Nathan L Pollesch
Postdoctoral Mathematician in EPA's National Health and Environmental Effects Research Lab

Contact Information
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Education
Ph.D., Mathematics, University of Tennessee – Knoxville, 2016
M.S., Statistics, University of Tennessee – Knoxville, 2016
M.S., Applied and Computational Mathematics, University of Minnesota – Duluth, 2012
B.S., Mathematics, University of Wisconsin – Stevens Point, 2009

Research Interests
My primary interest is in the creative use of mathematical and statistical models as a method to explore and understand human impacts in ecological systems. My overall interests are quite broad and I have conducted research in areas spanning the use of Markov chains to determine connectivity in fractal models of porous media to developing multi-criteria sustainability assessment strategies for bioenergy production. I am also interested in developing and promoting efforts that help scientists effectively communicate their research to their local communities.

In my current postdoctoral research position, I am developing population models for use in ecological risk assessment, with a focus on modeling the effects of pesticides on wildlife populations. My postdoctoral mentor at the EPA's Mid-Continent Ecology Division is Matthew Etterson.

Publications
Pollesch, N. L., & Dale, V. H. (2016). Normalization in sustainability assessment: Methods and implications. Ecological Economics, 130, 195–208. http://doi.org/10.1016/j.ecolecon.2016.06.018

Pollesch, N.L., & Dale, V. H. (2015). Applications of aggregation theory to sustainability assessment. Ecological Economics, 114, 117–127.

Pollesch, N. L. (2012). Stoichiometric Modeling of Nutrient and Biomass Flux in the Gulf of Mexico. Master's Thesis, University of Minnesota. Available Online: *http://conservancy.umn.edu/bitstream/handle/11299/140656/Pollesch_Nathan_July2012.pdf*