**Chesapeake StREAM Internship**
**Geospatial Analysis**

**Project Description**

The Chesapeake Bay Program (www.chesapeakebay.net) partnership and Chesapeake Research Consortium (www.chesapeake.org) seek a summer intern for Summer 2020 (late May - August, 11 weeks) to provide support to Chesapeake Bay Program (CBP) partnership goal implementation teams and workgroups at the Chesapeake Bay Program Office in Annapolis, MD. The Chesapeake Bay Program partnership manages the restoration of the Chesapeake Bay by coordinating the efforts of various federal, state, and local governments; academic institutions, local watershed organizations; concerned citizens and others to build and adopt policies that support Bay restoration.

The Chesapeake Bay Program's GIS team, is involved in a variety of projects related to analyzing landscape conditions, quantifying the potential impacts of land conversion on water quality, healthy watersheds and communities; and developing geo-visualization tools and aids to help federal/state, NGOs and local stakeholders to make informed decisions. Land conversion themes of interest include: urbanization, timber harvesting, and farmland abandonment. Impacts of interest include: loss of wildlife habitat, degradation of aquatic communities, erosion and sedimentation, alternation of stream flow, and adverse effects on under-served communities. Geo-visualization tools and aids include developing web and desktop GIS and visualization products to create immersive 3D visualizations to illustrate landscape characteristics and simulate natural and anthropogenic landscape change scenarios. The CRC's C-StREAM fellow will work with a team of diverse professionals in geography and environmental science to develop a study plan, use geospatial data and resources, and explore the relationships between landscape change and impacts on natural resources and communities.

The C-StREAM fellow will work with the team and other collaborators using geospatial analysis to evaluate tree canopy change in Maryland to explore issues such as understanding dominant force(s) behind tree canopy loss in MD, e.g. loss due to timber harvesting or development and assigning vegetation metrics using LiDAR to estimate the approximate age of the forest patches. In addition, the fellow will assist the team with various other geospatial analysis tasks and projects as needed.

**Opportunities**

This internship will provide a unique opportunity to contribute to large-scale, long-term natural resource management and policy development critical to understanding new ways to improve Chesapeake Bay water quality and manage Chesapeake Bay living resources most effectively and efficiently across the 64,000 square mile Chesapeake Bay watershed. The C-StREAM fellow will gain experience in natural resource management, restoration science, and environmental policy. In addition, this internship experience will provide insights into careers in natural resource management, policy development and science beyond those applied for and allows fellows to make connections with established environmental management and science professionals.

**Deliverables**

- Applied analysis project evaluating tree canopy loss in MD
- Presentation to CBP staff at the conclusion of the internship summarizing the experiences gained and work conducted

**Requirements**

- Knowledge of ArcGIS or other GIS software is preferred, Python and R knowledge is a plus
- Motivated self-starter with ability to work and reason independently
- Must be a college-level student entering sophomore, junior, or senior year of undergraduate study
- Must be willing to undergo a security background check

**Work Location and Duration**

This position will be stationed at the Chesapeake Bay Program Office in Annapolis, Maryland. The position will begin in late-May and conclude in August (11 weeks). Computer and phone services will be provided.

**Compensation**

The C-StREAM Fellow will be reimbursed at the end of each month, for a total of approximately $5,000 for the equivalent of 11 weeks of full-time activities. Candidates should expect to follow a normal weekday work schedule (40 hours) with occasional variations. No benefits are provided. A small housing stipend is available for those needing it. Funds are available to compensate fellows for occasionally required work-related travel.

**Diversity and Inclusion**

The EPA Chesapeake Bay Program Office and CRC are committed to supporting a diverse and inclusive workforce. Our internship program endeavors to recruit from a diverse, qualified group of potential applicants to secure a high-performing workforce drawn from all segments of American society. The CBP and CRC are strongly supportive of broadening the participation of Historically Black colleges and universities (HBCUs), Hispanic serving institutions, tribal colleges and universities, and institutions that work in underserved areas. We highly encourage applications from students from the above institutions.

**Application Instructions**

This position is being offered via the Chesapeake Student Recruitment, Early Advisement, and Mentoring (C-StREAM) program. C-StREAM is a program focused on recruiting, advising, and mentoring college students who identify as people of color and/or who are first generation college students. Please apply for this position using the process outlined on Chesapeake Research Consortium's page: http://chesapeake.org/c-stream/.

**The deadline for applications is February 15, 2020.**