



# Ecosystem Restoration Services

**CEC's team of aquatic ecologists, geomorphologists, wetland scientists, botanists, agronomists, and engineers recognizes the complex nature of ecosystems and works together to create functional, self-sustaining stream and wetland systems.**



## PLANNING AND DESIGN

CEC uses natural channel design to restore valuable hydrologic, hydraulic, geomorphic, and ecologic functions to streams. Wetlands can be incorporated into designs by retaining ox-bow and back channels, designing overbank floodways to connect and enhance floodplain wetlands, and creating depressional wetlands and vernal pools.

## CONSTRUCTION AND MONITORING

CEC develops realistic, ecologically relevant and measurable performance standards, as well as monitoring programs to determine compliance with those standards.

Functional assessments and post-restoration monitoring document the ecological "lift" to the aquatic community and improvements in aquatic life use. CEC also provides turnkey design-build and construction management services for restoring ecosystems.

## STREAM AND WETLAND RESTORATION DESIGN

- Site Selection and Evaluation
- Fluvial Geomorphic Assessments
- 3D Natural Channel Design
- Wetland Water Budgets
- Riparian and Wetland Planting Specifications
- Erosion Prevention and Sediment Control Specifications

## LANDSCAPE RESTORATION

- Geomorphic Restoration of Mined Land
- Agronomic Evaluations
- Revegetation of Disturbed Landscapes
- Invasive Plant Management

## CONSTRUCTION-RELATED SERVICES

- Design-Build
- Construction Management and Quality Assurance
- Construction Specifications and Bid Packages
- Fish and Wildlife Protection and Relocation
- As-Built Drawings and Certification Reports

## REGULATORY PERMITTING

## BIOLOGICAL MONITORING (FISH, AQUATIC, MACROINVERTEBRATES, VEGETATION)

## RARE AND ENDANGERED SPECIES SURVEYS (PLANTS, BATS, BIRDS, FISH)