

*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 [aqriggs@rivernetwork.org](mailto:aqriggs@rivernetwork.org) or 410-259-4536 (cell).*