

**Water Supply Reserve Account – Grant and Loan Program**  
**Water Activity Summary Sheet**  
**March 16-17, 2016**  
**Agenda Item 14(m)**

**Co-Applicants:** Vern Hillis / Mary Smith  
**Fiscal Agent:** Vern Hillis  
**Water Activity Name:** McKoon/Blanchard Reservoir Repair Project  
**Water Activity Purpose:** Agricultural  
**County:** Delta  
**Drainage Basin:** Gunnison  
**Water Source:** tributary to Gunnison River  
**Amount Requested/Source of Funds:** \$47,000     Gunnison Basin Account  
**Matching Funds:** Basin Account Match (\$47,000) = 100% of total project costs (\$55,924);  
Applicant/3<sup>rd</sup> Party Match (\$8,924) = 16% of total project costs (\$55,924)  
(refer to *Funding Summary/Matching Funds* section)

<b>Staff Recommendation:</b>
Staff recommends approval of up to \$47,000 from the Gunnison Basin Account to help fund the project titled: McKoon/Blanchard Reservoir Repair Project

**Water Activity Summary:** WSRA funds, if approved, will be expended to fund the project titled: McKoon/Blanchard Reservoir Repair Project. The repairs to the McKoon / Blanchard Reservoir are focused on the outlet pipe. In a routine inspection of the reservoir the Dam Safety Engineer revealed that there was a hole showing on the upstream end of the pipe. He recommended that the outlet pipe be excavated back by hand to further study this hole. Once this was done, they uncovered problems with holes along the outlet pipe. An engineer was hired to further examine the situation and make his recommendations as to how to make a lasting repair to the problem. Since then, the reservoir was put under a "no fill" restriction until these issues could be addressed. The owners got involved quickly to address the problems. They completed the repairs to the exterior of the pipe and re-compacted the material around the outlet pipe replacing the soil in the dam structure. The Engineer has recommended a liner for the outlet pipe which has not been installed. Initially the Owners had problems with the U.S. Forest Service regarding access. This has been resolved.

The second phase of this project has yet to be completed and involves the lining of the outlet pipe using a sock like material that is heated once installed to expand adhering to the walls of the outlet pipe. The Engineer will be involved in selecting a suitable contractor and overseeing this task.

As long as the repairs are not completed, the Reservoir will be administrated by a "no fill" restriction meaning the valve will remain open. The Owners have relinquished any water they would have had to operate for the 2016 irrigating season. They intend to complete this final process during the

summer months of 2016 with the intention of filling the reservoir for use in 2017. This process is subject to the inspection and approval of the Dam Safety Engineer.

**Discussion:** This project aligns with the goals and actions identified in the Gunnison Basin Implementation Plan. Additionally, the restoration and maintenance of reservoir storage on the Grand Mesa was identified as a Tier 1 priority in the Gunnison BIP.

This project also aligns with critical actions identified in Colorado's Water Plan:

**D3:** "Provide grants, loans, and technical support to update and improve Colorado's aging agricultural infrastructure, especially where improvements provide multiple benefits."

**Issues/Additional Needs:** No issues or additional needs were identified.

**Threshold and Evaluation Criteria:**

The application meets all four Threshold Criteria.

**Tier 1-3 Evaluation Criteria:** n/a

**Funding Summary/Matching Funds:**

<u>Funding Sources</u>	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>
Hillis/Young	\$8,924	\$0	\$8,924
WSRA Gunnison Basin Account	\$47,000	n/a	\$47,000
<b>Total Project Costs</b>	<b>\$55,924</b>	<b>\$0</b>	<b>\$55,924</b>

**CWCB Project Manager:** Brent Newman

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:** 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.

**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.

**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.

*The Gunnison Basin Roundtable  
501 Palmer Street  
Delta, CO 81416*

February 9, 2016

Mr. Craig Godbout  
Water Supply Management Section  
COLORADO WATER CONSERVATION BOARD  
1313 Sherman St., Room 718  
Denver, CO 80203

Re: WSRA Grant Request: Vern Hillis and Mary Smith – McKoon/Blanchard Reservoir Repair Project

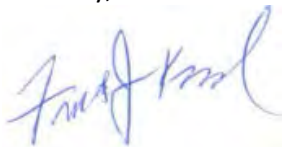
Dear Mr. Godbout:

This letter is presented to advise you that the grant application submitted by Vern Hillis and Mary Smith for \$47,000 from Basin Account funds from the Water Supply Reserve Account for the McKoon/Blanchard Reservoir Repair project was reviewed by the Gunnison Basin Roundtable and its Project Screening Committee and was approved by a unanimous vote of the Gunnison Basin Roundtable during our meeting on February 1, 2016.

This water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes. The requirements/language from the statute is provided in Part 3 of the Criteria and Guidelines.

This activity benefits water use in the Gunnison Basin through the renovation and improvement of an existing dam and reservoir.

Sincerely,

A handwritten signature in blue ink, appearing to read "Frank J. Kugel".

Frank J. Kugel  
Vice Chair

cc: Hugh Sanburg (e-mail)  
Tom Alvey (e-mail)



# COLORADO WATER CONSERVATION BOARD



## WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Today's Date: November 30, 2015

McKoon/Blanchard Reservoir Repair Project

### Name of Water Activity/Project

Vern Hillis  
Mary Smith

### Name of Applicant

Gunnison Basin  
Roundtable

Amount from Statewide Account:

-0-

Amount from Basin Account(s):

\$47,000.00

Total WSRA Funds Requested:

\$47,000.00

### Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

FEIN:

### Application Content

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### Required Exhibits

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

### Appendices – Reference Material

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

## Water Supply Reserve Account – Application Form

Revised October 2013

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### **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 (CWCBC). 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 CWCBC 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 CWCBC 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>. In addition, the applicant should also refer to the Supplemental Scoring Matrix applied to Evaluation Criteria Tiers 1-3 for Statewide Account requests .

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:

Craig Godbout - WSRA Application  
Colorado Water Conservation Board  
1313 Sherman St., Room 721  
Denver, CO 80203  
[Craig.godbout@state.co.us](mailto:Craig.godbout@state.co.us)

If you have questions or need additional assistance, please contact Craig Godbout at: 303-866-3441 x3210 or [craig.godbout@state.co.us](mailto:craig.godbout@state.co.us).

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

1.	Applicant Name(s):	Vern Hillis Mary Smith	
	Mailing address:	Vern Hillis 1888 NW Sage Ave. Cedaredge, CO 81413	Mary Smith P.O. Box 1486 Montrose, CO 81402
	FEIN #:		
	Primary Contact:	Vern Hillis	Position/Title: 2/3 Owner
	Email:		
	Phone Numbers:	Cell: 970-234-3440	Office: 970-856-3440
	Alternate Contact:	Mary Smith	Position/Title: 1/3 Owner
	Email:	msmith2930@yahoo.com	
	Phone Numbers:	Cell: 719-696-2008	Office:

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 - This Reservoir is privately owned by two individuals.

Mr. Vern Hillis has been a resident of the Cedaredge area for his entire life of 70 years. He operates a cattle operation on 90 irrigated acres that grows grass and alfalfa hay for winter feed for his cattle. To provide the necessary water to grow this feed he owns several reservoirs on Grand Mesa that provide water for mid to late summer growth.

Mary Smith purchased her property approximately one week prior to the notification from Dam Safety Engineer Jason Ward of the restrictions being placed on the reservoir structure. She will use the water on her 30 irrigated acres to grow grass and Alfalfa hay and provide pasture for her cattle operation.

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

The owners have contracted with :

Craig Ullmann, PE

Water Resource Engineer

The Applegate Group

118 W. 6th. Street, Suite 100

Glenwood Springs, CO 81601

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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 applicants have the ability to enter into a contractual agreement as individuals each representing their interest without any impact from TABOR.**

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**Part II. - Description of the Water Activity/Project**

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

☐ Nonconsumptive (Environmental or Recreational)

☒ Agricultural

☐ Municipal/Industrial

☐ Needs Assessment

☐ Education

☐ Other

Explain:

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

No - This water is solely used for agriculture

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?

New Storage Created (acre-feet)

New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)

136.76 Existing Storage Preserved or Enhanced (acre-feet)

Length of Stream Restored or Protected (linear feet)

Length of Pipe/Canal Built or Improved (linear feet)

Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)

Area of Restored or Preserved Habitat (acres)

Other -- Explain:

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

Latitude: 39° 2' 21.29" N

Longitude: 107° 55' 30.24" W

6. 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.

The repairs to the McKoon / Blanchard Reservoir are focused on the outlet pipe. In a routine inspection of the reservoir the Dam safety Engineer revealed that there was a hole showing on the upstream end of the pipe. He recommended that the outlet pipe be excavated back by hand to further study this holes. Once this was done, they uncovered problems with holes along the outlet pipe. A engineer was hired to further examine the situation and make his recommendations as to how to make a lasting repair to the problem. Since the reservoir was put under a "no fill" restriction until these issues could be addressed. The owners got involved quickly to address the problems. They completed the repairs to the exterior of the pipe and re compacted the material around the outlet pipe replacing the soil in the dam structure. The Engineer has recommended a liner for the outlet pipe which has not been installed. Initially the Owners had problems with the U.S. Forest Service regarding access. This has been resolved.

**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.<sup>1</sup> The Water Rights in this Reservoir and the construction of the Reservoir (vessel) that is used to confine or hold these rights have been properly file with the proper governmental agencies namely the State of Colorado and the U.S. Forest Service. These rights are recognized as "private usufructuary property right" and thus the Owner of these rights has the ability to protect, repair, maintain their private property rights. The Owners are requesting financial assistance to make necessary repairs to their private property to protect the established rights that they own.
  - 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 BRT's 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.

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<sup>1</sup> 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.<sup>2</sup> 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.
- d) Matching Requirement: For requests from the **Statewide Fund**, the applicants will be required to demonstrate a **25 percent** (or greater) match of the total grant request from the other sources, including by not limited to Basin Funds. A minimum match of 5% of the total grant amount shall be from Basin funds. A minimum match of 5% of the total grant amount must come from the applicant or 3rd party sources. 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 contract or purchase order between the applicant and the State of Colorado is executed. 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)

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<sup>2</sup> 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.

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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. The applicant should also refer to the Supplemental Scoring Matrix applied to Evaluation Criteria Tiers 1-3 for Statewide Account requests. 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).
- 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 intrabasin or interbasin needs or issues.
- 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.

**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).
- 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.

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

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- i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.
  - j. The water activity is complimentary to or assists in the implementation of other CWCB programs.
- Continued: Explanation of how the water activity/project meets all applicable **Evaluation Criteria**.  
**Please attach additional pages as necessary.**

The Criteria for evaluating this project is in Tier 3 (f.). This activity will help sustain agricultural activity for these two Owners for years to come. It also helps to maintain the total supply of water that is impounded on Grand Mesa.

**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 McKoon/Blanchard Reservoir has the following water rights decreed to the Reservoir: These rights are decreed from the Youngs Creek Drainage on Grand Mesa, a tributary of the North Fork of the Gunnison River.

	Adjudication Date	Prev. Adj. Date	Appropriation Date	Priority No.
12.5 ac.ft. of storage	1/31/64	3/20/54	5/1/05	K12
18.8 ac.ft. of storage	1/31/64	3/20/54	6/1/23	K49
105.46 ac.ft. storage	1/31/64	3/20/54	10/1/47	K87

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

The Reservoir was permitted under a Ditch Bill Easement. The access to the reservoir was blocked by the US Forest Service years ago under the promise that a new access would be provided. This had not been done when this emergency situation arose initially presenting the Owners with an access problem. Due to the existence of a USFS Timber Sale close to the reservoir

site, the Forest Service created an access route through the timber sale leaving approximately a quarter mile of road to build to reach the reservoir. At this time, this access road has been completed.

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.

**See Attached 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 10 percent

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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:

Vern Hillis      Mary Smith

Print Applicant's Name: Vern Hillis

Mary Smith

Project Title: McKoon/Blanchard Reservoir Repair Project

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

Craig Godbout – WSRA Application  
Colorado Water Conservation Board  
1313 Sherman St., Room 721  
Denver, CO 80203  
303-866-3441, ext. 3210 (office)  
303-547-8061 (cell)  
[craig.godbout@state.co.us](mailto:craig.godbout@state.co.us)

## **Exhibit A**

**Please see attached letters from the Applegate Group, Inc.**

**1. Engineers Summary of the Issues Concerning the Reservoir dated Sept. 11, 2015**

**2. Engineers Scope of Services and Estimates of work to be completed dated Sept. 11, 2015**

The repairs to the McKoon/Blanchard Reservoir have been divided into two parts.

A. Preparations: As soon as the problem with the reservoir was uncovered and the scope of the damaged had been assessed by the Dam Safety Engineer, the Owners immediately contracted with Applegate Group, Inc, Craig Ullmann, PE to consult on the work. They were also confronted with the problem with access which took several weeks to work out with the Forest Service. With the access, the Owners undertook the construction of an access road and addressed the issues on the exterior of the outlet pipe. Craig Ullmann, engineer from Applegate Grp, was present at the initial excavation of the hole down to the pipe. The dirt was removed from underneath the pipe where 4 separate holes were felt in the ribs of the pipe by the engineer and myself. The engineer then established a written plan for a temporary repair, with a copy for the owners and a copy sent to Jason Ward, State Engineer. The trench was dug by hand over several trips to the reservoir due to continued rainfall. I contacted Jason by telephone prior to band application to verify the temporary repair plan was approved. He gave me verbal approval, with a hard copy to be sent to me and did not need to be present during the repair. The culvert bands were applied and bolted in place. Concrete was mixed at the site using a portable generator and cement mixer. I pushed concrete under the pipe from both sides with my hands and a stick until compacted. Concrete was then poured up both sides of the pipe and over the top of the pipe. Completely encasing the pipe in concrete. The concrete cured for one week before being covered up. The dirt that was excavated from the trench was used to refill it minus the rocks. It was filled and tamped in increments up to the finished grade of the dam. This above described work done to the Engineers specification, has been completed and a cost has been tabulated below to be used as Owner contribution.

B. The second phase of this project has yet to be completed and involves the lining of the outlet pipe using a sock like material that is heated once installed to expand adhering to the walls of the outlet pipe. The Engineer will be involved in selecting a suitable contractor and overseeing this task.

As long as the repairs are not completed, the Reservoir will be administrated by a "no fill" restriction meaning the valve will remain open. The Owners have relinquished any water they would have had to operate for the 2016 irrigating season. They intend to complete this final process during the summer months of 2016 with the intention of filling the reservoir for use in 2017. This process is subject to the inspection and approval of the Dam Safety Engineer.

### **BUDGET FOR THE PROJECT**

Item	Date completed	Date Projected	Cost
Building Access Road	Fall 2015		\$,900.00
Labor Excavating & Re Packing	Fall 2015		\$ 1,140.00
Materials for Outlet Pipe Repair	Fall 2015		\$ 184.00
Engineering Services			\$6,700.00
Cost to Line Outlet Pipe		Summer 2016	\$40,000.00
Contingency Reserve			\$7,000.00
Total Estimated Cost to make necessary Repairs			<hr/> \$55,924.00

The Owners have paid to date \$2,224.00 for services that have all been performed during the Fall of 2015. Owners will pay for the Engineering Services as it is billed. They are requesting a Grant from the Gunnison Basin Roundtable for \$47,000.00.

September 11, 2015

Mr. Vern Hillis  
1888 NW Sage Ave  
Cedaredge, CO 81413

RE: McKoon/Blanchard Reservoir – Temporary Repair Of Excavation And Pipe

Dear Mr. Hillis:

Thanks for the opportunity to visit the McKoon (aka Blanchard) Reservoir a couple weeks ago. As discussed I am providing you with a brief recommendation regarding the backfill and repair of the excavated 10" corrugated metal pipe (CMP). As you know the soil surrounding the upstream end of the pipe was excavated using hand tools in order to inspect the condition of the pipe. It was discovered that there were numerous 1-3 inch diameter holes in the pipe invert along the first 4 feet of pipe, each hole coinciding with a corrugation rib. The pipe appeared round with little to no deflection in the first 4 feet downstream of the concrete inlet block.

The State Engineers Office later visited the site and noticed that the excavation had caved in during recent rains and the outlet pipe was no longer visible. They have since requested that a brief plan be submitted regarding the repair and backfill of the area. The first step would be to re-excavate the area and remove any loose material from the excavation. Next we recommend purchasing four 12" wide corrugation bands and installing them on the outside of the pipe. Once the bands are installed concrete should be placed underneath the pipe up to a point located between one third to one half way up the side of the pipe. The concrete can be sackcrete mixed at the site with a relatively high water content resulting in a slump of approximately 4-6 inches. The concrete should be worked in order to ensure that the entire void below the pipe has been filled. Once the concrete has set for 12 hours native fill should be re-compacted in 2-3 inch lifts using a shovel and hand plate tamper up to the level of the surrounding grade. The material used to backfill the hole should be a pliable clay material with no rocks over 3 inches in diameter. If material excavated from the hole is too dry or rocky to use, backfill material should be obtained from the reservoir basin at least 100 feet away from the dam embankment. This repair will provide a suitable surface for the installation of an internal liner as well as stabilize the current excavation. The outlet gate should remain open until the liner has been installed and approved by the SEO.

Construction of the liner is not likely to occur this year due to the short window between now and the onset of winter. This will allow adequate time to apply for grants, coordinate with the

Mr. Vern Hillis  
September 11, 2015  
Page 2 of 2

forest service regarding site access, obtain approval from the SEO, and select a contractor to perform the work.

As discussed, Applegate Group can prepare a submittal package for the lining portion of the work and assist with grant preparation if desired. The estimated cost for the lining project will be discussed in a separate letter.

If you or the SEO has any questions or concerns regarding this letter please don't hesitate to call me at 970-631-3675.

Regards,  
**Applegate Group, Inc.**

Craig Ullmann, P.E.  
Water Resource Engineer



cc: Mary Smith  
Jason Ward, P.E. Colorado Division of Water Resources – Dam Safety Branch  
AG File No. P15-142

Approved for temporary repair, 9/15/2015



William T. McCormick, III  
Chief Dam Safety Branch

Permanent repair should be submitted using  
typical design review process, through Jason Ward,  
Dam Safety Engineer



# Applegate Group, Inc.

Water Resource Advisors for the West

September 11, 2015

Mr. Vern Hillis  
1888 NW Sage Ave  
Cedaredge, CO 81413

RE: McKoon/Blanchard Reservoir – Engineering Services

Dear Mr. Hillis:

Thanks for the opportunity to visit the McKoon (aka Blanchard) reservoir a couple weeks ago. As discussed I am providing you with a brief proposal in order for you to better estimate the costs of pursuing the installation of a liner in the outlet pipe for McKoon Reservoir. This information can be used by you to submit a grant request to the Gunnison Basin Roundtable, Colorado River District, or other funding sources.

The first step in this project will be to install a temporary repair on the excavated portion of the outlet pipe. As discussed we will provide you with a separate letter describing the proposed temporary repairs. The second portion of work will involve submitting the required documentation to the SEO for the proposed liner system. The SEO will review this information and provide any comments they may have before allowing the lining project to proceed. The cost of a lining project is estimated in the table below:

Item	Cost
Engineering – Applegate Group	\$6,700
Construction* – Contractor TBD	\$40,000
Project Contingency-10%	\$7,000
<b>Total</b>	<b>\$53,700</b>

*\*Cost based on verbal estimate from a lining contractor (Insituform) assuming 2 days of work and includes mobilization to and from the site*

Applegate services will include a short site visit to survey the slope of the existing outlet tube. For this site visit we have assumed that you or Mary Smith would be available to assist holding the survey rod in order for us to avoid sending a second staff member. Hydraulic calculations will be prepared to compare the existing and post lining capacity of the outlet pipe. Construction specifications and a simple construction plan will be prepared and included in the submittal to the SEO. We will also assist you with obtaining bids for the lining project as well as be on site the day that the liner is installed. After construction is completed, we will prepare and submit the

*Mr. Vern Hillis*  
*September 11, 2015*  
*Page 2 of 2*

required documentation to the SEO for final approval. This project will require coordination with the Forest Service regarding access issues. It is our understanding that you are already pursuing an access permit from them and our services will not be necessary in that regard.

**BUDGET**

We propose to complete the engineering portion of the above scope of services on a fixed fee basis with a budget of **\$6,700**. We propose to bill this amount monthly on a percent complete basis.

**PROFESSIONAL SERVICES AGREEMENT**

If this Scope of Services is acceptable we will follow up with our Master Professional Services Agreement and Work Order. We will initiate work on this project when we are receipt of a copy of all signed documents.

This scope of services is for the specific project tasks and services as described above. If additional services are added that are outside the scope of this proposal, we will seek authorization from you prior to proceeding.

We appreciate your consideration of our services and look forward to working with you. Should you have any questions or need further information, please feel free to contact me at your convenience.

Regards,

**Applegate Group, Inc.**



Craig Ullmann, P.E.  
Water Resource Engineer

cc: Mary Smith  
AG File No. P15-143







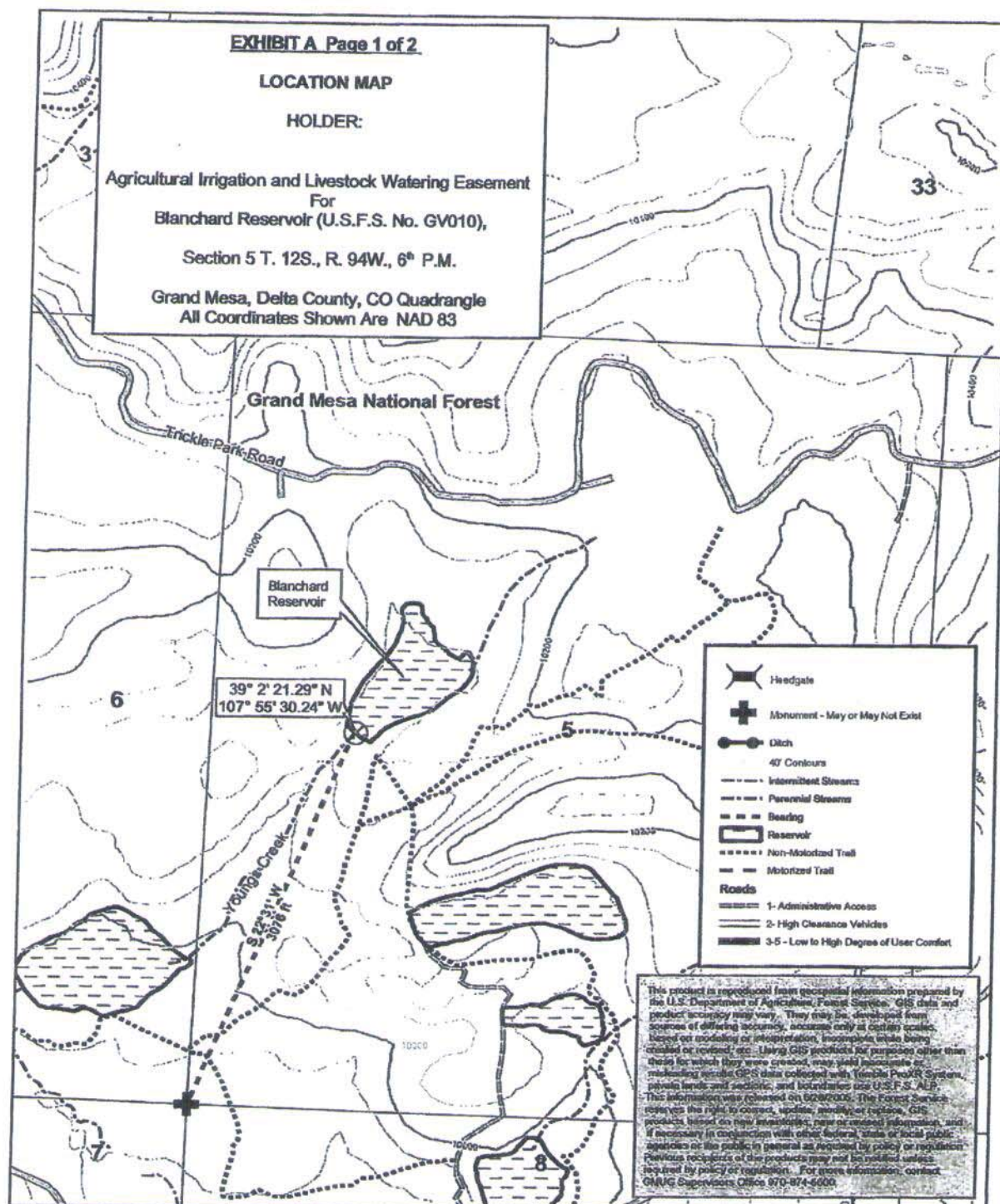
- Delta County Boundaries
- Towns in Delta County
- Parcels and Lots
- Fire Hydrants
- Public Safety & Health
- Delco\_Roads
- Delta County Roads

Delta County GIS Department

Mc Koon / BLANCHARD



346 ft



Prepared by: Cheryl O'Brien  
GIS Specialist  
Approved By: Dennis Valdovinos  
Forest Land Surveyor  
03/08/2006



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

Dam Safety

August 10, 2015

Mr. Vern Hillis  
1888 N.W. Sage Ave.  
Cedaredge, CO 81413

When replying, please refer to:  
**MCKOON (aka BLANCHARD) DAM, DAMID: 400408**  
**Water Division 4, Water District 40**

**SUBJECT: Engineer's Inspection Report**

Dear Mr. Hillis,

On July 28, 2015, our office inspected McKoon (aka Blanchard) Dam in accordance with Section 37-87-107 of the Colorado Revised Statutes that assigns the State Engineer responsibility to determine the amount of water which is safe to impound in the reservoirs of all dams in the state of Colorado. Enclosed is a copy of the Engineer's Inspection Report for your use and reference. Please sign the signature block on page 3 to acknowledge your receipt of report and return a copy to the Division 4 office via mail or email.

Conditions observed during the dam safety inspection resulted in an overall rating of *Conditionally Satisfactory* with a recommended safe storage level of *Conditional Full Storage*, indicating that the dam may be used to full capacity provided certain conditions are met. Specifically, the maintenance, repair, and/or monitoring items listed on page 3 of the inspection report are actions required to improve the safety of the dam.

If you have any questions concerning this inspection report or any other dam safety related matters, please do not hesitate to contact me in the Montrose office at (970) 249-6622.

Sincerely,

Jason P. Ward, P.E.  
Dam Safety Engineer

Encl: Engineer's Inspection Report  
ec: Bill McCormick, Chief, Dam Safety Branch  
Sam Stilson, District 40 Water Commissioner  
Linda Bledsoe, Forest Service, Grand Valley Ranger District, [lbledsoe@fs.fed.us](mailto:lbledsoe@fs.fed.us)



# ENGINEER'S INSPECTION REPORT

OFFICE OF THE STATE ENGINEER - DIVISION OF WATER RESOURCES - DAM SAFETY BRANCH

1313 SHERMAN STREET, ROOM 818, DENVER, CO 80203, (303) 866-3581

INSPECTOR: JPW

DAM NAME: MCKOON	T: 120S R: 0940W S: 5	COUNTY: DELTA	DATE OF INSPECTION: 7/28/2015
DAM ID: 400408 YRComp: 1948	DAM HEIGHT(FT): 32.0	SPILLWAY WIDTH(FT): 7.0	PREVIOUS INSPECTION:
CLASS: Significant hazard	DAM LENGTH(FT): 275.0	SPILLWAY CAPACITY(CFS): 432.0	NORMAL STORAGE (AF): 137.0
DIV: 4 WD: 40	CRESTWIDTH(FT): 10.0	FREEBOARD (FT): 3.5	SURFACE AREA(AC): 11.0
EAP: 2/27/1995	CRESTELEV(FT): 10120.0	DRAINAGE AREA (AC.): 125.0	OUTLET INSPECTED:

CURRENT RESTRICTION: -- NONE --

OWNER: VERN HILLIS	OWNER REP.: VERN HILLIS
ADDRESS: 1888 N.W. SAGE AVE.	CONTACT NAME: VERN HILLIS
CEDAREIDGE CO 81413-0000	CONTACT PHONE: 856-3440
INSPECTION PARTY: Jason Ward	Sam Stilson
REPRESENTING: Dam Safety	Water Commissioner
	Vern Hillis Owner

FIELD CONDITIONS OBSERVED	WATER LEVEL: BELOW DAM CREST	9.0	FT.	Below Spillway	5.5	FT.	GAGE ROD READING	18.4
	GROUND MOISTURE CONDITION:	<input checked="" type="checkbox"/> DRY	<input type="checkbox"/> WET	<input type="checkbox"/> SNOWCOVER	OTHER			

DIRECTIONS: MARK AN X FOR CONDITIONS FOUND AND UNDERLINE WORDS THAT APPLY

## UPSTREAM SLOPE

- PROBLEMS NOTED ☐ (0) NONE ☒ (1) RIPRAP - MISSING SPARSE DISPLACED WEATHERED ☒ (2) WAVE EROSION - WITH SCARPS
- ☐ (3) CRACKS WITH DISPLACEMENT ☐ (4) SINKHOLE ☐ (5) APPEARS TOO STEEP ☐ (6) DEPRESSION OR BULGES ☐ (7) SLIDES
- ☐ (8) CONCRETE FACING - HOLES CRACKS DISPLACED UNDERMINED ☐ (9) OTHER

Riprap coverage on slope up to high waterline, but considered (1) sparse. (2) Wave erosion with scarps up to 24-inches high with evidence of recent activity. Condition is localized and remains acceptable, but should be improved with maintenance.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

## CREST

- PROBLEMS NOTED ☒ (10) NONE ☐ (11) RUT OR PUDDLES ☐ (12) EROSION ☐ (13) CRACKS - WITH DISPLACEMENT ☐ (14) SINKHOLES
- ☐ (15) NOT WIDE ENOUGH ☐ (16) LOW AREA ☐ (17) MISALIGNMENT ☐ (18) IMPROPER SURFACE DRAINAGE ☐ (19) OTHER

Dam crest has uniform appearance except at left end adjacent to spillway due to ATV access erosion. However, crest elevation is slightly higher at left end associated with spillway training berm. Width and elevation along main part of dam all appear likely historic to original construction with no problems observed.

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

## DOWNSTREAM SLOPE

- PROBLEMS NOTED ☒ (20) NONE ☐ (21) LIVESTOCK DAMAGE ☐ (22) EROSION OR GULLIES ☐ (23) CRACKS - WITH DISPLACEMENT ☐ (24) SINKHOLE
- ☐ (25) APPEARS TOO STEEP ☐ (26) DEPRESSION OR BULGES ☐ (27) SLIDE ☐ (28) SOFT AREAS ☐ (29) OTHER

Slope change to steeper just above outlet. Historic to construction and not a stability concern at this time. Surface is rough and irregular with scattered large rock and boulders, but overall slope inclination on majority of embankment above toe appears uniform.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

## SEEPAGE

- PROBLEMS NOTED ☐ (30) NONE ☐ (31) SATURATED EMBANKMENT AREA ☐ (32) SEEPAGE EXITS ON EMBANKMENT
- ☐ (33) SEEPAGE EXITS AT POINT SOURCE ☒ (34) SEEPAGE AREA AT TOE ☐ (35) FLOW ADJACENT TO OUTLET ☐ (36) SEEPAGE INCREASED / MUDDY
- DRAIN OUTFALLS SEEN ☒ No ☐ Yes Show location of drains on sketch and indicate amount and quality of discharge. ☐ (37) FLOW INCREASED / MUDDY ☐ (38) DRAIN DRY / OBSTRUCTED
- ☐ (39) OTHER

(34) Damp ground left of outlet at toe, but not saturated or flowing. Lower reaches below toe influenced by tailwater from current release and unable to determine if wet due to seepage. Entire embankment slope and left and right groins all appear dry.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

### OUTLET

- PROBLEMS NOTED** ☐ (40) NONE ☐ (41) NO OUTLET FOUND ☐ (42) POOR OPERATING ACCESS ☐ (43) INOPERABLE  
☐ (44) UPSTREAM OR DOWNSTREAM STRUCTURE DETERIORATED (45) OUTLET OPERATED DURING INSPECTION ☒ YES ☐ NO  
INTERIOR INSPECTED ☒ (120) NO ☐ (121) YES ☐ (46) CONDUIT DETERIORATED OR COLLAPSED ☐ (47) JOINTS DISPLACED ☐ (48) VALVE LEAKAGE  
☐ (49) OTHER

Outlet pipe confirmed as 10" Corrugated Metal Pipe (CMP).

(45) Valve reportedly does not seal to full closure but operates well. Concrete support block and exposed valve stem casing all appear in acceptable condition.

(120) Overdue outlet inspection.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

### SPILLWAY

- PROBLEMS NOTED** ☒ (50) NONE ☐ (51) NO EMERGENCY SPILLWAY FOUND ☐ (52) EROSION WITH BACKCUTTING ☐ (53) CRACK - WITH DISPLACEMENT  
☐ (54) APPEARS TO BE STRUCTURALLY INADEQUATE ☐ (55) APPEARS TOO SMALL ☐ (56) INADEQUATE FREEBOARD ☐ (57) FLOW OBSTRUCTED  
☐ (58) CONCRETE DETERIORATED / UNDERMINED ☐ (59) OTHER

Well defined channel with good cross section to at least 100 feet downstream of dam. Steeper eroded channel beyond that point, but not considered a safety concern at this time.

Large driftwood logs and stumps near spillway entrance along reservoir edge and upstream slope of dam. No obstructions at this time but high probability that driftwood could float into spillway channel during normal runoff or emergency activation.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

### MONITORING

- EXISTING INSTRUMENTATION FOUND ☐ (110) NONE ☒ (111) GAGE ROD ☐ (112) PIEZOMETERS ☐ (113) SEEPAGE WEIRS / FLUMES  
☐ (114) SURVEY MONUMENTS ☐ (115) OTHER

MONITORING OF INSTRUMENTATION ☒ (116) NO ☐ (117) YES PERIODIC INSPECTIONS BY: ☒ (118) OWNER ☐ (119) ENGINEER

No formal monitoring instrumentation or program at this time.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☐ Poor

### MAINTENANCE AND REPAIRS

- PROBLEMS NOTED** ☐ (60) NONE ☐ (61) ACCESS ROAD NEEDS MAINTENANCE ☐ (62) CATTLE DAMAGE  
☒ (63) BRUSH ON UPSTREAM SLOPE CREST DOWNSTREAM SLOPE TOE ☐ (64) TREES ON UPSTREAM SLOPE CREST DOWNSTREAM SLOPE TOE  
☐ (65) RODENT ACTIVITY ON UPSTREAM SLOPE CREST DOWNSTREAM SLOPE TOE ☐ (66) DETERIORATED CONCRETE - FACING OUTLET SPILLWAY  
☐ (67) GATE AND OPERATING MECHANISM NEED MAINTENANCE ☒ (68) OTHER driftwood

(63) Large brush needs cutting and removal along upstream slope high waterline.

(68) Remove driftwood logs and stumps from adjacent to spillway entrance.

Some amount of known maintenance has occurred at the dam over the last few years. However, several repeated items from past inspections must be addressed for fully acceptable conditions.

CONDITIONS OBSERVED: ☐ Good ☒ Acceptable ☒ Poor

*Go to next page for Overall Conditions and Items Requiring Actions*

## OVERALL CONDITIONS

Conditions observed during the inspection are similar to those made during the 2013 inspection. The Owner indicates some amount of maintenance has occurred, but several items remain to be completed. Specifically, the cutting and removal of large brush on the upstream slope should be completed and removal of driftwood to prevent floating and obstruction of the spillway channel should be addressed to improve the safety of the dam.

In addition to General Maintenance, one of the main safety concerns for this dam is the lack of compliance for an outlet inspection once every ten years. The last known inspection was in 2003. The owner must take measures to either retain a contractor or work with CO Dam Safety to perform an inspection.

The Emergency Action Plan for this dam was recently updated with assistance from Grand Mesa Water Users Association and CO Dam Safety.

Based on results of the inspection, a overall condition of the dam is determined to be Conditionally Satisfactory.

Based on this Safety Inspection and recent file review, the overall condition is determined to be:

☐ (71) SATISFACTORY

☒ (72) CONDITIONALLY SATISFACTORY

☐ (73) UNSATISFACTORY

## ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

### MAINTENANCE - MINOR REPAIR - MONITORING

☒ (80) PROVIDE ADDITIONAL RIPRAP: along high waterline to prevent additional wave erosion.

☐ (81) LUBRICATE AND OPERATE OUTLET GATES THROUGH FULL CYCLE

☒ (82) CLEAR TREES AND/OR BRUSH FROM: along upstream slope high waterline.

☐ (83) INITIATE RODENT CONTROL PROGRAM AND PROPERLY BACKFILL EXISTING HOLES:

☐ (84) GRADE CREST TO A UNIFORM ELEVATION WITH DRAINAGE TO THE UPSTREAM SLOPE:

☐ (85) PROVIDE SURFACE DRAINAGE FOR:

☐ (86) MONITOR:

☐ (87) DEVELOP AND SUBMIT AN EMERGENCY ACTION PLAN:

☒ (88) OTHER Remove driftwood from adjacent to spillway entrance.

☐ (89) OTHER

ENGINEERING - EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO: (Plans and Specifications must be approved by State Engineer prior to construction.)

☐ (90) PREPARE PLANS AND SPECIFICATIONS FOR REHABILITATION OF THE DAM:

☐ (91) PREPARE AS-BUILT DRAWINGS OF:

☐ (92) PERFORM A GEOTECHNICAL INVESTIGATION TO EVALUATE THE STABILITY OF THE DAM:

☐ (93) PERFORM A HYDROLOGIC STUDY TO DETERMINE REQUIRED SPILLWAY SIZE:

☐ (94) PREPARE PLANS AND SPECIFICATIONS FOR AN ADEQUATE SPILLWAY:

☐ (95) SET UP A MONITORING SYSTEM INCLUDING WORK SHEETS, REDUCED DATA AND GRAPHED RESULTS:

☒ (96) PERFORM AN INTERNAL INSPECTION OF THE OUTLET: by retaining an independent contractor or arranging an inspection with CO Dam Safety. Also, inform CO Dam Safety of for outlet valve inspection at first available reservoir drawdown.

☐ (97) OTHER:

☐ (98) OTHER:

☐ (99) OTHER:

## SAFE STORAGE LEVEL: RECOMMENDED AS A RESULT OF THIS INSPECTION

☐ (101) FULL STORAGE

☒ (102) CONDITIONAL FULL STORAGE

☐ (103) RECOMMENDED RESTRICTION

☐ (104) CONTINUE EXISTING RESTRICTION

REASON FOR RESTRICTION

FT. BELOW DAM CREST  
FT. BELOW SPILLWAY CREST  
FT. GAGE HEIGHT  
NO STORAGE-MAINTAIN OUTLET FULLY OPEN



ACTIONS REQUIRED FOR CONDITIONAL FULL STORAGE OR CONTINUED STORAGE AT THE RESTRICTED LEVEL:

Complete all maintenance items listed above. Failure to show diligence towards completing all maintenance items and inspection of the outlet may result in additional requirements and reevaluation of the safe storage level.

Engineer's  
Signature

INSPECTED BY

Owner's  
Signature

OWNER/OWNER'S REPRESENTATIVE

DATE:



**COLORADO**  
Division of Water Resources  
Department of Natural Resources  
Dam Safety Branch

August 19, 2015

Mr. Vern Hillis  
1888 N.W. Sage Ave.  
Cedaredge, CO 81413

When replying, please refer to:  
**MCKOON (aka BLANCHARD) DAM, DAMID 400408**  
**Water Division 4, Water District 40**

**SUBJECT:** Engineer's Follow-Up Inspection Report

Dear Mr. Hillis:

On August 17, 2015, our office was contacted to conduct a follow-up safety inspection of McKoon (aka Blanchard) Dam. We had previously performed a regular inspection on July 28, 2015, and this follow-up visit allowed for inspection with a nearly drained reservoir for a more comprehensive inspection of the upstream face, and especially the area near the outlet works intake structure. Enclosed is a copy of the follow-up inspection report for your use.

As you are aware, our inspection revealed a sinkhole on the upstream slope of the dam suspected to be due to deterioration of the outlet pipe. This is considered an unsafe condition that could threaten the safety of the dam if the reservoir is used for storage of water. As we also discussed, a reservoir restriction will be recommended to the State Engineer and a formal order will follow under separate cover.

If you have any questions concerning this inspection report or any other dam safety related matters, please do not hesitate to contact me in the Montrose office at (970) 249-6622.

Sincerely,

Jason P. Ward, P.E.  
Dam Safety Engineer

Encl: Follow-Up Engineer's Inspection Report

ec: Bill McCormick, Chief, Dam Safety Branch  
Doug Wist, District 40 Water Commissioner  
Samuel Stilson, District 40 Water Commissioner  
Linda Bledsoe, US Forest Service, Grand Valley Ranger District, [lbledsoe@fs.fed.us](mailto:lbledsoe@fs.fed.us)



**COLORADO**

Division of Water Resources

Department of Natural Resources

Dam Safety Branch

**FOLLOW-UP INSPECTION REPORT****PROJECT INFORMATION**

Dam Name:	McKoon (aka Blanchard)	Inspector:	Jason Ward, PE
DAMID:	400408	Date:	August 17, 2015
Other:		Time on Site:	1430 - 1500

**OWNER CONTACT INFORMATION**

Dam Owner:	Mr. Vern Hillis 1888 N.W. Sage Ave. Cedaredge, CO 81413	Contact:	Vern Hillis (970) 856-3440
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**INSPECTION PARTICIPANTS**

Jason Ward, Dam Safety Engineer  
Samuel Stilson, District 40 Water Commissioner

**CONDITIONS**

Reservoir:	GH: 3.0 ft
Weather:	Partly Cloudy, Cool
Ground Moisture:	Dry

**REASON FOR INSPECTION AND BACKGROUND INFORMATION**

I was contacted Monday August 17, 2015 at approximately 0830 by Water Commissioner Samuel Stilson that the reservoir of McKoon dam was fully withdrawn making the outlet valve available for inspection. Mr. Stilson also informed me that he saw an unusual condition on the dam at about gage rod height 3.0 ft in the form of a hole on the embankment near the outlet valve stem casing.

A formal inspection of the dam was conducted on July 28, 2015 resulting in a Conditionally Satisfactory overall rating. One of the conditions of storage (Action Item 96) was to inform CO Dam Safety for an outlet valve inspection at the first available reservoir drawdown. Additionally, the last known internal inspection of the outlet was conducted in 2003 and is overdue per the Dam Safety Rules and Regulations (2007) requiring an inspection once every ten years. No serious conditions were found in 2003, but the dam has a history of outlet deterioration at the upstream end and was repaired by the Owner in 2000 as a minor repair under Rule 12 General Maintenance and Ordinary Repair.

Drawings and Specifications for enlargement of the dam in 1948 (State Engineer Construction File No. C-474) indicates the outlet pipe as an 8-inch diameter Corrugated Metal Pipe (CMP). However, the outlet pipe measures approximately 10-inches inside diameter CMP at the downstream end. Inspections for the past several years have revealed the downstream end of the pipe to be fully rusted through with missing portions.

**OBSERVATIONS**

Upon arrival to the dam, the outlet valve was fully closed and the reservoir was at approximately gage height 2.8 feet (Photo 1). A fairly well defined sinkhole approximately 6 to 8 inches in diameter with adjacent sloughing of material was observed directly under the valve stem casing at approximately gage rod height 2.8-ft, or the reservoir level at arrival (Photo 2). Water



was observed flowing into the sinkhole by stirring sediment on the surrounding surface. The sinkhole was easily probed to at least a depth of 2-ft. The outlet valve was reportedly fully closed, but approximately 10 to 15 gpm of flow was exiting at the downstream end of the outlet pipe (Photo 3).

The outlet valve was then fully opened and the reservoir dropped to the upstream edge of the sinkhole within 10 minutes and revealed definite signs of flow into the hole with audible air intake as the reservoir level decreased. Additional probing was fairly easy to about 3-ft, but was unable to fully determine if the outlet pipe was encountered. A sinkhole cavity with rocks and debris was fully exposed at that time (Photos 4 & 5).

At the end of the inspection the reservoir was down to approximately 2.5-ft and the outlet valve was left locked in the fully open position.

### SAFE STORAGE LEVEL: RECOMMENDED AS A RESULT OF THIS INSPECTION

The follow-up inspection revealed a sinkhole located directly in line with the outlet pipe at approximately gage height 2.8-ft and 8 to 10-ft horizontally downstream of the outlet valve. The CMP outlet material is susceptible to corrosion as seen at the downstream end and experienced at joints near the upstream end in past years, as documented in the file history.

Observations during the inspection appear to indicate the sinkhole was formed by a suspected hole in the CMP outlet. This condition is judged as unsafe and could lead to failure of the dam if allowed to store water. Therefore, a zero storage restriction will be recommended to the State Engineer. A formal storage restriction order will follow requiring the outlet to remain in the fully open position and that no work can be performed without prior approval from the State Engineer.

### PHOTOGRAPHS



Photo 1 – Overall photo of dam and upstream slope. Reservoir at approximately gage height 3.0 ft.

## PHOTOGRAPHS

Flow entry point into sinkhole

Photo 2 – Sinkhole on embankment slope  
at approximately gage height 2.8-ft.



Photo 3 – Downstream end of outlet pipe  
with valve in fully closed position.

## PHOTOGRAPHS

Photo 4 – Reservoir drawn down to upstream edge of sinkhole.

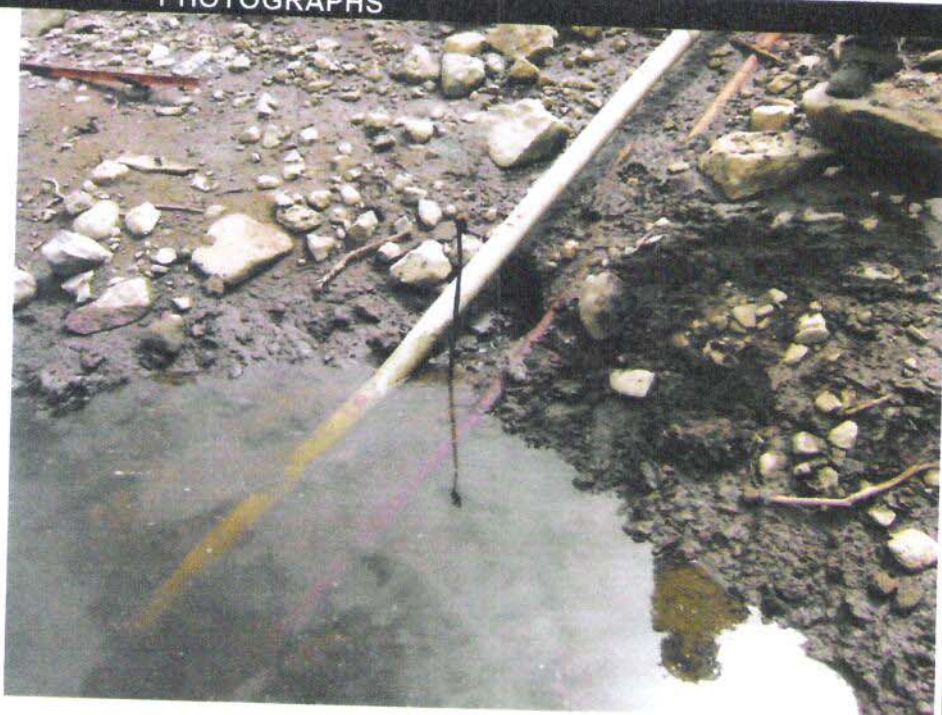


Photo 5 – Close up of flow from reservoir into sinkhole.



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

August 20, 2015

Mr. Vern Hillis  
1888 N.W. Sage Ave.  
Cedaredge, CO 81413

CERTIFIED NO.: 7004 0550 0001 0704 3585

When replying, please refer to:  
**MCKOON (aka BLANCHARD) DAM, DAMID 400408**  
**Water Division 4, Water District 40**

**SUBJECT:** Reservoir Zero-Storage Restriction Order

Dear Mr. Hillis,

A follow-up safety inspection of McKoon (aka Blanchard) Dam was conducted on August 17, 2015 by Mr. Jason Ward of our office in accordance with Section 37-87-107 of the Colorado Revised Statutes (C.R.S), which assigns the State Engineer responsibility to determine the amount of water which is safe to impound in the reservoirs of all dams in the state of Colorado. Observations during the inspection revealed a sinkhole on the upstream slope of the dam suspected to be due to deterioration of the outlet pipe. This is considered an unsafe condition that could threaten the safety of the dam if the reservoir is used for storage of water. A copy of the inspection report has been provided to you under separate cover.

Based on observed conditions, the reservoir is hereby restricted to zero storage and the outlet gate must be maintained in the fully open position. This storage restriction will result in a loss in storage volume of approximately 137.0 acre-feet.

By copy of this letter the Division Engineer is directed to enforce the restriction; however, the primary responsibility rests with you as the dam owner. This restriction is the minimum action you can take to improve the safety of your dam. Additional actions may be necessary based upon the recommendations of your engineer. You are reminded that, as owner, you are liable for the safety of this structure and these minimum requirements do not relieve you of that liability.

If you wish to have the restriction lifted, you must engage a professional engineer registered in the State of Colorado with dam design and construction experience to design a satisfactory



Authorization ID: CGJ253  
Contact ID: MILLER,JD  
Use Code: 925

RECEPTION#: 612969, 03/13/2007 at  
10:47:01 AM, 1 OF 7, R \$36.00  
ANN EDDINS, DELTA COUNTY, CO  
CLERK AND RECORDER

FS-2700-9a (08/04)  
OMB No. 0596-0082

**U.S. DEPARTMENT OF AGRICULTURE**  
**Forest Service**  
**AGRICULTURE IRRIGATION AND LIVESTOCK WATERING SYSTEM EASEMENT**  
**AUTHORITY:**  
**FEDERAL LAND POLICY AND MGMT ACT, AS AMENDED October 21, 1976**

THIS EASEMENT issued this 8<sup>th</sup> day of March, 2007 by the UNITED STATES OF AMERICA, acting by and through the Forest Service, Department of Agriculture, hereinafter called the grantor, to **DEEVON MILLER**, an individual, hereinafter called the Holder.

The Holder has applied for an easement under Section 501 of the Federal Land Policy and Management Act of October 21, 1976, as amended by P. L. 99-545 (90 Stat. 2743; 43 U.S.C. 1761), for agricultural irrigation or livestock watering system facilities located on lands owned by the United States on the Grand Mesa National Forest, in the County of Delta, State of Colorado. The description of the authorized facilities is as follows:

**McKoon (aka Blanchard) Reservoir (GV010)**

Location (legal description): S $\frac{1}{2}$ NW $\frac{1}{4}$  Section 5, T. 12 S., R. 94 W., 6<sup>th</sup> P.M., Colorado  
Description of Improvements: earthen dam approximately 32 feet high with a crest length of approximately 275 feet. Spillway width is approximately 7 feet.  
Area of National Forest Lands Occupied: approximately 11 acres.

Upon acceptance of this easement the holder relinquishes all right, title, and interest in and to any easement issued for the same lands by the United States by any previous grant or permit.

The United States does hereby grant, subject to valid existing rights, an easement for occupancy with water conveyance system facilities of lands as shown on the map contained in Exhibit A, attached hereto and incorporated herein, as provided by the holder and hereby accepted by the authorized officer.

**This easement is issued subject to the following terms, provisions, and conditions applicable to the holder, its permittees, contractors, assignees, and successors in interest.**

1. Authorized Use. This easement authorizes only the right-of-way and water conveyance system facilities as constructed and operated on October 21, 1976, as specified herein.
2. Extensions or Enlargements. This easement does not authorize extensions or enlargements of the water conveyance system.
3. Fees. This easement is issued free of charge.
4. Transferability. This easement is fully transferable provided the water conveyance system facilities are used for agricultural irrigation or livestock watering. The holder shall notify the grantor within sixty (60) days of any address change or change in ownership.
5. Tenure. This easement shall continue for as long as the above described lands and water conveyance system facilities are used, operated, and maintained in accordance with the terms and conditions herein described.

6. Operation and Maintenance.

- a. The holder agrees to operate and maintain the facilities and use the authorized easement in accordance with applicable Federal, State, and local laws, regulations, and standards.
- b. The holder shall notify, consult with, and obtain concurrence of the grantor for operation and maintenance of the authorized facilities.
- c. The holder agrees to install and maintain an operable headgate at each diversion structure. Such headgate shall be capable of controlling the amount of water entering the system.
- d. The holder will not use fire or herbicides on the authorized right-of-way except as permitted in writing by the grantor.
- e. Pursuant to the requirements of 36 CFR 251.56(b)(1)(v), the terms and conditions for operation and maintenance set forth in this section, and any operations and maintenance plan incorporated in this easement pursuant to paragraph (f) of this section, may be revised or modified by the authorized officer upon determination that:
  1. Modification or revision of such terms and conditions is necessary to comply with the requirements of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq*) or applicable State or Federal law.
  2. Terms and conditions contained herein are no longer needed to comply with the requirements of applicable State or Federal law.
- f. The holder agrees to operate and maintain the facilities and use the authorized easements in accordance with the attached operation and maintenance plan.

7. Emergency Repairs.

- a. Except for emergency repairs required to protect the environment, property of the United States, or public health and safety, the holder may not use materials on National Forest System lands outside the easement prior to obtaining written authorization and paying for the materials to be used. The holder's use of material within the easement is limited to maintenance of the water conveyance system facility.
- b. If the water conveyance system facilities authorized by this easement are allowed to deteriorate to the point of threatening persons or property, and the holder, after notification by the grantor, refuses to perform the repairs and maintenance required to remove the threat to persons or property, the grantor shall have the right to undertake such repair and maintenance and to assess the holder for the costs of such repair and maintenance, regardless of whether the grantor had required the holder to furnish a bond or other security.

8. Indemnification.

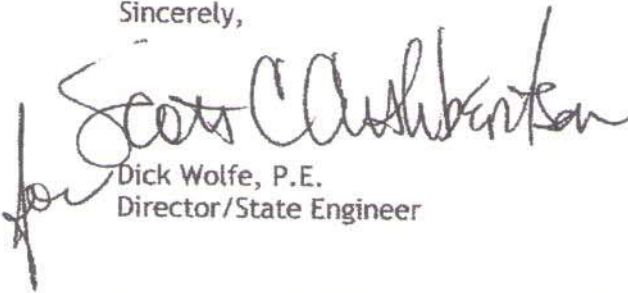
- a. The holder assumes all risk of loss to the authorized improvements.
- b. The holder shall indemnify, defend, and hold the United States harmless for any violations incurred under any such laws and regulations or for judgments, claims, or demands assessed against the United States in connection with the holder's use or occupancy of the property. The holder's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property in connection with the occupancy or use of the property. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. This paragraph shall survive the termination or revocation of this authorization, regardless of cause.

Mr. Vern Hillis  
McKoon Reservoir Zero Storage Restriction Order  
DAMID 400408  
August 20, 2015  
Page 2 of 2

repair for the dam to address the deteriorated outlet works issue identified here and in the recent inspection reports. Plans and specifications regarding this work must be submitted to our office for our review and approval prior to any construction.

We appreciate your cooperation in this matter. If you or your engineer should have any questions, please contact Mr. Jason Ward in the Montrose office at (970) 249-6622.

Sincerely,



Dick Wolfe, P.E.  
Director/State Engineer

ec: Bill McCormick, Chief, Dam Safety Branch  
Bob Hurford, Division Engineer, Water Division 4  
Jason Ward, Dam Safety Engineer, Water Division 4  
Doug Wist, District 40 Water Commissioner  
Samuel Stilson, District 40 Water Commissioner  
Linda Bledsoe, US Forest Service, Grand Valley Ranger District, lbledsoe@fs.fed.us



9. Liability. The holder shall be liable for all injury, loss, or damage, including fire suppression, or other costs in connection with rehabilitation or restoration of natural resources associated with the use and occupancy authorized by this easement. Compensation shall include but not be limited to the value of resources damaged or destroyed, the costs of restoration, cleanup, or other mitigation, fire suppression or other types of abatement costs, and all administrative, legal (including attorney's fees), and other costs in connection therewith.

10. Site Restoration. The holder shall, upon termination or revocation of this easement, stabilize the site as required by the grantor. If the holder does not stabilize the site, the holder agrees to pay the costs of such stabilization if undertaken by the grantor.

**The foregoing notwithstanding, this easement is granted subject to the following reservations by the grantor, for itself, its permittees, contractors, and assigns.**

11. Nonexclusive Use. The grantor reserves the right to use or permit others to use the easement area, provided such use does not unreasonably interfere with the rights and privileges hereby authorized.

12. Revocation and Termination. The grantor may take action to revoke this easement pursuant to 7 CFR 1.130 through 1.151 for noncompliance with applicable statutes or regulations or the terms and conditions of this easement. This easement also may be revoked with the consent of the holder, or if the holder fails to exercise the rights and privileges authorized for any continuous period of five (5) years or more. This easement also terminates according to its terms if the holder uses the water conveyance system for any purpose other than agricultural irrigation or livestock watering.

13. Special Provisions.

A. Water Rights (R2-X-103). This authorization confers no right to the use of water by the Holder; such rights must be obtained under State law.

B. Disputes (X-96). Appeal of any provisions of this authorization or any requirements thereof shall be subject to the appeal regulations at 36 CFS 251, Subpart C, or revisions thereto.

C. Nondiscrimination in Employment and Services (R2-B-108). During the performance of this permit, the holder agrees that:

1. The holder and employees shall not discriminate by segregation or otherwise against any person on the basis of race, color, sex (in educational activities), national origin, age or disability, by curtailing or by refusing to furnish accommodations, facilities, services, or use privileges offered to the public generally and that the holder and employees shall comply with the provisions of Title VI of the Civil Rights Act of 1964, as amended, section 504 of the Rehabilitation Act of 1973, as amended, Title IX of the Education Amendments, and the Age Discrimination Act of 1975.
2. The holder shall include and require compliance with the above nondiscrimination provisions in any third party agreement made with respect to the operations under this permit.
3. ~~Signs setting forth this policy of nondiscrimination to be furnished by the Forest Service will be conspicuously displayed at the public entrance to the premises, and at other exterior or interior locations as directed by the Forest Service.~~

The Forest Service shall have the right to enforce the foregoing nondiscrimination provisions by suit for specific performance or by any other available remedy under the laws of the United States or the State in which the breach or violation occurs.

In addition to the above non-discrimination policy, the holder agrees to insure that its program and activities are open to the general public on an equal basis and without regard to any non-merit factor.

D. Superceded Authorization (X-18). This authorization supercedes a special-use authorization designated: Crissie M. Hillis and Howard W. Finke, Reservoir, issued 6/10/1960 (CGJ535401).

ACCEPTANCE On this 02 day of January, 2007, I, the undersigned  
Holder have read, understand, and accept the terms and conditions of this easement.

Holder:

By: DeeVon Miller  
DeeVon Miller

The Secretary of Agriculture by the Deputy Regional Forester, Forest Service, has executed this easement pursuant to delegations of authority specified in 7 CFR 2.60 and 36 CFR 251.52 on the day and year written above.

UNITED STATES OF AMERICA

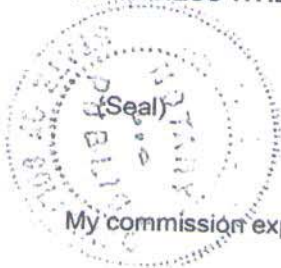
*for* *Randall Kustad*  
RICHARD C. STEM  
Deputy Regional Forester  
Rocky Mountain Region, R-2  
Forest Service, Department of Agriculture

**GRANTOR ACKNOWLEDGMENT**

STATE OF COLORADO )  
COUNTY OF JEFFERSON ) ss.

On this 04 day of March, 2007, before me, *N. Miller*,  
the undersigned officer, personally appeared, *Randall Kustad*, known to me or  
satisfactorily proven to be the person whose name is subscribed to the within instrument and  
acknowledged that he executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.



My Commission Expires  
10/24/2009

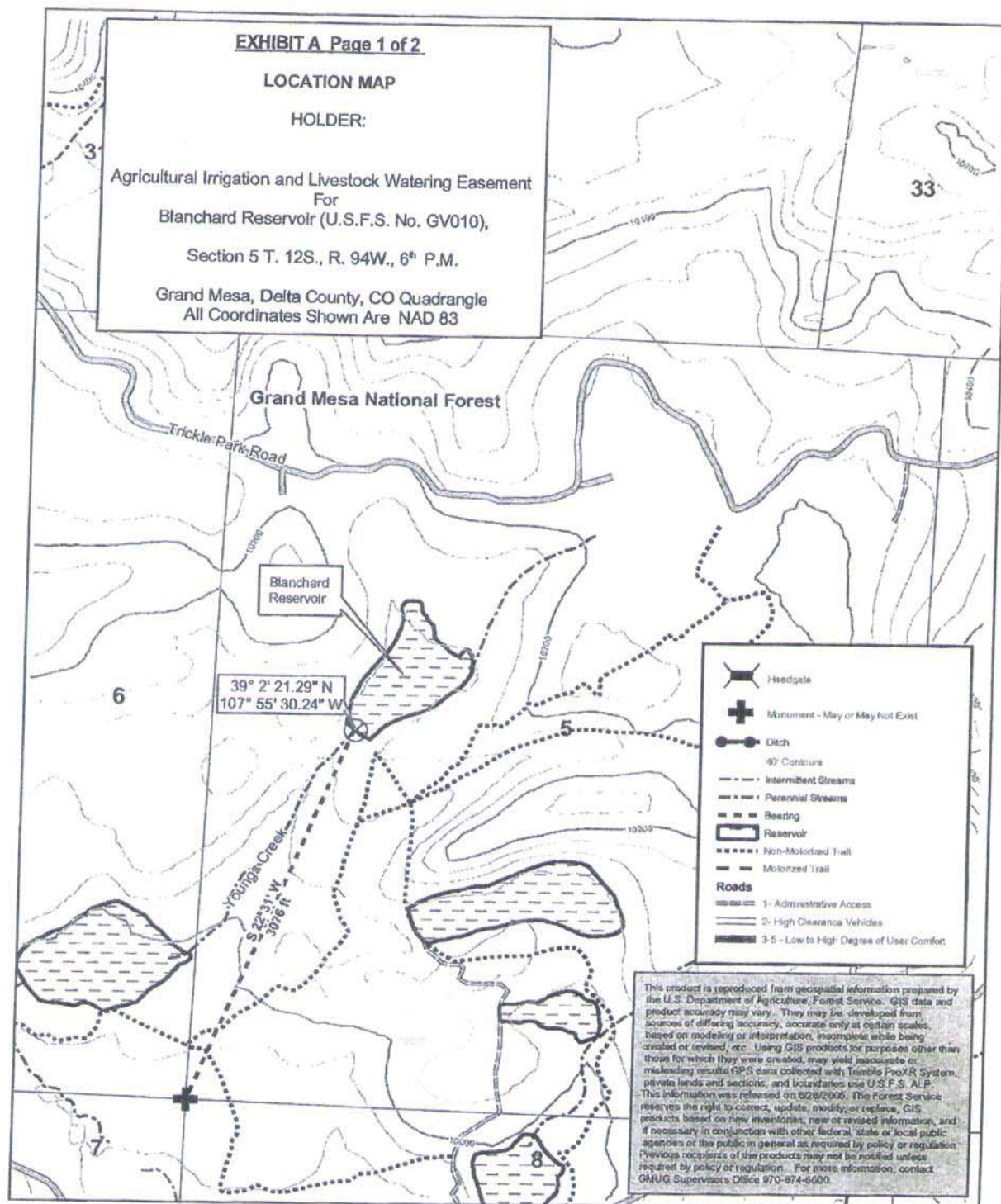
*Nancy Miller*  
Notary Public

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0082.

This information is needed by the Forest Service to evaluate requests to use National Forest System lands and manage those lands to protect natural resources, administer the use, and ensure public health and safety. This information is required to obtain or retain a benefit. The authority for that requirement is provided by the Organic Act of 1897 and the Federal Land Policy and Management Act of 1976, which authorize the Secretary of Agriculture to promulgate rules and regulations for authorizing an managing National Forest System lands. These statutes, along with the Term Permit Act, National Forest Ski Area Permit Act, Granger-Thye Act, Mineral Leasing Act, Alaska Term Permit Act, Act of September 3, 1954, Wilderness Act, National Forest Roads and Trails Act, Act of November 16, 1973, Archaeological Resources Protection Act, and Alaska National Interest Lands Conservation Act, authorize the Secretary of Agriculture to issue authorizations for the use and occupancy of National Forest System lands. The Secretary of Agriculture's regulations at 36 CFR Part 251, Subpart B, establish procedures for issuing those authorizations.

The Privacy Act of 1974 (5 U.S.C. 552a) and the Freedom of Information Act (5 U.S.C. 552) govern the confidentiality to be provided for information received by the Forest Service.

Public reporting burden for this collection of information, if requested, is estimated to average 1 hour per response for annual financial information; average 1 hour per response to prepare or update operation and/or maintenance plan; average 1 hour per response for inspection reports; logs, facility and user information, sublease information, and other similar miscellaneous information requests. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.



Prepared by: Cheryl O'Brien  
GIS Specialist  
Approved By: Dennis Valdovinos  
Forest Land Surveyor  
03/08/2006

EXHIBIT A (Page 2 of 2)

MCKOON (AKA BLANCHARD) RESERVOIR

Description for the McKoon (aka Blanchard) Reservoir, Agriculture Irrigation and Livestock Watering Easement (U.S. Forest Service No. GV010):

Located in the S1/2 S1/2 NW1/4, Sec. 5, T.12S., R.94W., 6 P.M.

The outlet of the McKoon (aka Blanchard) Reservoir is more particularly described as follows:

The said outlet, as depicted on Exhibit A, Page 1 of 2, is located on the southwest edge of the reservoir from which the SW corner of Section 5 (monument may or may not exist) bears S 22° 31' W, 3076 ft., plus or minus. Refer to the official easement document for the reservoir area.

Note: The U.S. Forest Service Automated Lands Program (ALP) which is primarily based upon the BLM Geographic Coordinate Data Base (GCDB), serves as the map base for this description. The land net may or may not agree with the U.S. Geological Survey map, therefore the ALP must be relied upon for this description.

## EXHIBIT B

### OPERATION AND MAINTENANCE PLAN

**Water Facility(s):** McKoon (aka Blanchard) Reservoir

**Easement Holder (s):** Vern Hillis  
DeeVon Miller

The easement incorporates this Operation and Maintenance Plan (O&M Plan) and any attachments thereto, and the Holder agrees to operate and maintain the authorized facilities and use the occupied National Forest System (NFS) lands in accordance with the following stipulations:

1. **Equipment/vehicles:** Holder agrees to use only approved equipment (i.e., ATVs, pickups, backhoes, trackhoes, etc.) listed below:
  - ATV, backhoe, pickup, dozer (for grading crest of dam, if necessary), tractor, heavy equipment flatbed trailer, dumptruck, trackhoe
2. **Access Routes:** Holder agrees to use only the access routes as shown on the attached map and to repair all damage resulting from said use.
  - **Holder will notify the Forest Officer at least 24 hours prior to using heavy equipment (i.e., dozers, etc.) on the access routes described above.**
  - Use of these routes is approved for water facility operation and maintenance needs only.
  - Holders must have this O&M Plan with them at all times when riding these routes.
  - Holder is still subject to federal and state laws regulating travel on State, County, and Federal lands. These include Code of Federal Regulations (CFR) 261.13 prohibiting travel in a manner which damages or unreasonably disturbs the land, wildlife and vegetative resources. Violation of the terms and conditions contained herein is punishable by a fine of not more than \$5,000 or imprisonment for not more than 6 months or both (Title 16 U.S.C. 551).
  - Operations that involve traveling the above-mentioned roadways, trails or other access to the project shall cease when travel causes rutting 3" or more in depth.
  - Holder shall replace any large rocks currently in place on roads or trails that are not designated as "open" to the public if those rocks are moved in order to allow access by full-sized vehicles or heavy equipment. This requirement does not apply to ATV access.
  - Holder shall cut and pull back any downed trees blocking the access routes and shall not leave the trail in order to go around the trees.
  - Holder shall perform access route maintenance, including installation of drainage structures, as directed by the Forest Service.
3. **Routine Maintenance:** includes, but is not limited to: regulating channel flows so that a freeboard is maintained above the water line, spillway maintenance, operating valves, weed and brush control, dam crest maintenance, replacing riprap on dams, rodent control and work on outlets (does not include breaching dam and replacing outlet). Repair work on dams done with heavy equipment is generally done from June to November. However, access by ATV, snowmobile, and pickups for operation and maintenance could occur year-round. Removal of dead and downed trees and brush that interfere with proper working condition of ditch, removal of beaver dams, maintaining diversion, headgate and other ditch structures in good functioning condition and clear of sediment and other debris, addition of ditch bank material to maintain freeboard above the water line.
4. **Non-routine Maintenance:** The Holder will contact the Forest Officer for approval before proceeding with work that is other than routine operations, as this work could require additional authorization from the Forest Service. Some of these situations are:
  - a. Bringing in and using heavy equipment other than that approved in 1., above.
  - b. Using other than approved maintenance routes for access.
  - c. Removal of significant amounts of vegetation and soil and deposition of the same, if on National Forest System lands.

- d. Burning slash, application of seed mixtures (weed-free seed required), or other means of vegetation control measures.
  - e. Reconstruction or re-routing of a portion of the ditch (the latter would also entail a new authorization).
  - f. Breaching a dam and/or replacement of outlet works.
  - g. Raising spillway height in order to enlarge a reservoir.
  - h. Excavation of riprap or borrow material from other than inside the reservoir basin. This will generally require a temporary special use permit.
5. The Holder shall be responsible for prevention and control of soil erosion and gulying on land covered by the easement and the land adjacent thereto resulting from operations and maintenance of granted use (i.e., breach of dam, ditch blowout, etc.); maintain channel to prevent downcutting and bank failure; remove all obstructions from the channel; revegetate, tamp down disturbed soil, or otherwise stabilize all ground where the soil has been exposed (i.e., during ditch cleaning, the spoils removed from the ditch shall not be left in piles but will be compacted on the ditchbank); and be responsible for control of and spread of noxious weeds (as identified by the USDA Forest Service and the local county weed list) on dams, ditchbanks, and ditchbank trails as directed by the Forest Officer.
6. Holder may use non-restricted chemical herbicides for weed control along access route and water facility within the confines of the easement. Label instructions will be strictly followed in the application of pesticides and the disposal of excess materials and containers.
7. The Holder shall inspect the facility prior to use each year and make necessary repairs. Work that is considered other than routine maintenance and/or minor repairs shall be discussed in advance with the Forest Officer. All repairs shall be acceptable to and completed by the date agreed to by the Holder and the Forest Officer.
8. If any items of archaeological, paleontological, or historic value, including but not limited to historic or prehistoric artifacts, structures, monuments, human remains and funerary objects (grave goods) are discovered, the Holder shall immediately cease all activities which may disturb such items and notify the Forest Service. The Holder shall not resume activities until written approval is given by the authorized officer. Failure to comply with this stipulation may result in civil or criminal penalties under the Archaeological Resources Protection Act of 1979.
9. Dam Safety: The holder shall comply with the statutes, rules and regulations of the State of Colorado concerning dam safety inspections for structural integrity, construction and maintenance of the authorized improvements. Prior to the commencement of any work required by the State, the holder is obligated to consult with the Authorized Officer to determine whether additional permitting by that agency is required for resource protection. This would typically be for items not considered to be "routine operation and maintenance."
10. This O&M Plan will be reviewed annually by the Holder and the Forest Service. In addition to the authority of the Authorized Officer to unilaterally revise or modify this operation and maintenance plan pursuant to those certain circumstances prescribed in paragraph 6(e) of this easement, this operation and maintenance plan may also be amended by mutual agreement signed and dated by the Holder and the District Ranger.

Alexander Miller  
Holder

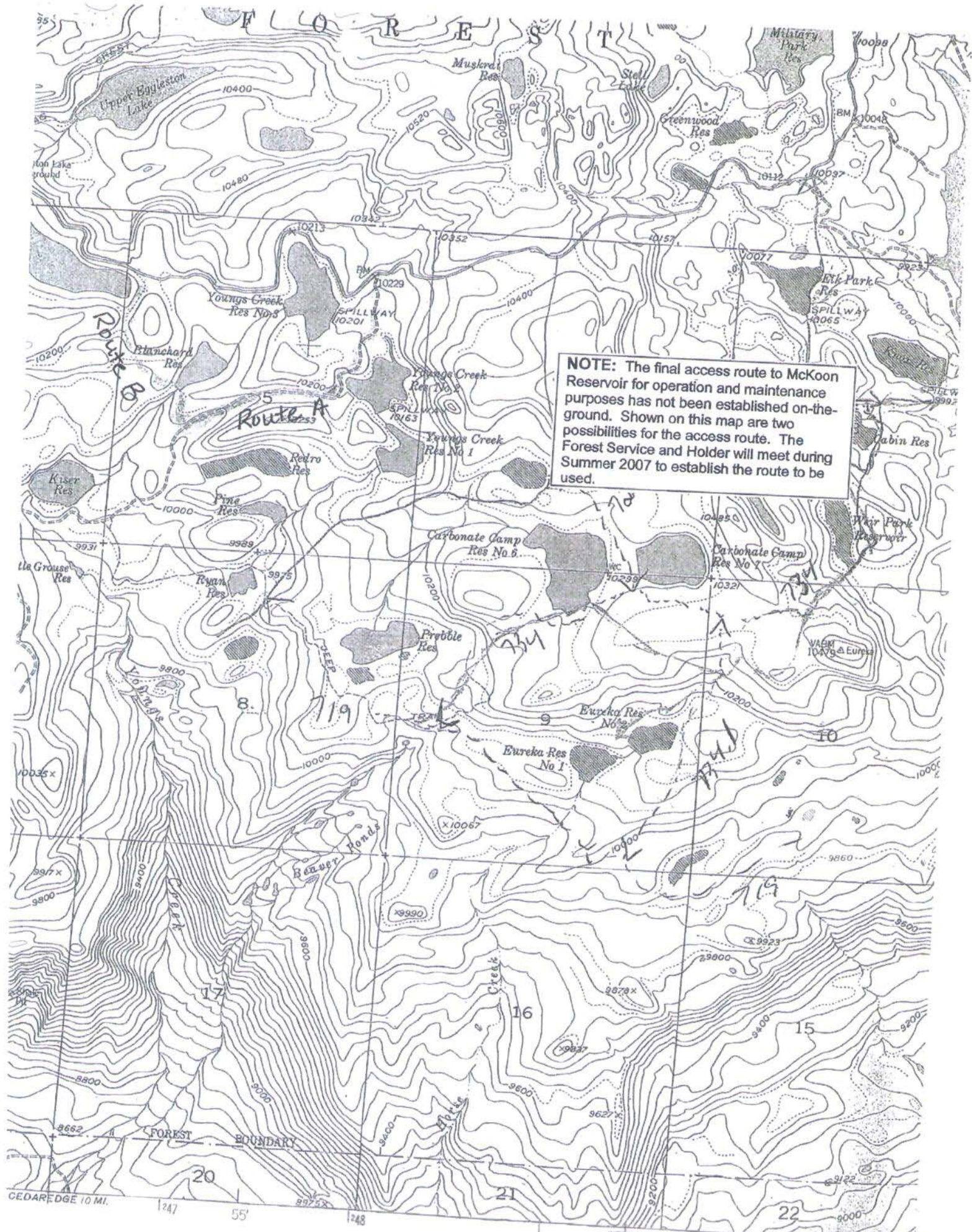
1/2/07  
Date

Holder  
Connie Chen  
District Ranger

Date  
1-25-07  
Date

Randall Krustadt  
Approved for Richard C. Stern  
Deputy Regional Forester  
Rocky Mountain Region, R-2  
Forest Service, Department of Agriculture

March 8, 2007  
Date



**NOTE:** The final access route to McKoon Reservoir for operation and maintenance purposes has not been established on-the-ground. Shown on this map are two possibilities for the access route. The Forest Service and Holder will meet during Summer 2007 to establish the route to be used.

## **EXHIBIT B**

### **OPERATION AND MAINTENANCE PLAN**

**Water Facility(s):** McKoon (aka Blanchard) Reservoir

**Easement Holder:** Mary Eileen Smith

The easement originally issued to Dee Von Miller on March 7, 2009, and subsequently transferred to Mary Eileen Smith, incorporates this Operation and Maintenance Plan (O&M Plan) and any attachments thereto, and the Holder agrees to operate and maintain the authorized facilities and use the occupied National Forest System (NFS) lands in accordance with the following stipulations:

- 1. Equipment/vehicles:** Holder agrees to use only approved equipment listed below. (Note: we have started a list of equipment/vehicles that are typically used by reservoir owners. Please add to that list.)

ATV, backhoe, pickup, dozer (for grading crest of dam, if necessary), tractor, heavy equipment flatbed trailer, dumptruck, trackhoe

- 2. Access Routes:** Holder agrees to use only the access routes as shown on the attached map and to repair all damage resulting from said use.

- **Holder will notify the Forest Officer at least 24 hours prior to using heavy equipment (i.e., dozers, etc.) on the access routes described above.**
- Use of these routes is approved for water facility operation and maintenance needs only.
- Holders must have this O&M Plan with them at all times when riding these routes.
- Holder is still subject to federal and state laws regulating travel on State, County, and Federal lands. These include Code of Federal Regulations (CFR) 261.13 prohibiting travel in a manner which damages or unreasonably disturbs the land, wildlife and vegetative resources. Violation of the terms and conditions contained herein is punishable by a fine of not more than \$5,000 or imprisonment for not more than 6 months or both (Title 16 U.S.C. 551).
- Operations that involve traveling the above-mentioned roadways, trails or other access to the project shall cease when travel causes rutting 3" or more in depth.
- Holder shall replace any large rocks currently in place on roads or trails that are not designated as "open" to the public if those rocks are moved in order to allow access by full-sized vehicles or heavy equipment. This requirement does not apply to ATV access.
- Holder shall cut and pull back any downed trees blocking the access routes and shall not leave the trail in order to go around the trees.
- Holder shall perform access route maintenance, including installation of drainage structures, as directed by the Forest Service.
- Holder has been issued a key to the gate.

- 3. Routine Maintenance:** includes, but is not limited to: regulating channel flows so that a freeboard is maintained above the water line, spillway maintenance, operating valves, weed and brush control, dam crest maintenance, replacing riprap on dams, rodent control and work on outlets (does not include breaching dam and replacing outlet). Repair work on dams done with heavy equipment is generally done from June to November. However, access by ATV, snowmobile, and pickups for operation and maintenance could occur year-round. Removal of dead and downed trees and brush that interfere with proper working condition of water facility, removal of beaver dams, maintaining any diversion, headgate or other structures in good functioning condition and clear of sediment and other debris are also considered to be routine maintenance.

- 4. Non-routine Maintenance:** The Holder will contact the Forest Officer for approval before proceeding with work that is other than routine operations, as this work could require additional authorization from the Forest Service. Some of these situations are:
- a. Bringing in and using heavy equipment other than that approved in 2., above.
  - b. Using other than approved maintenance routes for access.
  - c. Removal of significant amounts of vegetation and soil and deposition of the same, if on National Forest System lands.
  - d. Burning slash, application of seed mixtures (weed-free seed required), or other means of vegetation control measures.

- e. Reconstruction or re-routing of a portion of the ditch (the latter would also entail a new authorization).
  - f. Breaching a dam and/or replacement of outlet works.
  - g. Raising spillway height in order to enlarge a reservoir.
  - h. Excavation of riprap or borrow material from other than inside the reservoir basin. This will generally require a temporary special use permit.
5. The Holder shall be responsible for prevention and control of soil erosion and gully on land covered by the easement and the land adjacent thereto resulting from operations and maintenance of granted use (i.e., breach of dam, ditch blowout, etc.).
6. Holder is responsible for control of and spread of noxious weeds (as identified by the USDA Forest Service and the local county weed list) on dams, spillways, ditchbanks, and ditchbank trails as directed by the Forest Officer. Holder may use non-restricted chemical herbicides for weed control along access route and water facility within the confines of the easement. Label instructions will be strictly followed in the application of pesticides and the disposal of excess materials and containers.
7. The Holder shall inspect the facility prior to use each year and make necessary repairs. Work that is considered other than routine maintenance and/or minor repairs shall be discussed in advance with the Forest Officer. All repairs shall be acceptable to and completed by the date agreed to by the Holder and the Forest Officer.
8. If any items of archaeological, paleontological, or historic value, including but not limited to historic or prehistoric artifacts, structures, monuments, human remains and funerary objects (grave goods) are discovered, the Holder shall immediately cease all activities which may disturb such items and notify the Forest Service. The Holder shall not resume activities until written approval is given by the authorized officer. Failure to comply with this stipulation may result in civil or criminal penalties under the Archaeological Resources Protection Act of 1979.
9. Dam Safety: The holder shall comply with the statutes, rules and regulations of the State of Colorado concerning dam safety inspections for structural integrity, construction and maintenance of the authorized improvements. Prior to the commencement of any work required by the State, the holder is obligated to consult with the Authorized Officer to determine whether additional permitting by that agency is required for resource protection. This would typically be for items not considered to be "routine operation and maintenance."
10. This O&M Plan will be reviewed annually by the Holder and the Forest Service. In addition to the authority of the Authorized Officer to unilaterally revise or modify this operation and maintenance plan pursuant to those certain circumstances prescribed in paragraph 6(e) of this easement, this operation and maintenance plan may also be amended by mutual agreement signed and dated by the Holder and the District Ranger.

\_\_\_\_\_  
Mary Eileen Smith, Holder

11-4-15  
\_\_\_\_\_  
Date

\_\_\_\_\_  
William A. Edwards, District Ranger

\_\_\_\_\_  
Date

**ACCEPTANCE OF AGRICULTURE IRRIGATION AND LIVESTOCK  
WATERING SYSTEM EASEMENT**

The Agriculture Irrigation and Livestock **Watering System Easement** (aka Ditch Bill Easement) for the **McKoon Reservoir (aka Blanchard Reservoir)** issued by the Forest Service on March 8, 2007, to Deevon Miller is accepted subject to all terms and conditions.

\_\_\_\_\_  
**Mary Eileen Smith**

\_\_\_\_\_  
11-4-15  
Date