

## **STATISTICAL ECOLOGIST AND GEOSPATIAL ANALYST IN ANIMAL MOVEMENT AND SPATIAL ECOLOGY**

Apply your research skills to improve large-scale habitat management for endangered species. Enter a unique working environment where the energetic culture of a small, fast-paced, interdisciplinary research group intersects with one of the most successful collaborative endangered species recovery programs in the nation. Connect cutting-edge science to decision-makers responsible for endangered species management and restoration program governance. Invest your time in making a difference.

Headwaters Corporation is seeking a statistical ecologist with experience analyzing animal movement and spatial datasets to join a team that conducts interdisciplinary research with a focus on implementation of the [Platte River Recovery Implementation Program](#) (PRRIP). Headwaters serves in a unique role as a private consulting firm that carries out the day-to-day functions of PRRIP implementation by providing the Executive Director and all staff. This includes PRRIP administration, managing the PRRIP's land and water resources, and implementation of a robust science program that uses adaptive management and other science tools to inform the use of those resources. The Headwaters technical team includes biologists, ecologists, an ecological statistician, geomorphologists, hydraulic engineers, water resources planners, a biosystems engineer, and a science policy advisor that specializes in adaptive management and restoration program governance. The Program is authorized by Congress for a First Increment Extension through the year 2032. This position will be part of the PRRIP Executive Director's Office (EDO), and monitoring and research efforts are funded through the course of the Extension (as determined by the PRRIP annual budget and work plan).

This position will work collaboratively with the Headwaters team and PRRIP stakeholders to generate species relevant habitat metrics from field and remotely sensed data sources providing information on river hydrodynamics, channel morphology, and surrounding landcover to test hypotheses about factors that impact target species movement and use of the Platte River as laid out in [PRRIP's Science Plan](#). The successful candidate will design and conduct research to evaluate the response of piping plovers, whooping cranes, and pallid sturgeon to alternative management strategies. Work includes access to data and field sites from ongoing long-term studies. In addition to the research role, the successful candidate will play a critical role in translating probable outcomes from scientific research to estimable costs and benefits of alternative management scenarios for policy-level decision makers weighing their options. *Candidates must have the drive to tackle complex, multidisciplinary problems and the desire to develop methods, interpret results, and communicate findings regularly to PRRIP advisory committees and decision-makers.*

Opportunities may also exist for applying the described skill set to other projects outside the Platte River as time and workload allow.

### **Major duties include, but are not limited to:**

- Development of experimental design and analytical frameworks to address research questions.
- Working with field and remotely sensed data, error checking, online database management, and statistical analyses.
- Interpretation and synthesis of species monitoring data (animal movement, habitat use, and reproductive output data) as it relates to associated topographic, hydrologic, vegetation, and environmental conditions.
- Active participation in regular collaborative planning, process development, and check-in meetings with Headwaters Staff and PRRIP advisory committees.
- Explanation and teaching methods to establish trust and confidence in results for decision-making.

- Preparing short project updates, presentations, technical reports, and scientific manuscripts in conjunction with other staff.
- Presentation at public and scientific meetings and conferences.

**Highly Desirable Characteristics:**

- Knowledge of and facility with statistical analysis techniques, and spatial analysis using GIS.
- Experience with some or all of the following analysis methods: generalized linear modeling, bootstrapping and simulation, machine learning, Bayesian modeling, and survival analysis.
- Experience designing and evaluating field and remotely sensed monitoring studies.
- Working knowledge of methods for collection of animal behavior data, including telemetry data.
- Experience working at the nexus of terrestrial, aerial, and riverine ecological environments and the tools associated with each.
- Experience that includes establishing processes for integrating multiple data sources into a single evaluative process.
- Broad-based background in behavioral ecology (animal behavior and movement, migration ecology, population dynamics, wetland and shore bird ecology, pallid sturgeon ecology).
- Facility with Microsoft Office Suite (Word, Excel, Power Point), Adobe, online database management, R statistical packages, and ArcGIS.
- Experience coding for data management and analysis efficiency (Python, ArcPy, SQL).
- Other software experience may include AutoCAD, HEC-RAS, or other hydraulic models.
- Demonstrated skill in writing for both technical and policy-level audiences.
- Effective communicator with team mentality.
- Excellent time management and organizational skills with the ability to multi-task and work well under time constraints to provide on-time, high quality deliverables.
- Relevant experience in statistical consulting.
- Mature judgment, initiative, ownership, imagination, resourcefulness, energy, tact, and integrity.

Headwaters' main office is located in Kearney, NE, near the midpoint of the Big Bend reach of the Platte River. Program research and monitoring focuses on the ninety-mile reach of the central Platte extending from Lexington, NE to Chapman, NE. Headwaters' science staff are located in Kearney, water/engineering staff and our geoscientists are based in Headwaters' Lakewood, CO office. **This position will be housed in Kearney, NE. Remote work is not an option for this position.** Periodic travel for meetings and conferences (3 - 5 days a month) will also be necessary.

**EDUCATION**

Minimum of M.S. in Statistics, Biometrics, Statistical Ecology, or Geostatistics with experience developing and analyzing spatial datasets for evaluation of animal movement and spatial use patterns. Candidates holding a Ph.D. will also be considered.

**EXPERIENCE**

Minimum of 3 years of progressively responsible professional experience. Strongly prefer candidates with at least 5 – 8 years of experience as an applied statistician in ecology, fisheries, or wildlife research. Experience with Animal Movement Ecology, Spatial Ecology, Landscape Ecology, or related technical field.

## **BENEFITS**

Headwaters Corporation will offer a competitive salary commensurate with experience and qualifications relevant to this position. Starting range of \$70,000-\$90,000/year.

Headwaters offers an excellent compensation and benefits package including medical, dental, and life insurance; a 401(K) plan; and paid vacation time and holidays. Headwaters Corporation is an Equal Opportunity Employer.

## **APPLICATION**

Applications will be considered until the position is filled. Application materials should be submitted electronically and addressed to:

Malinda Henry, Ph.D.  
Science Plan Coordinator  
Headwaters Corporation  
4111 4<sup>th</sup> Avenue, Suite 6  
Kearney, NE 68845

*Please send a cover letter, resume, and three references in PDF format to Dr. Henry at:*  
[henrym@headwaterscorp.com](mailto:henrym@headwaterscorp.com)

## **OVERVIEW OF HEADWATERS CORPORATION**

Headwaters Corporation is a natural resources management consulting firm that specializes in the review and implementation of large-scale endangered species recovery and river restoration programs; management of independent science review processes; planning, design, and implementation of river restoration and wetland mitigation projects; and application of a variety of areas of scientific expertise to project planning, design, and implementation. We have a small, highly qualified team comprised of leading river restoration program managers and adaptive management practitioners, experts in restoration program governance and function, river ecologists, western water resources experts, biologists, geomorphologists, water resources engineers, and land managers. With offices in Nebraska (Kearney) and Colorado (Lakewood), Headwaters Corporation provides a broad range of services to public and private clients. Visit our website at [www.headwaterscorp.com](http://www.headwaterscorp.com) for more information on our purpose, our people, and our work.