*Julia Engdahl*

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*Lafayette, NJ 07848*

**EDUCATION**

Rutgers University, New Brunswick, NJ

Masters of Science, Operational Oceanography: expected July 2020

Bachelor of Science, graduation May 2019 (Honors)

* Major: Directed Marine Studies
* Minor: Fisheries Science

Pope John XXIII High School, Class of 2015

GPA 3.7, made High Honor Roll all four years

**RELEVANT COURSES**

• Conservation Ecology

• Ocean Modeling

• Python for Research Computing

• Dynamics of Marine Ecosystems

• Physical Oceanography

• Biological Oceanography

• Integrated Ocean Observing I

• Fishery Science

• Animal Physiological Ecology

• Ocean Methods and Data Analysis

• Politics of Environmental Issues

• Natural Resource Policy

**CERTIFICATIONS**

• PADI Open Water Diver: #19010U9677

**AWARDS**

• Edward L. and Ruth S. Hennessy Foundation Scholarship

• Paros-Digiquartz Scholarship – Marine Technology Society

**EXPERIENCE**

Glider Deployment, October 25, 2019

* Lead field technician
* Deployed the NJDEP Slocum glider out of Belmar, NJ
* Deployed Seabird CTD

Marine Technology Society TechSurge, October 1 – 2, 2019

* Presented student poster on Side Scan Sonar TOWFISH 4125
* Participated in the Career Fair

Marine Intern, May – August 2019

SubCom

* Analyze cable burial data and reports
* Compile a GIS database using Excel and exporting as .csv to be used in GIS platforms
* Used programs such as MATLAB and Python to plot burial data

Slocum Glider Training, June 2019

Rutgers University New Brunswick and Marine Technology Society

* Learned how to prepare a glider via communications and ballasting
* Learned how to put together and take apart all glider components
* Learned common glider commands for mission writing and data decoding
* Analyze data via MATLAB

Intern, October 2018 – May 2019

Rutgers University Center of Ocean Observing Leadership (RU COOL)

* Analyze and plot Q-factor data using CODAR
* Proficient in MATLAB
* Analyze data to pick out when a tsunami is flagged in CODAR

Summer Wildlife Worker, April 2018 – September 2018

Hackettstown Fish Hatchery – NJ Fish and Wildlife

• Clean 1000 and 2000-gallon tanks

• Fish species stocked, handled, and fed: Northern Pike, Channel Catfish, Muskie, Tiger Muskie, Sunfish, Perch, Crappie, Walleye, Grass Carp, Largemouth bass, Smallmouth bass, and hybrid striped bass

• Conducted weight counts

• Use of hand and seine nets

Intern, May 2016 – August 2016

Mulcare Pipeline Solutions, Boonton, NJ

• Utilized excel to make price sheets

• Maintained inventory and updated stock keeping cards

• Adhered to the directions of other employees for various projects

**ACTIVITIES**

Field Lab Methods

• Partake in many Slocum Glider deployments and recoveries

• Built a conductivity-temperature-depth sensor from scratch

Side Scan Sonar TOWFISH 4125

• Deployed EdgeTech TOWFISH 4125 for the first time in Rutgers history to collect HF and LF data of the Raritan River, Raritan Bay, and Passaic River

• Analyzed collected data in EdgeTech’s DISCOVER software

• One of four people at Rutgers trained to use the side scan sonar

Raritan River Cruise

• Deployed various sensors (Seabird, ProDSS, Castaway, etc.) to collect physical and biological data

• Analyzed collected data in MATLAB

Fisheries Management Practicum, September 2017 – December 2017

• Formulated and tested a hypothesis on American shad and river herring arrival in conjunction with environmental variables

• Filtered and manipulated data to observe trends

• Used Excel, Word, and R

Shad and River Herring Tagging Project Volunteer, April 2017 – May 2017

• Assist in tagging procedures and data collection

• Collect shad and river herring via angling and seining

• Identify and measure all fish species caught

**SKILLS**

• Operate cutting edge ocean technology: CTD, ADCP, Refractometer, autonomous gliders, REMUS AUV, and side scan sonar towfish

• Proficient in Python, MATLAB, and R

• Problem Solving

• Group collaboration

• Multi-tasking

• Applying knowledge

• Time management

• Oral Communication

**REFERENCES**

• Dr. Nicholas Beaird

Assistant Teaching Professor, Rutgers University

(401) 573-9456

[nlbeaird@marine.rutgers.edu](mailto:nlbeaird@marine.rutgers.edu)

• Dr. Hugh Roarty

CODAR Director, Rutgers University

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• Dr. Oscar Schofield

Distinguished Professor and Department Chair

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• Dr. Scott Glenn

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