ECOLOGICAL SERVICES
Mattern & Craig has extensive experience in monitoring, design, and inspection of a variety of stream and wetland related projects. Our capable staff has completed the Level I-IV Rosgen River Restoration and Natural Channel Design courses, as well as numerous other stream restoration design and stream restoration construction training courses. Mattern & Craig also has a certified Permaculture designer on staff. In addition to stream restoration design, Mattern & Craig has provided:

- construction oversight for stream and wetland restoration projects
- hydrological determinations on watercourses
- designed erosion and sediment control and stormwater management plans
- developed vegetation/planting plans for stream and wetland projects
- designed wetland mitigation sites
- conducted morphological, hydrological, and biological monitoring for stream restoration sites
- performed fieldwork, including surveying for numerous stream, wetland, BMP, and erosion and sediment control projects.

**Stream monitoring and assessment**
Assessing geomorphology and biological features of streams to determine stability, restoration potential, and/or restoration success.

**Ecological restoration**
Restoring unstable stream, river, and wetland systems through natural channel design processes to restore, enhance, preserve, and protect naturally-provided ecosystem functions of these systems.

**Streambank stabilization**
Stabilizing streambanks to protect adjacent land and utilities while also providing environmental benefits.

**Water quality protection**
Protecting streams, rivers, wetlands and other natural systems from pollution from stormwater runoff and other urban sources using BMPs.

**Riparian / buffer zones**
Designing planting plans to establish and/or protect riparian areas consisting of species native to the area and for removal of invasive/non-native species.

**Stream and wetland mitigation**
Providing mitigation designs to accomplish compensatory mitigation for unavoidable impacts resulting from development activities from localities and private developers.

**Construction oversight**
Providing knowledgeable construction oversight during stream and wetland restoration projects.

**Erosion & sediment control**
Creation of erosion and sediment control plans specifically designed to protect stream restoration implementations and performing inspections to ensure the integrity of stream and wetland areas during restoration projects.

**Stormwater BMP / Low Impact Development (LID) / Permaculture Design**
Sustainable design for managing stormwater runoff and pollutant removal using the runoff reduction approach by utilizing healthy soils, native vegetation, and green infrastructure (rain gardens, wetlands, bioretention, rainwater harvesting, permeable pavement, vegetated swales, etc.) for permanent stormwater control.
## STAFF CERTIFICATIONS

- **Rosgen Level IV Trained (Natural Channel Design)**
- **DEQ**
  - Stormwater Management Inspector / Plan Reviewer
  - ESC Inspector / Plan Reviewer
- **TDEC**
  - Erosion Prevention and Sediment Control Fundamentals (TDEC Level I EPSC)
  - Design Principles for Erosion Prevention and Sediment Control for Construction Sites (TDEC Level II EPSC)
  - Stormwater Control Measures Design using TNRRAT
- **NCDOT**
  - Erosion & Sediment Control/Stormwater Certification Levels I, II, & III
- **Certified Floodplain Manager (CFM)**
- **Permaculture Design Certified**

## PROFESSIONAL LICENSES

- **Professional Engineer (PE)**
- **Certified Professional in Erosion & Sediment Control (CPESC)**
- **Qualified Hydrologic Professional for Hydrologic Determinations (QHP)**

## Locations

**ROANOKE**
- 701 First Street, S.W.
  Roanoke, VA 24016
- 540.345.9342
- 540.345.7691 - Fax

**KINGSPORT**
- 429 Clay Street
  Kingsport, TN 37660
- 423.245.4970
- 423.245.5932 - Fax

**JOHNSON CITY**
- 403 East Market Street
  Johnson City, TN 37601
- 423.979.2220
- 423.979.2222 - Fax

**ASHEVILLE**
- 12 Broad Street
  Asheville, NC 28801
- 828.254.2201
- 828.254.4562 - Fax

**HICKORY**
- 231 16th Avenue, N.E.
  Hickory, NC 28601
- 828.855.2233
- 828.855.1133 - Fax

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