

POSITION ANNOUNCEMENT:

FUTURE PARK LEADERS of EMERGING CHANGE

The National Park Service (NPS) is pleased to support the *Future Park Leaders of Emerging Change* (FPL) program as a pathway for exemplary students in higher education (advanced undergraduate students, graduate students, and recent graduates) to apply their skills and ideas to park-based challenges and solutions. The Initiative offers 12-week paid internships which allow students to gain valuable work experience, explore career options, and develop leadership skills through mentorship and guidance while helping to advance NPS efforts on emerging management issues. Successful students may be eligible for non-competitive hire into federal positions for which they qualify following completion of all academic requirements.

ANALYSIS ON THE RATE OF LAND EROSION ON PARK SHORELINES AND ITS POTENTIAL EFFECT ON BUILDING STRUCTURES

George Washington Birthplace National Monument
Colonial Beach, VA

INTERNSHIP BLURB

Create a report analyzing the effect of changing water levels on erosion severity along park shorelines using collected data. The report will be developed in collaboration with various members of the National Park Service community and their resources to gain a better understanding of the current situation and to assist in future planning.

INTERNSHIP PROJECT BACKGROUND

Located along Virginia's east coast, a combination of changing climate factors (i.e. rising sea levels and the frequency of rain storms) have become a concern at the historic George Washington Birthplace National Monument. Due to the park's close proximity to the Potomac River and Popes Creek, a result of these global changes (i.e. the rate of water erosion) has become an issue for certain areas of the park. In particular, the future of the park's visitor center, located along Popes Creek, has become questionable. Land degradation has been noticed, but a thorough analysis has not yet been performed. Thus, with the increasing changes in water levels, the potential effects of erosion on the land between the building and body of water are not fully known. Working with the NPS shore line monitoring staff, the park seeks to better understand the current situation and, if needed, begin developing a plan to implement.

INTERNSHIP PROJECT DESCRIPTION

Working with the National Park Service and its shoreline monitoring staff, a primary goal is therefore for the intern to build a complete set of data that can accurately detail the current status of the park's

shores, with priority to the shoreline by the visitor center. Once the current status is known, it will be beneficial to forecast future erosion rates. The project's results will be instrumental in providing park staff with the information they need to take the most appropriate plan of action in the years to come. Due to the length of time that it takes to plan, budget and begin a project, the results from this research are highly time sensitive.

Internship Tasks

- **The intern will partner with members of the shoreline monitoring staff** to access and collect data regarding water levels and erosion rates from the park's shorelines along the Potomac River and Popes Creek.
- **With access to the data the intern will then be able to evaluate and build a model** that accurately presents the current status of the park's shorelines.
- **Collect data for other variables** such as shoreline vegetation density, water composition and the condition of shoreline soil/rock material will also need to be collected.
- **Using these variables data**, the intern will then run the data and make projections for future rates of erosion. Through research, the intern will also be responsible for proposing potential plans of action. Results concerning erosion levels near the park's Visitor Center are of high priority due to the need for park staff to plan appropriate measures in a timely manner.

Internship Products

- **A plan of action** will need to be created by the individual at the beginning of the internship. He/she will use this to assure that they are making efficient progress throughout their time here.
- **A folder or file containing all data gathered** appropriately labeled for future use.
- **A report and presentation** will be delivered to the park staff detailing the current severity of land erosion along the banks of Pope's Creek and Potomac River. The report needs to include forecasted erosion rates, water levels and land degradation for the next 5-10 years as well.
- **The report will also need to focus on the current status of the visitor center and potential hazards or concerns.** The intern will need to provide reasonable recommendations regarding the building's future and open up a discussion.

QUALIFICATIONS

Required:

- Minimum requirements include a student currently enrolled or a recent graduate from a college or university.
- School courses must focus on environmental science or related fields. Eight (8) or more college hours in a science-related field is preferred.
- Experience with data collection and use of statistical software (i.e. forecasting methods)
- Applicants must possess a valid state driver's license, personal transportation, and find housing near the park location.

Desired:

- Individuals whose studies concentrate on land erosion, geographical degradation and data analysis.

- Experience collecting field data using appropriate technology and techniques.

LEADERSHIP DEVELOPMENT

To successfully complete this project, the intern will have to develop exceptional leadership skills throughout their time here. Areas in which he/she will develop these skills include:

Interpersonal/Work Relationships. The intern will be working with a mentor and other staff from the National Park Service, including several subject matter experts

Communication. The mentor will have weekly or biweekly meetings with the intern to discuss the project's progress, questions or concerns. The intern will be required to create their own plan of action, which will then be discussed with their mentor to ensure it is appropriate. Communication will be key to a smooth and successful experience.

Feedback. The intern will be providing the park staff with feedback in order for them to appropriately understand the data, the effect of coastal changes and to open up discussion on possible management actions.

DATES OF POSITION

The preferred starting date is May 15, 2018, however dates of the position are flexible, depending upon applicant availability. Ideally the intern will work 480 hours between May 15 and August 15.

COMPENSATION

This initiative supports one student at \$16/hour for 12 weeks, or 480 hours.

HOUSING

No housing is currently available within park grounds. Apartments and home are available for rent in the towns of Colonial Beach (12 miles), Montross (12 miles), and King George (17 miles). Some opportunities are listed online, but many opportunities are only advertised or known about in local communities. The project mentor will provide the selected intern with information for known real estate contacts that can assist in locating short-term housing. A housing subsidy may be available to the intern for rental housing.

WORK ENVIRONMENT

Work environment will involve a combination of office and field work. Data will need to be collected from the banks of the Potomac and Pope's Creek. Data and report will then need to be done on a computer with necessary software.

CONTACT INFORMATION

Park Service Supervisor:
Bill Doerrer
william_doerrer@nps.gov
804-224-1732 Ext. 241