



Position Announcement – Quantitative Ecologist III

Company: RedCastle Resources, Inc.

Title: Quantitative Ecologist III

Location: Fort Collins, CO

Application Deadline: Until filled

Company Background:

RedCastle Resources is a small, employee-friendly company that provides geospatial and information technology support to natural resource management agencies throughout the country and around the world. We specialize in the analysis of remote sensing, ecological, and other geospatial data, focusing on providing technical expertise and communicating with natural resource managers and other subject matter experts. The majority of our staff provide support through contracts with the USDA Forest Service, assisting National Forests, Regional and Washington Offices, USFS Research, International Programs, and partner federal agencies to use advanced geospatial data and technology for improved mapping, inventorying, and monitoring of natural resources.

Position Description:

The successful candidate will support the Quantitative Analysis Program at the USDA Forest Service, Forest Health Assessment and Applied Science Team (FHAAS) in Fort Collins, Colorado. The individual will be part of the RedCastle Resources team conducting mapping projects and updating authoritative geospatial data, such as Forest Health Protection's (FHP) Insect and Disease Risk Maps. The initial responsibility will be to develop models that relate geospatial predictors to response variables derived from Forest Inventory and Analysis (FIA) plot data. In the next phase of the project, risk and hazard models will be produced that provide the basis for risk assessments of insect and disease damage used by field staff, USFS leadership, and Congress. The successful candidate will be expected to:

- Produce predictive models to map species distributions at national scales;
- Build models using a variety of methods including parametric and machine learning methods, such as Random Forest;
- Learn and apply published solutions that are adapted from similar problems;
- Be proficient in the scripting of analytical workflows using R and/or Python;
- Work with large environmental databases and be skilled at manipulating data and writing queries in SQL;
- Have experience working in a GIS and a basic knowledge of spatial analysis functions for vector and raster data;
- Assist in the design, development, and use of pest distribution maps based on statistical and spatial ecology techniques;
- Be familiar with the Forest Service's Forest Inventory and Analysis (FIA) program and data;
- Understand the Forest Health Protection organization, processes, and challenges;
- Have an interest and aptitude for expanding skill sets and knowledge as needed;
- Be able to clearly communicate scientific concepts and results to a wide variety of technical and non-technical audiences;
- Have a demonstrated ability to write scientific reports and publications.

The successful completion of tasks will involve external collaboration, demonstrations, written documentation, and user support. Successful candidates are expected to be self-motivated, have demonstrated initiative, be able to work independently and also as part of a team, be able to collaborate with resource specialists, and be adaptable to changing client priorities.

Education and Experience:

Applicants should have a college degree in ecology, biology, forestry, geography, or related natural resource area and have experience developing statistical, simulation, or spatial models, or analyses of ecological systems. Applicants with a BS must have 5 years of experience -OR- a MS or PhD degree in ecology, biology, forestry, or similar relevant field and at least three (3) years of relevant experience. Salary will be commensurate with qualifications and experience. This position offers a generous benefits package which includes health, dental, and vision insurance, company matching 401K and profit sharing, long term disability insurance, and paid vacations and holidays. To apply, submit a resume and cover letter to employment@redcastleresources.com.