

## Ryan Thomas Searcy

PhD Candidate  
Dept. Civil and Environmental Engineering  
Stanford University

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### (a) Education

PhD (Expected) Environmental Engineering, Stanford University  
MS 2014 Mechanical Engineering (Fluid Dynamics Focus), Univ. of California San Diego  
BS 2013 Environmental Engineering, Univ. of California San Diego

### (b) Professional Experience

2019-present Graduate Student Researcher  
Dept. of Civil and Environmental Engineering, Stanford University  
2019-present Volunteer Technical Advisor  
Heal the Bay  
2016-2019 Water Quality Modeler  
Heal the Bay  
2014-2016 Assistant Air Pollution Control Engineer  
County of San Diego, Air Pollution Control District  
2013-2014 Graduate Teaching Assistant  
Dept. of Mechanical and Aerospace Engineering, Univ. of California San Diego  
2012-2013 Engineering Assistant  
Air Sea Interaction Lab, Scripps Institution of Oceanography

### (c) Professional Certifications

2017 Applied Data Science with Python Specialization  
Coursera, License KZF8RBQLHAQT  
2013 Engineer in Training (EIT)  
California Board for Professional Engineers, Land Surveyors, and Geologists, License 150043

### (d) Honors and Awards

2020-Present Sea Grant Traineeship – University of Southern California Sea Grant  
2019-Present School of Engineering Graduate Fellowship – Stanford University  
2019 Robert L. Wiegel Scholarship – California Beach and Shoreline Preservation Association

### (e) Specialized Skills

#### **1) Data Science**

Data processing, statistics, and machine learning with Python, R, SPSS, and MATLAB  
Data visualizations with ArcGIS, Python, and R

#### **2) Oceanography**

Oceanographic data collection and processing using instrumentation such as ADCPs, ADVs, CTDs, pressure sensors, LIDAR, hyperspectral/IR cameras, WaveGliders, and custom fabricated buoys  
Mechanical and electrical design using Solidworks, LabVIEW, and oscilloscopes  
Experienced using shop machinery and operation of small boats  
PADI Open Water, Advanced, and Rescue Diver certified

#### **3) Miscellaneous**

Spanish (Intermediate)

**(f) Synergistic Activities**

**1) Publications**

Searcy, R.T. and Boehm, A. B. A Day at the Beach: Enabling Coastal Water Quality Prediction with High-Frequency Sampling and Data-Driven Models. *Environmental Science & Technology*. **2021**.

Searcy, R.; Taggart, M. L.; Gold, M. A.; Boehm, A. B. Implementation of an Automated Beach Water Quality Nowcast System at Ten California Oceanic Beaches. *J. Environ. Manage.* **2018**, *223*, 633–643.

**2) Conference Presentations**

R. Searcy (2019, March). The California Beach Water Quality NowCast Project. Presented at the *National Water Quality Monitoring Conference*, Denver, CO.

R. Searcy (2018, March). The NowCast System: Predicting water quality to protect surfer health. Presented at the *Global Wave Conference*, Santa Cruz, CA.

R. Searcy (2017, November). The NowCast System: Predicting water quality at California. Presented to the *California Beach Water Quality Workgroup*, Oakland, CA and Costa Mesa, CA.

R. Searcy (2017, May). The NowCast System: Using statistical models to predict water quality at California beaches. Presented to the *Headwaters to Ocean Conference*, Irvine, CA.

**3) Miscellaneous**

ACS certified manuscript reviewer for scientific journals including *Water Research*, *Journal of Environmental Quality*, and *Journal of Water & Health* (May 2017 – Present)

Surfrider Foundation Core Volunteer and Executive Committee Member (January 2014 – Present)