

GIS / Landscape Ecology Summer Intern

The Virginia Natural Heritage Program is seeking one or two summer interns to assist the Landscape Ecologist with Geographic Information Systems (GIS) work and other related tasks. Successful applicants will have prior experience using GIS and have a strong interest in ecological conservation. This internship is an excellent opportunity for students to hone existing GIS skills, develop new expertise, and discover practical ways in which GIS and principles of landscape ecology are used to help prioritize lands for conservation. The specific tasks to be accomplished by each intern may vary depending on the supervisor's needs as well as the intern's particular experience, skills, and interests. Training for specific tasks will be provided as needed.

Available Projects:

- (1) Work to update Virginia ConservationVision models. ConservationVision is a suite of conservation planning and prioritization maps and models developed by the Virginia Natural Heritage Program and partners. An example of one recently updated is the Development Vulnerability Model (<http://www.dcr.virginia.gov/natural-heritage/vaconvisvulnerable>).
- (2) Work to update Natural Heritage Conservation Sites. Conservation sites are planning boundaries representing key areas of the landscape worthy of protection and stewardship action because of the rare plants, animals, and/or exemplary ecological communities they are known to support (<http://www.dcr.virginia.gov/land-conservation/tools02c>).

Description of Duties (may vary depending on project needs and intern's previous experience):

- Gather, organize, and process various spatial data layers
- Document processed geospatial data with metadata
- Conduct land cover change analyses
- Use heads-up digitizing of high-resolution imagery to delineate different land cover types
- Create and/or modify customized ArcGIS tools
- Test and de-bug Python code
- Produce maps and other graphics for presentation
- Collect primary literature sources, and enter into bibliographic database
- Assist with report-writing

Knowledge and Skills Needed:

- General interest in and knowledge of environmental conservation issues
- General facility with Windows computers and MS Office or similar software
- Good organizational and problem-solving skills
- Good verbal and written communication skills
- Ability to follow protocols and work independently
- Experience with ArcGIS or other GIS software
- Experience with Python or other programming language preferred

Location: Flexible. By agreement, much of the work may be done on the student's campus or on-site at the Natural Heritage office.

Time Frame: A summer schedule is anticipated with flexible start and end dates, and with a minimum commitment of 8 weeks. Both full- and part-time work are options.

Compensation: Due to budget constraints, we most typically offer unpaid internships, although paid internships are occasionally available. Students are strongly encouraged to seek fellowship funding and/or college credit through their institutions to support their work on a project.

Application Procedure: Submit the following as email attachments to the contact below:

- A resume outlining your education, work experience, and relevant skills
- The names and contact information of at least two references who can attest to your abilities and work ethic
- A completed "GIS Skills: Self-Assessment" form (<http://www.dcr.virginia.gov/natural-heritage/document/gis-skillsassessment-self.pdf>)
- A cover letter describing what makes you a good internship candidate. Give some specific examples of how you have applied your GIS skills and/or knowledge of landscape ecology in past work (including independent class projects). Mention what you hope to learn and accomplish over the course of an internship with the Virginia Natural Heritage Program, as well as your project preference (if any). Be sure to also indicate the time frame (proposed start/end dates) and hours you would like to work.

Important: If you are applying for research fellowship funding through your college or university, you should send your materials at least two weeks before that application deadline, so that we can make sure that your application is competitive and outlines the specific tasks you would undertake for the fellowship period.

Contact:

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