



GRANT AMENDMENT

Arizona Department of
Forestry and Fire
Management

1110 W. Washington, Ste 100
Phoenix, Arizona 85007
(602) 771-1400

Grant No: ABG 14-904

Town of Prescott Valley as fiscal agent for Upper Verde River Watershed Protection Coalition

Amendment No: 2

It is mutually agreed that the referenced grant agreement is amended as follows:

1. Pursuant to total compensation, section V. COMPENSATION AND MATCHING INVESTMENT: An additional \$12,464.00 of grant funds may be reimbursed for cost incurred by the Upper Verde Watershed Protection Coalition to support the project activities of the Drake Cement Co-Fire Tests described in the attached Scope of Work.

The new total grant compensation shall not exceed \$41,464.00.

All Other provisions shall remain in their entirety

Grantee hereby acknowledges receipt and acceptance of above amendment. Amendment only becomes effective once signed by both Grantee and Arizona Department of Forestry and Fire Management.

The above referenced Grant Amendment is hereby executed as of the final signature date below.

Grantee: **Town of Prescott Valley as fiscal agent for
Upper Verde River Watershed Protection
Coalition**

Grantor: **Arizona Department of Forestry
and Fire Management**

Signature

Date

Signature

Date

Authorized Signatory's Name and Title

Jeffery C. Whitney, State Forester

Scope of Work and Budget
Drake Cement Co-fire Tests
Modification to the ABG 14-904 Grant Agreement

The Upper Verde River Watershed Protection Coalition (UVRWPC) requests funding through the Arizona Biomass Enterprise grant program to support a planned co-fire at Drake Cement in November 2016.

Scheduled work is divided into two components:

1. A co-fire with Juniper chips sourced from Cross-U Ranch in Yavapai County, the site of one of the equipment demonstrations sponsored by the UVRWPC and Arizona Department of Forestry and Fire Management in early 2016.
2. A co-fire with bio-coal provided by Enginuity, Inc. in Mexico, Missouri. Material will be sourced from Missouri hardwoods.

Use of Funds:

Co-fire with Juniper chips

Machinery for on-site processing: Transport tracked Morbark 3200 grinder and loader from Dodd Equipment in Phoenix. Round-trip transportation cost = \$1,500

Processing material: Process stockpile of Juniper located on Cross U Ranch into wood chips. Approximately 100 tons of air-dried material on the Cross U Ranch was created as a by-product of the biomass demonstration project sponsored by the private landowner, ADFFM, and the Upper Verde River Watershed Protection Coalition (Coalition). The material will be loaded into roll-off 20 foot-long containers for shipping. Cost = \$1,500

Material Transport: 100-tons of chipped Juniper from the Cross-U Ranch to Drake Cement for the co-fire test. Drake Cement will pay for the cost of transportation at \$40/ton for 100 tons of material for a total reimbursement of \$4,000

Administration and supervision: Southwest Forestry Inc. will provide administrative and supervisory oversight to the project during the 3-week time period at a cost of \$1,500.

Total Project Cost: \$11,000

Total Grant Modification Request from ADFFM: \$3,500

Drake Cement Juniper Co-fire Test Process and Deliver 100 tons of Juniper Project Budget				
	Unit Cost	No. of Units	Unit Type	Total
Transport Grinder and Loader to/from site	\$ 1,500.00	1	round trip	\$ 1,500
Grinding and loading material	\$ 40.00	100	Tons	\$ 4,000
Operations and management - SFI	\$ 1,500.00	1	each	\$ 1,500
Total to SFI (paid by Coalition)				\$ 7,000
Total request from Wood Enterprise Grant				\$ 3,500
Tranport material to Drake (paid by Drake either direct to Best Pick Disposal (BPD) or to SFI as pass through to BPD)	\$ 40.00	100	Tons	\$ 4,000
Total Juniper Co-fire				\$ 11,000

Co-fire with bio-coal

The co-fire with bio-coal is scheduled during the same timeframe as Juniper chips and expected to occur over one week in mid to late November.

Drake Cement Bio-Coal Co-Fire Test
Project Costs

Activity	Cost
Fuel for testing	\$11,000.00
Enginuity project management	\$ 4,000.00
Shipping and freight	\$ 6,012.14
State Forestry – AZ interaction	\$ 1,000.00
Total Costs	\$22,012.14

Source of Funds

Drake Cement	\$ 9,000.00
Enginuity strategic partner discount	\$ 2,000.00
Enginuity in-kind (project management)	\$ 4,000.00
Biomass Enterprise grant	\$ 6,012.14
State Forestry – in-kind	\$ 1,000.00
Total Source of Funds	\$22,012.14

Project Deliverables from the Grant Modification:

The Coalition will work with the project engineer for Drake Cement to document results of the co-firing tests and make results available to ADFFM employees and the public. Some proprietary processes may not be available to the public. The co-fire is scheduled late November or early December. An outcome's report is expected by the end of 2016.

Identification of the Materials for the Co-fire Test:

Materials for the co-fire tests at Drake Cement will come from the stockpile located on the Cross U Ranch for Juniper chips, and Missouri hardwoods to produce bio-coal.

ADFFM Request:

Information below represents a request for a grant modification to the current UVRWPC Biomass Enterprise Grant with the Arizona Department of Forestry and Fire Management.

Juniper co-fire

The UVRWPC requests \$3,500, or thirty one (31) percent of the hard project costs. Remaining costs will be covered by the Coalition and designated as the fifty (50) percent match required for a Biomass Enterprise Grant.

Bio-coal co-fire

The UVRWPC requests \$6,012.14 or twenty seven (27) percent of the hard project costs to cover shipping of bio-coal from Mexico, Missouri to the Drake Cement facility in Paulden, Arizona. Total project costs are \$22,012.14. The remaining \$16,000 is designated as match for the Biomass Enterprise grant and will be met by Drake Cement and Engenuity, Inc.

UVRWPC Costs

The UVRWPC requests \$2,951 for project management and grant administration. Total UVRWPC costs are \$3,500 for Drake co-fire of Juniper chips plus \$2,951 for a total of \$6,451.00.

Total Arizona Department of Forestry and Fire Management request: \$12,463.14

TOTAL DIRECT PROJECT COSTS: \$35,963.14