PROJECT DESCRIPTION
2020 FALL/WINTER

NPS UNIT: REGION 2 SOUTH ATLANTIC - GULF REGIONAL OFFICE

Position Title: GiS Assistant (1)
Position Type: Guest Scientist
Primary natural resource discipline: Multidisciplinary
Project keywords: GiS, remote sensing, shoreline, vegetation classification
Location: Atlanta, Georgia

COVID-19 NOTICE
This project description was developed prior to the onset of the COVID-19 outbreak. Therefore, project timelines and structure remain flexible and it may be necessary to postpone start dates, begin work remotely, or reformulate the project’s description. Should any development in the COVID-19 outbreak impair a project’s timeline or results, the GIP Team will work with the park and project mentors to assess the situation and determine the best course of action at that time.

PROJECT DESCRIPTION AND WORK PRODUCTS

Position Description: The National Park Service’s (NPS) mission is to preserve unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations.

The NPS has five park units in the US Virgin Islands: Buck Island Reef National Monument, Christiansted National Historic Site, Salt River Bay National Historical Park and Ecological Preserve, Virgin Islands Coral Reef National Monument, and Virgin Islands National Park. Each site has resources needing protecting and preserving. Information gaps exist and answers to remote sensing questions can help inform resource management in their decision making.

Research priorities have been identified by park staff along with regional resource management leadership. The internship will be focused on the following priorities:

1. Shoreline change analysis using imagery of Salt River Bay National Historical Park and Ecological Preserve (SARI). The basic questions here are: (a) how much has shoreline changed over a certain period of time? and (b) can we determine a rough estimate of rate of change?

We will expect the intern to research and document methodology in determining shoreline change for SARI, conduct the analysis, and document the results. A report will be expected with the findings, maps (and GIS data), methodology, software used (be it ESRI, ERDAS, or some other software approved for NPS use), a description of the input imagery, and any other information critical to this priority.

2. Change in vegetation (principally mangroves) at Salt River Bay. The basic questions here are: (a) how have the mangroves at SARI changed over time? and (b) can the changes be mapped based on the different type of mangrove species?

We will expect the intern to research and document methodology in mapping how mangroves at SARI have changed over time. We are especially interested to see if this can be done by differentiating between the
different mangrove species. A report will be expected with the findings, maps (and GIS data), methodology, software used (be it ESRI, ERDAS, or some other software approved for NPS use), a description of the input imagery, and any other information critical to this priority.

3. Shoreline change analysis using imagery of Buck Island Reef National Monument (BUIS). The questions and desired results of this priority are the same as priority # 1. We will expect the same deliverables as well, whether or not the same methodology can be followed, or if new methodology will be needed specifically for BUIS.

4. Debris mapping at Virgin Islands National Park (VIIS). The question here is: can debris on the island be mapped using leaf-off imagery? Damage from various hurricanes created a lot of debris on the island of St John. Imagery collected right after the hurricane has an unusual amount of leaf-off due to the high winds. We want to know if this imagery can be used to map the debris.

We will expect the intern to research and document methodology in mapping debris on the island of St John, within park boundaries. While we are interested in the results related to recent hurricanes, we are also interested in the feasibility of applying these techniques after future storms in the Caribbean. A report will be expected with the findings, maps (and GIS data), methodology, software used (be it ESRI, ERDAS, or some other software approved for NPS use), a description of the input imagery, and any other information critical to this priority.

Since the length of the internship is only twelve weeks, we recognize that perhaps not all the priorities will be met. On the other hand, if all the results are delivered with time left over, additional tasks can be assigned. Any support needed for meeting these priorities will be taken care of to the best of our abilities.

This position is offered through the National Park Service’s Geoscientists-in-the-Parks (GIP) Internship Program in partnership with Stewards Individual Placement Program (Stewards) and The Geological Society of America (GSA).

**Work Products:** Reports will be expected with their findings, maps, methodology, software used, and descriptions of the input imagery. Also, vitally, any GIS data created will be expected to have full FGDC-compliant metadata and delivered with the reports.

**QUALIFICATIONS**

We are looking for applicants that have demonstrated and documented remote sensing analysis techniques either for a job (preferred) or for classwork. A GIS degree or certificate is preferred, or be on track for a degree. Related degrees (with applicable GIS coursework) are acceptable.

The applicant must be a U.S. citizen or U.S. permanent legal resident ("green-card-holder") between the ages of 18 and 30 years old, inclusive, or veteran up to age 35. Prior to starting this position, a government security background clearance will be required.

**VEHICLE AND DRIVER LICENSE REQUIREMENTS**

**Applicant does not need a valid driver license.** No driving is necessary, and it is easy to live in Atlanta without a car.

**A personal vehicle is RECOMMENDED but not required for this position.** While the intern can go to work and get around the city using public transportation, a vehicle is recommended to take advantage of the recreational opportunities just outside the city.

If the GIP is required to drive a park vehicle for their position, Stewards will perform a driving records search, and the GIP’s ability to drive a park vehicle during work hours will be contingent upon the results. GIPs will have to have had their license for 3 years or be over the age of 21 to be insured as drivers under Stewards insurance policy. Examples of things that will preclude a GIP from driving a park vehicle include: GIP under the age of 21 years old that has been licensed less than three years, DUIs, multiple moving
vehicle violations, suspended or revoked license, or three or more accidents (regardless of fault) in the last 3 years. If the driver’s search is favorable, Stewards will provide driver’s liability insurance while the intern is driving a NPS vehicle for their GIP position. If the GIP is denied coverage by Stewards, they will not be permitted to drive during work hours.

**HOUSING**

**Park housing is NOT available and the intern will be responsible for finding housing in the nearby area.** Park housing is not available. Short-term lease options are available throughout the Atlanta metro area, and vary wildly on location, condition, and cost. Please contact us for help finding housing. Recruiting locally in Atlanta is highly, highly recommended.

**INTERNSHIP DATES**

- **Start Date:** 10/5/2020
- **Number of weeks:** 12 weeks
- **Flexible start date:** Yes

**LIVING ALLOWANCE**

12 weeks ($525/week = $6,300)

**RELOCATION ALLOWANCE**

$250

**PROFESSIONAL DEVELOPMENT ALLOWANCE**

$500

**AMERICORPS PROGRAM**

AmeriCorps is a program that engages individuals in intensive community service work with the goal of “helping others and meeting critical needs in the community”. The GIP Program is supported through AmeriCorps by providing a Segal Education Award in addition to the GIP’s living stipend and relocation allowance.

Upon successful completion of the GIP position, the GIPs (AmeriCorps members) are eligible for a $1,612 - $6,095 pre-tax education award that can be used for paying back student loans or for continuing their education. The amount of the education award is based on the length of the position.

AmeriCorps limits the number of terms an individual can serve to 4 terms. If an applicant has previously completed 4 GIP or other AmeriCorps positions, they will not be eligible to apply for an additional GIP position.

**NATURAL AND PHYSICAL WORK ENVIRONMENT**

**Natural Environment:** The office is located in the Sam Nunn Federal Center, right across from 5 Points Station, the central transportation hub for Metro Atlanta. Employees can arrive by train, bus, car, bicycle, electric scooter, or foot.

Access options to grocery stores, health care, restaurants, and any type of entertainment/recreation are numerous and what could be expected for a major metropolitan area.

**Physical Work Environment:** This internship will be located at the Region 2 South Atlantic-Gulf Regional Office located in downtown Atlanta, GA. It is an office environment and the position will be working from a cubicle. The applicant will be at a desk for full work days but will have access to a sit/stand station.
MENTORING AND LEARNING GOALS

**Mentoring:** The selected individual will become part of the Geographic Resources team of the regional office. The coordinator will supervise and adjust his involvement based on the needs of the individual. He will sit only a few steps away and will be in regular communication to assess needs. Additionally, the selected applicant will have access to natural resource scientists and other GIS professionals for additional learning opportunities.

**Learning Goals:** The selected applicant will develop invaluable on-the-job experience. They will learn how to apply what they have learned to a real-world situation, including office communication. They will learn how to fit their research into results that will be used for resource management decisions. They will have the ability to fine tune their GIS skills with access to a plethora of free training.

**SUPERVISORS/MENTORS**

<table>
<thead>
<tr>
<th>Primary:</th>
<th>Secondary:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Barrow</td>
<td>Darrell Echols</td>
</tr>
<tr>
<td>Geographer/GIS Coordinator</td>
<td>Chief, Science and Natural Resources</td>
</tr>
<tr>
<td>100 Alabama St SW; Bldg 1924</td>
<td>Management Division</td>
</tr>
<tr>
<td>Atlanta, GA 30303</td>
<td><a href="mailto:darrell_echols@nps.gov">darrell_echols@nps.gov</a></td>
</tr>
<tr>
<td>(404) 507-5811</td>
<td><a href="mailto:christopher_barrows@nps.gov">christopher_barrows@nps.gov</a></td>
</tr>
</tbody>
</table>