River and watershed restoration is a complex undertaking, best guided by science, and requiring a variety of highly technical skills. While nonprofit watershed organizations are often at the front lines of this work, very few have all the technical capacity they need in-house. River Network can complement and enhance existing science capacity and provide short-term technical support to organizations and projects in the following areas:

**Program/Study Design and Evaluation**

- Study Design Planning – production of documents, Quality Assurance Project Plans, Standard Operating Procedures, etc.
- Issue-based selection of parameters, methods, equipment and technologies to ensure program data meets intended use requirements.
- Assessment method development, online/app-based survey forms.

**Aquatic Data Management**

- Data management planning to create efficient data flows from field to database to dashboard.
- Relational database development to manage and connect a variety of water data types, including: quantity, chemical, biological, physical, or spatial (MS Access).
- Data aggregation from external sources (Water Quality Portal, CUAHSI, NPDES, WADE, etc.).

**Data Analysis and Visualization**

- Statistical analysis of ecological data (Descriptive, Multivariate, Bayesian, Modeling) particularly for stressor and threshold identification (e.g. nutrient criteria, environmental flows).
- Macroinvertebrate data calculation and interpretation (certified NABS/SFS taxonomist for 10 years) including metric and index development, calculation, and interpretation.
- Development of attractive data visualization charts and live-data dashboards using R, ArcGIS, Data Studio, plotly, etc.
- Geospatial data analysis to inform watershed and landscape restoration – parcel prioritization, opportunity identification, landscape resilience.

**Data to Action and Science Communication**

- Development of public (or private) ArcGIS Online Story maps, map applications, and map-based data viewing applications.
- Development of scoring systems, and report card type public information tools.
- Data sharing support – data preparation for WQX, state submittal, data user liaison services.

For more information on the types of services we can provide, or questions about how to partner or engage with us in your science work, please contact Adam Griggs at agriggs@rivernetwork.org or 410-259-4536 (cell).