



ONE WORLD,

ONE MEDICINE,

ONE HEALTH

One Health Intellectual Exchange

Weekly Discussions / Course: Philosophy to Practical Integration of Human, Animal and Environmental Health

A weekly discussion series, sponsored by the **North Carolina One Health Collaborative** within the NCBC IEG Program to enhance collaborations between physicians, veterinarians, researchers and other local/global/environmental health professionals by increasing public awareness of the interconnectedness of people, animals and the environment.

(Available each spring for credit if desired)

**7th 2014 Weekly Session - Tuesday, February 25th
5:30 – 7:30 p.m.**

Feedbacks between shallow water coastal ecosystems and human well-being

Mike Piehler, MSPH, PhD

Associate Professor, Department of Marine Sciences
University of North Carolina, Chapel Hill
Program Head, Estuarine Ecology and Human Health
UNC Coastal Studies Institute

Meets Tuesdays, 5:30 – 7:30 p.m. at the North Carolina Biotechnology Center
15 T.W. Alexander Drive Research Triangle Park, NC 27709
Directions: www.ncbiotech.org/directions

For more information on the course option, suggestions, or ideas contact NC OHC: nconehealth@gmail.com

For Speaker Cancellation notices and additional background on One Health and the NC OHC:
<http://nconehealthcollaborative.weebly.com/index.htm> <http://onehealtheducation.blogspot.com/>





Mike Piehler was born and raised in Pittsburgh, Pennsylvania where, through the collapse of the steel industry in the 1980s, he experienced first-hand the complex relationships between human activities and aquatic ecosystems. After completing his undergraduate degree in Biology he worked as an environmental consultant in Washington, DC. Following that, he received an MSPH and PhD in Environmental Sciences and Engineering from UNC Chapel Hill. He holds a dual appointment as an Associate Professor at the UNC Chapel Hill Institute of Marine Sciences in Morehead City, NC and as Head of the Program in Estuarine Ecology and Human Health at the UNC Coastal Studies Institute in Manteo, NC. Additionally, he is the Director of Graduate Studies for the Curriculum for the Environment and Ecology at UNC-CH

His research focuses on material transport and processing and microbial communities at the coastal land-water interface. He has conducted work on a broad range of microbial systems including benthic microalgae, epiphytic microalgae, phytoplankton, benthic bacterial communities and bacterioplankton. His research is funded by the National Science Foundation, the US Environmental Protection Agency, the National Oceanographic and Atmospheric Administration, the Strategic Environmental Research and Development Program and other national and regional funding sources. Piehler serves on scientific advisory panels for governments, non-government organizations and industry.

Lecture Outline:

- Overview of shallow coastal ecosystem function
- What are the connections between human activities and coastal ecosystems?
- Why is nitrogen important?
- How do coastal ecosystems support human health?
- What can we do to restore coastal systems, and are health benefits a consideration when evaluating restoration?
- How might future changes in climate and land use affect shallow coastal ecosystems?

Recommended Readings:

Horwitz, Pierre. *Healthy wetlands, healthy people: a review of wetlands and human health interactions*. Diss. 2012.

Townsend, Alan R., et al. "Human health effects of a changing global nitrogen cycle." *Frontiers in Ecology and the Environment* 1.5 (2003): 240-246.

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