

Attachment 1

Grant Application

Part I - Grant Application Form and Signature Page

Arizona Department of Environmental Quality Water Quality Improvement Grant Program <i>Grant Application Form</i>	
Project Title - Mesquital Fence and Pipeline	
Project Description - This project provides implementation of best management practices including improved grazing management, a 1 mile of riparian/pasture fence, and for alternative water sources 0.8 miles of pipeline, a 2,500 gallon storage tank and 2 troughs located in the Santa Cruz-Rio Magdalena-Rio Sonoita Watershed in the borderlands area of southern Arizona. The focus is on the ephemeral Sycamore and Providencia Canyons which flow into the Santa Cruz River. This project is part of a much larger watershed based effort which seeks to enhance water quality through improved grazing management at a landscape-scale level covering nearly 35,000 acres on the west side of the Patagonia Mountains.	
Authorizing Agency - Name: <u>USDA Forest Service</u> Address: <u>300 West Congress</u> City: <u>Tucson</u> State: <u>Arizona</u> Zip Code: <u>85701</u>	Authorized Agency Contact - Name: <u>Jeanine Derby</u> Title: <u>Forest Supervisor</u> Phone #: <u>520-388-8306</u> Fax #: <u>520-388-8305</u> E-mail: jderby@fs.fed.us
Project Manager - Name: <u>Kent Ellett</u> Address: <u>300 West Congress</u> City: <u>Tucson</u> State: <u>Arizona</u> Zip Code: <u>85701</u> E-mail: kellett@fs.fed.us	Title: <u>Range Program Manager</u> Phone #: <u>520-388-8372</u> Fax #: <u>520-388-8305</u>
Project Period <input checked="" type="checkbox"/> 0 - 2 Years (Preferred) <input type="checkbox"/> Greater than 2 years - (Provide justification in Part IV, Project Milestones)	
Project Costs Funds Requested: \$ <u>13,000</u> Matching Funds: \$ <u>5,200</u> Total Project Cost: \$ <u>18,200</u>	
Are you or your organization currently debarred, suspended or otherwise lawfully prohibited from any public procurement activity? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

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 with modifications to scope, methodology, schedule, final projects and/or budget.

Authorized Signature _____ Date _____

Print Name Jeanine Derby

Title Forest Supervisor

Company/Agency USDA Forest Service, Coronado National Forest

The Grant Application Form must be signed by the individual legally authorized to act on behalf of the applicant in conducting all official business relating to the project. Signing this form and submitting a grant application package, certifies that the applicant has authority to enter into the agreement, accept funding, and fulfill the terms of the proposed project if approved. Applicant is required to read the Water Quality Improvement Grant Agreement Terms & Conditions and be legally authorized to enter into an agreement with ADEQ.

Part II – Project Summary

This overall project is unique in that it seeks to protect and enhance watershed conditions through improved grazing management on a landscape-scale approach. The cumulative efforts of three livestock producers and cooperating agencies impacting 35,000 acres of land will be a showcase for landscape scale stewardship.

During the past year there has been great momentum and coordination to implement best management practices across the entire west side of the Patagonia Mountains. A June, 2007 NEPA based decision identified opportunities for numerous structural improvements to establish discrete pastures and alternative watering locations to facilitate more frequent movement of animals and other management practices to improve watershed conditions. These structural improvements are not decision requirements but recommendations pending possible funding. In all, approximately 13 miles of fence, 8 cattle guards, 3 wells, 19 miles of pipeline, 10 storage tanks and 35 troughs are proposed with several currently under construction.

With this application we are requesting funds for a portion of the overall project including 1 mile of fence, 0.8 miles of pipeline, a 2,500 gallon storage tank and 2 troughs. The purpose is to reduce by 50% the amount of time livestock will spend along 2.3 miles of Providencia Canyon and 1.3 miles of Sycamore Canyon. The fence will improve the current deferred rotational grazing system and the pipeline and alternative drinking water sources will aid in redirecting livestock away from the drainage bottom thereby improving riparian habitat and water quality.

Again, the proposed practices and projects are not requirements of the NEPA decision, subsequent Allotment Management Plans or Term Grazing Permits but are identified as enhancement opportunities to improve management, watershed health and ultimately water quality.

Why here and why now? While other improvements for the overall project focus more on overall watershed health, the Mesquital fence and pipeline are more specific to improving water quality. There has already been much coordination and partnerships developed to work together. The timing is right for ADEQ to be a part of the overall improvement of the west side of the Patagonia Mountains to move the project further along.

\$172,200 has been obtained through grants from the Arizona. Dept of Agriculture (ADA), Arizona Game & Fish Dept. (AZGFD) and the National Wild Turkey Federation (NWTFF) for implementation of some of the improvements which will be constructed concurrently with the fence and pipeline that would be constructed under with this grant application. This \$172,200 is being used as matching funds for this application.

The ranchers are beginning work with the NRCS to develop conservation plans to further develop the infrastructure needed to improve livestock management. Funds obtained through this ADEQ grant will be used as a match for other upcoming funding opportunities that will be sought after to complete the overall project.

The purpose of this grant application is to focus on improved water quality by improved livestock management. OHV use along Sycamore Canyon has been identified as an additional water quality issue. OHV use is currently being analyzed as part of the Coronado NF Travel Management Rule analysis. The appropriate time to address the OHV issue is following that analysis and subsequent recommendations. For now the focus is on the effects of livestock management.

Fencing both sides of the drainage has been considered, however, it is not our intent to completely exclude livestock use. Having the fence and pipeline in place will allow for sufficient appropriate control of the timing, duration and intensity of use to improve watershed conditions and water quality.

Fencing, Numex pipe and poly troughs properly installed and barring natural disasters will last at least 25 years at a minimum. Once the project is completed, maintenance responsibility will be made a part of the permittees Term Grazing Permit and administered by the Forest Service.

Part III – Plan of Action

(Address all actions and best management practices outlined in the Project Summary)

The project will include constructing a fence to Forest Service specifications approx. 1 mile long to split the flatter western portion of the Mesquital pasture from the steeper eastern portion. Sycamore Canyon and a portion of Providencia Canyon will be fenced in with the flatter western portion (Lower Mesquital) where livestock are more prone to spread out and not congregate in the drainage bottom.

A 0.8 mile pipeline with storage tank and two troughs will be installed to provide an alternate source of water for the new discrete pasture (Upper Mesquital).

Measuring nitrogen (N) and phosphorous (P) inputs into streams from non-point sources is difficult at best. Using modeling, it is estimated that the amount of N and P going into the system will be reduced annually by 172 and 47 pounds respectively using current reduced stocking levels. At full permitted numbers the estimated annual reduction of N and P would be 473 and 130 pounds respectively.

[N and P inputs are estimates using modeling from the Upper Eagle Creek Watershed Association 2005 ADEQ application and derived from research conducted in 2002 at the University of Nebraska, “Integrating Animal Feeding Decisions into the CNMP (Comprehensive Nutrient Management Plan) Processes”]

Current versus natural erosion rates for the project site are presently not known. As part of the monitoring plan we will establish baseline erosion rates across the project area using methods shared with us by the USDA-ARS, SW Watershed Research Center. Knowing that a loss of ¼” of soil equates to approx. 43 tons of soil per acre we’re confident the expected increase in ground cover will have a substantial reduction in the amount of soil moving off site.

Best Management Practices (BMPs):

Alternative Drinking Water Sources: The pipeline and two troughs will provide an alternative source of water for when livestock are on the newly created Upper (east) Mesquital pasture.

Animals in Waterways: The amount of time livestock may spend in Providencia and Sycamore Canyons will be reduced by 50%. Also the Lower (west) Mesquital pasture is relatively flat and livestock are expected to disperse well when they are in this pasture instead of concentrating in the drainage bottom.

Controlled Grazing: Splitting the Mesquital pasture into two smaller more manageable pastures will improve the deferred rotational grazing management and cause more frequent movement of animals.

Part IV - Location Information

Location Map: Kino Springs Quadrangle Map.

Site Plan: Attached.

County: Santa Cruz

Watershed Name(s): Santa Cruz

HUC Code (USGS): AZ15050301-03

Land Ownership: USDA Forest Service

Current Land Use: Livestock grazing, dispersed recreation, wildlife habitat, open space & air quality.

Latitude: 110.45.677 W

Longitude: 31.21.926 N

Part V - Land Ownership

USDA Forest Service, Coronado NF

Maintenance will be assigned to the Alisos Allotment permittee by including it as a term and condition in Part 3 of the allotment Term Grazing Permit.

Part VI - Affected Waters

Both Sycamore Canyon and Providencia Canyon which flow into the Santa Cruz River. The Santa Cruz River is on the 303(d) TMDL list.

Part VII - Project Longevity

25 + years

Implementation of the project to standard will be administered by the Forest Service as specified in a Term Grazing Permit Modification which is initiated by signature of both the permittee and the District Ranger.

Completion and approval of the permit modification is contingent upon satisfaction of construction to standard as verified by final inspection and signature of the District Ranger.

Part VIII- Education and Outreach

Signs or plaques will be posted at various locations on the west side of the Patagonias identifying the various projects and who assisted in their construction.

A portion of this project will be constructed by a local Boy Scout Troop. A portion of another improvement in the project area is being completed as part of an Eagle Scout project. This provides educational opportunities to troop members, their families and those reviewing the Eagle Scout packet/project.

The Coronado NF will be highlighting the West Patagonia Project in internal newsletters, the local media and on its internet site.

Part IX- Key People and Partners

Coronado NF: Kent Ellett, Range Program Manager - *Project Manager*

ADA: Karol Brill, LCCGP program - *Matching Funds*

AZGFD: Al Eiden, Hunter Donations Program - *Matching Funds*

Ruth Gregory, Habitat Partnership Program - *Matching Funds*

John Millican, Wildlife Manager – Sierra Vista - *Support of Project.*

Boy Scouts, Catalina District: Brian Payne, Scoutmaster - *Construction of a portion of the improvement.*

NWTF: Scott Lerich, Regional Biologist - *Matching Funds.*

Duncan Blair, Livestock Producer - *Construction and maintenance of improvements.*

Double Bar R Ranch: Bob Heilig – *Adjacent ranch and cooperator.*

Metz Trust: Forrest Metz - *Adjacent ranch and cooperator*

Part X- Water Quality Improvement Plans

A watershed based plan for the Santa Cruz Watershed is currently being developed with the University of Arizona Water Resources Research Center, Arizona NEMO, taking the lead.

Part XI- Work Plan, Steps, and Milestones

Workplan/Product Step	Milestone	Expected Date of Completion	Associated Costs
Complete amendment to June, 2007 NEPA decision.	NEPA Sufficiency of improvements	Feb., 2008	NA
Complete Archeological Survey and SHPO consultation	SHPO reports and clearance	May, 2008	NA
Develop and initiate Term Grazing Permit Modification	Approval and specifications to begin work.	July, 2008	NA
Execute contract with ADEQ	Approval and specifications to begin work.	July, 2008	NA
Collect bids and order materials for 1 mile of fence	Materials ordered	Aug., 2008	2,860
Collect bids and order 0.8 miles of 1 ¼" pipe, 2 troughs and fittings.	Materials ordered	Aug., 2008	7,320
Receive delivery of materials	Materials delivered to site.	Sept., 2008	NA
Complete construction of fence.	1 mile fence construction. Fundraiser and education for local Scout Troop.	Dec., 2008	8,000
Complete construction of alternative water.	Functioning pipeline and troughs	Dec., 2008	6,400
Submit quarterly reports to ADEQ	Coordinate progress	Each Quarter	1,600
Final inspection and approval of project.	Finalize project.	Jan., 2009	NA
Develop and submit final report	Reports	Feb., 2009	800

Part XIII- Project Verification/Evaluation

To maintain the success of this project, monitoring efforts will be ongoing following implementation.

Implementation Monitoring for Construction of Improvements: Field inspections, photos, completion of permit modification form and summary report.

Effectiveness Monitoring: Continue monitoring methods as spelled out in the NEPA decision and AMP i.e. Utilization and production surveys, condition of improvements, precipitation, photo points, actual use data, quadrat frequency, dry weight rank & fetch analysis, erosion pins and use of the grazing response index.

Part XIV- State Historic Preservation Office (SHPO) Form

Any Arizona Department of Environmental Quality (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). ADEQ is legally responsible for making determinations and findings. In order to make informed decisions and facilitate consultation with SHPO, ADEQ requires applicants to provide the “project related” information requested below. By working together, we can seek out ways that “the historical and cultural foundations of this state can be preserved as a living part of our community life and development” (State Historic Preservation Act).

Please prepare and answer the following questions pertaining to historic properties and preservation. Add map(s), drawings and pictures where appropriate.

1. Project Location and Area:

- County: *Santa Cruz*
- Township, Range and Section: *T24S, R15E, Sec. 1 & 2..*
- Nearest Town or City: *Nogales*
- Describe the conditions of the land in the project area: *Mid-seral.*

Attach a copy of a USGS topographic map (*See Part III – Scope of Work, Section G-1*) with the project area clearly marked. On the map, please specify the area(s) where impacts will occur.

II. Project Description:

- Describe the buildings or structures within project area and their age:

AR-03-05-02-141 is located near the northern end of the proposed fence line. It consists of the remains of an adobe structure, reportedly occupied by the Chamberlain family, descendants of Pete Kitchen.

- Describe any ground-disturbing activities:

Approximately 330 steel posts and 18 wooden brace posts will be installed. The pipe will be buried in places where it isn't too rocky.

- Generally speaking, can this project impact historical properties, should they be present? Yes No

The potential exists for site impacts but we can easily move the location of the fence or pipelines to avoid any sites identified by the Forest archeologists.

III. Describe the steps taken to identify historic properties in the project area:

- Has the project area been previously surveyed to determine the presence or absence of historic properties? Yes No (If yes, include report.)

Not officially, although some preliminary surveys have been conducted by para-archeologists.

- Are buildings, structures, or objects that are 50 years old or older present in the project area? Yes No (If yes, include description.)

- Are any prehistoric or historic-period archaeological sites present? Yes No (If yes, please list and briefly describe.)

Unknown if any other archaeological sites are located within the project area. Additional survey is required.

What does the state or federal land manager, if any, say about historic properties present in the project area? (Attach letter if available.)

Several pre-contact and historic period archaeological sites have been documented within one mile of the proposed project area. The project area itself has not yet been surveyed but will be completed before any ground disturbing activities are started.

- What efforts, if any, would be reasonable to complete in determining the presence or absence of historic properties? As is Forest policy, the site will be surveyed and an archeological report will be submitted to SHPO before construction begins.

Qualified Forest Service personnel will survey the project area for historic properties following the standard procedures outlined in the *First Amended Programmatic Agreement Regarding Historic Property Protection and Responsibilities...* (2003), as agreed upon by the Arizona State Historic Preservation Office and Region 3 of the USDA Forest Service, among other parties. Forest Service archaeologists, range personnel, and the permittee will cooperate to insure that the project design is modified as necessary to insure that no historic properties will be affected by the proposed range installations.

IV. *In the applicant's opinion, which determination listed below is appropriate for this project based on the information presented above:*

- No impacts/ historic properties not present
- No impacts/ historic properties present. Describe how historic properties will be avoided or protected: If historic properties are located along proposed fence lines or trough locations the fence line or trough locations will be moved to avoid the sites.

The known abode structure and any other artifacts that may be found when the project area is surveyed further will be avoided by moving the fence or pipeline location to avoid the sites.

- Negative impacts to historic properties. Suggest treatment measures:
- Positive impacts to historic properties. Describe:

For SHPO Use Only - Record of Consultation

SHPO advises ADEQ on the completeness of identification effort, determination of effect, and any proposed treatment measures.

- ___ Concur with determination
- ___ Do not concur with determination
- ___ Request More Information
- ___ Recommend that the project area be surveyed to determine the presence or absence of historic properties by a qualified professional
- ___ Additional comments below:

Signed: _____

Date: _____