

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

Applicant & Fiscal Agent: Crosho Lake Corporation

Water Activity Name: Crosho Lake and Reservoir (Simon #1) Dam Outlet Replacement

Water Activity Purpose: Implementation/Consumptive (Ag) & Nonconsumptive

County: Rio Blanco

Drainage Basin: Yampa/White/Green

Water Source: Crosho Lake & North and Middle Hunt Creeks

Amount Requested/Source of Funds: \$30,000 Yampa/White/Green Basin Account
 \$108,380 Statewide Account
 \$138,380 Total Grant Request

Matching Funds: Basin Account Match (\$30,000) = 21.7% of total grant request (meets 5% min);
 Applicant Match (\$61,620) = 44.5% of total grant request (meets 5% min);
 Basin Account & Applicant Match (\$91,620) = 66% of total grant request (meets 25% min)
 (refer to *Funding Summary/Matching Funds* section)

Staff Recommendation:

Staff recommends approval of up to \$30,000 from the Yampa/White/Green Basin Account; and \$108,380 from the Statewide Account to help fund the project titled: Crosho Lake and Reservoir (Simon #1) Dam Outlet Replacement.
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Water Activity Summary: WSRA funds, if approved, will be expended to complete the replacement of the outlet works at Crosho Lake Reservoir, known also as the Simon #1 Dam, which was constructed in 1917. The age of the outlet infrastructure, inspection observations, and previous observations and knowledge lead to the conclusion that the outlet works are severely deteriorated and in need of replacement. Their current state and the observations of leakage into the tower and seepage around the outlet headwall represent an active failure mode that will eventually lead to failure of the dam. The current deteriorated state of the outlet works is advanced enough that it is a significant dam safety concern and needs to be addressed as immediately as possible.

The proposed outlet will include an 18” PVC pipe conduit encased in concrete flow fill with an upstream control gate. An inclined slide gate will be installed on a new concrete intake structure. The gate stem and an air vent will be encased in a concrete grade beam on the upstream dam embankment. A lockable handwheel will be mounted to a new concrete block on the dam crest, preventing unauthorized operation of the outlet. A new staff gage will be installed on the concrete grade beam. A sand filter diaphragm will be installed towards the downstream end of the conduit to intercept any seepage traveling along or near the conduit. Seepage entering the diaphragm will be

collected in a perforated drain pipe and carried to the downstream toe of the dam. The outlet pipe will discharge into a concrete structure located at the dam toe. From this point discharge water will be conveyed in a new 24 inch PVC pipe that will tie into the existing ditch pipe downstream.

Discussion: This project aligns well with several of the Goals and Measurable Outcomes as addressed in the Yampa/White/Green Basin Implementation Plan, such as: Protect and encourage agriculture uses of water in the YWG Basin within the context of private property rights; Improve agricultural water supplies to increase irrigated land and reduce shortages (The agricultural needs study of the YWG BRT identified an additional 14,805 acres of potential new agricultural production in the future); Quantify and protect environmental and recreational water uses at locations identified in the non-consumptive needs study of the YWG BRT; Restore, maintain, and modernize water storage and distribution infrastructure; Develop an integrated system of water use, storage, administration and delivery to reduce water shortages and meet environmental and recreational needs (YWG BIP; Section 1.2.2: YWG Basin Goals, page 1-7). While this project has not been identified as an IPP in the YWG BIP, it is staff's opinion that this activity furthers the Goals of the YWG BIP and Colorado's Water Plan.

In addition this effort advances Agricultural Viability as presented in Colorado's Water Plan by: Develop and implement policies and strategies that support meaningful agricultural viability statewide; and upgrading irrigation and diversion systems (CWP; Chapter 6.5.2, pages 6-138 thru 6-144). Furthermore, this activity supports the storage goals of Colorado's Water Plan as presented in Section 6.5.3: Storage, and Section 6.5.4: Maintenance of Existing Projects and Methods (CWP; pages 6-145 thru 6-156). The proposed Crosho Lake improvements also furthers several of the Measurable Objectives, such as: D. Agriculture & E. Storage (CWP; Chapter 10.2: Measurable Objectives and Adaptive Management; pages 10-5 thru 10-7); and Critical Goals and Actions introduced in Colorado's Water Plan, such as: A. Supply-Demand Gap: Meet Colorado's Water Gaps: Use a grassroots approach to formulate projects and methods that avoid some of the undesirable outcomes of the supply-demand gaps. The plan addresses the gap from multiple perspectives (e.g., water storage, reuse, recycling, integrated water management, restoration, and conservation); D. Agriculture: Maintain Agricultural Viability: Maintain Colorado's agricultural productivity, support of rural economies, and food security (through meaningful incentives and grassroots efforts); and Support Agricultural Conservation and Efficiency: Support Colorado's agricultural industry to make it more efficient, resilient, and able to reduce water consumption without impacting agricultural productivity; and E. Storage: Promote Additional Storage and Infrastructure: Assess and promote opportunities for multipurpose and multi-partner storage projects that address strategic needs. (CWP: Chapter 10.3: Critical Goals and Actions; pages 10-8 thru 10-15).

Issues/Additional Needs: No issues or additional needs have been identified.

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

Tier 1-3 Evaluation Criteria:

This project has undergone review and evaluation and staff has determined that this request satisfies the Evaluation Criteria. Further analysis of the project, and how the project will meet Tiered Evaluation Criteria, is provided by the applicant in the WSRA Application.

Funding Summary/Matching Funds:

<u>Funding Source</u>	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>
Colorado River Water Conservation District	\$20,000	\$0	\$20,000
Upper Yampa Water Conservancy District	\$16,000	\$0	\$16,000
Crosho Lake Company	\$25,435	\$185	\$25,620
Subtotal Applicant & 3 rd Party Matches	\$61,435	\$185	\$61,620
WSRA Yampa/White/Green Basin Account	\$30,000	n/a	\$30,000
WSRA Statewide Account	\$108,380	n/a	\$108,380
Total Project Costs	\$199,815	\$185	\$200,000

CWCB Project Manager: Craig Godbout

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.

YAMPA-WHITE RIVER BASIN ROUNDTABLE
PO Box 772975
Steamboat Springs, CO 80477

January 13, 2016

Craig Godbout - WSRA Application
Colorado Water conservation Board
1313 Sherman St., Room 721
Denver, CO 80203

Dear Mr. Godbout:

On this date the Yampa-White River Basin Roundtable voted unanimously to grant conditional approval of the Crosho Lake Corporation application for funding from the Water Supply Reserve Account in the total amount of \$138,380.00. The amount of \$30,000.00 was approved from the Yampa-White Basin Account and \$108,380.00 was recommended for approval by CWCB from the Statewide Fund.

Questions revolved primarily about a portion of the matching funds for this \$200,000 project. Crosho Lake Corporation has committed \$25,620 to the project and has hired the engineering firm of Applegate Group, Inc. in order to get a quick start on engineering, permitting, and the SEO approval process. They have also submitted a grant request for \$16,000 to the Upper Yampa Conservancy District and an application to the Colorado River Conservation District for \$20,000, with those funds pending approval from their respective Boards. The BRT vote was unanimous, contingent upon notification that the funds requested from UYWCD and from CRWCD have been secured.

Crosho Lake Reservoir, known also as Simon Reservoir No. 1, in Water District 58, has an appropriation date of 1904, qualifying it as a pre-compact reservoir, with its waters not subject to a call on the Colorado River by the lower states. The applicant represents about 1,000 irrigated acres, with significant return flows sustaining the health of the Yampa watershed.

Roundtable members voted to consider this proposal on a priority basis, due to the SEO's determination that the Crosho dam outlet works must be replaced during 2016. The members further agreed that this application and the project it represents works toward the implementation of several of the goals and objectives of the Basin Implementation Plan of the Yampa, White, Green Roundtable addressing both consumptive and non-consumptive needs.

Confirming our commitment of Basin funds in the amount of \$30,000, we recommend that CWCB approve this request for WSRA funds from Crosho Lake Corporation.

Best regards,



Mary T. Brown

Chair, Yampa White Green Basin Roundtable



COLORADO

Parks and Wildlife

Department of Natural Resources

Steamboat Springs Service Center
925 Weiss Dr.

Steamboat Springs, CO 80487
P 970-870-2197 | F 970-871-2853

January 2, 2016

Mr. Craig Godbout
Program Manager
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street, Room 718
Denver, CO 80203

**RE: Colorado Water Conservation Board - Water Supply Reserve Account Application
Crosho Lake and Reservoir - Simon #1 Dam Outlet Replacement**

Dear Mr. Godbout:

I am writing this letter to show our support for Crosho Lake Corporation's efforts to replace the outlet works at Crosho Lake Reservoir, known as Simon #1 Dam. It is our understanding that the current deteriorated state of the outlets works presents a legitimate dam safety concern; subsequently, we recognize the Corporation's need to address this issue as quickly as possible.

Due to the fact that Crosho Lake Reservoir supports a valuable grayling and Colorado River cutthroat trout fishery, it is necessary from our perspective that this project be completed in a manner that protects this popular fishery. In recognition of the importance of this fishery, it is our understanding that Crosho Lake Corporation has agreed to provide local Colorado Parks and Wildlife (CPW) staff with reasonably adequate time to review and comment on the project design plans and specifications as well as the construction timeline in order to ensure that appropriate measures, if needed, are taken to avoid any negative impacts to the existing fishery at Crosho Lake Reservoir.

In addition, it is our understanding that Crosho Lake Corporation has also agreed to support the efforts of CPW, the US Forest Service (USFS), and the Colorado Division of Water Resources (DWR) to review the existing erosion concerns around the gabion baskets located where the inlet channel enters the reservoir, and to determine the extent of assistance which Crosho Lake Corporation may be able to provide in repairing these structures. Although the erosion issue involving the gabion baskets is not specifically related to the intent of this application, Crosho Lake Corporation is aware that there is a mutual interest between the CPW, USFS, DWR, and Crosho Lake Corporation to keep fish out of the irrigation ditches. This project provides an opportunity for additional collaboration while work is underway at Crosho Lake.

Bob D. Broscheld, Director, Colorado Parks and Wildlife • Parks and Wildlife Commission: Robert W. Bray • Chris Castilian, Chair • Jeanne Horne, Vice-Chair
John Howard • Bill Kane • Dale Pizet • James Pribyl, Secretary • James Vigil • Dean Wingfield • Michelle Zimmerman • Alex Zipp

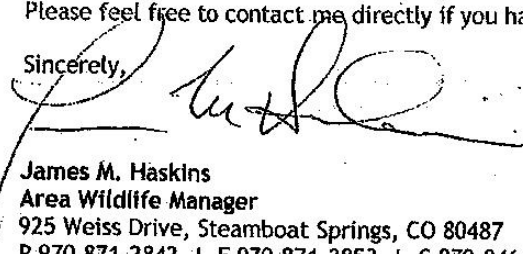


Lastly, Crosho Lake and the immediate area within the surrounding reservoir watershed provide significant hunting-related recreational opportunities. Big game hunting for elk, mule deer, and black bear, as well as small game hunting for dusky grouse are all extremely popular activities in this area during the fall. The vast majority of the hunting-related activity in this area is concentrated between the middle of August through the end of October. Crosho Lake Corporation understands CPW's concerns about potential impacts to hunters, given the proposed fall schedule for construction. Subsequently, it is our understanding that Crosho Lake Corporation has agreed to make every reasonable effort to work directly with the USFS and local CPW staff to minimize and when possible, eliminate any safety or other use concerns to hunters and the general public.

As always, CPW staff appreciates being afforded the opportunity to advise on projects that may impact wildlife and/or wildlife-related activities, and we look forward to continued collaboration with Crosho Lake Corporation on this project.

Please feel free to contact me directly if you have any questions or concerns.

Sincerely,



James M. Haskins

Area Wildlife Manager

925 Weiss Drive, Steamboat Springs, CO 80487

P 970.871.2842 | F 970.871.2853 | C 970.846.4233

jim.haskins@state.co.us | www.cpw.state.co.us

CC: Velarde, Haskins, Miller, Atkinson



Town of Yampa
56 Lincoln Street
P.O. Box 224
Yampa, CO 80483
970-638-4511
Fax 970-638-1085

January 7, 2016

Mr. Craig Godbout
Program Manager
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Godbout:

The Board of Trustees of the Town of Yampa is writing to support the Water Supply Reserve Account request for funding from Crosho Lake Corporation to replace the outlet works at Crosho Lake Reservoir.

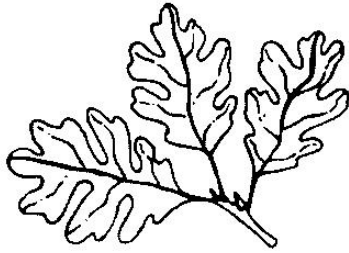
First and foremost, Crosho is a very popular fishing destination for many of Yampa's residents. They want the reservoir to continue to offer the excellent fishing opportunities it does now, for many years to come.

In addition, Yampa is a member of the Northwest Colorado Cultural Heritage Program (NWCCHP) and South Routt Economic Development Council (SREDC). Both NWCCHP and SREDC are working hard to maintain and increase the number of visitors to our area to help in the economic recovery of our region.

Crosho is a significant recreational draw for all fishing enthusiasts, both locals and visitors; therefore, your consideration of helping fund the needed outlet work will be greatly appreciated.

Sincerely,

Thomas E. Yackey
Mayor



TOWN OF OAK CREEK

P.O. Box 128 • Oak Creek, Colorado 80467 • (970) 736-2422

January 5, 2016

Craig Godbout, Program Manager
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Godbout:

On behalf of the Town of Oak Creek, we are writing to support the Crosho Lake Corporation's request for funding from the Water Supply Reserve Account to replace the outlet works at Crosho Lake Reservoir.

Crosho Lake provides an abundance of year round recreation opportunities, and is a rare Arctic grayling fishery. Crosho Lake also provides water resources for our South Routt County agricultural endeavors. Maintaining the viability of the lake and the recreational and agricultural resources it affords with the proposed repairs to the dam is a critical component of preserving significant facets of our local cultural and economic community.

Thank you for the opportunity for us to voice our support for this project.

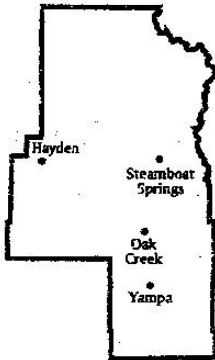
Sincerely,

A handwritten signature in cursive script that reads "Nikki Knoebel".

Nikki Knoebel
Mayor

NK:map

xc:file



ROUTT COUNTY BOARD OF COUNTY COMMISSIONERS

Box 773598 • Steamboat Springs, Colorado 80477

Phone: 970-879-0108 • Fax: 970-879-3992

January 12, 2016

Timothy V. Corrigan
District 1

Douglas B. Monger
District 2

Carl Hermacinski
District 3

Thomas A. Sullivan
County Manager

Craig Godbout
Program Manager
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Godbout,

On behalf of Routt County, we are writing in support of Crosho Lake Corporation's Water Supply Reserve Account funding request to replace the outlet works at Crosho Lake Reservoir. This project includes a multitude of partnerships of Colorado Parks and Wildlife, the Forest Service, and local ranchers. It provides many benefits including rehabilitating a historical water storage structure with pre-compact water rights, wetlands rejuvenation, dam safety improvements, continued late season return flows on irrigation water to the Yampa River, historic fishery of native trout and Grayling Salmon (a fresh water salmon that is only located in two spots in Colorado), and improvements to a highly visited area by locals and destination visitors.

We encourage your strongest funding support for the Crosho Lake Corporation's request.

Best Regards,

ROUTT COUNTY BOARD OF COUNTY COMMISSIONERS

A handwritten signature in black ink, appearing to read "Cari", with a stylized flourish at the end.

Cari Hermacinski, Chair



Oak Tree Inn
Penny's Diner
PO Box 267
98 Moffat Avenue
Yampa, CO 80483
(970) 638-1000 / Fax (970) 638-9702



January 12, 2016

Mr. Craig Godbout
Program Manager
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street, Room 718
Denver, CO 80203

Dear Mr. Godbout:

This is to express our support for Crosho Lake Corporation's request for funding from the Water Supply Reserve Account to replace the outlet works at Crosho Lake Reservoir.

The hospitality business is a primary economic driver for many businesses and service providers in this part of Colorado. People come here to have fun, to relax, to explore the outdoors, and to enjoy the many natural treasures of these high-country communities. We understand that this reservoir, which provides irrigation for many ranching families, is about 100 years old, and that some worn out parts of the dam need to be replaced.

Our combined businesses in Yampa provide affordable and comfortable lodging at Oak Tree Inn, and a 24-hour restaurant at Penny's Diner. Especially in summer time, our customers come here to stay overnight and to eat, sometimes at both ends of their trip.

What draws people to this area are the excellent opportunities for hiking, fishing, camping, and enjoying the beautiful forest environment and wildlife at Crosho Lake. Our businesses are always especially busy during hunting season, so of course we don't want anything to reduce that flow of visitors.

Please know that our business community is in favor of this project. We ask that you grant the funding that is needed to protect this valuable resource. Thank you.

Sincerely,

Onika Mayer, General Manager
Oak Tree inn & Penny's Diner
TR Lodging Enterprises

January 12, 2016

Mr. Craig Godbout
Program Manager
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street, Room 718
Denver, CO. 80203

Dear Mr. Godbout:

We as a team here at Kum & Go, are writing to support the Water Supply Reserve Account request for funding from Crosho Lake Corporation to replace the outlet works at the Crosho Lake Reservoir.

We feel as a team that it is important to fix the dam, due to the amount of business we see throughout the summer as well into our hunting seasons up here. Not only the business side of it, but many of us with our families' camp, fish, hike and just love going for the scenery. We feel that is the main reason for their never being an open spot to camp, during the 4th of July. During our hunting season's our hunters when they fill their tags for that season. They will come and grab some food, something to drink and some worms to go fish. Seeing how most of the tourist enjoy many of the same things that we do, we feel that it is very important to fix the dam. A lot of customers like to come in and talk about the tree's that have carvings in them, as well as tell us about their trips and how much they enjoyed coming up to this area. They really love the fishing in that lake as well, they will come in multiple times a day to buy worms, ice, snacks, as well as fuel. They always leave happy and wanting to come back. Crosho Lake is a big part of this community and all of the families as well as the people who just come to visit. It benefits our community as well as our businesses in this area.

Sincerely,

Ellicia Fuller
Hay Fuller
Patricia Shea

MONTGOMERY'S General Merchandise

224 MAIN STREET

P.O. BOX 202

YAMPA, CO 80483

BUSINESS 638-4531

January 12, 2016

Mr. Craig Godbout

Program Manager

Colorado Water Conservation Board

Water Supply Planning Section

1313 Sherman Street, Room 718

Denver, CO 80203

Dear Mr. Godbout:

As it is important to understand what came before in order to make well-grounded decisions in the future, we fear that all the hard work, perseverance, and dedication that built these communities are becoming lost to our children and grandchildren. As owners and operators of one of the oldest general mercantiles in Colorado, we feel that saving and restoring the dam at Crosho Reservoir should be considered a high priority. Water is a very valuable resource and a dam would ensure that we maintain our heritage in our ranching valley. It would bring in more visitors which would benefit the business of the Yampa valley. Much work has been done by these project leaders already that demonstrate their vision and commitment to this project. We whole-heartedly support their efforts and hope for a successful conclusion for their efforts.

Respectfully submitted,



Ken and Cindia Montgomery

Montgomery's General Merchandise



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Today's Date: 1-13-16

Crosho Lake and Reservoir - Simon #1 Dam Outlet Replacement

Name of Water Activity/Project

Crosho Lake Corporation

Name of Applicant

Yampa/White Basin
Roundtable

Amount from Statewide Account:

\$108,380.00

Amount from Basin Account(s):

\$30,000.00

Total WSRA Funds Requested:

\$138,380.00

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

FEIN: 20031071768 (Colo Sec. of State)

Application Content

Application Instructions	page 2
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Part II – Description of the Water Activity	page 6
Part III – Threshold and Evaluation Criteria	page 9
Part IV – Required Supporting Material	
Water Rights, Availability, and Sustainability	page 22
Related Studies	page 24
Signature Page	(last page)

Required Exhibits

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

Appendices – Reference Material

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

Instructions

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

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

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

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

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

Water Supply Reserve Account – Application Form
Revised October 2013

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

1.	Applicant Name(s):	Crosho Lake Corporation		
	Mailing address:	22840 Road 15 P.O. Box 23 Phippsburg, CO 80469		
	FEIN #:	20151382959 (Colo S.O.S.)		
	Primary Contact:	Mark or Virginia Rossi	Position/Title:	President / Sec.Treas.
	Email:	ceenarossi@aol.com		
	Phone Numbers:	Cell: (970)846-9469	Office:	970-638-4550
	Alternate Contact:	Bob Mattson	Position/Title:	Project Coordinator
	Email:	apacherkm@gmail.com		
	Phone Numbers:	Cell: 970-846-3263	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.

Water Supply Reserve Account – Application Form

Revised October 2013

3. Provide a brief description of your organization

The Crosho Lake Corporation is organized as a Colorado Mutual Reservoir Company, with its stock to be used “only as a basis for the distribution of water.”... “No dividends will ever be paid upon the capital stock. Each stock holder shall be entitled to acre feet of water from the total capacity of the reservoir in the same proportion as his stock bears to the total number of shares issued and outstanding.”

The Crosho Lake Corporation was initially formed and incorporated on May 22, 1963 as a nonprofit mutual ditch company under the laws of the State of Colorado. It is not a federal nonprofit. Concurrently with its formation, the corporation acquired “all of the interests in the defacto corporation known as the Simon Mutual Ditch Company.” The original decree of the Simon Mutual Ditch Company, dated February 13, 1920, states, in part:

2. That the petitioner is a corporation or mutual ditch company, organized and existing pursuant to the laws of the state of Colorado, for the purpose of supplying water for irrigation purposes to its several stockholders.

3. That the petitioner is the sole owner of Simon Reservoir No. 1, together with the inlet and outlet ditches thereof, and of the First Enlargement of the Simon Reservoir No. 1, with its outlet and distributing ditches, all in Water District No. 58, Irrigation Division No. 6.

Crosho Lake Reservoir predates the 1922 Colorado River Compact, which means it is not subject to a call by the lower states. As shown on the table below and on the map on the following page, an estimated total of 922 acres is irrigated by Crosho Reservoir water. Some of these ditches also have other sources of water on North or Middle Hunt Creeks. The five ranches, each representing their extended families and their respective agricultural businesses, are as follows, with an approximation of the irrigated acres:

WATER RIGHT	PRINCIPALS	DITCH	ACRES
Rossi Ranches LLLP	Jim & Dean Rossi	Watson	100
Hart Mtn. Ranch	Mark, Philip & Virginia Rossi	Rossi	19
	Mark, Philip & Virginia Rossi	Simon	300
	Mark, Philip & Virginia Rossi	Collins	100
	Mark, Philip & Virginia Rossi	Max Hoff	34
	Mark, Philip & Virginia Rossi	Upper Hoff	24
Viele Family Ranch, LLC	Hal, Gary & Kerry Viele	High Mesa	72
	Hal, Gary & Kerry Viele	Sage Hen	31.5
Son Hi Ranch	Bob Sonheim	Divide	119
	Bob Sonheim	Divide	19
North Hunt Creek Ranch	Ira Wertenteil	High Mesa	72
	Ira Wertenteil	Sage Hen	31.5

Structure Name: SIMON RES 1 **WDID :**580353 **Measuring Device/Recorder:**GAUGE

Source: MIDDLE HUNT CK @ Mile 238.1

Location: Q10 Q40 Q160 Section Twnshp Range PM CIU:A
NW SW 4 2 N 86 W S

Distance from section lines: From N/S line: From E/W line:

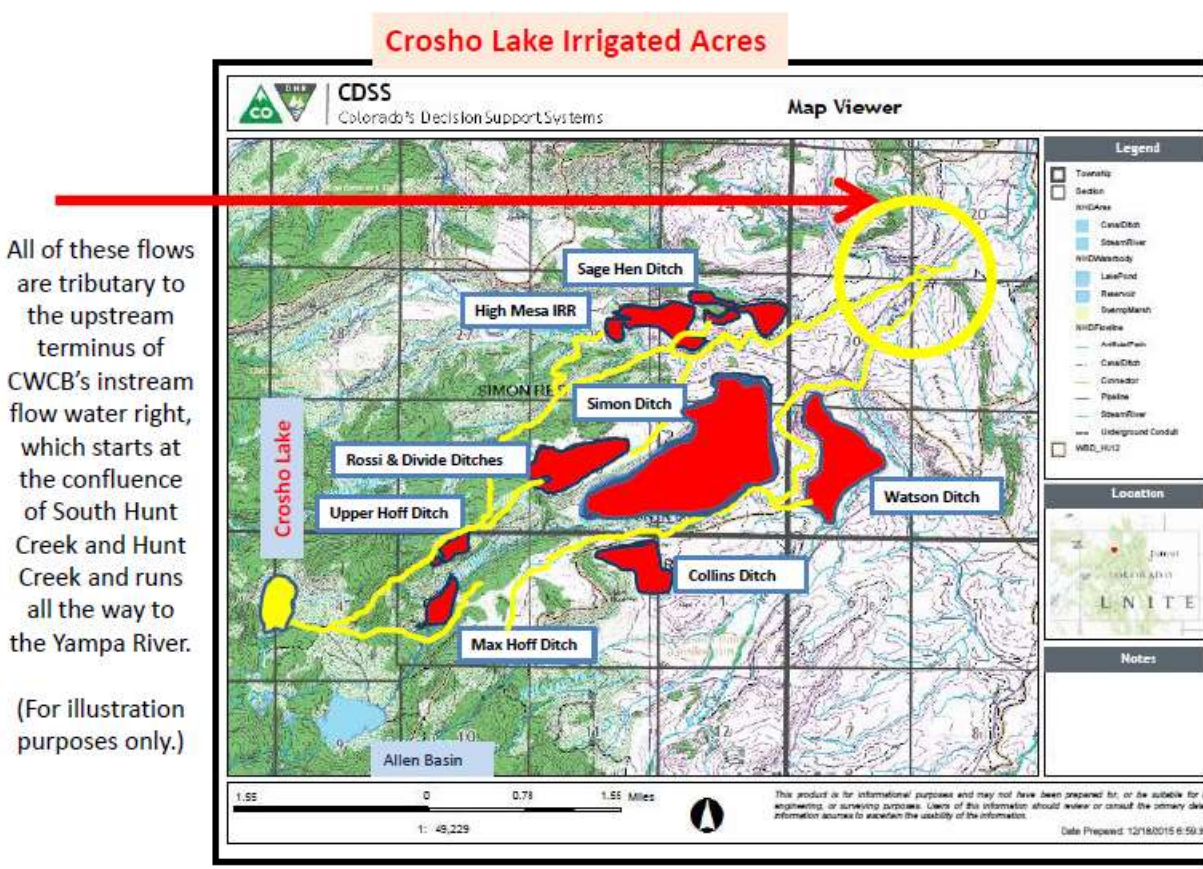
UTM Coordinates (NAD 83): Northing (UTM y): 4448679.0 Easting (UTM x): 325051.0 GPS

Latitude/Longitude (decimal degrees): 40.1703 -107.0546

Water Supply Reserve Account – Application Form

Revised October 2013

The following map gives a conceptual illustration of the Crosho Lake Reservoir flows. It shows the ditches that directly deliver Crosho water; how some of the return flows return directly to these ditches; how some combine with additional ditches or streams; and then in many cases how they are again diverted by these ditches, with the whole return-flow system from these Crosho Reservoir irrigators significantly contributing to the health of the Upper Yampa watershed.



Water Supply Reserve Account – Application Form

Revised October 2013

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

The Crosho Lake Corporation, (or “Crosho” in this grant proposal) is the applicant as well as the Contracting Entity with CWCB.

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.

There are no TABOR issues involved.

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.

- Replace deteriorated water management infrastructure in Yampa River basin
- Eliminate a significant public safety concern and identified risk of potential dam failure
- Prevent damage to and/or loss of aquatic resources and valuable recreational assets
- Support valuable grayling and Colorado River cutthroat trout fishery
- Reduce agricultural/environmental impact, improve water management, maintain seasonal irrigation
- Limit impact of outlet works replacement project on recreation, wildlife & shareholder operations
- Protect the value of a pre-Compact reservoir, helping to keep water in Colorado
- Provide an opportunity to collaborate with CPW & US Forest Service to address erosion concerns
- Address objectives of identified Yampa/White Basin nonconsumptive needs

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)

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

Latitude: 40.1701960770001

Longitude: -107.054289458

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

Infrastructure: This project includes the complete replacement of the outlet works at Crosho Lake Reservoir, known also as the Simon #1 Dam, which was constructed in 1917. To the State's knowledge, the dam contains the original outlet works, consisting of a corrugated metal pipe through the embankment with a concrete outlet tower just downstream of the crest. This tower is located within the embankment and contains the valve and operator used to make releases from the reservoir. Due to the location of the valve, the upstream portion of the pipe is subject to the full pressure of the reservoir, while the downstream portion remains open to the atmosphere.

Problem: The age of the outlet infrastructure, inspection observations, and previous observations and knowledge lead to the conclusion that the outlet works are severely deteriorated and in need of replacement. Their current state and the observations of leakage into the tower and seepage around the outlet headwall represent an active failure mode that will eventually lead to failure of the dam. The current deteriorated state of the outlet works is advanced enough that it is a significant dam safety concern and needs to be addressed as immediately as possible.

Actions and Schedule: Underlined items will be paid for with WSRA funds

1. Applicant has hired project engineer at its own expense - The Applegate Group
2. Submit plans and specifications to the state engineer for review and approval
3. Proceed with construction over a 5-week period in the fall of 2016
4. Reduce reservoir level down to outlet pipe, leaving lake levels unaffected, in late summer 2016
5. Proceed with normal operations for the 2016 irrigation season
6. Regular fill and reservoir operation on completion of dam restoration

Deliverable: The proposed outlet will include an 18" PVC pipe conduit encased in concrete flow fill with an upstream control gate. This configuration will de-pressurize the entire conduit, eliminating concerns associated with a pressurized conduit within the embankment. An inclined slide gate will be installed on a new concrete intake structure. The gate stem and an air vent will be encased in a concrete grade beam on the upstream dam embankment. A lockable handwheel will be mounted to a new concrete block on the dam crest, preventing unauthorized operation of the outlet. A new staff gage will be installed on the concrete grade beam. A sand filter diaphragm will be installed towards the downstream end of the conduit to intercept any seepage traveling along or near the conduit. Seepage entering the diaphragm will be collected in a perforated drain pipe and carried to the downstream toe of the dam. The outlet pipe will discharge into a concrete structure located at the dam toe. From this point discharge water will be conveyed in a new 24 inch PVC pipe that will tie into the existing ditch pipe downstream.

- A full **Statement of Work** with a detailed budget and schedule are in **Exhibit A** of this application.
- A **maps** of Yampa Basin and Crosho Lake plus **photos** are in **Exhibit B**
- The Dam Safety Inspector's Report and additional supporting documents are in **Exhibit C**.

Part III. – Threshold and Evaluation Criteria

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

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

This project does not have any effect upon Colorado's current system of allocating water rights. In fact it supports the State's water rights adjudication system by preserving stockholder values of the five ranches which depend upon Crosho Lake for irrigation. This project does not restrict the ability of the holder of any water right to use or to dispose of that water right in any manner permitted under Colorado law, nor does it in any way impact the General Assembly's protections for contractual and property rights under the state constitution and related statutes. By restoring the infrastructure of Crosho Lake, the use of water is directed to beneficial uses, supporting provisions in Section 37-75-102 relating to the allocation and use of water. This project does not supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights; nor does it 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.

- 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.

Per grant guidelines, the cover letter from the Chairperson of the Yampa/White Basin Roundtable includes information on the Yampa/White Basin Roundtable's action in approving this application.

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

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

This project meets the provisions of Section 37-75-104(2), Colorado Revised Statutes because it assists in meeting the water supply needs identified in the Yampa/White Basin Roundtable's assessment of nonconsumptive water needs. The Yampa/White Roundtable conducted an extensive inventory of its environmental and recreational attributes and summarized this information in focus area mapping in "*Appendix D-9, Yampa/White Basin Mapping Results.*" These focus-area charts are available at cpw.state.co.us/Documents/LandWater/ click on stratplan-Y-W12-04.pdf

The development of the focus mapping for environmental and recreational features in the Yampa/White Basin was heavily dependent on the work of the Basin Roundtable Consumptive Needs Analysis subcommittee. Some of those members have reviewed this proposal and have found that this project addresses nonconsumptive needs in each of the above categories, and therefore meets the provisions of Section 37-75-104(2) CRS.

The Chairperson of the Yampa/White Basin Roundtable includes this information in her letter to CWCBC.

- 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)

	Total Project	Local Match	WSRA Basin	WSRA Statewide
	\$ 200,000	\$ 61,620	\$ 30,000	\$ 108,380
TOTAL PROJECT COST	\$ 200,000			
TOTAL MATCHING FUNDS (Crosho Match = \$25,620) (* Grant Applications Pending)		\$ 91,620		
TOTAL WSRA GRANT REQUEST				\$ 108,380

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

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Local matching funds constitute 66% of the total WSRA grant request, with the Yampa/White Basin Roundtable's \$30,000 representing 22% of the total grant request. The Crosho match alone is 24% of the statewide grant request. Strong local buy-in from multiple stakeholders demonstrates that Crosho is able to significantly exceed the matching requirement.

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).

Multiple needs and Issues:

- **Address dam safety inspector's concerns:** This project addresses Colorado's obligation to protect public safety and public property from the failure of dams. When there is an immediate concern with the safety of a structure, the state engineer has the authority to order a reservoir level restriction down to a safe level. The risks associated with not taking action include both risks to public safety and property as well as loss of the resource to the shareholders.

In this project the multiple interests of Colorado Parks & Wildlife and the Forest Service are coordinated with those of the stockholders and the Dam Safety Engineer. The project's engineer, Applegate Group, Inc., has been hired with \$17,000 of Crosho's matching funds and is integrating input from all stakeholders.

- **Protect Crosho Lake's grayling and Colorado River cutthroat trout fishery**

Colorado Parks & Wildlife Aquatic Biologist, Billy Atkinson and District Wildlife Manager, Libbie Miller, are advising the project to ensure that the timing and execution of this project will not negatively impact Crosho Lake's grayling and Colorado River cutthroat trout fishery

or any of the other valuable recreational and wildlife assets in the United States Department of Agriculture's Crosho Lake Recreation Area. The grayling at Crosho Lake attract anglers and fly fishing enthusiasts from far and wide.

- **Provide Agricultural and Rural Residential Source of Water**

Crosho Lake is mostly fed with water by ditch and also by springs. It is located between Middle and North Hunt Creek Drainages, which are tributaries of the Upper Yampa River. For generations Crosho Lake Reservoir has supplied downstream ranches with water, but due to its natural depth it has never been drawn down even remotely low. As the above map illustrates, Crosho Lake's reservoir water provides essential return flows, feeding the springs which also provide water for several homes in the area. Without those return flows, those families would have to find alternative sources of domestic water.

- **Protecting Natural, Agricultural and Domestic Water Uses**

Crosho Lake is a very deep natural lake. Its waters serve the needs of the forest, of riparian habitat, and of the bountiful fishery and wildlife which thrive in this breathtakingly beautiful place. Crosho Lake Reservoir sits on top of that lake. Built in 1917 for irrigation purposes, the capacity of the dam has been lifted twice in order to serve the approximately 1,000 acres capable of irrigation. These waters also provide recharge to springs, providing domestic water for eight families.

- **Protecting Natural and Public Resources - Project Will Not Disturb Crosho Lake**

The outlet pipe of the reservoir portion of those waters only releases reservoir water and not lake water. As Water Commissioner Schaffner points out, Crosho has drawn the reservoir down all the way, i.e. to the point where the outlet pipe is open completely and no more flows are coming out of the reservoir. DWR records indicate that the reservoir was drawn down as far as possible (or very close to that) in 2015, 2010, 2007, 2002, 1994, 1993, 1992, 1990, 1958, 1956, 1955, 1953, 1951 and 1950. The following pictures from the 2015 drawdown show the perspective of the lake & the outlet channel to the dam.



This 4 to 6 week dam restoration project pertains to Crosho reservoir, and not to Crosho Lake. There will be no perceptible impacts upon the natural and public resources of the Crosho Lake Recreational Area or on its many fishery and wildlife assets.

- **Eliminate the risk of flood to popular recreational areas**

The dam is located in a significant recreational area accessed via county and National Forest roads in/along the floodplain below the dam. Although loss of life is not expected in the case of a dam failure, potential failure certainly poses a risk to public safety, and would mean certain damage to popular recreational sites and to public property such as downstream roads and structures.

- **Protect water quality and enhance the health of the Upper Yampa River Watershed:**

Water Quality: The project is also mindful of any potential water quality issues which might come up during the project. The channel from the reservoir to the outlet pipe in the dam has silted in to some degree, so the bottom several feet of reservoir storage will not be released.

Riparian & Wetlands Ecology: Seventeen miles west of Steamboat Springs, the Yampa River drops through a narrow gap before flowing onto one of the broadest floodplains in western Colorado. The above map of Crosho's irrigated acres shows the lake's location in the Upper Yampa watershed and the watershed's network of creeks, streams and rivers, all supporting an extensive riparian ecosystem.

CWCB's Instream Flow Right: Starting at the confluence of South Hunt Creek and Hunt Creek, shown by the yellow circle, CWCB has an instream flow water right which runs all the way to the Yampa River. This Crosho Lake and Reservoir project helps to maintain the long-term ecological balance of streamside forests and wetlands, one of the largest remaining examples of a rare riparian forest type dominated by narrowleaf cottonwood, box elder and red-osier dogwood.

- **Protect Agricultural Assets**

Failure of the dam would mean loss of the reservoir resource for the shareholders that rely on this water source for irrigation every year. The timing of this project, dictated by the dam-safety urgency, is also critical for economic reasons, limiting the impact of the outlet replacement work on shareholder operations and preserving the annual irrigation season.

- **Improve efficiency of water management in the Yampa River basin**

For almost a century, since 1917, those who have lived and worked in the irrigated lands served by Crosho Reservoir have understood the dynamics of watershed health. Generation after generation these families have been sensitive to the seasonal flow variations required for their ranch operations and for maintaining the balance of surface and ground water flows.

Quick action on this project will support the seasonal balance of Crosho's normal ranching operations, preserving their return flow benefits to the Yampa/White Basin.

- **Preserve return flows and the re-use of surface waters**

The continuing tradition of agricultural flood irrigation augments groundwater aquifers and creates wetlands which can assist with late season return flows to the river. The Crosho Lake Community of ranchers, fishermen and hunters, together with the wider community of local and visiting recreationists, will benefit by helping to maintain the balance of the Yampa River watershed system. These benefits of groundwater recharge promote responsible and efficient use of Colorado's water.

- **Address objectives of identified Yampa/White Basin nonconsumptive needs**

As explained in Part III-1-c above, this project directly addresses nonconsumptive needs identified by the Yampa/White Basin analysis.

- 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.

In addition to the Crosho community of livestock businesses and families, the issues to be addressed in this project have brought together the collaboration of the Yampa Basin's best and brightest in water and natural resource management disciplines:

Andy Schaffner, Water Commissioner WD 58, DNR
970-819-4899 Schaffner - andy.schaffner@state.co.us
Kevin McBride Manager, Upper Yampa Water Conservancy District
970-871-1173 or kcmcbride@upperyampawater.com
Janet Faller USFS contact for structures on USFS land, Steamboat area
970-819-2905 or jfaller@fs.fed.us
Billy Atkinson fish biologist, Colo Parks & Wildlife
970-871-2868 or Bill.Atkinson@state.co.us
Dana Miller, P.E. Colorado Dam Safety Inspector
970-879-0272 dana.miller@state.co.us
Craig Ullman, P.E., Applegate Group, Inc.
970-945-9686 craigullmann@applegategroup.com
Dave Kanzer, Colorado River Water Conservation District
dkanzer@crwcd.org
Libbie Miller District Wildlife Manager, CPW libbie.miller@state.co.us
970-736-8359
Dana Miller, P.E. Dam Safety Engineer, DWR
970-879-0272 or dana.miller@state.co.us

Promoting Cooperation:

Andy Schaffner, Water Commissioner WD 58, DNR: Much research and assistance was needed for the ranching families of Crosho Lake to determine how to proceed with this dam safety situation. From the beginning, Andy provided assistance, helped identify expertise, and provided much needed data and logistic help for the preparation of this funding request.

Kevin McBride, Manager, Upper Yampa Water Conservancy District (UYWCD): Mr. McBride has counseled Crosho on his concerns regarding the grayling and Colorado River cutthroat trout fishery and the timing of the project in relation to the springtime spawning of the grayling. This project will not start until late in the fall. Applegate Group, Inc., the engineers of the project, are experienced in coordinating projects to minimize/eliminate environmental and wildlife impacts; and Crosho has done its best to provide information many months in advance of this project's commencement in the fall of 2016. Clarifications have been made with respect to the timing of the draw down, the duration of the project, and discussions will continue on any relationship which may exist between this project and potential future projects of the Forest Service and CPW in the area. The Reservoir, not the Lake, will be drawn down -- no lower than occurs seasonally, and no lower than is allowed by the Crosho adjudication. Crosho is submitting a grant proposal to UYWCD requesting \$16,000.

Bill Atkinson, Aquatic Biologist, and Libbie Miller, District Wildlife Manager, Colorado Parks & Wildlife: During all phases of this project, Crosho will make every reasonable effort to minimize and, when possible, to eliminate any impact upon public safety, or on the recreational, environmental and wildlife assets of Crosho Lake. As part of this commitment, Crosho has agreed to provide the CPW with reasonably adequate time to review and comment on the project design plans and specifications and the construction timeline in order to ensure that appropriate measures, if needed, are taken to avoid any negative impacts to the existing fishery at Crosho Lake. In addition, Crosho has agreed to support the efforts of CPW, the USFS, and the Colorado Division of Water Resources (DWR) to review and address concerns relating to the existing erosion around the gabion baskets located where the inlet channel enters the reservoir, and to determine the extent of assistance which Crosho may be able to provide in repairing these structures. Although the erosion issue involving the gabion baskets is not specifically related to the intent of this application, Crosho is aware that there is a mutual interest between the CPW, USFS, DWR, and Crosho to keep fish out of the irrigation ditches. This project provides an opportunity for additional collaboration while work is underway at Crosho Lake Reservoir. Crosho understands CPW's concerns about potential impacts to hunters, given the proposed fall schedule for construction. Crosho will make every reasonable effort to work directly with the USFS and the CPW to minimize and, when possible, to eliminate any safety or other use concerns to hunters and the general public.

There will be a few days in the late fall of 2016, after Labor Day, when materials and equipment will be delivered to the project site. The access road to the work site is a narrow forest road. Travelers always know to drive slowly and they anticipate having to yield at times to an oncoming vehicle. This is the same road which is used by motor homes, camper trailers and fish-stocking trucks, so it is capable of handling the vehicles which will be accessing the work site. There are some narrow spots and a few blind corners, but Crosho sees no need to limit traffic, and no need at all to close the road to the project site. Crosho has determined that if necessary, it may provide an escort vehicle whenever a heavy truck needs to access the work site.

Janet E. Faller, Land Specialist for Medicine Bow-Routt National Forest: In an email dated 12/18/15 Janet Faller wrote: “The Forest Service is interested in working cooperatively with the Crosho Lake Corporation to complete the outlet replacement on the Crosho Lake dam.” Janet Faller and Crosho are exploring a mutually beneficial exchange of services to see how Crosho’s presence on the site, with equipment and capabilities, might be of benefit to the Forest Service. Forest Service crews completed an inspection of the Crosho inlet and outlet ditches this past summer. In conjunction with the repair of the dam, Crosho is discussing with Ms Faller the need for providing maintenance on the inlet ditch to Crosho Lake.

Applegate Group: Having selected Applegate Group as the Contractor for this Project, Crosho has committed \$17,000 of its matching funds for engineering services. In addition to guiding the project’s execution, Craig Ullman has assisted in preparing this proposal’s Scope of Work and Timeline. Applegate Group will do all of the engineering, provide on-site supervision of the project, provide contacts with potential contractors, and meet with Division of Water Resources engineers and others.

Other Resources: At the time of this writing Crosho is planning to pursue funding opportunities with Kevin McBride of the Upper Yampa Water Conservancy District, and Dave Kanzer of the Colorado River Water Conservation District. Those applications for funding will be submitted soon after this present WSRA proposal, with Crosho reporting to Yampa Basin Roundtable and to CWCB the status of the respective grant applications.

- 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.

This project helps to support the CWCB instream flow water right in the 15-Mile Reach established to protect water for endangered fish, per the Recovery Program. Balancing this commitment on the economic and agricultural side, one of the Yampa/White Basin Roundtable’s priorities is to “ensure endangered species’ needs do not negatively impact future in-basin uses.”

As shown on the map of irrigated acres, preserving the storage space at Crosho and improving water management in the releases of that water helps to sustain critical habitat on the Yampa River for the endangered fish. All of these activities help to meet future water needs of Colorado’s endangered fish without “negatively impacting future in-basin uses.”

Tier 2: Facilitating Water Activity Implementation

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

Without this assistance from CWCB’s Water Supply Reserve Account, this project will not be done. There is no way these families can pay for this project. The only request Crosho is making is that every effort be made to expedite the process of obtaining these funds so that no time is lost in the process. In this case, time = risk; and no WSRA funding means no project.

- 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.

Crosho's contribution demonstrates both cash and in-kind contributions, and has enlisted strong support from stakeholders - in all ways exceeding WSRA's matching requirements.

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.

This project helps sustain the cattle and livestock operations of the stockholders of the Crosho Lake Corporation and their extended families, representing almost 1,000 acres of irrigated lands. The environmental benefits of this project have been shown to address the nonconsumptive needs of the Upper Yampa watershed and its high value riparian ecosystems. Return flows and repeated use of water also support CWCB's Instream Flow water right and helps sustain Colorado's ability to keep water in Colorado for multiple beneficial uses. Perhaps the most visible, popular and most user-friendly Statewide benefit of this project is to provide for the continued and long term safety and sustainability for one of Colorado's most outstanding recreational regions.

Sustaining Recreational Needs:

Crosho Lake, 10 miles from Yampa and just off the Flat Top Scenic Byway, is a great place for hiking, bird watching, wildlife viewing, and hunting. It is a popular fishing destination, with easy access to nearby conveniences and services. Local communities offer anglers, campers and outdoor enthusiasts plenty of places to get a meal and stock up on supplies. Crosho Lake's visitors contribute to the local economy by stopping and shopping at the nearby towns of Yampa, Oak Creek, Hayden and Steamboat Springs.

Hikers often walk along the Crosho Inlet Ditch and the Rossi Bypass, and fishing spots are found on many nearby lakes, reservoirs and streams such as Allen's Basin Reservoir, Chapman's Reservoir, Sheriff's Reservoir, Heart Lake, Sand Lake, Hunt Creek, Oak Creek, Trout Creek, and the Yampa River.

Campgrounds and tackle shops provide fishing maps and information, and some locals have been known to reveal a secret or two about some of the best fishing spots this lake has to offer. Nearby cottages, campgrounds, and bait and tackle shops welcome visitors, with many who return every year to work their favorite fishing hotspots. This is where a visitor can get the latest Crosho Lake fishing report, shared over a campfire or submitted by charter captains, fishing guides, cottage owners and other users who have recently been out on the lake.

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There are 10 undeveloped campsites near Crosho Lake, with plenty of hiking activity on nearby trails from early June through mid-November. In winter months, the area is only accessible by snowmobile, skis, or snowshoe, when the entire Yampa winter recreation scene is in full swing.

Crosho Lake, together with the Crosho Lake Corporation's reservoir which sits on top of that natural lake, combine to support agriculture, domestic water use, tourism, as well as one of Colorado's favorite secluded fishing locations. Folks are attracted here from far and wide across the US for hunting, camping, hiking, birding, wildlife watching -- and for a chance to land a fierce-fighting grayling or to bring home a Colorado River cutthroat trout for dinner.

USDA Forest Service
Medicine Bow-Routt
National Forests,
Thunder Basin
National Grassland
2468 Jackson Street
Laramie, WY 82070
307-745-2300

Ranger Districts

Telephone for the
Hearing Impaired
307-745-2307

Contact Us

A Google Map showing Crosho Lake. A callout box titled "Crosho Lake Recreation Area" is overlaid on the map. The box contains icons for a tent, a fishing rod, and a bird. The text inside the box reads: "There are 10 undeveloped campsites near Crosho Lake. The area is popular for fishing in the lake and hiking on nearby trails. The Crosho Lake Recreation Area is located 10 miles northwest of Y". Below the text, it says "Go to the [Crosho Lake Recreation Area page](#)". The map also shows the "Simons Reservoir Number 1" and a road labeled "9302D". The Google logo is visible in the bottom left corner of the map.

- 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.

The appropriation date for Simon Reservoir 1 is 1904, so it clearly pre-dates all of the Colorado River Compacts. The adjudication date is 1936, but the appropriation date suffices to qualify it as pre-compact. This means that Crosho Lake Reservoir is not subject to a call by the lower states, i.e. the reservoir/right would be preserved in the case of a call placed on the Colorado River by downstream states, keeping the water here in Colorado for our use, while many other more junior rights would be "called out" and forced to send their water downstream.

The Yampa is one of the last free-flowing rivers in the Colorado River basin. The Preamble to the Bylaws of the Yampa/White Basin Roundtable states that the Roundtable is "especially sensitive to the protection of the Yampa River ... basin water for future generations in our basin, and to protect our present and future water users against curtailments in the event of a compact call on the Colorado River." Crosho Lake's pre-compact status responds positively to this concern of the Yampa/White Basin Roundtable, rehabilitating the dam which keeps Crosho Lake Reservoir's water in the Yampa Basin for future generations -- even in the event of a call on the Colorado.

This activity actively promotes maximum utilization of state waters because it establishes the long term sustainable operation of a pre-Compact reservoir dam which is tributary to the Yampa River, and thus to the Colorado River. This project assists in maintaining the surface / groundwater balance in the Yampa basin by quickly and efficiently replacing the deteriorated outlet works of the Crosho Reservoir dam. By restoring the Crosho irrigation system, the return flows and recharge help to sustain the wetlands and the water table of the Yampa watershed.

The State of Colorado is party to the 1922 Colorado River Compact and the 1948 Upper Colorado River Compact. The Final Yampa/White/Green Basin Implementation Plan (4-17-2015) states that

Currently, the state is discussing methods (e.g. contingency planning, demand management, water banking) to minimize the risk of a "call" under compact administration. The role of the Yampa/White/Green Basin flows in meeting the state's compact obligations is a central issue in the YWG Basin Roundtable's planning efforts. In the event of a compact deficit, the State Engineer would have to develop rules by which to curtail Colorado River water users to remedy the condition. How the state administers a curtailment could greatly affect Colorado River water rights users across the state.... If administration is based upon a statewide application of the prior appropriation system in the Colorado mainstem and tributary basins, the burden would likely fall disproportionately on the YWG Basin as its water rights are relatively junior to those of other Colorado River basins.

This project reduces the burden that a potential future call on the Colorado would have upon the Yampa/White/Green Basin because, being a pre-Compact reservoir, Crosho's waters will not be affected by any such call. These waters will not be curtailed. Rehabilitating the Crosho Lake Reservoir dam helps to keep water in Colorado.

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

Aquatic Life and Federally Listed Fish: Crosho Lake flows and Crosho Reservoir return flows are tributary to the Yampa River, which is considered by some to be one of the most

hydrologically and biologically intact rivers in the West. The Upper Yampa watershed supports a diversity of aquatic communities, and Crosho Lake Reservoir specifically supports a valuable grayling and Colorado River cutthroat trout fishery. Colorado River cutthroat trout are identified by the CPW as a Species of Special Concern. This project will help to ensure that the necessary water resources continue to be available as vital habitat for this species. In addition, the lower stretches of the Yampa River are located within critical habitat for four endangered fish species (humpback chub, bonytail, Colorado pikeminnow, and razorback sucker); however, this project will not have any impact to these species.

Wildlife: Crosho Lake and those immediate areas within the surrounding Reservoir watershed provide valuable habitats to a wide diversity of wildlife species. These species range from big animals such as elk, mule deer, moose and black bears to a number of other species that are listed by the CPW as Species of Special Concern. These less common species include bald eagles, Columbian sharp-tailed grouse, greater sand hill cranes, northern leopard frogs, and common garter snakes. This project will help to ensure that Crosho Reservoir will continue to provide habitats for these species.

Hunting: Crosho Lake and those immediate areas within the surrounding Reservoir watershed provide significant hunting-related recreational opportunities. Big game hunting for elk, mule deer, and black bear, as well as small game hunting for dusky grouse are all extremely popular activities during the fall. Most hunting-related activity in this area is concentrated between the middle of August through the end of October. Crosho is aware of the CPW's concerns about potential impacts to hunters with the proposed fall construction of this project. Subsequently, Crosho will work directly with the USFS and the CPW to minimize and, whenever reasonably possible, to help eliminate any safety or other use concerns for hunters.

Grayling and Colorado River cutthroat trout fishery: Crosho Lake Reservoir supports a valuable grayling and Colorado River cutthroat trout fishery that is very popular with locals and visitors alike, and it is one of only two such fisheries in northwest Colorado. At one point in time, the state record for grayling came from Crosho Lake. This project will help to ensure that the necessary water resources continue to be available as vital habitat for this popular fishery.

CPW staff has reviewed this proposal and has determined that the project should not have any direct impact on the recovery of threatened or endangered species.

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

The highest benefit is the preservation of public safety and the elimination of the risks associated with the current condition of the dam. The grant request is a small price for Colorado to pay to sustain the stability of agriculture in the Crosho Lake and Reservoir watershed, to provide the safety and protections which are expected in a state/national recreation area, and to protect the wildlife ecology of its Upper Yampa riparian areas and wetlands.

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

This project has a positive effect by supporting CWCB's instream flow water right, to which Crosho Lake and Reservoir watershed and the return flows from Crosho reservoir are tributary.

Continued: Explanation of how the water activity/project meets all applicable **Evaluation Criteria**.

This concludes Crosho's responses in Part III.

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Part IV. – Required Supporting Material

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.

DWR is not required to track ownership, but has assisted this project by providing the following information. Updated ownership and stockholder participation is above in Part I #3.

Structure Name: SIMON RES 1

WDID : 580353

Source: MIDDLE HUNT CK @ Mile 238.1
Location: Q10 Q40 Q160 Section Township Range PM
NW SW 4 2 N 86 W S CIU: A
Distance from section lines: From N/S line: From E/W line:
UTM Coordinates (NAD 83): Northing (UTM y): 4448679.0 Easting (UTM x): 325051.0 GPS
Latitude/Longitude (decimal degrees): 40.1703 -107.0546
Measuring Device/Recorder: GAUGE

NOTE - DWR is not required to track ownership. This data is provided for assistance only and may not reflect actual ownership.

Water Rights Summary

Total Decreed Rate(s):	Abs.:	Cond.:	AP/EX abs:	AP/EX cond:
Total Decreed Volume(s):	Abs.: 1105.7100	Cond.: 0.0000	AP/EX abs: 0.0000	AP/EX cond: 0.0000

Structure Comments:

NO MEASUREMENT ON RELEASES UNTIL SPLIT BETWEEN #843 AND NORTH HUNT CREEK; SIGNIFICANT LOSS TO DELIVERY POINTS. FILLED BY #1090; THE BOTTOM 5' WILL NOT FLOW TO THE OUTLET

Ownership

Priority	Owner	Amount/Shares	Comments
143 B	HART MOUNTAIN RANCH	17.5 A	EACH PARTNER 1/3 INT RCR B.698, P.2370-2373
143 B	R&R LAND & CATTLE (ROSSI)	22.5 A	MCKUNE SOLD #528547
143 B	SON HI RANCH (SONHEIM, BOB)	20 A	
143 B	VIELE, FLOYD (DUTCH)	15 A	
143 B	WERTENTEIL, IRA	25 A	WILLCOCKSON SOLD #573636

Water Rights -- Transactions

Seq. #	Case Number	Adjudication Date	Appropriation Number	Admin. Number	O #	Priority Number	Max Rate (CFS)	Total Vol (AF)	Adj. Type	Uses	Comments
2	CA2114	1/2/1936	1/2/1904	31362.19724	0	0		292.89	S	1	
1	CA2114	1/2/1936	1/2/1904	31362.19724	0	0		812.82	S	1	

The Yampa/White Basin Needs Assessment describes water rights in the region as follows:

*Development patterns occurred later and in a less diverse manner than other regions in the state. Agriculture was the first modern settlement pattern and it relied heavily, as it still does, on irrigation. Later development patterns included ski resort development, oil, and coal production for electrical generation. Recent development has been in natural gas extraction and second home construction. Due to this pattern of development, **water rights in the region tend to be of a newer appropriation date than those in basins to the south, on the West Slope, and East Slope in general. Commitments of flows to meet the Colorado River compact and subsequent agreements reflect these later patterns of appropriating water.** This has created concerns that less opportunity may be available within this basin for new development due to obligations both in and out of the state. (emphasis added)*

In the Yampa/White Roundtable's nonconsumptive water needs summary, major stream and lake segments are identified according to the following attributes/categories: Federal Threatened & Endangered Fish, State Threatened and Endangered Species, Important Riparian Habitat, Instream Flows and Natural Lake Levels, fishing, boating, and waterfowl hunting. The study concludes that "Within the basin, a substantial amount of the major rivers (the Yampa, White and Green Rivers) are each highlighted for their environmental, recreational, or environmental and recreational needs."

The Yampa River basin and portions of the Upper Green River basin are located in northwest Colorado and the combined drainage area includes 6,775 square miles within Colorado. The basin is bounded by the Continental Divide on the east, the Colorado River basin on the south, and the White River basin on the southwest.

The Yampa River originates near Yampa Colorado at the confluence of the Bear River, which flows northeast out of the Flattops Wilderness area; and Chimney Creek, which flows northwest from the Gore Range through Egeria Park. The CDW's *Yampa River Basin Aquatic Wildlife Management Plan* divides the basin into three major hydrounits -- the Upper Yampa hydrounit, the Little Snake River hydrounit, and the Lower Yampa-Green River hydrounit.

The upper Yampa basin includes seven Fish Management Units (FMUs): YP01, Upper Yampa; YP02, Elk River; YP03, Trout Creek; YP04, Williams Fork; YP05, Middle Yampa; YP06, Elkhead Creek; and YP07, Fortification Creek. The Little Snake hydrounit contains four FMUs: YP08, Upper Little Snake; YP09, Slater Creek; YP10, Middle Little Snake; and YP11, Lower Little Snake. The Lower Yampa-Green River hydrounit contains two FMUs: YP12, Lower Yampa River; and YP13, Vermillion Creek-Green River

Aquatic resources and fisheries within these drainages range from high mountain lakes and perennial coldwater streams to larger rivers and coldwater reservoirs, to the warmwater reaches of the lower Yampa River, and ephemeral streams and ponds created by spring snowmelt and runoff. The mountainous portions of the basin in the upper Yampa hydrounit contain 91% of the lake habitat area and 48% of the stream habitat area. The lower elevation, high desert plateau of the lower Yampa hydrounit contains only 7% of the lake habitat area and 34% of the stream habitat area. Within the Little Snake River hydrounit, which includes mountain and desert plateau landscapes, only 2% of the lake habitat area and 18% of the stream habitat area occurs.

Within the Yampa basin, 922 waters are currently being managed by state, federal or private entities. Standing water resources comprise 258 lakes and reservoirs totaling 5,275 surface acres (ac) while running water resources comprise 662 stream segments totaling 4,469 miles (mi).

The Yampa River retains a distinction not afforded to any other major river in Colorado--It is essentially undammed. This makes its biology unique and its recreational opportunities world-class. The largely agricultural basin, however, is faced with many modern problems, including energy development, in-basin growth and trans-basin diversion prospects.

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The Upper Yampa Fish Management Unit is located within and south of Steamboat Springs, and includes the mainstem Yampa River and tributaries upstream of the Elk River confluence. It covers an area of 676 square miles.

The Yampa River originates near Yampa, Colorado at the confluence of the Bear River, which flows northeast out of the Flattops Wilderness area, and Chimney Creek, which flows northwest from the Gore Range through Egeria Park.

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

There are no studies that are known to be related to this project. Acknowledging the critical nature of this project, the Forest Service has advised Crosho that they might be granted a somewhat higher priority in applying for the required Forest Service Permit, due to the urgency of this project.

Applegate has determined that this project qualifies for a maintenance exemption, since the project is not changing the purpose of the dam nor is it changing the overall size of the reservoir and dam. The regulations to this effect are included in Exhibit C.

2. 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.

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 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.

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

Signature of Applicant: *Virginia L. Rossi*

Print Applicant's Name: Virginia Rossi, Treasurer and Secretary

Project Title: Crosho Lake & Reservoir –Simon #1 Dam Outlet Replacement

Date: January 14, 2016

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

Signature of Applicant:

Print Applicant's Name: Virginia Rossi, Treasurer and Secretary

Project Title: Crosho Lake & Reservoir –Simon #1 Dam Outlet Replacement

Date: January 14, 2016

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

Exhibit A
Statement of Work
Date: 1-3-15

WATER ACTIVITY NAME –

Crosho Lake and Reservoir - Simon #1 Dam Outlet Replacement

GRANT RECIPIENT - Crosho Lake Corporation

FUNDING SOURCE - WSRA Basin Account:	\$ 30,000
WSRA Statewide Acct:	\$108,380
Matching Funds:	\$ 61,620

INTRODUCTION AND BACKGROUND

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

Crosho Lake Reservoir sits above the natural Crosho Lake, with flows tributary to the Yampa River. This project replaces the outlet works of Crosho Lake Reservoir. Recent inspections by the Division 6 Dam Safety Engineer noted significant leakage from the valve and through the outlet tower walls, plus deterioration of the pipe and seepage at the downstream end, raising serious dam safety concerns. An internal camera inspection of the outlet confirmed that, due to the severely deteriorated condition of the outlet pipe, lining it is not advised. A new outlet pipe encased in concrete will be installed, with new inlet and outlet structures and an inclined slide gate on the upstream side, eliminating the current tower. A concrete grade beam will encase the gate stem and air vent pipe, providing a solid surface for mounting a new reservoir staff gage. A hand wheel on the dam crest will control the outlet. The new outlet will be constructed along approximately the same grade and alignment as the existing outlet pipe, continuing Crosho Lake Corporation's normal irrigation drawdown patterns and having virtually no impact upon Crosho Lake's fishery, wildlife, environmental and recreational assets. Applegate Group Inc., the project engineer, will oversee the project.

OBJECTIVES

- Replace severely deteriorated century-old outlet infrastructure
- Install a new outlet pipe and appurtenant structures for Crosho Lake Reservoir
- Halt active failure mode caused by leakage into tower and seepage around outlet headwall
- Establish optimum long-term water management for agricultural uses
- Restore dam integrity, ensuring public safety for popular recreational assets
- Ensure water resources to support valuable grayling & Colorado River cutthroat trout fishery
- Support Yampa/White Basin nonconsumptive objectives for wetlands and riparian habitat

TASKS - SCOPE OF WORK

TASK 1 - Project Design

Description of Task

A detailed topographic survey was obtained by the owners prior to snow limiting site access in late fall 2015. Applegate Group has visited the site and prepared a preliminary design for purposes of estimating the project costs for this grant. Preliminary design concepts have been discussed with the Dam Safety Branch of the State Engineers Office (SEO) in order to verify their expectations of the project. This task will include the engineering design of the project. The proposed design will include a new outlet pipe encased in concrete as well as new inlet and outlet structures. The outlet will be controlled by an inclined slide gate on the upstream side. A concrete grade beam will be designed to encase the gate stem and air vent pipe as well as provide a solid surface for mounting a new reservoir staff gage. The outlet will be controlled with a hand wheel mounted on a concrete block on the dam crest. The new outlet will be constructed along approximately the same grade and alignment as the existing outlet pipe.

Method/Procedure

Qualifications were solicited from several engineering firms in 2014 and Applegate Group was selected as the engineer for the project based on their experience with similar projects. Design is currently anticipated to begin in mid-January and be completed by mid-March. The owners are currently planning on paying for the engineering services in order to get started earlier and keep the project on schedule.

Deliverables

Final construction plans, technical specifications, and a design report will be prepared for SEO review in Task 2.

TASK 2 - SEO Review

Description of Task

Documents from Task 1 will be submitted to the Dam Safety Branch of the State Engineers Office (SEO) for review as required. Any comments from the SEO will be addressed and final documents will be issued for bidding purposes. This review process typically takes 4-6 months.

Method/Procedure

Initial plans will be submitted to the SEO in mid-March. Assuming a 4 month initial review would result in receiving comments on the submittal by mid-July. This allows for up to 6 weeks to address SEO comments and obtain their final approval of the project.

Deliverables

An approval letter for the SEO will be obtained which will allow the project to proceed to construction.

TASK 3 - Contractor Bidding

Description of Task

Bids and qualifications will be solicited from a minimum of 5 construction contractors in order to obtain a competitive bid on the project.

Method/Procedure

A list of potential qualified contractors will be prepared based on past experience of the owners, Applegate Group and the SEO. Potential contractors will be contacted prior to the release of bids to determine if they are interested in the project.

Deliverable

A bid summary will be prepared in order to compare all bids received and select a contractor. An agreement with the selected contractor will be executed and a final timeline for construction will be established.

TASK 4 - Permitting

Description of Task

This task will be performed in conjunction with Tasks 1-3. The reservoir lies on National Forest lands. Local USFS representatives have been contacted and will be kept up to date on the project schedule and design. The necessity of other permits will be evaluated during the design process; however, very few other permits are anticipated to be necessary for this work. This project is considered maintenance of an existing structure used for irrigation purposes and therefore this work should be exempt from Army Corps Permitting. The project does not include any enlargement of the reservoir or change in operations that would tend to trigger an Army Corps Permit. This project does not require a significant amount of imported materials and therefore the impacts to the roadways should be minimal. Surface disturbance should be limited to the dam embankment and areas below the high water line of the lake.

Method/Procedure

The USFS will be regularly updated on the design of the project and the final design will attempt to address any concerns voiced by them during that process. Plans submitted to the State Engineer in mid-March will also be submitted to the USFS for review and comment.

Deliverable

A permit for the construction project will be obtained from the USFS and any other entities identified during Task 1.

TASK 5 - Construction

Description of Task

Construction is anticipated to take place over 4-5 weeks during the Fall of 2016. This works well with the other project tasks as shown in the attached Schedule. The old outlet will be excavated and disposed of properly. The new concrete encased outlet will then be placed followed by the replacement of the embankment above the conduit. A new concrete inlet structure with a slide gate and trash rack will be installed on the upstream end of the outlet. The new outlet will also be a concrete structure and will provide for energy dissipation of high flows exiting the conduit.

Method/Procedure

Applegate Group, the Engineer of Record on the project, will provide periodic oversight of the project during construction in order to verify that the project is constructed according to the approved plans and specifications. A geotechnical engineering firm will be retained by the owners to provide compaction testing of the embankment as well as concrete testing for the cast in place concrete portions of the project. The contractor will be responsible for hiring a surveyor to provide survey staking on the project. Changes made to the design plans and specifications to accommodate field conditions will be coordinated with the SEO office as required.

Deliverable

A completed outlet pipe and appurtenant structures for Crosho Lake

TASK 6 - As-Built Documentation

Description of Task

The SEO requires that as-built documentation be submitted following project completion prior to granting final approval of the project. A report must be prepared detailing the construction process, any problems that were encountered, how such problems were addressed, quality control testing, and any other pertinent information. An as-built set of construction plans will also be prepared in order to document any changes that were made during construction.

Method/Procedure

Applegate Group will prepare the necessary documentation and submit it to the SEO within 4 weeks of project completion.

Deliverable

A final construction report and as-built construction plans will be signed by Applegate Group and submitted to the SEO. The SEO will then provide a letter of project approval that will allow the reservoir to be filled.

Task 7 - Project Administration

Description of Task

This task includes general project administrative duties necessary for a successful project. In order to properly track the project budget the owners anticipate hiring a project bookkeeper to process invoices, reimbursements, and reports. Legal counsel will be consulted with regarding USFS permitting and other land rights issues that arise during the project. The owners will obtain insurance as required by the CWCB.

Method/Procedure: Hire project bookkeeper

Deliverable: A successfully administered project with timely and accurate delivery of contract documentation and purchase orders between Crosho Lake Corporation and CWCB, including periodic and final reports.

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BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, \$/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

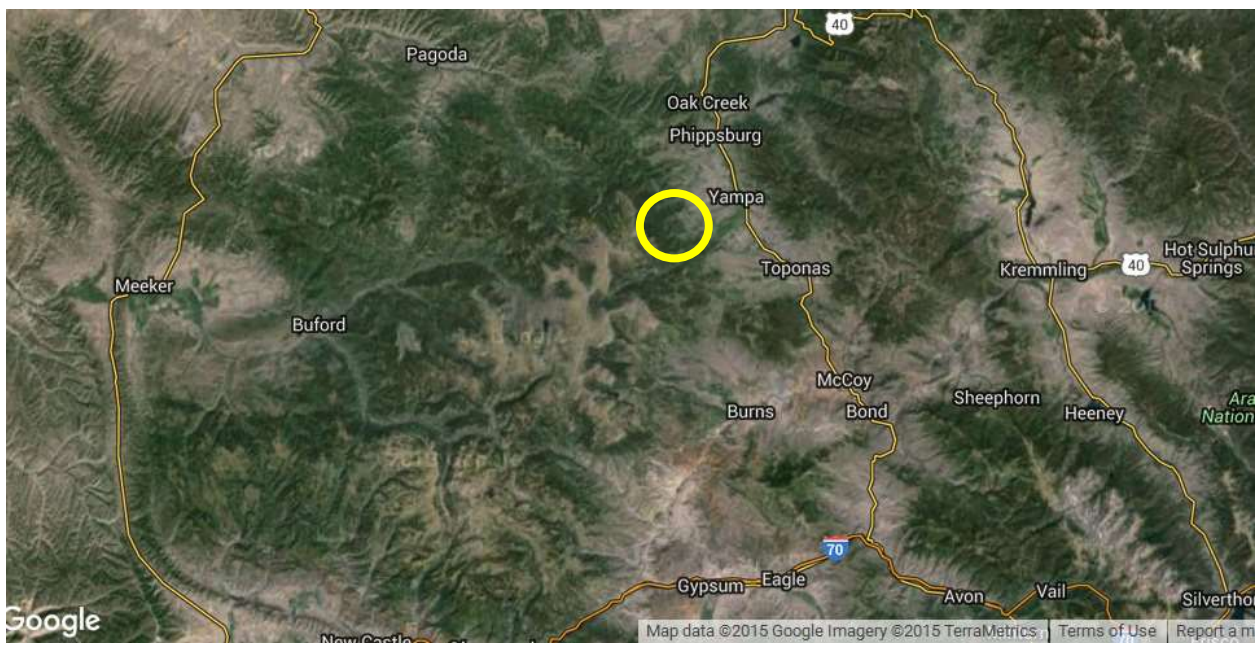
TASK	ITEM	UNIT	QUANT	PER UNIT	TOTAL PROJECT COST	CROSHO & LOCAL MATCH		YAMPA BASIN RT FUNDS	WSRA STATEWIDE FUNDS
1	Project Design								
1a	Engineering Design	LS		\$ 11,000	\$ 11,000	\$ 11,000	Crosho		
1b	Site Survey	LS		\$ 2,000	\$ 2,000	\$ 2,000	Crosho		
2	SEO Review	LS		\$ 3,000	\$ 3,000				\$ 3,000
3	Permitting	LS		\$ 5,000	\$ 5,000				\$ 5,000
4	Bidding	LS		\$ 3,000	\$ 3,000				\$ 3,000
5	Construction								
5a	Mobilization	LS	1	13000	\$ 13,000				\$ 13,000
5b	Clearing and grubbing	AC	0.5	2500	\$ 1,250				\$ 1,250
5c	Excavation	CY	2185	8	\$ 17,480				\$ 17,480
5d	Debris Removal	LS	1	3000	\$ 3,000				\$ 3,000
5e	18" Concrete Encased Outlet	LF	140	250	\$ 35,000	\$ 20,000	CRWCD*		\$ 15,000
5f	24" PIP	LF	40	40	\$ 1,600				\$ 1,600
5g	Embankment compaction	CY	2400	14	\$ 33,600				\$ 33,600
5h	Sand Collar	CY	20	250	\$ 5,000			\$ 5,000	
5i	Sand Collar Drain	LF	80	15	\$ 1,200				\$ 1,200
5j	Inlet Structure w/gate & Trashrack	LS	1	12000	\$ 12,000	\$ 12,000	UYWCD*		
5k	Outlet Structure	LS	1	4000	\$ 4,000	\$ 4,000	UYWCD*		
5l	Grade beam & staff gage & 60 LF stem	LS	1	12000	\$ 12,000			\$ 12,000	
5m	Gate hoist block	LS	1	2000	\$ 2,000				\$ 2,000
5n	Riprap Replacement	LS	1	3000	\$ 3,000				\$ 3,000
5o	Seeding	AC	0.5	2500	\$ 1,250				\$ 1,250
5p	Construction Observation Engineer	LS		13000	\$ 13,000			\$ 13,000	
5q	Geotechnical Testing	LS		\$ 4,000	\$ 4,000	\$ 4,000	Crosho		
5r	Survey Staking	LS		\$ 2,000	\$ 2,000				\$ 2,000
6	As-Built Documentation	LS		\$ 3,000	\$ 3,000				\$ 3,000
7	Project Administration								
7a	Pre-NTP Admin, Meetings & Site Prep Labor	LS			\$ 4,420	\$ 4,420	Crosho		
7b	Legal	LS			\$ 1,500	\$ 1,500	Crosho		
7c	Insurance	LS			\$ 850	\$ 850	Crosho		
7d	Security & Lighting	LS			\$ 350	\$ 350	Crosho		
7e	Bookkeeping	Contr.	3	500	\$ 1,500	\$ 1,500	Crosho		
					\$ 200,000	\$ 61,620		\$ 30,000	\$ 108,380
	TOTAL PROJECT COST				\$ 200,000				
	TOTAL MATCHING FUNDS (Crosho Match = \$25,620) (* Grant Applications Pending)					\$		91,620	
	TOTAL WSRA GRANT REQUEST								\$ 108,380

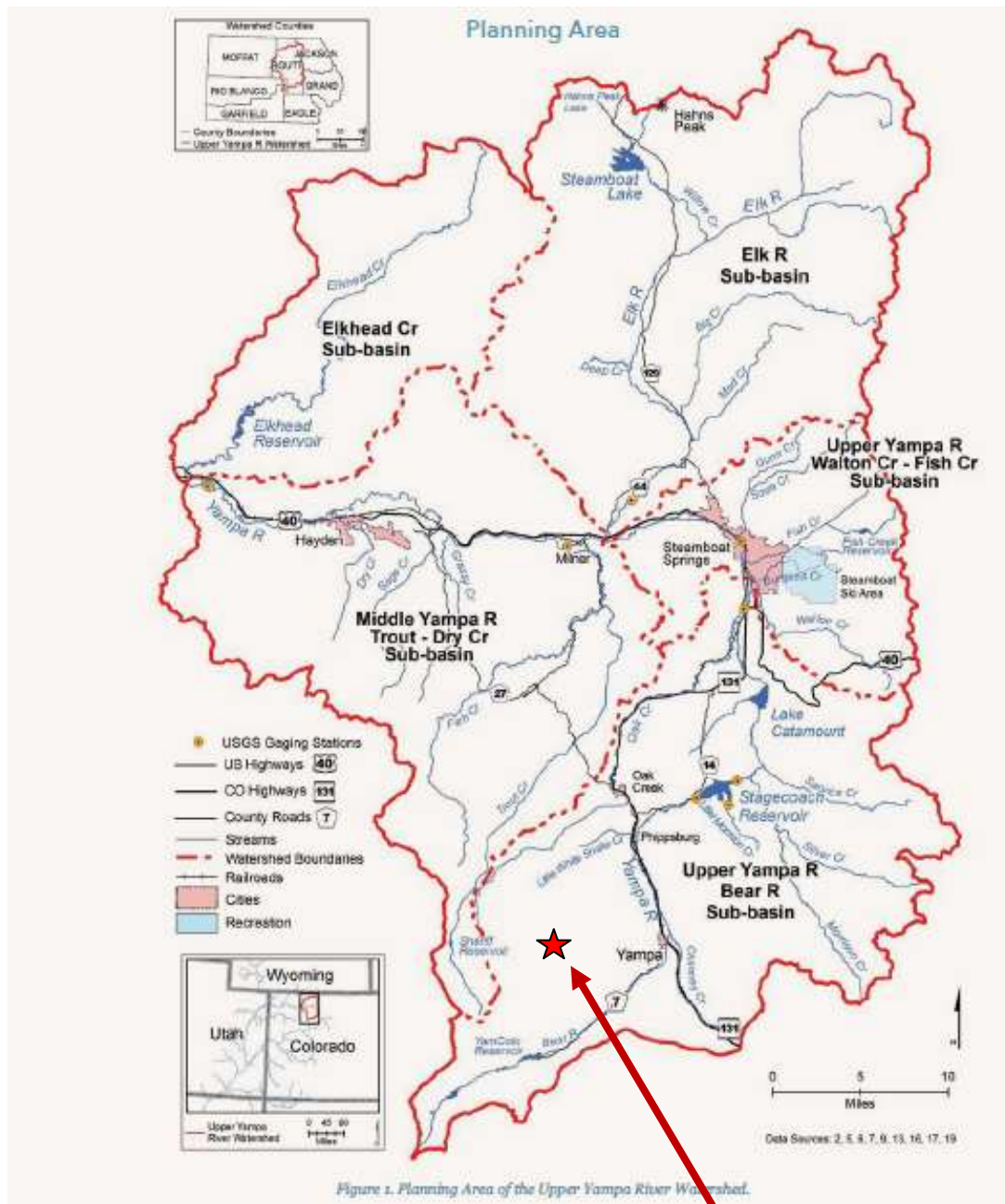
SCHEDULE

1. Applicant will hire project engineer
2. Submit plans and specifications to the state engineer for review and approval
3. Proceed with normal and/or reduced operations for the 2016 irrigation season
4. Draw down the reservoir late summer 2016 and allow the work area and dam embankment to dry out.
(Reservoir draw down will be similar to levels in the fall of 2014 and 2015.)
5. Proceed with construction in the fall of 2016
6. Regular fill and reservoir operation in 2017
7. (Pre NTP Admin & Site Prep) Administration, Bookkeeping and Final Report

TASK	ITEM	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov
1	Project Design											
2	SEO Review											
3	Contractor Bidding											
4	Permitting											
5	Construction											
6	As-Built Documentation											
7	Administration											

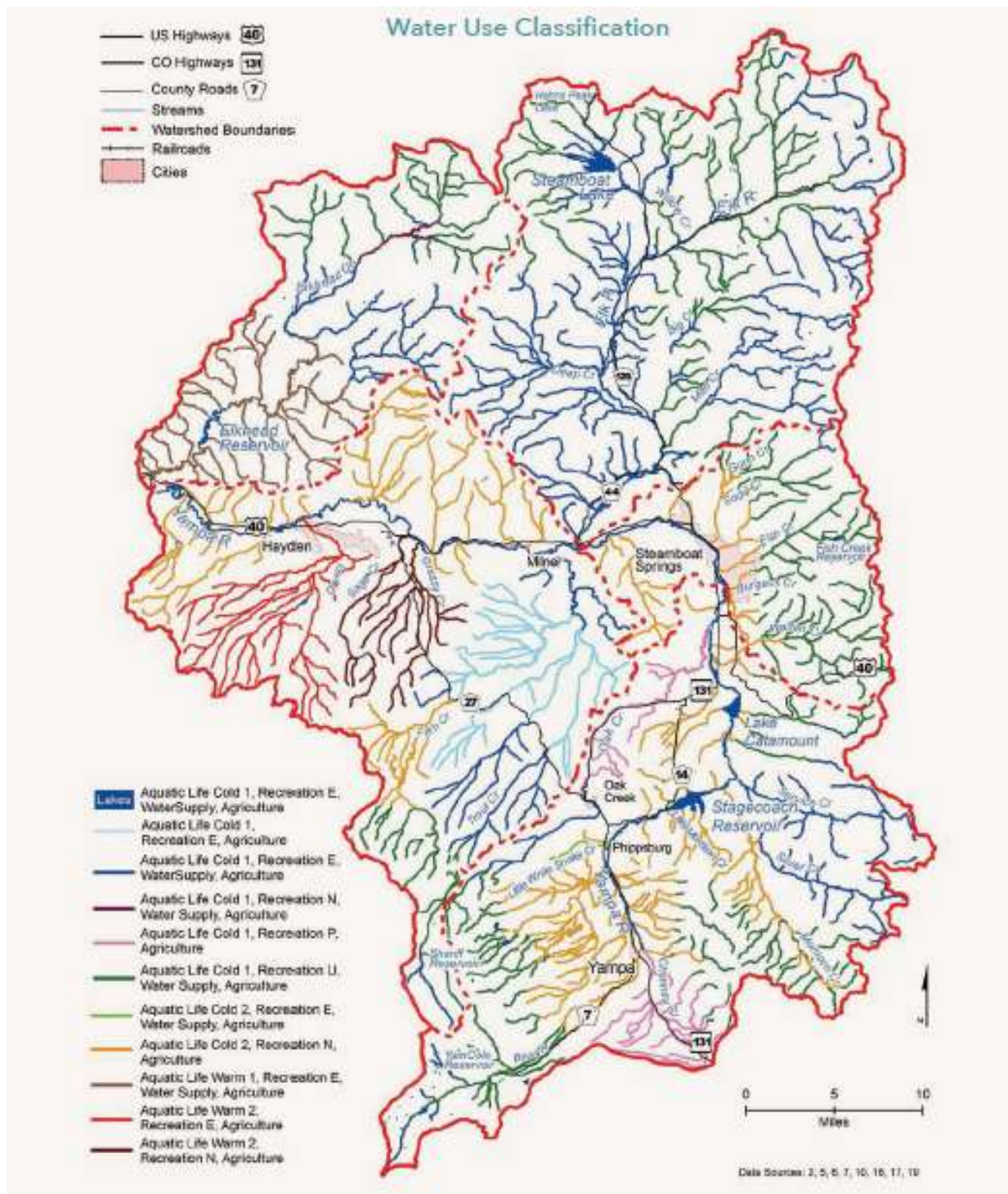
Exhibit B
Project Maps and Photos
Date: 1-3-16





CROSHO LAKE AND RESERVOIR

YAMPA RIVER BASIN



WATER USE CLASSIFICATION





This shows the approximate level of the lake which will prevail throughout this project.

