



September 2019- August 2020 Service Year POSITION DESCRIPTION

Position Title

Field Program Technician

Sponsoring Organization

Department of Forests, Parks and Recreation/Division of State Parks
Rutland, VT

Sponsoring Organization's Mission

The mission of the state park system is to conserve and interpret on behalf of the people of Vermont their natural and cultural heritage, while providing recreational opportunities and economic benefit. The emphasis in this dual role should be provided only within the ability of the natural and cultural resources to support the activity.

Goals for the ECO AmeriCorps Position

Two major goals have been identified for the member: 1) to provide field and analytical support for a pilot project designed to demonstrate a methodology for developing a functional, spatially enabled resource information database that will improve the department's ability to more quickly and accurately perform park and natural resource planning and evaluation, and, 2) to provide field support for natural resource restoration and water quality protection measures on state-owned recreational and forest lands.

Essential Functions. Functions that the applicant must be able to perform

- Participate in a project kick-off meeting to layout both components of the service plan
- Familiarity with and ability to use hand tools (i.e. shovel, McCloud, Pulaski, loppers, weed wrench)
- Must be proficient with computers including Microsoft software products and ArcGIS
- Using a field device or application, accurately collect spatial coordinates and other pre-defined attribute data for natural and man-made features on state-owned recreational lands
- Display collected data using both an enterprise platform (i.e., ANR's Natural Resources Atlas) and within a stand-alone system such as ArcGIS to provide customized program-specific analyses.
- Digitize GIS features of interest using existing remote sensing source data
- Be able to perform physically demanding activities outdoors in a variety of weather
- Possess good interpersonal skills for success with project team and the general public

- Must be able to perform independently and as part of a team

Marginal Functions. These are secondary to Essential Functions, may be negotiable, and can be completed as time allows.

- Perform various specified GIS-related analyses to demonstrate the potential future use of the data collected.
- Propose recommendations for the build-out of the project to all state parks and state lands, for example, is there a particular data collection strategy that would be more efficient than others, etc.
- Document all methods and procedures used in the project and provide an instruction manual for future build-out of the pilot project's database.

Projects May Include

This project has two components.

The first component is designed as a pilot effort to create and demonstrate a methodology for developing a spatially enabled recreational resource inventory and planning platform for the state parks. The goal of this component of the project ultimately is to improve the department's ability to assess, allocate and project needs for operating and maintaining state parks on a statewide scale.

The second component of the project is to provide field support for natural resource restoration and water quality protection measures on state-owned recreational and forest lands. The member will be an active part of the state lands management team in southwestern Vermont including collaboration with the district trail/recreation program and invasive species program (Habitat Restoration Crew). Projects to include:

- Shoreland restoration and erosion control. A number of state parks in the district include shoreline along major lakes including Lake Champlain, Lake Bomoseen and Lake St. Catherine. Restoring shoreland habitat in those state parks and others is a management priority.
 - Plant native shrubs and trees on 12 acres of shoreland
 - Stabilize riparian and RTE habitat by managing invasive species along approximately 26,000 feet of shore
 - Restore areas that have been degraded by invasive species
 - Assess invasive species populations along approximately 30,000' of shore; assist determination of management prioritization
- Trail maintenance (i.e. nature, hiking, VAST, mountain bike, and cross-country ski trails) focusing on erosion control and water quality protection
 - Erosion control – assess and maintain 111 miles of trail focusing on improvements to erosion control and trail drainage - maintain water bars, ditches, culverts and assess need for additional structures or trail relocations to address ongoing water quality issues.
 - Stream crossings – using ESRI Collector, identify, assess and map stream crossings along 80 miles of hiking trail and 31 miles of VAST trail. Assist with replacement of designated failed stream crossings (i.e. bridges, bog boards). Coordinate permitting with VFPR staff.

- Trail relocations away from shore – identify, map and assess trail segments that are damaging fragile shoreline along lakes and streams along district trails as part of trail assessment. Collaborate with Trail Coordinator to relocate 600 feet of identified trail segments within Bomoseen State Park that have previously been identified as problem locations along shore of Glen Lake and Half Moon Pond. Restore shoreline at terminus of High Pond Trail (install structures to protect soils and vegetation, collaborate with Trail Coordinator to relocate a section of trail away from shore, install signs to direct foot traffic).
 - Invasive Species Management
 - Partner with Invasive Plant Program’s Habitat Restoration Crew to continue development of the Bomoseen State Park invasive species management project as a successful riparian restoration and demonstration area. Build upon ongoing VFPR efforts with area middle school that has been successful in engaging students in an educational/fieldwork project. Focus on completing aspects of the project that can’t be accomplished by students. Assess, prioritize and plan future management aimed at completing invasive species control along lakeshore and streams that is beyond the scope and ability of the student project. Assist with removal of large invasive shrubs, evaluate past treatments and conduct follow up treatment as needed. Assist with the development and implementation of a plan to complete demonstration site. Coordinate site restoration by planting native shrubs. 900 feet of shoreline protected, 300 feet of smelt spawning stream protected, 7 acres of state park land restored.
 - Assess and map invasive areas along 111 miles of trails. Identify priority invasive species management areas using VFPR prioritization model. Recommend management/control strategies and identify resources protected. Collaborate with HRC to implement. Monitor and evaluate project effectiveness.
 - Coordinate site restoration planting projects. Restore identified sites by planting purchased native shrubs and harvesting and planting live stakes of red osier dogwood and other native species that regenerated by that method. Plant in disturbed shoreline areas where invasive species management has taken place including Lake Bomoseen, Button Bay, Shaftsbury, and Emerald Lake state parks. 15 acres of state park restored.

Desired Qualifications

- Required: Knowledge, skills and experience collecting field data using GPS units
- Required: Knowledge, skills and experience using GIS systems such as ArcGIS in a variety of applications relating to natural resources
- Required: Skill in interacting with others in a team setting
- Required: Ability to write instructions and reports
- An interest in and understanding of natural resource management and trail maintenance standards and practices
- Desirable but not required: Ability to analyze GIS data

Networking Opportunities

Yes. The member will have opportunities to network with, shadow, and accompany various ANR employees and partners. The member will primarily serve out of the Rutland North Regional Office

alongside a variety of staff from the Dept. of Fish and Wildlife and Dept. of Forests, Parks and Recreation. The member will also regularly interact with staff from the FPR central office in Montpelier.

Service Conditions

- Service will be conducted primarily in a field setting, however, office time is expected for creating various reports and performing work with data. A substantial amount of time in the beginning of the GIS component of the project will be in the field to develop and test the field methodology. The bulk of the natural resource restoration component of the position will occur outdoors, although it will include some office time.
- During the winter/harsh outdoor weather periods, service is envisioned to take place indoors to develop the project platform and collaborate with team sponsors to share progress and exchange ideas.
- Once the project kick-off is accomplished, the individual will be accompanied by department staff to the field areas to assist with orientation and answer any logistical questions as needed. After this, much of the data collection and input will be self-directed with support and guidance from department staff. Formal check-ins between member and GIS project leader will be scheduled at appropriate intervals.

Minimum Qualifications:

- Be a US citizen, a national, or legal permanent resident alien of the U.S.;
- Be at least 18 years of age upon entering the Pre-Service Orientation (there is no upper age limit);
- Be a high school graduate or have a GED certificate, or be willing to work towards their GED as part of their service-year successful completion requirement. A member cannot have dropped out of high school to join AmeriCorps. If a member has a documented medical reason/professional opinion why they cannot finish high school, they might be eligible; call in this case;
- Has not been convicted of murder or sexual assault and is willing to undergo a National Service Criminal History Check;
- Must submit to Agency of Human Services checks, i.e. Adult Abuse and Child Abuse Prevention;
- Be committed to the ECO AmeriCorps program, and its ethic of service and personal and professional development of its participants;
- Have the ability and enthusiasm to drive to, attend, and participate in required trainings and events, and be prepared to drive up to 2-3 hours each way.