Internships in Marine Geography

2017 Report
Table Of Contents

Program Partners/Acknowledgements..................................................................................................2
Program Background.................................................................................................................................3
Career Webinars/Workshop.......................................................................................................................4
Meet The Interns..........................................................................................................................................5-6
Intern Position Overviews.........................................................................................................................7-8
Closing Statements From The Interns......................................................................................................9
Concluding the inaugural completion of the “Internships in Marine Geography Program” of 2017.
President Thomas Jefferson created the U.S. Coast Survey in 1807 to provide nautical charts that would help the young nation with safe shipping, national defense, and maritime boundaries. Two centuries later, Coast Survey – now an office within NOAA – continues to provide navigation products and services that ensure safe and efficient maritime commerce on America’s oceans and coastal waters, and in the Great Lakes.

Four interns with unique backgrounds spent 11 weeks working within the Office of Coast Survey. The interns used their education in marine geography to assist NOAA and the OCS in completing skill focused projects that benefited the staff as well as equipped the interns with “real world” experience. At the conclusion of the program, the 4 interns attended a Career Workshop in Denver, Colorado. During the conference, each intern was given an opportunity to present their research and network with representatives from Federal Agencies in their field.

**Program Objectives**

1. Encourage a diverse group of young adults to study and pursue careers in Science, Technology, Engineering and Mathematics (STEM) fields;
2. Provide meaningful and relevant science-based internships to individuals from underrepresented groups in STEM fields;
3. Introduce program participants to science careers at NOAA;
4. Increase relevancy, diversity, and inclusion in the NOAA workplace.

Total Budget: $61,888.40

**Recruitment:**

The Greening Youth Foundation worked with many colleges and universities to recruit exceptional students for the Marine Geography Internship Program. GYF recruited bright and qualified applicants from all over the nation. In doing so, we received over 200 applications from all over the United States.

**Education Status of Selected Interns**

- Undergraduate Program: 25%
- Graduate Program: 50%
- Post-Graduate Program: 25%

**Intern Demographics**

<table>
<thead>
<tr>
<th>Background</th>
<th>Number of Interns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
</tr>
</tbody>
</table>

**Legend**

- Total of Interns
- Female
- Male

**Total Applicants**

- Silver Spring, Maryland Position(s):
  1. “Source Area of Interest Intern”: 63 applicants
  2. “Survey Priorities Communication Strategist Intern”: 55 applicants
  3. “Nautical Chart Adequacy Intern”: 52 applicants

- Fernandina Beach, Florida Position(s):
  4. “Hydrographic Assistant Survey Technician Intern”: 53 applicants
Weekly Career Webinars:

- Webinar 1: Financial Literacy
- Webinar 2: Non-federal Resumes & Interviews
- Webinar 3: Graduate School
- Webinar 4: Intern Presentations
- Webinar 5: Pathways to the Park
- Webinar 6: Federal Resumes
- Webinar 7: Workshop Presentations
- Webinar 8: Workshop Details

Career Workshop & Webinars:

Career Workshop: August 6th-10th, 2017 (Colorado)

Interns enjoyed an all expense paid career workshop in Colorado. This career workshop gave the interns the opportunity to present their research as well as network with professionals and other interns in their fields.

In order to prepare for the Career Workshop in Denver, the interns attended weekly online webinars. These webinars promoted professional development within the internship to equip the intern with skills for the workforce.

NPS Mosaics in Science / NOAA Internships in Marine Geography Internship Programs
Career Workshop - August 6-10, 2017

Workshop locations: Hyatt House at Belmar, 7310 West Alaska Drive, Lakewood, CO 80226
YMCA of the Rockies, 2515 Tunnel Rd, Estes Park, CO 80511

Workshop meetings: Sunday and Monday: Hyatt House
Tuesday - Lakewood NPS office (tentative)
Wednesday and Thursday: YMCA of the Rockies / Rocky Mountain National Park

Objectives:

- present the intern’s project results to their peers and NPS and NOAA management;
- learn about science careers, needed skills, and how to apply for federal science positions;
- participate in facilitated discussion about the value of diversity and inclusion in the workplace and whether any issues were encountered during the internship;
- visit one of the participating parks and learn about the intern’s project; and
- obtain feedback on the program, projects, and intern experiences.
Meet The Interns

Internships in Marine Geography

2017 Intern Profiles

Intern Biographies

Aleah Worthem
Chart Adequacy Intern

Aleah is a graduate student at the University of Maryland, College Park. In the fall, she will be entering her second and final year of her Master’s program as an MPS GIS candidate. Though her Master’s degree will be in Geospatial Information Sciences (GIS), Aleah received her B.S in Geological Science from New Mexico State University. Though she gained an immense amount of knowledge from her degree in geology, Aleah felt the need to be able to apply what she learned to applications that could be used by the public. This led her to the pursuit of her next degree, as well as the need to for on the job experiences. At the start of her internship with NOAA, the concept of a Nautical Chart Adequacy intern, a mouthful in itself, was a vague yet compelling concept, which she was willing to undertake. Throughout this internship, Aleah dove into the vast world of marine/nautical cartography and has learned concepts such as Satellite Derived Bathymetry, reading nautical RNC and ENC charts, International Hydrographic Standards, as well as the process of implementation chart adequacy. After the completion of this internship, Aleah hopes to pursue as full-time position at NOAA or within a federal capacity as a GIS analyst/cartographer.

James Moy
Source Area of Interest Intern

James Moy is a recent graduate from the University of Maryland, College Park with both an M.S. and B.S. in Geospatial Information Systems (GIS). While earning his degrees, he also worked as a Teaching Assistant for several GIS courses. With his background, James is passionately interested in exploring the potential of GIS, its technology, and how it can be used to better society. While interning at NOAA, James has developed his GIS skills, gained practical work experience through analyzing data from various sources, and created Area-of-Interest data for a new NOAA Weekly Update webpage. This data primarily serves to inform mariners and the general public of all corrections to navigational products weekly. After this internship, James is looking forward to joining the workforce, and applying his knowledge of GIS for others.
Nia Matsumoto
Survey Priorities Communication Intern
Nia is a senior finishing her B.S. at the Ohio State University pursuing a degree in Geographic Information Science with a minor in Computer Information Science. This summer, she worked for NOAA as the Survey Priorities Communication Strategist intern. Nia was tasked with creating a plan of communication for the Office of Coast Survey’s Hydrographic Survey Division. Her goal was to clearly and effectively communicate the purpose and results of a highly technical hydrographic model being developed. The audience varies greatly in terms of technical understanding and intended use of the new model, so Nia served an important role as the intermediate interpreter between users and scientists. In the future, Nia hopes to pursue a master’s degree and find a career that combines her passion for the environment with her interest in technology.

Remy Phillip
Hydrographic Assistant Survey Technician Intern
Remy is a rising senior at Embry-Riddle Aeronautical University currently working for a B.S in Civil Engineering. For the past 2 months, Remy has been stationed at NOAA’s National Response Team #2 (NRT2), based in Fernandina Beach, FL. His job has been to assist his team leads in networking, soldering, hydrographic surveying, map cleaning, and general problem solving. Land surveying in itself is one of the backbones of Civil Engineering and is something Remy understands quite well, but doing it in the open water is something completely different and has been a challenge for the up and coming engineer. Without his teammates guiding him and explaining how each equipment works in gathering data, this internship would not have been as successful as it was. After the summer ends, Remy plans to finish his senior year with the hopes of being sponsored for an accelerated master’s degree and from there, find a job that suits his steadily growing interests.
Nautical Chart Adequacy Intern

NOAA’s Office of Coast Survey maintains the nation’s nautical charts, surveys the coastal seafloor, responds to national maritime emergencies, and searches for underwater obstructions and wreckage. In support of Coast Surveys mandated mission to provide reliable nautical charts and other products necessary for safe navigation in U.S. ocean and coastal waters, the NCA intern performed various geographic information systems (GIS) analysis tasks and compiled bathymetric data sets to: generate coverage maps, intersect source layer data in order to generate adequacy maps, and process vessel traffic data.

Supervisor: Dr. Shackhak Pe’eri (NOAA/OCS)

Source Area of Interest Intern

Supporting Coast Survey’s mandated mission to provide reliable nautical charts and other products necessary for safe navigation in U.S. ocean and coastal waters, the SOI intern worked with subject matter experts to collect new polygons and meta data associated with existing source databases to create a geospatial component for use in ArcGIS web sites. This project helped complete the work necessary for the full deployment and use of the new Weekly Update webpage informing mariners of all corrections to navigational products released weekly by the Office of Coast Surveys Marine Chart Division. The SOI intern benefited in applying learned GIS skills in creating GIS components while also learning how GIS is used in creating the nations navigational products.

Supervisor: Mark Griffin (NOAA/OCS)
The HAT intern served on a small boat engaged in oceanographic/survey operations performing such activities as: operating and monitoring fathometers, multibeam, singlebeam or side-scan-sonar instruments, including annotating records and recording data using the above mentioned equipment. The HAT intern assisted in the staging and set-up during preparations for, and at the completion, of oceanographic and survey operations such as tide gauge, horizontal control or sound velocity. The HAT intern was tasked to perform oceanographic and/or survey observations, measurements, and calculations. The intern also assisted in preparation, installation, deployment and recovery of oceanographic and/or survey equipment and instruments.

“I was really able to bond with my head supervisor and co-worker. Through them, I was able to obtain many skills that I’ve always wanted to possess.”
–Remy Phillip

Supervisor: Kyle Ward (NOAA/OCS)
How did you learn about this internship program?

- Learned about this program via Google: 25%
- Returning NOAA Intern: 25%
- Learned about this program via College/University: 50%

Would you participate in this program again?

Yes, the experience was a great opportunity to see how GIS is used in a real work setting. It was also very beneficial to network and meet others in the field. I appreciated the chance to move to DC and experience something new.

Would you participate in this program again?

Yes, Shachak provided me with clear directions and training on the work I performed. He allowed me to utilize my GIS skills to complete projects, as well as teach me new skills that aren't available to learn in the classroom.

Would you recommend this program to other students?

I definitely would recommend this program to those wanting to gain hands on experience in a real work environment.

Thank you to everyone involved in this year’s program success.