

# Katherine Fitzgerald Weber

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## EDUCATION

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**Yale University, School of Forestry & Environmental Studies**, New Haven, CT

*Master of Environmental Science*, May 2016

- **Thesis:** “Nutrient and Sediment Modeling in Two Connecticut River Watersheds: Implications for Ecosystem Service Provision”
- **Relevant Coursework:** Hydrology, Biogeochemistry, Geospatial Software Design, Remote Sensing, Energy’s Impact on Freshwater Resources, Business and Environment Clinic

**Dartmouth College**, Hanover, NH

*A.B. in Biology with High Honors, Minor in Anthropology*, June 2011

- **Thesis:** “Effect of Altitude on Coniferous Leaf Traits in Central New Hampshire”
- **Study Abroad:** Biology Foreign Study Program, Costa Rica, 2011; Italian Language Study Abroad, Italy, 2009.
- **Relevant Coursework:** Biostatistics, Methods in Ecology, Cell Biology, Ecology, Aquatic Ecology, Genetics, Population Ecology, Tropical Biology

## RELEVANT EXPERIENCE

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**Karen Seto Lab**, Yale University, New Haven, CT, September 2015 – Present

*Remote Sensing Analyst*

- Processed satellite imagery to highlight the impact of urban growth and decline on the landscape for publication in a book through the Yale University Press (Fall 2016).
- Analyzed remotely sensed images of over 100 international urban areas using ENVI and ArcGIS. Created automated image processing scripts using Python and IDL.

**Coach, Inc. Business & the Environment Clinic Project**, New York, NY, September – December 2015

*Student Team Member*

- Assessed Coach’s corporate water risk as part of Yale coursework. Researched supply chain best management practices and mapped areas of water quantity and quality concern.
- Alongside team of three, presented results and recommendations to members of operations and general counsel departments.

**James Saiers Lab**, Yale University, New Haven, CT, May – August 2015

*Hixon Center Student Research Fellow*

- Modeled water quality in two New England watersheds, one rural and one suburban, using ArcSWAT and InVEST. Collected hundreds of water quality samples to validate the models. Data used to locate areas within the watershed that contribute the most pollutants to downstream waterways.
- Collaborated with USGS and other researchers to unify sampling protocols. Helped to install complex spatial network of water quality monitoring probes in the Connecticut River Basin.

**The Nature Conservancy**, San Francisco, CA and Arlington, VA, August 2011 – August 2014

*Consultant*

- Designed and populated Access database and created geospatial data in ArcGIS for “City Water Map” effort to delineate the municipal drinking water sources and watersheds of 533 cities around the world. Used GIMP and Python to create figures and run scripts within ArcGIS.
- Collaborated with academic researchers, the Rockefeller Foundation, and the C40 group to create “Urban Water Blueprint” website using the above database.
- Created similar database for the state of California and the 400 largest cities in the U.S. Assisted in accompanying public outreach efforts, including [nature.org/water](http://nature.org/water) and [conserveca.org](http://conserveca.org).

## **PUBLICATIONS**

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- Robert I. McDonald, **Katherine F. Weber**, Julie Padowski, Tim Boucher, and Daniel Shemie. Estimating watershed degradation over the past century and its impact on water treatment costs for the world's largest cities. PNAS. Accepted June 2016.
- McDonald, R.; **Weber, K.**; Padowski, J.; Flörke, M.; Schneider, C.; Green, P.; Gleeson, T.; Eckman, S.; Lehner, B. and D. Balk. Water on an urban planet: Urbanization and the reach of urban water infrastructure. *Global Environmental Change*. 27: 96-105. 2014.
- Klausmeyer, K. and **K. Fitzgerald**. 2012. Where does California's water come from? Land conservation and the watersheds that supply California's drinking water. A Science for Conservation Technical Brief. [http://www.nature.org/media/california/california\\_drinking-water-sources-2012.pdf](http://www.nature.org/media/california/california_drinking-water-sources-2012.pdf)
- Battistoni, M., **K. Fitzgerald**, and S. Kellson. Effects of Ocean Acidification on a Turtle Grass Meadow. *Dartmouth Undergraduate Journal of Science*. Spring 2011.

## **AWARDS & HONORS**

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- Hixon Center for Urban Ecology Student Research Fellow, 2015.
- Yale Institute for Biospheric Studies Masters Research Award, 2015.
- George Wright Society Park Break Fellow, San Juan National Historical Park, WA, 2015.
- The Dartmouth College Willard W. Eggleston Memorial Botany Prize, 2011.
- Dartmouth College Third Honor Group 2008-2009 and 2010-2011.

## **REFERENCES**

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- Karen Seto, Yale University, Professor of Geography and Urbanization Science  
[karen.seto@yale.edu](mailto:karen.seto@yale.edu)  
(203) 432-9784
- Robert McDonald, The Nature Conservancy, Senior Scientist for Urban Sustainability  
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(703) 841-2093
- James Saiers, Yale University, Professor of Hydrology  
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