



Water Quality Improvement Grant Program
Grant Application Form

☒ Water Quality Improvement Grant

☐ Watershed Preservation Grant

Project Summary

Project Title: Rogers/Lee Ranch Streambank Treatment for Sediment Reduction

Project Description:

Provide an abstract that briefly describes the project. Limit: 500 characters.

The goal of this project is to treat vertical streambanks which are a considerable source of sediment entering Coyote Creek. This project is takes upstream of previous bank sloping work completed in GC15 and GC17. The project will include bank sloping and an aggressive revegetation strategy.

Authorizing Agency

Name: Danny Lee - Knight Environmental

Address: P.O. Box 212

City: Springerville State: AZ Zip Code: 85938

Authorizing Agency Contact

Last Name: Knight First Name: Daric

Title: Knight Environmental Phone Number: 928-521-9897 Fax Number:

E-mail: dknight100@hotmail.com

Project Manager

Last Name: Knight First Name: Daric

Title: Knight Environmental Phone Number: 928-521-9897 Fax Number:

E-mail: dknight100@hotmail.com

Project Period ☐ 1 year ☒ 2 years

Project Costs

Total Project Cost: \$61,658

Funds Requested (maximum 60% of total project cost) \$36,973

Matching Funds (minimum 40% of total project cost) \$24,685

Application Details

I. Location and Land Ownership

a. City/Town: Springerville County: Apache

b. Land Ownership: Private

c. Provide Latitude and Longitude in decimal degrees for the main location of the project

Latitude: 34°10'26.25"N Longitude: 109° 8'31.14"W

How do I find the latitude and longitude of my area? [Click here](#)

d. Provide a map of the project area. For assistance in developing a map, contact the ADEQ Grant Coordinator

II. Pollutant(s) of Concern

- a. Is this water body identified as impaired based on ADEQ's 2010 Status of Ambient Surface Water Quality in Arizona Arizona's Integrated 305(b) Assessment and 303(d) Listing Report? Both reports can be found at <http://www.azdeq.gov/programs/water-quality-programs/surface-water-monitoring-and-assessments>. Contact ADEQ for assistance if necessary

b. Select the pollutant(s) of concern that this project will address.

Primary Pollutant: Sedimentation -Siltation

Secondary Pollutant, if any: Pathogens (E Coli)

Other: _____

c. Clearly define the causes and sources of pollutants impacting the project area. Limit: 2500 characters

This ranch contains ~4.3 miles of Coyote Creek. The reach of interest here contains tall (> 6 feet) vertical banks which consist of poor soils that are easily eroded. The entire stream appears to be adjusting to a change in base level, evident by the headcuts in tributaries and entrenched stream channel with little to no floodplain connectivity. Base level change is likely stabilized upstream of a major grade control structure. However, the channel through the project reach is still adjusting.

III. Scope of Work

- a. Briefly describe the management measures or best management practices to be implemented to improve water quality. Limit: 5000 characters

The reach of Coyote Creek of interest here is negatively influenced by bedrock at the natural location of a point bar. The channel is artificially narrowed due to the bedrock. As a result, shear stress along the outside of the meander is greatly increased, causing considerable bank erosion, with even the smallest of flows. This project will reshape the point bar to a dimension more consistent with reference, as well as slope the ~12 foot vertical banks to a grade that will support vegetation. Native grass seed will be applied and covered with an all natural erosion control fabric. This fabric creates a micro environment for seed germination and aids it vegetation regrowth, substantially greater than regrowth seen in areas with not fabric. This work will decrease bank erosion, a significant contributor to the sediment related issues within this watershed.

- b. Identify the permits, if any, to be obtained in order to complete this project. Consider the need for Army Corps of Engineers 404 Permits and 401 Certifications for in-stream activities, Construction General Permit coverage for projects impacting an area greater than one acre, NEPA permits from the USFS, and Applications for Land Improvements from the AZ State Land Department etc. All projects are subject to State Historical Preservation Office clearance. Limit: 1000 characters

Construction General Permit
SHPO Clearance
Biological Assessment
404 Nationwide (May require 2 year project timeframe)

- c. Life expectancy of BMPs: Identify and justify the life expectancy of any proposed BMPs. Limit: 1000 characters

The BMP's will be designed to a 10 to 25 year storm event. The toe rock and bank sloping are expected to last more than 10 years and likely 25 years with occasional maintenance. The realignment of the channel will remove stress from the bank potentially lengthening the life expectancy of the project.

- d. Long-term Maintenance: Identify the maintenance required for your project. Identify groups or individuals responsible for the long-term maintenance of projects. Provide letters of support, if possible. Limit: 1000 characters

The long term maintenance will primarily include monitoring the rundown structure to ensure that the structure is sound. An extremely large runoff event may necessitate the need for maintenance to correct an adjustments that may have happened. Additionally if any of the sloped banks begin developing rills they will be repaired and reseeded. Maintenance inspections will be completed every spring and end of monsoon season (approx. September) or after large flow events. Any necessary maintenance will be completed promptly after the problem is identified.

We will coordinate with ADEQ's Arizona Water Watch for quality sampling by volunteers.

IV. Education and Outreach

- a. Describe the education and outreach components that will enhance public understanding of the project and encourage implementing future management measures. Limit: 1000 characters

Project presentation at the local NRCD meeting and/or site visit to be provided by project manager upon project completion.

V. Key Personnel & Partnerships

- a. Describe the roles and responsibilities of positions for this project. Include the overall salary and rate for each position. Limit: 1000 characters

Daric Knight - Grant Administrator,
Danny Lee - Landowner

Natural Channel Design (Technical Services Provider) will provide technical drawings and specification for the construction of the project and the obtaining of necessary permits. NCD will be on site to provide construction observation services and as-built drawings.

- b. Provide a brief summary of qualifications for individuals filling a position. If individuals have not yet been identified, describe the qualifications that will be used for an individual. Limit: 1000 characters

Daric Knight has acted as Grant Administrator through the Apache County Conservation District for two previous grant cycles. Daric has successfully worked with landowners and ranchers to implement projects of similar scope and scale.

Danny Lee has also completed similar work on projects during previous ADEQ grant cycles.

Natural Channel Design is a leader in conservation engineering and has been part of many successful project in the area related to conservation engineering and stream restoration.

VI. Conflict of Interest

What steps will be taken to ensure that hiring/personnel selection practices are carried out without the existence or appearance of bias? Provide a statement of policy for hiring if possible. Limit: 1000 characters

This project will conform to Federal and State laws pertaining to hiring and personnel selection.
This project will be carried out under the prohibition of discrimination on the basis of race, color, sex, age, disability or retaliation.

This project is entered into by landowner, as a voluntary program for conservation.

VII. Budget Form

Develop a budget based on the anticipated costs for completing the project within the proposed time schedule. The budget form can be downloaded at http://static.azdeq.gov/wqigp/wqig_budget_form.xls. **Be sure to attach your budget form to your final application submission.**

Initials: 

VIII. Work Plan Steps

Develop a work plan with a series of steps and associated dates that are necessary to complete the plans. Each step must have a milestone that provides a description of what will be accomplished. Work plan must be developed as part of the budget form. The budget form can be downloaded at:

http://static.azdeq.gov/wqigp/wqig_cycle_19_budget_form.xls

Initials: 

IX. SHPO Form

Any ADEQ action, including grant projects paid in-part with ADEQ funds, on state, federal, or private lands that may impact historic properties (i.e., any prehistoric or historic-period district, site, building, structure, or object included in, or eligible for inclusion in the State Register of Historic Places) require consultation with the State Historic Preservation Office (SHPO) pursuant to the State Historic Preservation Act (ARS 41-861 to 864).

In order to make informed decisions and facilitate consultation with SHPO, ADEQ requires applicants to provide the project-related information requested in the SHPO form. Please complete the information requested in the SHPO form and submit with your final application. The SHPO form can be downloaded from the ADEQ website at: http://static.azdeq.gov/wqigp/wqig_shpo.pdf.

Initials: 

X. Abbreviated Monitoring Plan

If water quality data are to be collected and interpreted to determine effectiveness, a "Sample Analysis and Quality Assurance Plan" (SAP/QAP) must be developed in accordance with state guidelines. Additional information for developing the abbreviated monitoring plan can be found at

http://static.azdeq.gov/wqigp/wqig_abbrev_monitoring_plan.pdf

Initials: 

XI. Project Insurance Coverage

Providing proof of insurance coverage for your project is necessary upon award. Insurance requirement may be found in the grant manual. If you need assistance with contacting an insurance company to obtain required coverage for your project you may contact: <https://insurance.az.gov/contact-us> or (602) 364-3100, for assistance with insurance companies in your area.

Initials:



Authority Signature Page

The undersigned hereby offers and agrees to perform in compliance with all terms, conditions, specifications, and scope in this grant application. Signature certifies understanding and compliance with the application attached hereto. ADEQ may approve the grant application and modifications to scope, methodology, and schedule, final projects, and/or budget.

Authorized Signature: 

Date: 9/5/2017

Printed Name: Daric Knight Knight Environmental

Authority Signature Page must be submitted in hard copy and must be received prior to the Final Application deadline.

UPPER LITTLE COLORADO RIVER HEADWATERS AZDEQ Water Quality Improvement Project

Danny Lee

FUNDED BY:
Arizona Department of Environmental Quality (ADEQ)
Water Quality Division



LOCATION MAP

ARIZONA, GILA & SALT RIVER WATERSHED
TBM, R30E, S20N, NE1/4, SE1/4
APACHE COUNTY, ARIZONA



PROJECT SITE

Natural
Channel
Design, Inc.



LANDOWNER:
Danny Lee
(contact: Daric Knight)
Phone: (928) 521-9897

PROJECT MANAGER:
Knight Environmental
Daric Knight
P.O. Box 212
Springerville, AZ 85938
Phone: (928) 521-9897

TECHNICAL CONSULTANT:
Natural Channel Design, Inc.
2900 N. West St Suite #5
Flagstaff, AZ 86004
Phone: (928) 774-2336

PROJECT PARTNER:
Arizona Department of
Environmental Quality
1110 W. Washington St.
Phoenix, AZ 85007
Phone: (602) 771-4635

INDEX OF DRAWINGS

SHEET NO.	TITLE
1	COVER SHEET: Location, Index, and Quantities
2	GENERAL NOTES & CONSTRUCTION SPECIFICATIONS
3	CONSTRUCTION SPECIFICATIONS CONT. SEEDING AND EROSION CONTROL FABRIC
4	PLAN VIEW
5	PROFILE & TYPICAL CROSS SECTIONS
6	DETAILS: Rock Vanes & Sills

WORK QUANTITIES

Earthwork - 1900 c.y. cut, spoiled fill on site.
56 c.y. sandstone excavation, spoiled on site.
Rock 3 ft - 60 ea (31.4 cy)
Rock 2 ft - 325 ea (50.5 cy)
Single Net Fabric - 4925 s.y.
6 in. metal landscape staples - 10,000 ea
Double Net Fabric - 675 s.y.
2 ft tapered wood stakes - 560 ea
Seeding - 1.1 ac

AS-BUILT notations
displayed in RED
in the included sheets
where applicable.

SEALED FOR AS-BUILT



EXPIRES: 03/31/2021

AS-BUILT/RECORD DRAWING CERTIFICATION
I hereby state that the as-built information shown within this plan set is correct to the best of my knowledge. The record information, as presented, is based upon field observations by NCD personnel and information provided to the engineer by the contractor. Those sheets not marked with record information indicate that the work was completed substantially to plan without significant modifications.
MICHAEL D. KEARLY 34587 4/28/2020
RES. PROFESSIONAL ENGINEER RES. DATE

Natural
Channel
Design, Inc.

DRAWN BY: M. Wirtanen
DESIGNED BY: M. Wirtanen
REVIEWED BY: M. Kearly

REV	DATE	BY	REVISION

2900 N. West Street #5
Flagstaff, Arizona 86004
(928) 774-2336

COVER SHEET:
Location, Index & Quantities

UPPER LCR
ADEQ Water Quality Improvement Project
Lee Ranch



EXPIRES: 03/31/2021

UNAUTHORIZED CHANGES & USES
THE ENGINEER PREPARING THESE PLANS
WILL NOT BE RESPONSIBLE FOR ANY
LIABILITY FOR UNAUTHORIZED CHANGES TO
OR USES OF THESE PLANS. ALL
CHANGES MUST BE IN WRITING AND
MUST BE APPROVED BY THE PREPARED
OF THESE PLANS.

DATE:
12/18/2018
NCD PROJECT NO:
18-295-AZ

Correct Arizona State Seal Use to
Verify Date before your legal authority
is used.
ARIZONA
State Seal Use to Verify Date before your legal authority
is used.

DRAWING NO:
SHEET NO:
1 OF 6



Water Quality Improvement Grant Program
Grant Agreement EV18-0001
(20-007)

Project Title: Rogers/Lee Ranch Streambank Treatment for Sediment Reduction
Expiration Date: October 31, 2019
Dollars Matched: \$24,685.00
Dollars Awarded: \$36,973.00

Between
Arizona Department of Environmental Quality
and
Danny Lee – Knight Environmental

This Grant Agreement is established between the State of Arizona Department of Environmental Quality, located at 1110 West Washington Street, Phoenix, Arizona 85007 ("ADEQ" or "Department") pursuant to Arizona Revised Statutes (A.R.S.) § 41-2701 et. seq. and A.R.S. § 49-104 and ("Grantee"). This Grant Agreement includes the attachments listed below. Incorporated by reference, this Grant Agreement also includes the ADEQ Water Quality Improvement Grant Program Request for Grant Applications (EV18-0001).

Attachment 1: Grant Applications

Attachment 2: Water Quality Improvement Grant Agreement Terms and Conditions

Special Conditions

1. Attachment 1 includes the approved project scope of work and budget. Any adjustments shall be pre-approved by ADEQ.
2. Grantee shall provide proof of adequate insurance prior to any grant activities being initiated. Minimum insurance requirements are located in Attachment 2: Water Quality Improvement Grant Agreement Terms and Conditions.
3. Grantee shall work with ADEQ staff to develop a complete an approved monitoring plan prior to on-the-ground activities that reflects grantee and ADEQ responsibilities.
4. Grantee agrees to coordinate with ADEQ for water quality sampling and best management practice effectiveness monitoring.
5. Grantee shall allow access to project area before and after implementation to complete BMP assessment monitoring.
6. Grantee shall provide the required information to ADEQ to obtain SHPO clearance for projects and update Work Plan Steps and Milestones to reflect activities and time needed to obtain SHPO clearance.
7. No on-the-ground work shall be initiated on a project of concern until all identified permit clearances have been secured for the specific project.
8. Grantee shall work with the ADEQ Project Manager to update the Work Plan Steps & Milestones to be approved by the ADEQ Project Manager.
9. All education and outreach presentations and materials shall be approved by ADEQ prior to distribution.
10. Grantee will provide a detailed scope of work to be approved by ADEQ prior to project implementation.
11. Grantee will provide a Letter of Commitment to Maintenance prior to funds be expended.
12. Grantee will provide preliminary engineering design ADEQ prior to project implementation.

In witness whereof the parties hereto agree to carry out the terms of this Grant Agreement.

Arizona Department of Environmental Quality	Danny Lee – Knight Environmental
Trevor Baggione, ADEQ Water Quality Division Director	Daric Knight, Authorizing Agent
 Signature of Authorized Individual	 Signature of Authorized Individual
Date: 9-22-17	Date: 9/27/2017



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY IMPROVEMENT PROJECTS

CONTRACT NO.: EV18-0001 (20-007)

AMENDMENT: #1

REVISED AGREEMENT AUTHORIZED
AGENT:

PURPOSE OF AMENDMENT:

The purpose of this Amendment is to change the Scope of Work outlined in this contract.

THE CONTRACT IS HEREBY AMENDED, AS FOLLOWS:

The purpose of Amendment #1 is to revise the Contract EV18-0001 (20-007) scope of work. The original scope of work has been expanded to include bank stabilization work along the entire reach of Coyote Creek from the downstream property line to the upstream end of the property line. No extra funds are requested.

EXCEPT AS NOTED HEREIN, ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME

KNIGHT ENVIRONMENTAL

Contractor hereby acknowledges receipt and understanding of above amendment.

Darin Knight 1/8/2019
Signature of Authorized Individual Date

Darin Knight
Printed Name and Title

ARIZONA DEPARTMENT OF
ENVIRONMENTAL QUALITY

The above-referenced Contract Amendment is hereby executed this

17th day of January, 2018, at
Phoenix, Arizona

Jason Sutter
Jason Sutter, Acting Manager
Watershed Protection Unit



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY IMPROVEMENT PROJECTS

CONTRACT NO.: EV18-0001 (20-007)

AMENDMENT: #2

REVISED AGREEMENT AUTHORIZED
AGENT:

PURPOSE OF AMENDMENT:

The purpose of this Amendment is to approve reallocate budget line items and total amount between two concurrent contracts, 20-007 and 20-008, with the same grantee signed agreement

THE CONTRACT IS HEREBY AMENDED, AS FOLLOWS:

The purpose of Amendment #2 is to revise the Contract EV18-0001(20-007) budget. The original budget will be increased to complete an increased scope of work load. The required additional funding will be transferred from 20-008. The funding transferred is \$22,896.20 increasing the total award from \$36,973.00 to \$59,869.20. The match increased from \$24,685.00 to \$39,912.80.

EXCEPT AS NOTED HEREIN, ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME

KNIGHT ENVIRONMENTAL

Contractor hereby acknowledges receipt and understanding of above amendment.

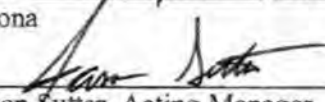
 1/14/19
Signature of Authorized Individual Date

Daric Knight owner
Printed Name and Title

ARIZONA DEPARTMENT OF
ENVIRONMENTAL QUALITY

The above-referenced Contract Amendment is hereby executed this

17th day of January, 2019, at
Phoenix, Arizona


Jason Sutter, Acting Manager
Watershed Protection Unit



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY IMPROVEMENT PROJECTS

CONTRACT NO.: EV18-0001 (20-007)

AMENDMENT: #3

REVISED AGREEMENT AUTHORIZED
AGENT:

PURPOSE OF AMENDMENT:

The purpose of this Amendment is to extend the grant contract period.

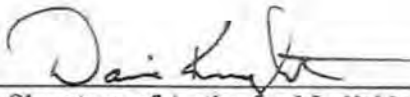
THE CONTRACT IS HEREBY AMENDED, AS FOLLOWS:

Terms of Agreement for this Contract are amended as follows: Contract new expiration date is
December 31, 2019.

EXCEPT AS NOTED HEREIN, ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME

KNIGHT ENVIRONMENTAL

Contractor hereby acknowledges receipt and
understanding of above amendment.

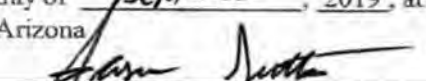
 9/23/2019
Signature of Authorized Individual Date

Daric Knight, Knight Environmental
Printed Name and Title

ARIZONA DEPARTMENT OF
ENVIRONMENTAL QUALITY

The above-referenced Contract Amendment is
hereby executed this

25th day of September, 2019, at
Phoenix, Arizona


Jason Sutter, Acting Manager
Watershed Protection Unit