



Ecological and Nature-Based Solutions



Planning, Assessments, Stream and Wetland Design Services, and Mitigation Solutions

Headway Environmental can help guide your project through any environmental compliance challenge with ecological and nature-based solutions. We'll assess the ecological function of your site and help develop an effective, nature-based approach to prevent, offset, or mitigate the potential impacts of your activities.

Ecological and nature-based solutions focus on the recovery or re-creation of the natural functions of your project site. Our ecological restoration engineers, designers, and scientists will help you understand, assess, restore, and conserve natural systems that contribute to sustainable infrastructure and land development projects that meet both regulatory requirements and community standards.

Watershed Planning

Headway Environmental's water resource staff can make comprehensive assessments of watersheds affected by your project, including those that extend across state or municipal lines. We develop masterplans based on scientific assessments of existing conditions, a thorough understanding of forward-looking ecological restoration practices, and community and stakeholder participation throughout the process.

Our watershed planning capabilities include:

- Stream geomorphology
- Hydrology
- Water quality
- Aquatic habitat and biological condition assessments

Stream and Wetland Design

Headway Environmental specializes stream and wetland delineation, environmental impact assessments, and nature-based restoration solutions. Our Professional Wetlands Scientists (PWS) and restoration design engineers have experience across the country using the delineation methods and standard operating procedures in effect in most U.S. Army Corps of Engineers (USACE) districts.

Our stream and wetland design capabilities include:

- Ecological restoration design and engineering of Fluvial Geomorphology and Natural Channel Design (NCD)
- Expertise in Reference Reach methodologies and other science-based approaches to stream and wetland design
- Application of the Cowardin Classification System in wetland restoration design

Geomorphic, Ecologic Function, and Water Quality Assessments

Headway Environmental has extensive experience in assessing a range of parameters related to fluvial geomorphology, ecological function, and water quality issues. Our professionals are adept at assessing the causes of biological, chemical, and physical impacts on water quality and watershed function.

Our geomorphic, ecologic function, and water quality assessment capabilities include:

- Watershed Assessment of River Stability and Sediment Supply (WARSSS) protocols

- Hierarchical methodologies for watershed scale assessments
- Analytical hydraulic engineering planning and design
- Nature-based restoration solutions
- Physicochemical water quality treatment prescriptions

Watershed Hydrologic and Hydraulic Analysis

Headway Environmental's team of water resources experts can perform comprehensive assessments and analyses including stream geomorphology, hydrology, water quality, aquatic habitat condition, and biological conditions of watersheds including those that span state or municipal lines.

Our watershed hydrology and hydraulic analysis capabilities include:

- Detailed watershed health management planning
- 1D, 2D, and combined 1D/2D hydraulic modeling
- GeoHECRAS capability for model optimization
- Expertise in the use of hydro analysis tools and modeling platforms

Watershed and Riverine Sediment Source and Transport Assessments

Headway Environmental is an experienced provider of watershed and riverine sediment source assessments. Our specialists can assess the health of the watershed in your project area and develop sustainable and resilient solutions to enhance ecological function.

Our sediment source and transport assessment capabilities include:

- Sediment source assessment using WARSSS
- Flowsed/Powered methods of calculating transport capacity by stage
- Sediment transport analysis
- Detailed water resources management planning
- Surface, groundwater, and water quality assessments
- Permitting consultation and agency coordination

Streamline your path to environmental approvals.

Contact Headway Environmental today.

(866) 506-2124

info@headwayenviro.com

headwayenviro.com