granger, S., Nixon, S., Harris, L., Chaves, J., **Fulweiler, R.**, Mueller, C., Sturgis, B., and Almarino, A. A preliminary assessment of seagrass health and vitality in Assateague National Seashore's coastal bays. Understanding the Role of Macroalgae in Shallow Estuaries. January 10-11, 2002. Linthicum, MD.
- 2002 **Fulweiler, R.W.**, Nixon, S.W., Buckley, B., Granger, S.L. Quantifying Nutrient Loading From the Pawcatuck Watershed to Little Narragansett Bay. (Talk). New England Estuarine Research Society (NEERS); Bar Harbor, ME.

#### **g. UNIVERSITY AND PROFESSIONAL SERVICE**

##### *University*

- 2018-present Member of the University Council Committee on Faculty Policies
- 2016-present Director of the BU Marine Program
- 2016-present Member of the Dive Control Board
- 2018 Boston University Goldwater Scholarship Review Committee
- 2016- 2017 Interim Chair of the BU Dive Control and Boating Safety Board
- 2016 Member of BU HUB Satellite Implementation Team
- 2015-2016 Boston University Marine Program Search Committee for Marine Genomics/Marine Ecology
- 2014, 2015 Boston University Trustees Scholarship Committee
- 2014-2015 Boston University Department of Earth and Environment Search Committee for Global Climate Change Scientist

- 2013-2014 Boston University Department of Earth and Environment Curriculum Redevelopment Committee
- 2013-2014 Boston University Department of Earth and Environment Search Committee for Social Scientist specializing in Global Climate Change
- 2013, 2014 Boston University Graduate Student Orientation Talk – How to be a good Teaching Fellow. *(Invited)*
- 2012-2013 Boston University Biology Department Search Committee for Microbiology Faculty position
- 2012 Boston University Volunteer Judge for Scholars Day
- 2012 Boston University Earth Sciences and Geography and the Environment Merging Space Committee
- 2010-2011 Earth System Forum Steering Committee - helped plan and schedule forum; presented at forum on behalf of the BU Marine Program (BUMP)
- 2010-2012 Dive Safety Committee - help monitor and approve diving projects associated with BU research or educational activity.
- 2009-2013 UROP Science Presentation Judge
- 2010-present Associate Director of the BU Marine Program (BUMP)
- 2009-2012 Volunteer Judge for Science and Engineering Day
- 2009-2010 Earth Sciences Graduate Student Admissions Committee
- 2008 BU Geological Society (BUGS) Graduate School Advise Panel
- 2008-2009 Geography and the Environment Faculty Search Committee
- 2008-2009 Boston University Department Biology Search Committee for Marine Biologist

*Professional*

Scientific Society service

- 2014-present Chair of ASLO Publications Committee.
- 2012-2018 Voted to the ASLO Board as Member at Large. *(First person to be voted to serve two terms).*
- 2013- 2015 Appointed as co-Chair of the Public Policy Committee of the Association for the Sciences of Limnology and Oceanography (ASLO).

2011, 2013 Geosciences Congressional Visits Day; participated via ASLO on behalf of marine scientists.

2010-2015 Member at Large, New England Estuarine Research Society. (*Invited*)

#### Conference related service

2018 Co-Chair of a special session for Goldschmidt 2018 with J. Waldbauer, A. Steen, E. Roden, N. Butterfield, G. Antler, A. Zerkle, & P. Girguis titled: What the Flux?: Advances in Understanding the Role of Microbes and Animals Governing Biogeochemical Flux at Local and Global Scales.

2015-2017 Co-Chair of the Coastal Estuarine Research Federation 2017 Fall Meeting.

2015 Co-organized a special session for the Coastal Estuarine Research Federation fall meeting w/ Carlos Duarte titled: Triaging the Coastal Ocean.

2014 Co-organized a special session for the Aquatic Sciences Meeting (ASM) (May meeting) w/ A. Marcelli, T. Scott, and J. Welter titled: We have a Nitrogen Fixation.

2014 Co-organized a special session for the Association for the Sciences of Limnology and Oceanography (ASLO) (February meeting) w/ P.J. Treguer, J.C. Carey, M.A. Brzezinski, C. De La Rocha, and M. Maldonado entitled: Advancing the Frontiers of the Si cycle in Terrestrial, Coastal, and Open Ocean Ecosystems.

2013 Co-organized a special session for the ASLO (February meeting) w/ K. Fennel, J. Lehrter, and R. Maranger entitled: Biological and Biogeochemical Responses to Human Impacts at the Sediment-Water Interface. New Orleans, LA.

2013 Co-organized a special session for the Coastal Estuarine Research Federation (CERF) (November meeting) w/ L. Fields, M. Brush, and K. Henry entitled: Synthesis Research in Estuarine and Coastal Science: A Session in Honor of Scott W. Nixon.

2009 Co-organized a special session for the Association for the Sciences of Limnology and Oceanography (ASLO) (February meeting) w/ R. Maranger and M. McCarthy entitled: Can nitrogen fixation in aquatic systems reverse nitrogen limitation?

2008 Co-organized a special session Association for the Sciences of Limnology and Oceanography (ASLO) (June meeting): Special Session w/ R. Twilley entitled: The Response of Coastal Marine Ecosystems to Pulsing Events.

2007 Co-organized a special session (Coastal) Estuarine Research Federation (CERF) (November meeting) w/ S. Nixon for session entitled: The Impact of Climate change on Biogeochemical Cycles.

#### Journal related service

2016-present Associated Editor for Marine Ecological Progress Series.

2016-present Associate Editor for the Journal of Geophysical Research: Biogeosciences.

- 2016 Steering Committee for UNOLS - Ocean Observatories Initiative Coastal Array Workshop (*Invited*).
- 2014- present Associate Editor of *Frontiers of Marine Science - Global Change and the Future Ocean*.
- 2012-2017 Associate Editor for *Estuarine, Coastal, and Shelf Science*.
- 2010-present Editorial Board for the *Journal of Sea Research*.
- 2010-2012 Editor for the Journal *CLEAN- Soil, Air, Water*.
- 2005-present *Journal Reviews*: Aquatic Microbial Ecology; Aquatic Sciences, Biogeochemistry; Biogeosciences, Chemical Ecology; Chemosphere; CLEAN-Soil, Air, Water; Continental Shelf Research, Deep Sea Research, Ecological Modeling; Ecosystems; Environmental Microbiology; Earth Science Reviews; Environmental Microbiology; Environmental Science and Technology; Estuaries and Coasts; Estuarine, Coastal, and Shelf Science; Frontiers in Aquatic Microbiology; Geophysical Research Letters; Global Change Biology; Global Biogeochemical Cycles; ISME, Journal of Vegetation Science; Journal of Environmental Quality; Limnology and Oceanography; Marine Ecology Progress Series; Marine Pollution Bulletin; Nature; Plant and Soil; Proceedings of the National Academy of Sciences (PNAS); Silicon; Science; Water Research; Wetlands.

Funding review service

- 2013 Louisiana Sea Grant (NOAA) Proposal Review Panel
- 2012 Reviewer for National Fellowships Committee for Sigma Delta Epsilon, Graduate Women in Science.
- 2010 NSF Chemical Oceanography Proposal Review Panel
- 2011 MIT Sea Grant (NOAA) Proposal Review Panel
- 2008-present *Proposal Reviews*: NSF: Biological Oceanography, Chemical Oceanography, OPUS, Arctic Programs; Sea Grant: Alabama, Louisiana, Maryland, MIT, North Carolina, Virginia, Washington; National Institute for Climate Change Research (NICCR).

**i. PROFESSIONAL SOCIETIES**

- American Geophysical Union (AGU)  
 American Society of Limnology and Oceanography (ASLO)  
 American Society of Microbiology (ASM)  
 Coastal and Estuarine Research Federation (CERF)  
 Ecological Society of America (ESA)  
 New England Estuarine Research Society (NEERS)