Elizabeth Burke Watson, Ph.D.

Associate Professor <u>elizabeth.b.watson@drexel.edu</u>

Dept. Biodiversity, Earth & Environmental Science 215.299.1109 office Wetland Section Leader, Patrick Center for Environmental Research 831.345.6353 cell

Wetland Section Leader, Patrick Center for Environmental Research The Academy of Natural Sciences of Drexel University

1900 Benjamin Franklin Pkwy, Philadelphia, PA 19103

EDUCATION

2006	Ph.D., Physical Geography	University of California, Berkeley
2002	M.A., Physical Geography	University of California, Berkeley
2000	A.B., Integrative Biology	University of California, Berkeley

PROFESSIONAL EXPERIENCE

Associate Professor, Drexel University, Philadelphia, PA
Assistant Professor, Drexel University, Philadelphia, PA
Research Ecologist, US EPA, Narragansett, RI
Environmental Scientist, Elkhorn Slough NERR, Watsonville, CA
Postdoctoral Research Fellow, CICESE, Ensenada, México
Postdoctoral Research Scholar, Hydrologic Sciences, UC Davis

RESEARCH INTERESTS

Remote sensing; global change impacts on coastal and inland wetlands; blue carbon; coastal water quality; landuse impacts on sediment transport; coastal climate adaptation and restoration; coastal management in developing countries; historical ecology

SUMMARY OF PUBLICATION RECORD

Since 2004, I have published 48 peer-reviewed journal articles and one book chapter, including 22 first-author publications, and four additional publication are under consideration. I have an hindex of 20, and i10-index of 31 as calculated using <u>Google Scholar</u>. The following list of my five most highly cited publications includes current citation counts. Full publication record is available as a separate attachment.

- Watson, E.B. and R. Byrne. 2009. Abundance and diversity and abundance of San Francisco Estuary tidal marsh plants: implications for global change ecology. *Plant Ecology* 205:113-128. [90 citations], [Impact Factor 1.8]
- Wigand, C., C.T. Roman, E. Davey, M. Stolt, R.L. Johnson, A.R. Hanson, E.B. Watson, S.B. Moran, D.R. Cahoon, J.C. Lynch, and P. Rafferty. 2014. Below the disappearing marshes of an urban estuary: historic nitrogen trends and soil structure. *Ecological Applications* 24: 633-649. [87 citations], [Impact Factor 4.2]
- Gray, A.B. Gray, A.B., G.B. Pasternack, and E.B. Watson. 2010. Hydrogen peroxide treatment effects on the particle size distribution of alluvial sediments. *The Holocene* 20: 293-230. [79 citations], [Impact Factor 2.4]
- Watson, E.B., A.J. Oczkowski, C. Wigand, A. Hanson, E.W. Davey, S.C. Crosby, R.L. Johnson, and H.M. Andrews. 2014. Nutrient enrichment and precipitation changes do not

- enhance resiliency of salt marshes to sea level rise in the Northeastern U.S. *Climatic Change* 125: 501-9. [67 citations], [Impact Factor 4.1]
- Wigand, C. T. Ardito, C. Chaffee, W. Ferguson, S. Paton, K. Raposa, C. Vandemoer, and E. B. Watson. 2017. A climate change adaptation strategy for management of coastal marsh systems. *Estuaries and Coasts* 40: 682-693. [60 citations], [Impact Factor 2.4]

PROFESSIONAL SERVICE

- Research Activity Panel, Monterey Bay National Marine Sanctuary (2009-2011)
- Science and Technical Advisory Committee Member (elected), Delaware Bay National Estuary Program (2015-present)
- Manuscript reviewer: Estuaries & Coasts, Wetlands, Geomorphology, Journal of Hydrology, Journal of Coastal Research, Marine Environmental Research, Plant Ecology & Others
- Proposal review/panel member: NSF, NOAA, Sea Grant, CalFED Science, DRWI
- Graduate student mentoring: Andrew Gray (Ph.D., UC Davis 2014) (committee member), Josh Moody (Ph.D., Drexel 2017), Elisabeth Powell (M.S., Drexel 2018), Johannes Krause (Ph.D., Drexel 2021),
- Mentoring of 15+ undergraduate research interns, and two undergraduate theses
- Session organizer, Coastal and Estuarine Research Federation, Society of Wetland Scientists
- Field Trip organizer, Association of American Geographers (2007, 2016)
- Special Issue editor, Estuaries & Coasts Volume 40 on sea level rise impacts to coastal marsh

OUTREACH

- Advisor on restoration and coastal climate-adaptation projects: Bolinas Lagoon, California; Parson's Slough Project, Elkhorn Slough, California; Minohoto sediment addition and carbon sequestration project, Elkhorn Slough, California; Narrow River Climate Adaptation, Chaffee National Wildlife Refuge, Narragansett, Rhode Island
- Organizer of workshops on the effects of sea level rise for the public and for environmental scientists and managers in California and southern New England (with National Estuarine Research Reserve Coastal Training Program Staff)
- Active with the Women in Natural Science (WINS) Program at the Academy of Natural Sciences (an afterschool science enrichment program for young women in Philadelphia public high schools), and the Society of Wetland Scientists' Multicultural Mentoring Program