

On-Call Environmental Consulting and Contracting Services for Los Alamos County RFP #19-07

Scope of Work for Graduation Canyon Erosion Control and Channel Enhancement



Proposals Highlights

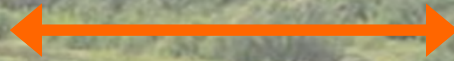
- Familiarity with Ecosystem
- Community Partnerships
- Revegetation

Services Provided - Assessment, Geomorphology and Ecology, Bioengineering and Revegetation, Engineering Design and Modeling, Public Collaboration and Education, and individual expertise



Intro to Fluvial Geomorphology

FORM



FUNCTION

Natural channels
are created and
maintained by
their watersheds

Channel function
is to successfully
carry sediment
and water from
the watershed.

A stable channel can perform these functions without
erosion or deposition of sediment

Assessment and Design by KRE and NCD

“Field Fit” Design due to limited
budget and to maximize
implementation

Over 50 resource
damage locations
identified

Red dots denote structure locations



Implementation of Wetland Restoration and Gully Repair by KRE

Construction Period:

- ~10 days; 37 Restoration Structures Built
- Imported Rock - 17 cy (25 tons),
remainder harvested on site
- Total of 80 machine hours
- Hand Crew - 2 crew members
- Rubber tracked skid steer loader and
mini-excavator

Structures

Log Plug - 2 Completed



Channel Plugs - 8 Completed



One Rock Dams- 18 completed



Zuni Bowls - 5 completed



Recommendations

- Restoration in lower canyon to improve water retention and expand wetland
- Utilize youth crews for culvert outlet spreaders and stormwater harvesting along canyon rim, trail maintenance
- Monitor and treat invasive species (whitetop and others) as needed.
- Photography monitoring of structures
- Community Involvement



Riparian Corridor Function Assessment And Enhancement Strategy Proposal

Identify restoration opportunities to improve stream stability and ecological health, improve groundwater recharge and water quality, and restore habitats for native plant and animal species that were lost due to wildfire.

Task 1 - Gather information: Trail and visitor use, LIDAR Modeling, aerials

Task 2 - Field Assessment: GPS Assessment of Potential Projects

**Task 3 - Concept Design, Cost Estimates and Prioritization: 5 Sites
Prioritized by Los Alamos County**

Task 4 - Final presentation: Ranking By Committee to Pursue Funding

Task 5 - Grant Writing

Grant Funding for Watershed Restoration

- * Restoration Projects Funded by US EPA, State of NM, US Fish and Wildlife, and other public and private sources
- * Funding in range of \$150,000 - \$300,000 per project
- * NM River Stewardship Grant deadline in April/May, 2019 funding was \$2 Million
- * Initial Priority Sites are Los Alamos Canyon, Pueblo Canyon, Guaje Canyon
- * MATCH: Most project sources require between 25% to 100% match funding, cash, hours, materials

Watershed Restoration for Community Engagement and Education

- * Youth Outreach and Science Education by performing Scientific Monitoring
- * Community Engagement (Match) and Restoration Enhancement
- * PEEC, USFS, NPS (Band) and others
- * MS4 Compliance, KRE has worked with Dr. Brent Newman at EES-14 to show that wetland conditions occur/contaminant breakdown



RFP # 19-07

**Request for Qualification --On Call Environmental Consulting
and Contracting Services for Los Alamos County**

August 28, 2018

