Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
September 24, 2013
Agenda Item 18(j)

Applicant: City of Canon City, Colorado

Water Activity Name: Royal Gorge Wildfire Water Quality Impact and Protection Project – Emergency Mitigation, Stabilization, and Reclamation

Water Activity Purpose: Nonconsumptive

County: Fremont County

River Basin: Arkansas

Water Source: Arkansas River

Amount Requested: $460,940 (Statewide Account); $24,260 (Arkansas Basin Account)

Matching Funds: $437,500 cash (45%), $50,000 in-kind (5%)

Staff Recommendation
Staff recommends approval of up to $24,260 from the Arkansas Basin Account and $460,940 from the Statewide Account to fund the Royal Gorge Wildfire Water Quality Impact and Protection Project.

Water Activity Summary:
This project will mitigate potential impacts to Arkansas River water quality caused by the Royal Gorge Fire. The Arkansas River below the fire affected watershed is the main source of water for the City of Cañon City, multiple providers of potable water, and various irrigation ditch companies.

The July 11, 2013 Royal Gorge fire in the Pinion/Juniper covered hills surrounding the Royal Gorge immediately west of Cañon City resulted in extremely rapid fire growth and large areas of high vegetation mortality, eventually burning 3,218 acres of the City's Royal Gorge Park. The Royal Gorge Bridge attraction, which had substantial infrastructure, is included within the 715 acres to be addressed in this project. Mitigation, reclamation, and stabilization activities will take place only on the 715 acres that directly impact water quality draining to the river. Modeling indicates that runoff from the burned areas can be expected to increase 4-fold, and sediment yield at the mouth of the burned area is predicted to change from 0-.45 tons/acre/year (pre-fire) to 2.5 tons/acre/year (post-fire).

The Cañon City Water Treatment Plant raw water intakes (along with three major irrigation ditches) are located approximately 2 miles downstream from the burned area. The City's water treatment plant pumps directly from the river and has no raw water storage. The City has three days of summer water storage available if intakes are shut down. It is likely that diversions downstream of the fire will need to shut down during storm events. Emergency stabilization of severely burned drainages is necessary to eliminate the threat to water supply.

The objectives of this project are to arrest the threats to water quality within the Arkansas River by conducting mitigation, stabilization, and reclamation efforts in the fire affected area. WSRA funds will be used for seeding, hydro-mulching, and seedling planting.

Threshold and Evaluation Criteria
The application meets all four Threshold Criteria.

The application articulates how the project meets the Evaluation Criteria as summarized below:

Tier 1: Promoting Collaboration/Cooperation & Meeting Water Management Goals & Identified Needs:
This activity addresses multiple needs of multiple entities (City of Cañon City, four agricultural ditch companies, and impacts to water providers from the burn area downstream to Pueblo Reservoir). Entities represented within this application include providers of potable water (including the City of Cañon City, the Florence Regional Water Authority (serving not only Florence and the surrounding area, but the towns of Rockvale, Coal Creek, and Williamsburg), the Board of Waterworks Pueblo, Pueblo West, Colorado Springs Utilities and the Fountain Valley Authority. Other stakeholders include agricultural ditch companies, recreational users (rafting companies, fishermen, the Arkansas Headwaters Recreational Area, etc.), and communities downstream that rely on the river as their water source. Implementation of this project will preserve water quality and maintain existing water supplies in the Arkansas River. Runoff containing debris and sediment will be reduced.

Tier 2: Facilitating Water Activity Implementation:
Without the benefit of this grant funding, it will be impossible for the City to leverage enough funds through partners to accomplish the breadth of work that must be accomplished to protect the water resources of the Arkansas River.

The amount of matching funds garnered both through revenues of the City and the pledges/contributions received by multitudinous agencies, as well as the demonstrable in-kind contributions for this project, well exceed the minimum match and reflect the dedication and importance of this project.

Tier 3: The Water Activity Addresses Issues of Statewide Value and Maximizes Benefits:
The increase in sediment and debris to the river has the potential to impair aquatic habitat, displace storage space in downstream reservoirs (Pueblo Reservoir), and damage agricultural water delivery infrastructure. Stabilizing the burn area and reducing sediment inputs is of benefit to the State of Colorado. The project compliments the CWCB's Watershed Protection and Restoration Program.

Issues/Additional Needs:
There are no additional needs or issues.

Staff Recommendation:
Staff recommends approval of up to $24,260 from the Arkansas Basin Account and $460,940 from the Statewide Account to fund the Royal Gorge Wildfire Water Quality Impact and Protection Project.

All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform. In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

Reporting and Final Deliverable: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues. At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.

Arkansas Basin Roundtable
P.O. Box 1976
Colorado Springs, CO 80901

August 15, 2013

Mr. Chris Sturm
Stream Restoration Coordinator
Watershed and Flood Protection Section
Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman St., Room 721
Denver, Co 80203

Re: Royal Gorge Wildfire Water Quality Impact and Protection Project – Emergency Mitigation, Stabilization and Reclamation

Dear Chris:

Under separate cover you will receive a WSRA grant application for the Royal Gorge Wildfire Water Quality Impact and Protection Project – Emergency Mitigation, Stabilization and Reclamation. At the August 14, 2013, Arkansas Basin Roundtable meeting, the Roundtable agreed by consensus to approve this application for $24,260 in Basin Funds and $485,200 in Statewide Funds.

At the meeting, we discussed the importance of putting these mitigation measures in place quickly since the sediment from the burn area is traveling downstream past several municipal potable water intakes and into Pueblo Reservoir. Therefore, the Arkansas Roundtable would very much appreciate this grant request be heard at the September, 2013 CWCB meeting. Please do not hesitate to contact me if you have any questions.

Sincerely,

Gary Barber
Chair

c: Executive Committee, Ark Roundtable
Mr. Bob Hartzman, Canon City

SOUTHEASTERN COLORADO
Water Conservancy District
"Your investment in water"

August 7, 2013

Arkansas Basin Roundtable
Attention: Gary Barber, Arkansas Basin Roundtable Chairperson
P.O. Box 1976
Colorado Springs, CO 80901

Dear Chairperson Barber,

On behalf of the Southeastern Colorado Water Conservancy District (SECWCD), I am writing to urge you to support the efforts of the City of Cañon City and their Royal Gorge Wildfire Water Quality Impact and Protection Project. On June 11, 2013 and the days that followed the Royal Gorge Fire burned 3,218 acres. There is an urgent need for emergency mitigation, stabilization, and reclamation work to recover and restore the Arkansas River watershed areas. SECWCD is especially concerned about sediment loading occurring in Pueblo Reservoir due to soil stabilization problems caused from erosion of the burn scar. The process of restoring the burned watershed area will provide long term benefits by helping to maintain water quality and reducing sediment loading of the river especially during high intensity summertime thunderstorm events.

Support of this project by the Arkansas Basin Roundtable is greatly needed to assist the City of Cañon City in these endeavors. This project will benefit many water purveyors and their customers, mutual ditch companies and their agricultural users, recreational enthusiasts, and help protect the environment. SECWCD participates in the Voluntary Flow Management Program with the Bureau of Reclamation and Colorado Parks and Wildlife and views this project as a means to ensure good water quality for the rafting and fishing industries in the upper Arkansas River basin. SECWCD also allocates Fryingpan-Arkansas Project (Project) water to many municipalities and agriculture irrigation companies in the basin. SECWCD is concerned with the water quality impacts on Project water storage facilities and related issues that could affect the quality of water delivered to our Project water users.

31717 UNITED AVENUE • PUEBLO, CO 81001 • PHONE (719) 948-2400 • FAX (719) 948-0036
web site: www.secwcd.org

As Chairperson for the Arkansas River Basin Roundtable, you are more aware than most of how water projects can protect public health, protect the environment, and promote recreational activities that are vital not only to a community's long-term economic growth and stability, but also to others in the State of Colorado who rely upon the Arkansas River.

Please contact me at 719-948-2400 if you have any questions.

Sincerely,

James W. Broderick

James W. Broderick
Executive Director

CC:
Bob Hartzman, Water Superintendent

UPPER ARKANSAS
WATER CONSERVANCY
DISTRICT

August 5, 2013

Arkansas Basin Roundtable
Attention: Gary Barber, Arkansas Basin Roundtable Chairperson
P.O. Box 1976
Colorado Springs, CO 80901

Dear Mr. Barber;

On behalf of the Upper Arkansas Water Conservancy District, I wish to convey the support of the efforts of City of Cañon City and their Royal Gorge Wildfire Water Quality Impact and Protection Project. On June 11, 2013 and the days that followed we saw the Royal Gorge Fire burn 3,218 acres. The mitigation, stabilization and reclamation work to recover and restore the burn areas – vital water shed of the Arkansas River - is of great importance to us. The process of restoring a burned water shed area will have long term water supply benefits, including helping to maintain water quality and reducing sediment loading of the river especially during high intensity summertime thunderstorm events.

Support of this project by the Arkansas Basin Roundtable is greatly needed to assist the City of Cañon City in these endeavors and will benefit the entire Arkansas Basin. The Upper Arkansas Water Conservancy District is concerned with issues that can affect our ability to provide augmentation water and maintain storage space that may be threatened by the sedimentation run-off from the burn area.

As you are aware this proposed watershed protection project will protect public health, the environment, make future fire protection possible, and promote recreational activities that are vital not only to the Arkansas Basin's long-term economic growth and stability, but also to others in the State of Colorado who rely upon the Arkansas River.

Please contact me at if you have any questions.

Sincerely,

Ralph "Terry" Scanga
General Manager

CC:
Bob Hartzman, Water Superintendent
City of Cañon City

PHONE: 719-539-5425 • FAX: 719-539-7579 • P. O. BOX 1090 • SALIDA, COLORADO 81201

Board of Water Works
of Pueblo, Colorado

319 W. 4th Street • P.O. Box 400 • Pueblo, Colorado 81002-0400 • 719/584-0250

August 8, 2013

Arkansas Basin Roundtable
Attention: Gary Barber, Arkansas Basin Roundtable Chairperson
P.O. Box 1976
Colorado Springs, CO 80901

Dear Chairperson Barber,

On behalf of the Board of Water Works, I am writing to urge you and the Arkansas Basin Roundtable to support the efforts of the City of Cañon City and their Royal Gorge Wildfire Water Quality Impact and Protection Project. On June 11, 2013 and the days that followed, the Royal Gorge Fire burned more than 3,200 acres. The emergency mitigation, stabilization and reclamation work to recover and restore the Arkansas River watershed areas impacted by the fire is very important to the Board of Water Works and its customers. Restoring the burned watershed areas will have long term benefits including helping to maintain water quality and reducing sediment loading of the river especially during high intensity summertime thunderstorm events.

Support of this project by the Arkansas Basin Roundtable is greatly needed to assist the City of Cañon City in these endeavors and will benefit many other water purveyors and their customers, as well as agricultural users and recreational enthusiasts, and will help protect the environment. The Board of Water Works is concerned with issues that can affect our ability to provide an adequate supply of high quality water to the 108,000 people we serve.

As Chairperson for the Arkansas River Basin Roundtable, you are more aware than most of how watershed recovery and remediation projects such as this can protect public health and the environment while promoting recreational activities that are vital not only to a community's long-term economic growth and stability, but also to others in the State of Colorado who rely upon the Arkansas River.

In addition to urging the Arkansas Basin Roundtable to support the grant application of the City of Cañon City we are considering making a direct contribution to their project.

Please contact me at me at 719.584.0233 if you have any questions.

Sincerely,

Terry R. Book

Terry R. Book, Executive Director

cc: Bob Hartzman, Water Superintendent, City of Cañon City, 103 Tunnel Drive, Cañon City, CO 81212

COLORADO
DEPARTMENT OF NATURAL RESOURCES

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Royal Gorge Wildfire Water Quality Impact and Protection Project – Emergency Mitigation, Stabilization, and Reclamation

Name of Water Activity/Project

City of Cañon City, Colorado

Name of Applicant

Arkansas Basin Roundtable

Approving Basin Roundtable(s)
(If multiple basins specify amounts in parentheses.)

Amount from Statewide Account: $460,940

Amount from Basin Account(s): $ 24,260

Total WSRA Funds Requested: $485,200

Application Content

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Required Exhibits

A. Statement of Work, Budget, and Schedule
B. Project Map
C. As Needed (i.e. letters of support, photos, maps, etc.)

Appendices – Reference Material

1. Program Information
2. Insurance Requirements
3. WSRA Standard Contract Information (Required for Projects Over $100,000)
4. W-9 Form (Required for All Projects Prior to Contracting)

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCB). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCB staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCB website at: http://cwcb.state.co.us Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Greg Johnson – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
gregory.johnson@state.co.us

If you have questions or need additional assistance, please contact Greg Johnson at: 303-866-3441 x3249 or gregory.johnson@state.co.us.

Water Supply Reserve Account – Application Form
Revised December 2011

Part I. - Description of the Applicant (Project Sponsor or Owner);

1. Applicant Name(s): City of Cañon City, Colorado

Mailing address: P.O. Box 1460
Cañon City, CO 81215-1460

Taxpayer ID#: 84-1249973

Primary Contact: Bob Hartzman Position/Title: Water Superintendent

Email: bwhartzman@canoncity.org

Phone Numbers: Cell: 719-240-5281 Office: 719-269-9019

Alternate Contact: Rex Brady Position/Title: Parks Director

Email: rtbrady@canoncity.org

Phone Numbers: Cell: 719-371-2989 Office: 719-269-9028

2. Eligible entities for WSRA funds include the following. What type of entity is the Applicant?

☑ Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.

☐ Public (Districts) – authorities, Title 32/special districts, (conservancy, conservation, and irrigation districts), and water activity enterprises.

☐ Private Incorporated – mutual ditch companies, homeowners associations, corporations.

☐ Private individuals, partnerships, and sole proprietors are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.

☐ Non-governmental organizations – broadly defined as any organization that is not part of the government.

3. **Provide a brief description of your organization**

The City of Cañon City is a home-rule Colorado municipality of approximately 16,500+ citizens and a service area of approximately 44,000 citizens. Incorporated in 1872, the City's mission is committed to providing quality services for a diverse population. The City is the water provider for all citizens within its limits, as well as the outlying service areas, and transient population for a total of 34,800 within its service area. The City has managed several substantial grants on a bevy of projects, including federal, state, local, corporate, and foundation grants and the involved parties in this grant application have substantial successful grant administration experience. The City's current 2013 General Fund Budget is $11.8 million with the Water Enterprise budgeted at $6.4 million. The City relies heavily on a tourism industry and the resulting sales tax revenues, as well as the revenues received from the Royal Gorge Bridge Company (concessionaire who operates the attractions within the City's Royal Gorge Park on the City's behalf) to subsidize these budgets. With the June 11, 2013 wildfire that impacted the tourism economy of Cañon City and Fremont County as well as the destruction of most attractions at the Royal Gorge Bridge, both sources of revenues have seriously jeopardized the fiscal health of the City, making the much needed reclamation, mitigation, and stabilization of the burn scarred area in the park impossible without the aid of multitudinous agencies' assistance.

4. **If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.**

Not Applicable.

5. **Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract is included in Appendix 3. Please review this contract and check the appropriate box.**

☑ The Applicant will be able to contract with the CWCB using the Standard Contract

☐ The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

6. **The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.**

The citizens of the City of Cañon City, through a formal electoral process, have successfully and perpetually "de-Bruced" any grant funds received by the City of Cañon City, and as such, there are no limitations or impacts of TABOR on this grant application.

Part II. - Description of the Water Activity/Project

1. What is the primary purpose of this grant application? (Please check only one)

✓	Non-consumptive (Environmental or Recreational)
✓	Agricultural
✓	Municipal/Industrial
	Needs Assessment
	Education
✓	Other — Explain: Mitigation of water quality threats due to wildfire and to maintain and improve Watershed Health.

2. If you feel this project addresses multiple purposes please explain.

   The mitigation of downstream contaminants due to the fire will address not only the quality of water that is utilized by all providers of water from the point of the fire to Pueblo Reservoir, but it will also address the recreational use of the river by rafters, tubers, hikers, fishermen and naturalists alike.

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

	Study	✓	Implementation

4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

n/a	New Storage Created (acre-feet)
n/a	New Annual Water Supplies Developed, Consumptive or Non-consumptive (acre-feet)
n/a	Existing Storage Preserved or Enhanced (acre-feet)
54,440 lf/ 171,475 lf	Length of Stream Restored/Protected (linear ft.) ***NOTE: Restored water shed gulches /AK River from the point of the fire to Pueblo Reservoir.***
n/a	Length of Pipe/Canal Built or Improved (linear feet)
n/a	Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)
715	Area of Restored or Preserved Habitat (acres)
n/a	Other – Explain:

4. To help us map WSRA projects please include a map (Exhibit B) and provide the general coordinates below:

Latitude: 38.4133 Longitude: 105.4355

5. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSRA funding will be used for. A full **Statement of Work** with a detailed budget and schedule is required as **Exhibit A** of this application.

This project *involves the mitigation/stabilization/reclamation of threats to the water quality of the Arkansas River which is the main source of water for the City of Cañon City, multiple community providers of potable water along the Arkansas River to and including Pueblo Reservoir, and various irrigation ditch companies as a result of the Royal Gorge Wildfire.*

Background: *The July 11, 2013 Royal Gorge fire in the Pinion/Juniper covered hills surrounding the Royal Gorge immediately west of Cañon City resulted in extremely rapid fire growth and large areas of high vegetation mortality, eventually burning 3,218 acres of the City's Royal Gorge Park. The Royal Gorge Bridge attraction, which had substantial infrastructure, is included within the 715 acres to be addressed in this project. Mitigation, reclamation, and stabilization activities will take place only on the 715 acres that directly impact water quality draining to the river.*

Issues: *Modeling indicates that runoff from the burned areas can be expected to increase 4-fold, and soil erosion (sediment yield at the bottom of the hillslope) is predicted to change from 0-.45 tons/acre/year pre-fire to 2.5 tons/acre/year after. Debris, ash, and sediment all directly threaten the Arkansas River, and therefore the water quality and provision of water to users from this resource, as a result of the fire damage to this 715 acre area.*

The Cañon City Water Treatment Plant raw water intakes (along with three major irrigation ditches) are located approximately 2 miles downstream from the burned area. The City's water treatment plant pumps directly from the river and has no raw water storage. As such, only the tanks of finished water and that water held within the settling pond are available to our service area, providing only three-days of water to its customers if the intakes were shut down during the summer. As such, if no fire rehabilitation treatments are implemented, runoff from rains will cause the intakes to be shut down for various lengths of time and threaten water availability to the City's water customers. This degraded water quality can impact other water providers downstream from the burn area all the way to the Pueblo Reservoir. Emergency stabilization of severely burned drainages and the area is immediately necessary to eliminate the threat to the environment that, without quick action, could have severe adverse impacts to the environment, including increased sediment laden runoff, debris and rockfall into the river contributing to degraded water quality downstream. The water intakes of Cañon City, as well as several other agricultural diversions and water providers downstream will be impacted and would require those intakes to be shut down for the duration of the rain event or require additional treatment if the water is diverted in. Likewise, the rise in sediment that would reach the water facilities of Cañon City and other providers of water downstream to Pueblo Reservoir would effectively displace the amount of stored water with rising sediment that had been washed downstream from the burn area.

EMERGENCY MITIGATION, STABILIZATION, AND RECLAMATION ACTIVITIES OF THIS PROJECT ENTAIL THE FOLLOWING:

–**Site stabilization and cleanup of debris resulting from the fire** *has already begun. Forty-eight of the fifty-two structures at the Royal Gorge Bridge were burned, most of which were built and/or located directly along the rim of the gorge and posed the risk of dropping, blowing, or being washed into the Arkansas River directly below the rim. Burnt buildings, concrete, metal, the aerial tram, cables, random debris, and tons of ash have been removed from the rim, and the work is ongoing. This has been the highest priority to mitigate the most immediate threat to the river, and WSRA funding has not been involved in these efforts. No WSRA funds are anticipated for use in these endeavors.*

–**Check Structures:** *A minimum of 147 check structures will be constructed of logs or rocks in three watershed drainages which have eight sub-drainages within. Of the over 2,200 acres of watershed area, we will address 30% of the acres that need immediate treatment with these structures. They will stabilize channel gradient and store a small amount of sediment which carries surface flow only after storm events. These structures will prevent or reduce sediment inputs into perennial streams during the first winter or rainy season following the wildfire. No WSRA funding will be used to fund this portion of the project due to the significant urgency to get these dams in place to eliminate the highest risk for water quality impact. It is anticipated that these dams will be built prior to award and*

subsequent Notice to Proceed is received from WSRA.

--Seeding *will be aerial applied prior to areas planned for slash and hydro-axing. The seed will be covered with the mulch from hydro-axing, speeding the replacement of vegetation and leading to more litter on the ground, resulting in increased tortuosity in water flow paths, increased infiltration, and reduced runoff, thereby helping retain soil on site and reduce runoff resulting in reduced soil and debris movement to the Arkansas River.*

--Slash spreading - hydro-axing/mastication *of 715 acres to provide soil cover to moderate/high burn severity areas. This treatment reduces hill slope erosion by increasing ground cover with available onsite materials. Due to the terrain of this area, two methods to generate slash will be used. Hydro-ax/mastication type machinery will mulch the standing, burned trees onsite, generating surface roughness and helping break up any hydro phobic layers in the soil. The second method will be the utilization of hand crews to break down and drop burned trees, helping create micro-climates that aid in vegetation regeneration and slow runoff. It is anticipated that 700 acres will be able to utilize the hydro-axing method, while 15 acres will require hand treatment. NOTE: Certain stable burnt trees will be retained throughout the acreage to provide habitats for wildlife. These slash methods will help reduce the amount of runoff from the burn site and reduce ash and debris traveling downstream to the AK River. This work must begin as soon as possible to eliminate such grave threats. WSRA funding will be used to fund portions of the work that will occur after the award and subsequent Notice to Proceed is received from WSRA.*

--Seedling Planting: *Pinion pine and juniper seedlings will be planted in select locations throughout the burn area to help accelerate the return of trees to the site, provide for soil stabilization, provide a seed source for coming years, and add vegetative structure for wildlife. Seedlings are expected to be planted at a rate of 100 trees/acre and approximately 100 acres will be replanted. WSRA funds will be used for fund portions of the work after the award and subsequent Notice to Proceed is received from WSRA.*

Part III. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

   a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.[1]

   Nothing in the water activity planned in this project are in non-conformance with Section 37-75-102 CRS. The water activity is consistent with and shall not supersede, abrogate or otherwise impair water vested water rights or the allocation of water rights within Colorado.

   b) The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRTs evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. Note- If this information is included in the letter from the roundtable chair simply reference that letter.

   The Arkansas Basin Roundtable has attached a letter of approval of this project, which includes the above information.

[1] 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.[2] The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

This water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes and meets the basin roundtable's needs both consumptive and non-consumptive needs assessment.

Preventing sediment loading of the Arkansas River will help to maintain the water quality of the river and meet a non-consumptive need of the basin. If the water quality is degraded severely, water users may not be able to use the water at times. Maintaining water quality is so very important because stable water quality will be a benefit to all that use the river including water purveyors, agricultural users, fishermen, recreational enthusiasts, and naturalists.

Over a prolonged period of time the sediment will continue to migrate to the river. In time, (and given the proximity to Pueblo Reservoir) the sediment will settle in the reservoir and take up space that could otherwise be used for the storage of water (modeling indicates that runoff from the burned areas can be expected to increase four fold, and soil erosion (sediment yield at the bottom of the hillslope) is predicted to change from 0-.45 tons/acre/year pre-fire to 2.5 tons/acre/year after). This loss of storage space will be a loss of opportunity to store water as the water will go down stream.

If nothing is done the water supply gap may increase for two reasons. With continued sediment loading of the river the water quality will be degraded. This degradation can have an impact in the sense that there may be less water available to use due to the poor water quality. Secondly, valuable storage space may be taken up by sediment decreasing the ability to store the water and possibly increase maintenance costs due to the need to remove the sediment.

Planting of grass/seedlings will help to restore and improve the Watershed Health from its present condition. By restoring the soils the water will be retained instead of running off, soil migration will be lessened, re-vegetation of the ground cover will be aided and the return flows will be slowed. In turn a healthier watershed helps to maintain the supply of return flows in a consistent manner after precipitation events.

d) Matching Requirement: <u>For requests from the **Statewide Fund**</u>, the applicants is required to demonstrate a **20 percent** (or greater) match of the request from the Statewide Account. Statewide requests must also include a minimum match of **5 percent** of the total grant amount from Basin Funds. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the application was submitted to the CWCB. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in **Exhibit A** of this application)

[2] 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

Applicant's Match: The Project Budget includes a 50.1% match from the City and other sources and is a combination of both cash and in-kind, and includes funds expended or to be expended prior to the grant award and Notice to Proceed. The Project Budget reflects a grant request of 49.9% from the WSRA.

Applicant's Match	
In-kind:	$ 55,000
Cash (On-hand, expended or pledged)	$437,500
Statewide Account Fund Grant:	$485,200
TOTAL PROJECT	$977,700

2. For Applications that include a request for funds from the **Statewide Account**, describe how the water activity/project meets all applicable **Evaluation Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines and repeated below.) Projects will be assessed on how well they meet the Evaluation Criteria. **Please attach additional pages as necessary.**

Evaluation Criteria – the following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three "tiers" or categories. Each "tier" is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. WSRA grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.

Tier 1: Promoting Collaboration/Cooperation and Meeting Water Management Goals and Identified Water Needs

a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).

This activity addresses consumptive and non-consumptive needs of multiple entities (City of Cañon City, Fremont County, four agricultural ditch companies, and impacts to water providers from the burn area downstream to Pueblo Reservoir) as well as the needs of preservation and restoration of water quality that has been impacted by the burn area and destruction of the water shed areas subject of this grant. See attached letters of support from impacted entities; we are still in the process of obtaining these letters.

b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intra-basin or inter-basin needs or issues.

Entities represented within this application include providers of potable water (including the City of Cañon City, the Florence Regional Water Authority (serving not only Florence and the surrounding area, but the towns of Rockvale, Coal Creek, and Williamsburg), the Board of Waterworks Pueblo, Pueblo West, Colorado Springs Utilities and the Fountain Valley Authority. Other applicants include agricultural ditch companies including but not limited to the South Cañon, Hydraulic, Oil Creek, and Union ditches. Recreational users (rafting companies, fishermen, the Arkansas Headwaters Recreational Area, etc.); and generally all

communities along the river that rely on it for their water source, either for residential or commercial use or recreation.

By stabilizing and restoring the Watershed Health within the watershed area and mitigating the negative impact of erosion, sediment loading, and debris runoff, 100% of this project addresses the intra-basin needs and issues by protecting and preserving the major water source for both for drinking water providers, agricultural users, and recreation. This project will also prevent the accumulation of sediment in Pueblo Reservoir and other storage areas that would otherwise decrease current storage areas.

c. The water activity helps implement projects and processes identified as helping meet Colorado's future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable's basin-wide water needs assessment.

Through this project and the mitigation measures, both water quality and the existing water supply will be restored and maintained to the Arkansas River. Through stabilization and restoration measures, runoff containing debris and sediment flowing directly to the river will be reduced and protect the quality of water entering the Arkansas River.

Tier 2: Facilitating Water Activity Implementation

d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).

Without the benefit of this grant funding, it will be impossible for the City to leverage enough funds through any partners to accomplish the breadth of work that must be accomplished to protect the valuable water resources of the Arkansas River. As such, while the bare minimums may be accomplished, the entirety of the necessary work will simply not be accomplished, and likely never will, given the budgetary constraints of our community and the losses of revenues felt as an impact of this unanticipated fire.

e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

The amount of matching funds garnered both through revenues of the City and the pledges/contributions received by multitudinous agencies, as well as the demonstrable in-kind contributions for this project, well exceed the minimum match and reflect the dedication and importance of this project.

Tier 3: The Water Activity Addresses Other Issues of Statewide Value and Maximizes Benefits

f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.

Through implementing the water activity and protecting the Arkansas River the damages that are guaranteed due to the fire maybe mitigated and the agricultural communities that boundary the river through Cañon City and downstream to Pueblo Reservoir will be sustained. Heavily sediment laden waters can have an impact on agricultural users and their infrastructure by increasing ditch maintenance (removing/clearing debris and sediment in ditches) and in sprinkler systems (plugged piping/nozzles). Reducing agricultural user's infrastructure maintenance time may increase the availability of water for watering their crops and livestock in a timely manner and allow them to maximize the beneficial use of the water.

Environmental and Recreational issues will be addressed by the water activity work as well. Environmental issues of runoff and sediment loading identified in this application will be reversed. It is reasonable to

assume that the increase of debris within the river, and the increase of sediment in the water, can have a damaging effect on the fish habitats within the river and, as a major water source for the wildlife that populates the gorge, make an impact on easy access to water difficult for the variety of wildlife inhabitants.

The recreational uses of the river (rafting, fishing, tubing, kayaking, etc.) will be improved and restored through the water activity work. The maintaining of water quality and restoration of Watershed Health measures outlined are the goals of this project.

g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.

This water activity does assist in the administration of compact-entitled waters by maintaining water quality and protecting from the loss of storage space so that maximum utilization of state waters is maintained.

h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.

The Department of Wildlife cannot identify any threatened or endangered wildlife species in this area.

i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.

Given the extent of the damage that will be done to the water quality of the Arkansas River, from the burn area downstream to Pueblo Reservoir, and the significant number of agencies, citizens, and activities that depend upon the river and the reservoir, this project provides a high level of benefit to the state of Colorado as it relates to the amount of grant funds requested.

j. The water activity is complimentary to or assists in the implementation of other CWCB programs.

One of the major goals of the Colorado Water Conservation Board is preservation and restoration of environmental aspects that affect water quality. This includes the protection and restoration of watersheds. This project clearly addresses the restoration of watershed areas surrounding and draining to the Arkansas River, as well as the reduction of debris and sediment that will be a sure result of this catastrophic fire in areas that are upstream and directly border the Arkansas River. This project will reduce flood hazards, stabilize and restore watershed channels, and reduce erosion, three of the goals of watershed protection and restoration. Likewise, these activities will also reduce the amount of increased sediment that could displace water storage area within Pueblo Reservoir.

Part IV. – Required Supporting Material

1. **Water Rights, Availability, and Sustainability** – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights, and water rights issues, and the name/location of water bodies affected by the water activity.

   The water source to be affected by this project is the Arkansas River, which therefore includes the agricultural ditch intakes and water provider intakes downstream from the burn area to Pueblo Reservoir. At a minimum, this includes 171,475 linear feet of the Arkansas River.

2. **Please provide a brief narrative of any related studies or permitting issues.**

   Since the fire on June 11, the City of Cañon City, in conjunction with the Bureau of Land Management, has completed the "Royal Gorge Fire Emergency Stabilization and Burned Area Rehabilitation Plan." In addition, in conjunction with Natural Resources Conservation Service the "Estimated Runoff & Peak Discharge for Watersheds Affected in the Burn Area" analysis has been completed of the watershed areas identified within the 715 acre area.

   The City has consulted with other appropriate agencies and has been informed that there will be no requirement for floodplain permits, no Army Corps of Engineer permitting, or any other permits that would be required to accomplish the scope of work included within this grant application. There are no permits that would delay any of the work anticipated and described herein.

3. **Statement of Work, Detailed Budget, and Project Schedule**

   The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. **Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.** All WSRA funds are disbursed on a reimbursement basis after review invoices and appropriate backup material.

   Please provide a detailed statement of work using the template in Exhibit A. Additional sections or modifications may be included as necessary. Please define all acronyms and include page numbers.

   Please see Exhibit A

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

The above statements are true to the best of my knowledge:

Signature of Applicant: _____

Print Applicant's Name: *Doug D. Dotson, City Administrator, City of Cañon City*

Project Title: *Royal Gorge Wildfire Water Quality Impact and Protection Project – Emergency Mitigation, Stabilization, and Reclamation*

Return an electronic version (hardcopy may also be submitted) of this application to:

Greg Johnson – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
gregory.johnson@state.co.us

Exhibit A

Statement of Work

WATER ACTIVITY NAME - *Royal Gorge Wildfire Water Quality Impact and Protection Project – Emergency Mitigation, Stabilization, and Reclamation*

GRANT RECIPIENT – *City of Cañon City*

FUNDING SOURCE – *Water Supply Reserve Account/City Match & In-Kind*

INTRODUCTION AND BACKGROUND

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

On June 11, a wildfire swept through the City of Cañon City's Royal Gorge Park. By the time the fire was contained, 3,218 acres had burned. Given the location of the fire, watershed areas that drain to the Arkansas River were substantially impacted by the contiguous 715 acres of burn scar subject of this grant. The Royal Gorge Bridge attraction, included within this acreage, also burned, with infrastructure located immediately upon the rim of the gorge on both the north and south side threatening the fall of debris directly into the river. Several rain incidents have occurred since the fire, demonstrating significant negative impact to water quality through falling rock, run-off of sediment caused by significant erosion, and debris wash down the water sheds and into the river. The Cañon City water treatment plant intakes (along with three major irrigation ditches) are located approximately 2 miles downstream from the burned area. Water purveyors bordering the river from the burn area to Pueblo Reservoir are negatively impacted by the threat of this sediment, debris, and water quality issues. Storage of water facilities downstream are significantly threatened with the possibility of displacement of water storage area by sediment.

OBJECTIVES

List the objectives of the project

The objectives of this project are to arrest and mitigate the threats to water quality within the Arkansas River by conducting mitigation, stabilization, and reclamation efforts upstream as a result of the Royal Gorge fire. It is important to note that much of this work must begin immediately, and there is urgency to that work which will be performed utilizing WSRA funds. As such, there is little involvement of Youth Corp or other volunteer groups, all of whom we've contacted have identified that their availability is not until late fall this year or early spring next year. We will be utilizing these types of crews to help with the stabilization and reclamation of the balance of the 3,218 acres that burned within the park.

TASKS

Provide a detailed description of each task using the following format

TASK 1 – Site stabilization and cleanup of debris resulting from the fire.

Description of Task

- *Remove debris from the ridge of the gorge as a result of the complete destruction of 48 structures and other facilities at the Royal Gorge Bridge attraction on the rim area.*

Method/Procedure

- *Utilizing contractors, burnt buildings, concrete, metal, the aerial tram, cables, random debris, and tons of ash have already been removed from the rim, and the work is ongoing.*
- *Waddles and barriers have been placed to attempt to eliminate the wash/blow/fall of this debris over the ridge and directly into the Arkansas River.*
- *Given the urgency of this task, contractors are being utilized for this element of the project.*

Deliverable

From the date of contract/notice to proceed:

- *Before and after photos, and photos of the progress throughout this task.*
- *Written reports, with specific detail of this task, every six months, including percentage complete, major issues arise, and corrective action taken to address issues.*
- *Copies of invoices, dump receipts, expense reports and in-kind tracking reports for this task.*

TASK 2 – Construction of 147 check structures

Description of Task

One hundred forty-seven check structures will be constructed of logs or rocks from immediate burn site contiguous to and within the drainage channels that collect runoff from the three impacted watershed drainage areas.

Method/Procedure

- *Trees (felled or to be felled), brush and rocks located immediately within proximity of the location of each check structure will be used to build check dams within the drainage channels.*
- *The location of these structures has been determined based upon the reports and studies that have been conducted since the fire (referenced elsewhere in this application) and successful practices of other burn area modeling.*
- *Generally, in high run off areas and the drainage ways, check dams will be constructed every 50-200 feet, though more or less may be determined in each watershed based on slope of terrain.*
- *Though capable of doing so, there are no available Youth Corps groups until May, 2014. The skills necessary to construct these structures are not those that are possessed by the "typical" volunteer groups (boy scouts, etc.). Given the urgency of this task, a contractor has been hired to build these structures.*

Deliverable

From the date of contract/notice to proceed:

- *Before and after photos, and photos of the progress throughout this task.*

- *Written reports, with specific detail of this task, every six months, including percentage complete, major issues arise, and corrective action taken to address issues.*
- *Copies of invoices, dump receipts, expense reports and in-kind tracking reports for this task.*

TASK 3 – Seeding

Description of Task

Seed will be spread aerially or hand spread throughout the acreage subject of this grant

Method/Procedure

- *Two methods:*
  - *Generally, it has been determined that the best method to apply this seed will be through aerial drop (700 acres), given the rugged terrain of the area.*
  - *Given the topography of some areas, hand seeding may be required on a limited basin (15 acres).*
- *A seed mixture has been identified to provide for immediate germination to stabilize soils and avoid growth of noxious weeds and allow establishment of native grasses long term.*
- *Given the urgency of this task, the skills and equipment necessary for the aerial seeding, and the lack of Youth Corp crews, a contractor will be hired to perform this work.*

Deliverable

From the date of contract/notice to proceed:

- *Before and after photos, and photos of the progress throughout this task.*
- *Written reports, with specific detail of this task, every six months, including percentage complete, major issues arise, and corrective action taken to address issues.*
- *Copies of invoices, expense reports and in-kind tracking reports for this task.*

TASK 4 – Slash Spreading – Hydro-axing/mastication of 715 acres

Description of Task

There are 715 acres subject of this grant. Throughout that area, slash spreading and hydro-axing will take place to provide soil cover to moderate/high burn severity areas.

Method/Procedure

- *715 acres will be slash cut/spread and/or hydro-axed.*
- *Two methods to generate slash will be used:*
  - *Hydro-ax/mastication type machinery:*
    - *Mulch standing, burned trees onsite, generating surface roughness and helping break up any hydro phobic layers in the soil.*
    - *Cover seed that will have been aerial spread (above) to help seed germination.*
    - *700 acres will receive this treatment based on terrain topography.*
  - *Hand slashing:*
    - *Crews will break down and drop burned trees, helping create micro-climates that aid in vegetation regeneration, slow runoff and promote seed germination.*

- *15 acres will receive this treatment due to terrain topography.*

- *Targeted trees and vegetation will be marked and maintained to ensure habitat for the wildlife that inhabits the area.*
- *Given the urgency of this task and unavailability of Youth Corps crews, a contractor will be hired to perform this work.*

Deliverable

From the date of contract/notice to proceed:

- *Before and after photos, and photos of the progress throughout this task.*
- *Written reports, with specific detail of this task, every six months, including percentage complete, major issues arise, and corrective action taken to address issues.*
- *Copies of invoices, expense reports and in-kind tracking reports for this task.*

TASK 5 – Seedling Planting

Description of Task

- *Pinion pine and juniper seedlings will be planted in select locations throughout the burn area. To accelerate the return of trees to the site, provide for soil stabilization, provide a seed source for coming years and add vegetative structure for wildlife.*

Method/Procedure

- *100 seedlings will be planted per acre of land to be planted.*
- *100 acres will be planted with seedlings.*
- *Volunteers and/or Youth Corp crews will be utilized to plant these seedlings.*

Deliverable

From the date of contract/notice to proceed:

- *Before and after photos, and photos of the progress throughout this task.*
- *Written reports, with specific detail of this task, every six months, including percentage complete, major issues arise, and corrective action taken to address issues.*
- *Copies of invoices, expense reports and in-kind tracking reports for this task.*

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

BUDGET

Task	Lump Sum Cost	Funding Sources			
		In-Kind CofCC	* Cash Match RGBCo	** Cash Match CofCC	WSRA Funds
#1 – Site stabilization Needs/Clean Up	$387,500		$387,500		
#2 – Check Structures	$29,400		$ 25,000	$ 4,400	
#3 – Seeding					
-Aerial drop (Labor/Equip) (700acres@$40/acre)	$28,000			$20,600	$ 7,400
-Hand spread (Labor/Equip) (15acres@$440/acre)	$6,600				$ 6,600
-Seed Product (715 acres x $110/acre)	$78,650				$ 78,650
#4 – Slash – Hydro-axing/hand slash					
-Hydro-axing (700 acres @ $500)	$350,000				$350,000
-Hand-slashing (15 acres @ $750/acre)	$11,250				$ 11,250
#5 – Seedling Planting					
100 acres/100 seedling/$1/seedling	$10,000				$ 10,000
Labor (Youth Corps: 3 weeks X $7,100/week)(320 man hrs/week) (Oversight by City personnel)	$21,300				$ 21,300
Over-site of project (1,041 hrs @ $48)	$50,000	$50,000			
BLM Royal Gorge Fire Emergency Stabilization & Burned Area Rehabilitation Plan	$5,000	$ 5,000			
Applicant Sub-totals		$55,000	$412,500	$25,000	
Totals	$977,700	$492,500			$485,200
		50.4%			49.6%

* This cash match is from the City of Cañon City's partner/concessionaire, the Royal Gorge Bridge Company (RGBCo.)

** This cash match is from the City of Cañon City (CofCC)

SCHEDULE

Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

Task	Start Date	Finish Date
1 – Site Stabilization	June 17, 2013	August 23, 2013
2 – Check Structures	August 12, 2013	October 31, 2013
3 – Seeding	November 1, 2013	January 2014
4 – Slash/Hydro-ax	November 1, 2013	January 2014
5 – Seedling Planting	May 2014	June 2014
6 – Final Project Documentation		July 31, 2014

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

Appendix 1
Reference Information

The following information is available via the internet. The reference information provides additional detail and background information.

- Water Supply Reserve Account main webpage:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/main.aspx
- Water Supply Reserve Account – Basin Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx
- Water Supply Reserve Account – Statewide Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/StatewideWaterSupplyReserveAccountGrants.aspx
- Colorado Water Conservation Board main website:
  - http://cwcb.state.co.us/
- Interbasin Compact Committee and Basin Roundtables:
  - http://cwcb.state.co.us/about-us/about-the-ibcc-brts/Pages/main.aspx/Templates/BasinHome.aspx
- House Bill 05-1177 – (Also known as the Water for the 21st Century Act):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318
- House Bill 06-1400 – (Adopted the Interbasin Compact Committee Charter):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911
- Senate Bill 06-179 – (Created the Water Supply Reserve Account):
  - http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911
- Statewide Water Supply Initiative 2010:
  - http://cwcb.state.co.us/water-management/water-supply-planning/Pages/SWSI2010.aspx

Appendix 2
Insurance Requirements

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed $25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

13. INSURANCE

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in **§13(B)** with respect to sub-Grantees that are not "public entities".

B. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: **(a)**$1,000,000 each occurrence; **(b)** $1,000,000 general aggregate; **(c)** $1,000,000 products and completed operations aggregate; and **(d)** $50,000 any one fire. If any aggregate limit is reduced below $1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of $1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§13**.

Appendix 3
Water Supply Reserve Account Standard Contract Information

NOTE: The standard contract is required for WSRA projects that exceed $100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

The standard contract is available here under the header "Additional Resources" on the right side: http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx

Royal Gorge Fire Emergency Stabilization & Burned Area Rehabilitation Plan

Part 1 - Background

The Royal Gorge Fire started on June 11, 2013 in the Piñon/Juniper covered hills surrounding the Royal Gorge immediately west of Cañon City, Colorado. The weather during this period was very windy with record heat in an area that has endured prolonged drought and contained extensive beetle killed vegetation. These conditions resulted in extremely rapid fire growth and large areas of high vegetation mortality. Most of the fire growth occurred in one day and it was declared contained at 3,218 acres on June 16th. Table 1 shows the acreage of the fire by ownership.

Table 1- Effected Land Ownership/Management

Land owner/manager	Acres Affected
City of Cañon City	2,165
Private	561
Bureau of Land Management	501

Overall, even though the fire resulted in a large percentage of high vegetative mortality, it appears that the rapid movement and little ground fuel of the area the fire resulted in mostly moderate soil burn severity. Table 2 shows the respective soil burn severity. The degree and extent of water repellent (hydrophobic) soils is largely unknown due to limited collection of field data. However, limited observations indicate no or little water repellency in the burned soils. Water repellent soils are caused when fires burn forest littler and waxes in the litter are released causing water to runoff rather than infiltrate. Fire induced water repellency is often cited as a leading factor in post-fire runoff and erosion. Modeling indicates that runoff from the burned areas can be expected to increase four fold, and soil erosion (sediment yield at the bottom of the hillslope) is predicted to change from 0-.45 tons/acre/year pre-fire to 2.5 tons/acre/year after.

Table 2 – Soil Burn Severity within the Royal Gorge Fire

Soil Burn Severity	Acres	Percent of the Fire Area
Unburned	387	12%
Low	613	19%
Moderate	2195	68%
High	32	1%

As stated above, most of the fire was located on lands owned by the City of Cañon City and burned 48 of the 52 structures within the Royal Gorge Bridge and Park. Four main resource

concerns related to the fire have been identified at this time. The first concern is that the Cañon City Water Treatment Plant intakes are located approximately 2 miles downstream from the burned area. Downstream of the Cañon City intake is the City of Florence's intake. Beyond Florence is the Pueblo Reservoir that supplies water to several entities including Board Water Work Pueblo, Pueblo West, Colorado Springs Utilities, and Fountain Valley Authority. In the Cañon City area there are 3 major irrigation ditches including the Hydraulic Ditch, South Cañon Ditch, and the Oil Creek Ditch. Other irrigation ditches that could be impacted are the Fremont Ditch and the Union Ditch.

The Cañon City Water Treatment plant is a run of the river operation where water is pumped directly from the river to a small settling pond, then to the treatment plant. During most summertime demands, there is less than a three to four day supply of water for the city in storage. It is expected that if no fire rehabilitation treatments are implemented and summertime thunderstorms bring rain to the burn areas there will be an increase in runoff carrying sediment, ash and debris. The runoff will cause the intake to be shut down to avoid diverting the poor quality of water into the treatment system for various lengths of time. Heavy flows may increase the risk of inundating the intake and plugging it with debris and threaten the water availability to the city.

The second concern is the stability of slopes and drainages leading into the Royal Gorge could impact the railroad and river users below. The canyon will be subject to increase rock falls that may restrict the travel through the canyon on the river by rafters or by tourists on the train.

The third concern identified is the overall aesthetics and visual resources of the area. The Royal Gorge Park and surrounding land is a major economic driver of the local economy. It is anticipated that great efforts will be made to make the area as aesthetically pleasing to visitors as possible and maintain the areas viewshed. Finally, several historic properties that were burned in the fire are now in various states of disrepair.

It is expected that most of the soil stability issues will be worse in the first summer after the fire (due to reoccurring, monsoonal rains) and gradually decrease over time as ground cover returns. Overall, it should be expected that most impacts downstream of the fire will last less than five years with grass and shrubs replacing the burned piñon/juniper trees. The return of tree cover is expected to take 100+ years if no planting takes place. The Parkdale Canyon Fire immediately west of the Royal Gorge Fire is a good representation of how recovery is expected to look.

Part 2 - Issues

Issues related to the impacts caused by the Royal Gorge Fire are split into two categories. The first category is the emergency stabilization issues that are immediate threats to the environment that without quick action could have severe adverse impacts to the human and/or natural environment. An example of this type of threat would be flooding contributing to a degraded water quality downstream. The second category is the burned area rehabilitation issues. These

issues are impacts caused by the fire that are not immediate threats to the environment, but should be addressed to help the area recover to close to pre-burn conditions. Examples of these treatments are tree planting and fence reconstruction.

Emergency Stabilization Issues

1- Human Life and Safety Issue 1 – Water Quality/ Debris Flows - Threats to people below and downstream of the burn area exists where severely burned drainages are expected to produce increased runoff and debris. Throughout the entire burned area, the soils are severely susceptible to erosion and transport due to their sandy texture. Even though infiltration rates appear to be unaffected by the fire, the loss of litter cover is expected to generate increased runoff and erosion effecting downstream private lands. Natural Resources Conservation Service soil classification for soils within the burn perimeter rate the soils as being highly susceptible to damage following fire due to severe water and wind erosion potential because of their sandy nature and rock content. Water intakes for the city and several other agricultural water diversions are located within two miles of the burned area. The debris and suspended sediment load anticipated to come from the fire area, if no soil stabilization treatments are implemented, is expected to require that the water intakes be shut down for the duration of the rain event and/or require extra treatment.

2- Human Life and Safety Issue 2 – Hazard Trees and Burned Facilities – The Royal Gorge Park had extensive infrastructure, both within the main park attraction area and adjacent city picnic/camping property. It is expected that the area will still have high visitation and people will be in the burn area. Hazard trees that could fall are located along roadways, trails, picnic areas and campgrounds. In addition, facilities within the park burn and are need of stabilization. Examples include burned outhouses that left large holes and the burned tram that left cables throughout the gorge. Some action has already been taken, such as fencing people away from immediate danger (outhouse holes) and removing the tram materials from the canyon bottom so that raft and train traffic could resume.

3- Human Life and Safety Issue 3 – Rock Fall - In addition to the water quality issues expected to arise, safety issues are possible as a result of increased rockfall/debris flows into the Arkansas River that flows through the Royal Gorge. The Royal Gorge is heavily used by rafters and the Royal Gorge Route Railroad, a scenic, passenger train, resulting in many people at the bottom of the canyon. Due to the loss of vegetative cover and expected increases in erosion, more frequent rock/debris movement can be expected, especially following and during precipitation events.

4- Burned Area Rehabilitation Issue 1 – Visual Resources/ Visitor Impressions – The Royal Gorge Park attracts on average 320,000 visitors a year from around the world. The overall impression that the visitor gets upon approaching, staying at, and leaving the park is important to maintaining the overall visitor experience and the parks reputation, as well as contributions to the local economy of the City of Cañon City.

5- Burned Area Rehabilitation Issue 2 – Historical Resources – The Royal Gorge area is rich in historical resources. One of the historical items is the old water supply pipeline to the City of Cañon City. This wooden pipeline was a several mile long pipeline that hung in the canyon above the river. The way the pipeline was constructed had metal bands every few feet holding the wood together similar to a barrel. The fire burned much of this pipeline and the metal bands are now scattered along the river. There is concern that over time these bands will work their way into the river and become safety hazards to river users.

Part 3 – Treatments

Slash Spreading/Hydro-ax
Slash spreading provides soil cover to moderate and high burn severity areas. This treatment is designed to reduce hillslope erosion by increasing ground cover with available onsite materials. The slash generated by this treatment would be generated in one of two ways. The first would be to utilize a hydro-ax/mastication type machine to mulch the standing, burned trees onsite. This would help generate surface roughness, help break up any hydro phobic layers in the soil, cover any seeds applied and provide a mulch to help seed germination. The second method would be to simply utilize hand crews to break down and drop burned trees thereby helping create micro-sites that aid in vegetation regeneration and slow runoff.

This treatment would help reduce the amount of runoff from the burn site thereby reducing the amount of ash and debris traveling downstream to the Arkansas River and nearby water intakes. These treatments, especially the mechanical methods, are limited by terrain type. Approximately 700 acres have been identified as being suitable for mechanical treatment and 15 acres for hand treatment.

Small Check Structures
Small structures would be built in smaller (zero and first order channels) made of logs or rocks designed to stabilize channel gradient and store a small amount of sediment which carries surface flow only after storm events. These structures are used to prevent or reduce sediment inputs into perennial streams during the first winter or rainy season following a wildfire.

This treatment would function by decreasing water velocity and detaining sediment laden surface runoff long enough for courser sediments to deposit behind check dams. Decreased water velocity also reduces down cutting in ephemeral channels. This treatment is designed to help reduce the amount of ash, rock and other debris traveling downstream to the Arkansas River and nearby water intakes. Approximately 147 of these types of structures could be constructed in 8 drainage channels leading into the Royal Gorge.

Seeding
Seed would be applied prior to areas planned for the slash spreading treatment. This treatment will speed up the replacement of vegetation and lead to more litter on the ground resulting in increased tortuosity in water flow paths, increased infiltration, and reduced runoff, thereby,

helping retain soil on site and reduce runoff resulting in reduced soil and debris movement to the Arkansas River.

Species	Seeding Rate (PLS/Acre)
Western wheatgrass	6.4
Sideoats Gramma	3.64
Sand dropseed	.02
Triticale	20

Seedling Planting
Piñon pine and juniper seedlings would be planted in select locations throughout the burn area to help accelerate the return of trees to the site, provide a seed source for coming years, add vegetative structure for wildlife, and aid in adding visual texture to the landscape in areas that will largely be converted to grassland for the foreseeable future.

Seedlings are expected to be planted at a rate of 100 trees/acre with a 25% survival rate resulting in 25 trees/acre. The size of this treatment would be variable depending on funding, labor and suitable areas. It is anticipated that no more than 100 acres would be treated.

Hazard Tree Falling
Trees that pose a falling threat to park visitors, mainly along roads, trails and picnic areas, will be fallen and the slash spread on site.

Site Stabilization/cleanup of debris resulting from the fire
Stabilization and/or the cleanup of debris that is a result of the fire would be conducted where appropriate. Specifically, debris associated with the wooden pipeline and other structures (outhouses) burned in the fire would be removed or stabilized from further degradation where necessary to ensure public safety.

Signs/Public Education
Conditions within the gorge should be monitored and if increased rockfall is observed, the public will be notified through various methods. Signs should be posted, if conditions warrant, warning the public of potential hazards associated with burn areas. This could include:

- Warning park users of flood threats.
- Warning park users of tree fall threats.
- Inform park users of the general conditions of the area.
- Warning rafters of rock fall potential, especially following or during precipitation events

It is estimated that up to 15 signs would be necessary.

Costs
Slash Spreading/Hydro-ax/mastication

Current costs for mechanical mastication treatments on unburned sites ranges between $250 and $400/acre. Hand treatments generally run in the $100/acre range.

Small Check Structures
It is estimated that the cost of building small check structures using contract labor would be approximately $200/structure. Up to 147 structures may be necessary.

Seeding
Based on current vendor seed pricing, seed would cost approximately $110/acre. Application of the seed is estimated to be $40.00 acre for aerial application.

Seedling Planting
Seedlings can be purchased from the Colorado State Forest Service for $1.00/each. Utilizing volunteer labor the costs of seedling planting would be $100/acre. This treatment would be applied to 100 acres and cost $10,000.

Site Stabilization/Cleanup of Debris/Hazard Tree Falling/Barrier Construction
Site stabilization including cleanup of debris located on the rims (north and south) of the canyon walls will be necessary to prevent the debris from being blown down the canyon walls and into the river. This includes securing and removing the aerial tram car located on the north side of the canyon. Depending on the extent of work required, it is anticipated that this treatment could cost up to $25,000.

Barrier Construction /Signs/Public Education
The cost of a 20"x24" aluminum sign is approximately $100 resulting in a cost of up to $1,500.

Table 3 – Proposed Treatments and Costs

Treatment	Cost
Slash Spreading/Hydro-ax/mastication	$361,250
Small Check Structures	$29,400
Seeding	$113,250
Seedling Planting	$10,000
Site Stabilization/Hazard Tree Falling/Cleanup of Debris	$25,000*
Signs/Public Education	$1,500
Total	**$540,400**

*Site stabilization cost estimate does not include spending to date for tram stabilization and other work already accomplished.

Figure 1- Effected Land Ownership/Management

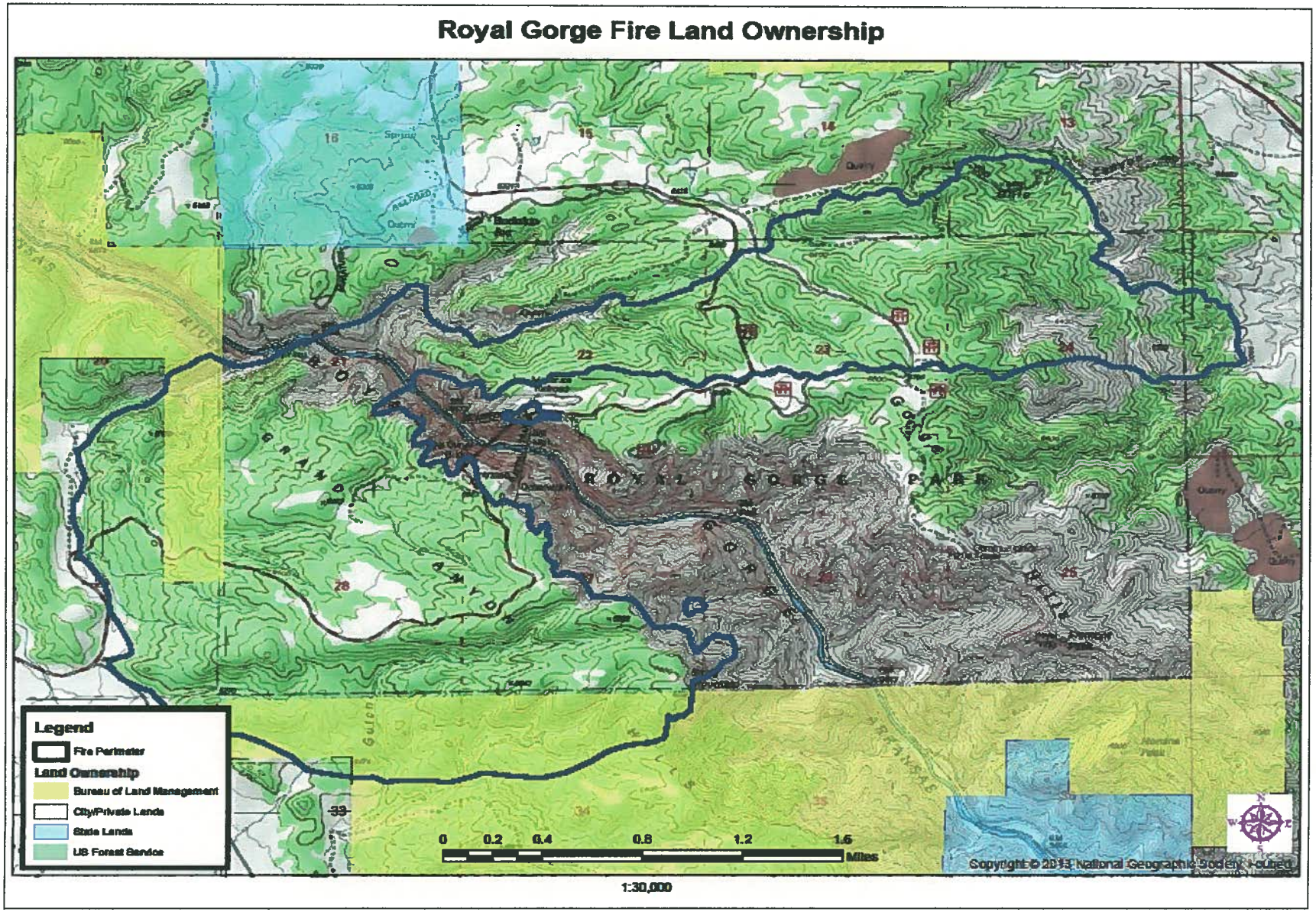


Figure 2 - Royal Gorge Fire Soil Burn severity

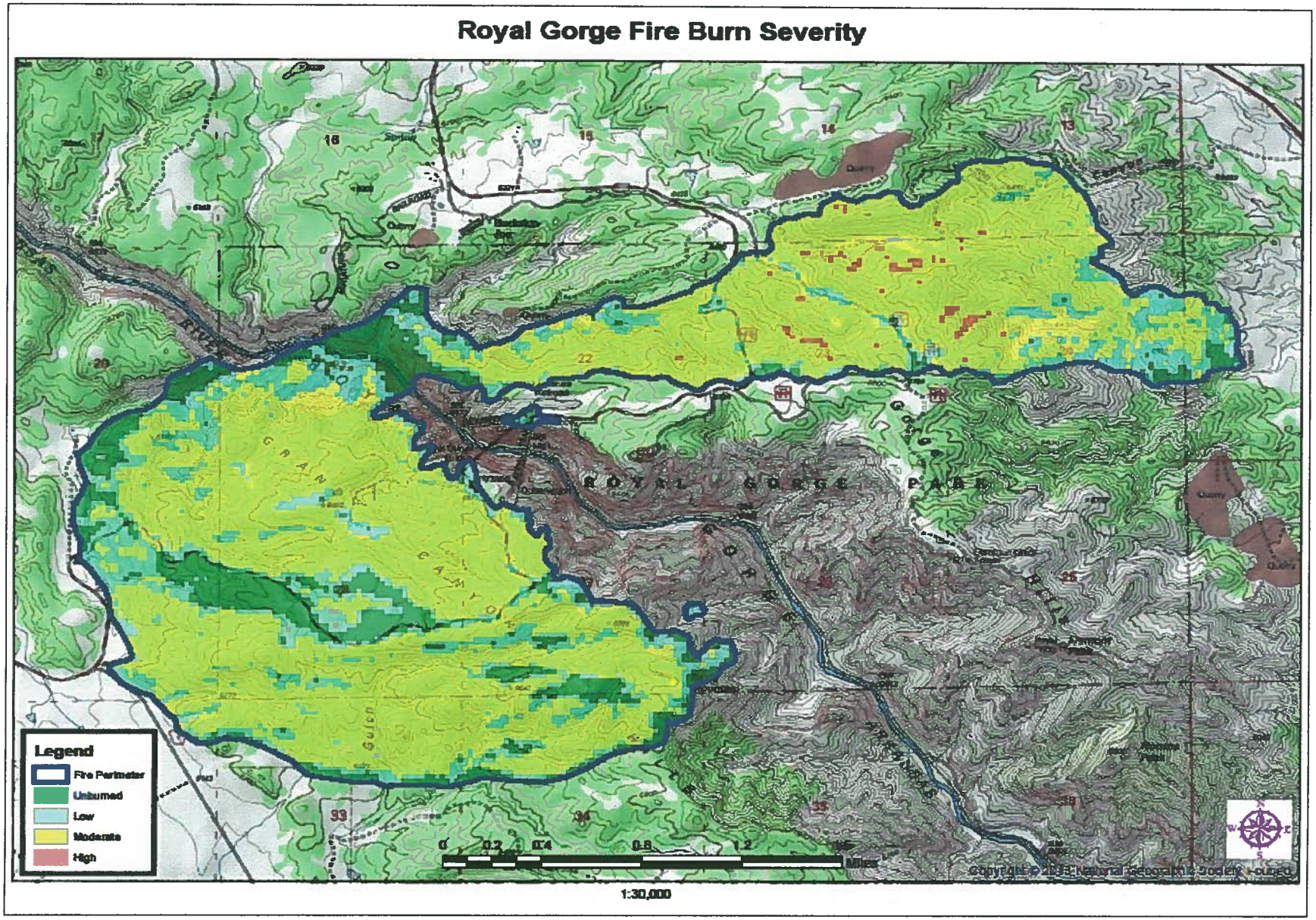
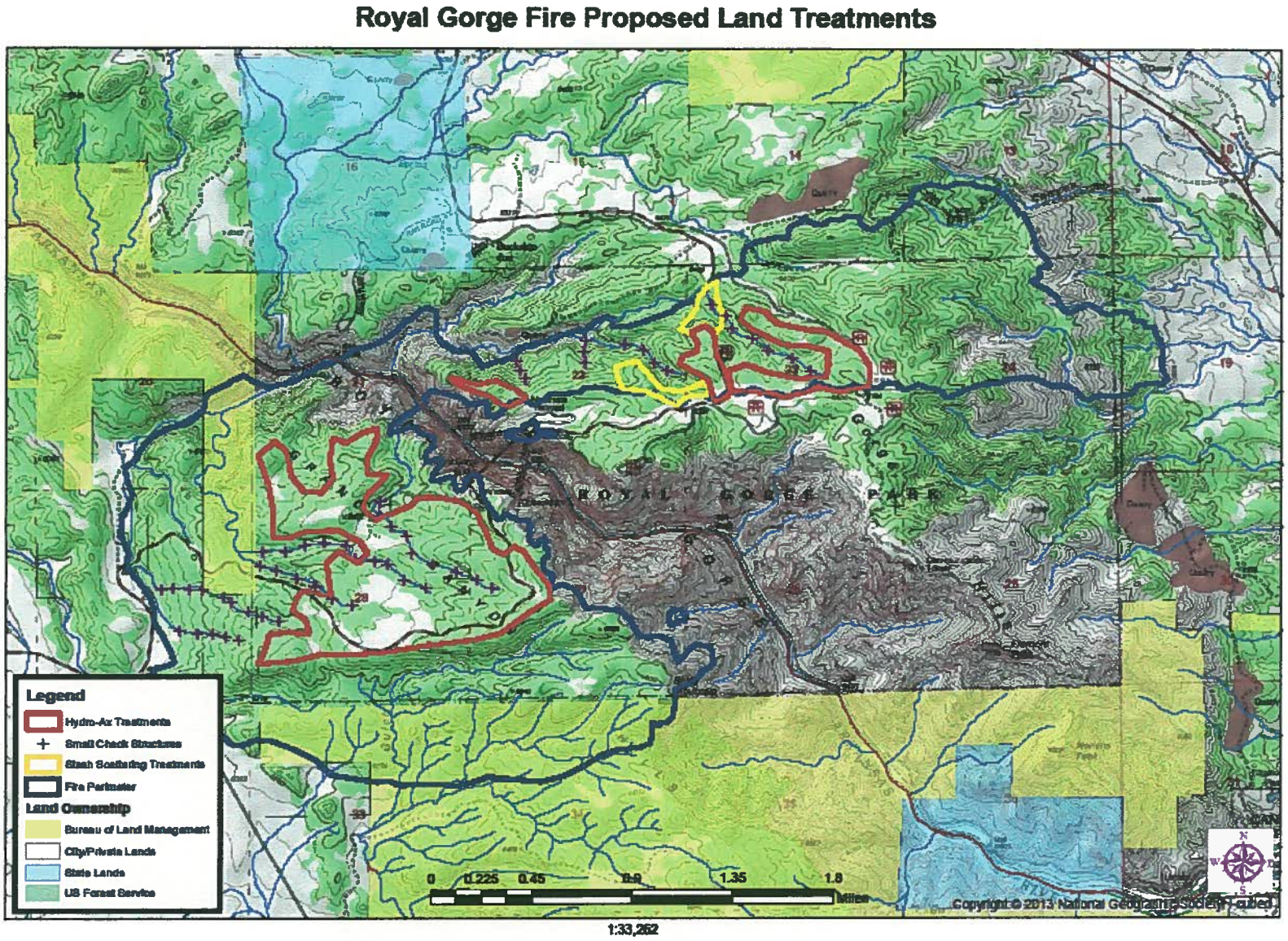
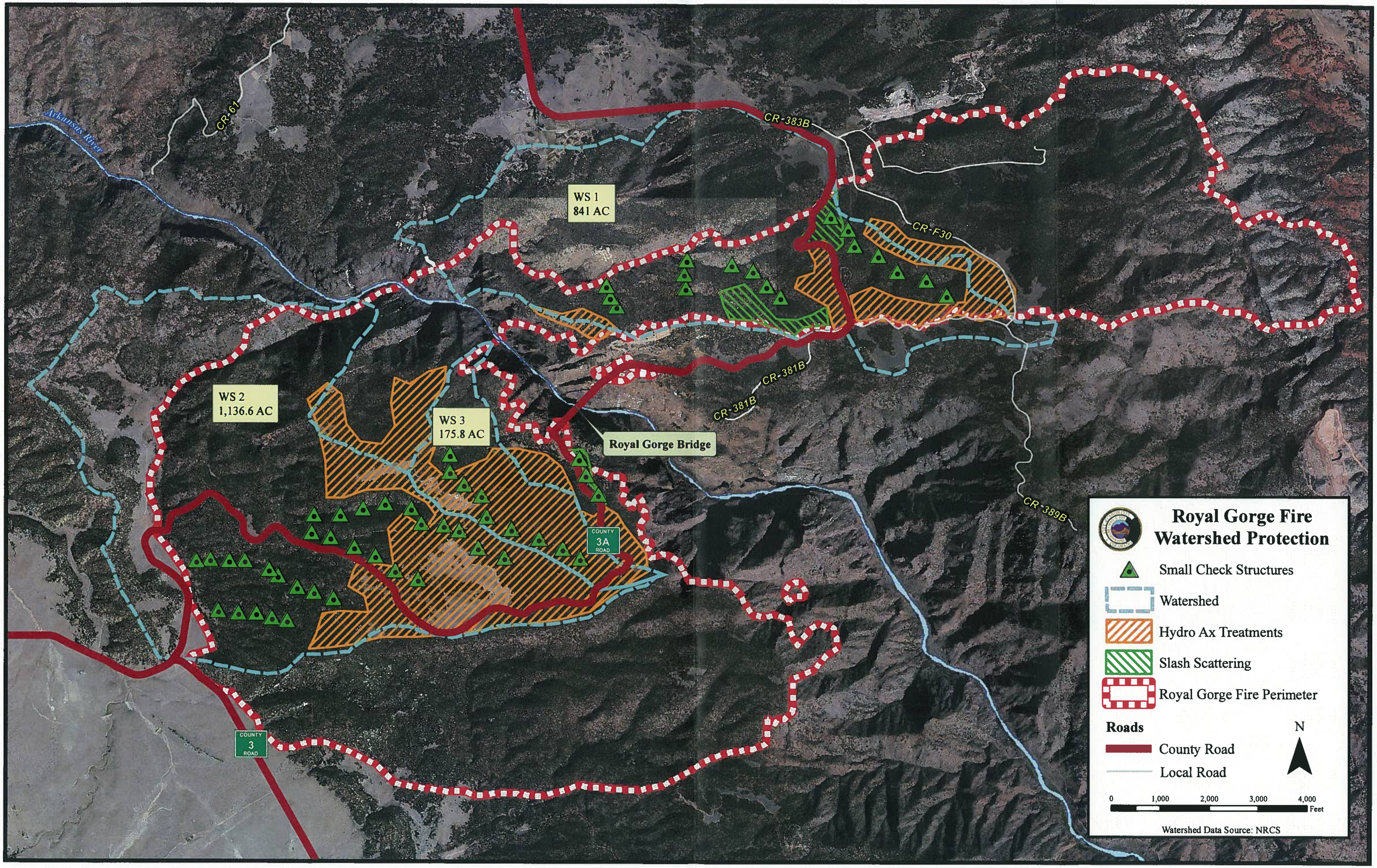


Figure 3-Proposed Stabilization and Rehabilitation Treatments





Cañon City GIS: August 14, 2013