**First and Last Name**



Phone • [email](mailto:barker.molly@hotmail.com) • address

## Education

**State University of New York at New Paltz**

Bachelor of Science, GeologyDecember 2015

## Professional Experience

**Henningson Richardson and Durham Engineering and Architecture P.C.** May 2014 – Current

* Assist with the New York State Department of Environmental Conservation (NYSDEC) Standby Contracts
* Prepare deliverables including Electronic Data Deliverables (using EQuIS), Chemical Box Figures (using EnviroInsite), create figures using Geographical Information Sciences (GIS), tables (using Excel and an Access table generator), and appendices
* Write/edit text for Remedial Investigation, Remedial Design, Site Management, Operation & Maintenance, and additional report types
* Assist on multi million contracts including NYSDEC, New York City Department of Environmental Protection (NYCDEP), and Duke Energy
* Help contract manage and assisted in project management
* Maintain 95%+ efficiency rate in billable hours

## Geologic Field Work

**NYCDEP, SUNY New Paltz** September 2017-Current

* Monitor of effects of the restoration of the New York State Aqueduct System
* Monitor of current expressions of the leaky Aqueduct
* Collect of water quality measurements at piezometers and surface water locations
* Obtain NYCDEP security clearance to access field sites

**NYSDEC – Standby Contract, Albany, New York** May 2017-Current

* Oversee well installation, both Monitoring Well and Bedrock Well
* Soil Vapor Intrusion sampling
* Transducer download/installation
* Well, soil and surface water sampling at a NYSDEC Remedial Investigation Superfund Sites

**Duke Energy Site Investigation, New York** June 2016

* Worked in a 2-man team on the Duke Energy sites conducting the following:
* Developed and sampled wells including shallow monitoring wells and deep bedrock wells
* Collected surface water samples
* Sampling included speciation, voa vials, plastic liters, preserved and unpreserved
* Worked in extreme heat conditions and for extreme lengths of time (12+ hour days, 7 days a week)
* Worked side by side with subcontractors, Increasing HDR’s ability to provide services with subcontractors

## Geologic Field Work Continued

**Field Geology, SUNY New Paltz** Fall 2016

* Used geologic mapping techniques and conducted field study of rock formations and structures
* Utilized scientific skills of observation, measurement, analysis, hypothesis development, & reporting
* Used basic field equipment such as a geologic compass and pocket transits
* Conducted data analysis including map & cross section construction & used of spherical projections
* Scientific report preparation is emphasized including abstract preparation, technical organization, and citation
* Included the production of a full geologic map, with cross-sections and written report

**Geology of Acadia National Park, SUNY New Paltz** October 2016

* Overview of the geology of Acadia National Park, where igneous and metamorphic rocks associated with the collision of the Avalon micro-plate with North America during the Acadian Orogeny are well exposed
* Examined a wide variety of igneous, sedimentary, and metamorphic rocks and structures, emphasizing the relationships between rock exposures and geologic maps
* Examined structures of intrusive bodies, relative dating of igneous rocks, the products of glacial and coastal processes, and other geologic features
* Learned basic field observation techniques, and to relate field data to a geologic map and the geologic history of a region

**Geology of Northern New Mexico, SUNY New Paltz** May 2016

* Collected and recorded geologic data in the field encompassing a diversity of igneous, sedimentary, and metamorphic rocks (mapping project)
* Studied water resource management issues in the southeastern U.S. through a study of the hydrology of the Rio Grande Basin
* Gained a regional understanding of geologic history of New Mexico
* Applied concepts from Historical and Physical Geology in order to interpret New Mexico’s geologic history within the broad context of the evolution of the North American continent
* Interpret geologic maps and cross sections including the Geologic Map of New Mexico and other regional geologic publications
* Gained geologic perspective on history of human settlements in southwestern U.S. through a study of cultural historical sites in New Mexico

## Silurian- Devonian Stratigraphy/Sedimentology of Southeastern New York State Fall 2015

* Conducted fieldwork through the Upper Silurian-Upper Devonian of southeastern New York State, collected field data on sedimentology (lithology, grain size analyses, sedimentary structures) and stratigraphy (bed to formation level description and correlation, measuring flat-lying and tilted stratigraphic sections)
* Compiled field data into scientific reports, with figures (including maps and computer-drafted stratigraphic sections); reports consisted of data description and interpretation of depositional environments

**Coursework**

Structural Geology

Field Geology

Petrology

Mineralogy & Crystallography

Hydrogeology

Introduction to GIS

Physical Geology

Historical Geology

Stratigraphy and Sedimentation

Calculus I and II

General Chemistry I and II

General Physics I and II

## Conference Attendance

* HDR Northeast Young Professional Group Summit Meeting October 2015
  + Included a site visit to the new Tappan Zee Bridge project
* New York State MWBE Forum October 2014
* Northeastern Sectional Geological Society of America Conference in March 2014
* Northeastern American Institute of Professional Geologists Meeting in October 2013
* National Student Leadership Conference at American University during the summer of 2010

## Computer Skills

Proficient in Windows 7

Apple OSX

Access

Microsoft Office Suite

Adobe Illustrator

GIS 10.3

Adobe Acrobat

EQuIS

EnviroInsite

## Certifications

40-hour OSHA Hazardous Waste Operations and Emergency Response

CPR & First Aid Certified

NYCDEP site access

MICCS, SCUBA Diving Certified