



COLORADO
**Colorado Water
Conservation Board**

Department of Natural Resources

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TO: Colorado Water Conservation Board Members

FROM: Cole Bedford, P.E., Project Manager
Kirk Russell, P.E., Finance Section Chief

DATE: November 15-16, 2023 Board Meeting

AGENDA ITEM: 20a. Change to Existing Loan (CT2021-2039)
Municipal Subdistrict, Northern Colorado Water Conservancy District
Windy Gap Firing Project

Staff Recommendation

Staff recommends the Board include this Water Project Loan increase of \$65,650,000 in the 2024 CWCB Projects Bill for consideration by the Bill sponsors. Upon passage of the Projects Bill and signature by the governor, CWCB shall enter into a contract for the loan not to exceed \$155,650,000 (\$154,108,911 for Project costs and \$1,541,089 for the 1% service fee) to the Municipal Subdistrict, Northern Colorado Water Conservancy District, acting by and through the Windy Gap Firing Project Water Activity Enterprise, for costs related to the Windy Gap Firing Project, from the Construction Fund. This is an increase of \$65,650,000 (\$65,000,000 for Project costs and \$650,000 for the 1% service fee). The loan term shall remain 30 years at 2.08% per annum.

Introduction

The Municipal Subdistrict, Northern Colorado Water Conservancy District (Municipal Subdistrict) owns the Windy Gap Firing Project Water Activity Enterprise (Firing Enterprise). The Firing Enterprise is applying for a loan increase for the Windy Gap Firing Project (Firing Project). The purpose of the Firing Project is to construct Chimney Hollow Reservoir located in Larimer County, to increase the firm yield of the existing Windy Gap Project.

When the loan was first approved in 2017, the Municipal Subdistrict estimated the total Firing Project cost at \$440 million. However, major uncertainties existed at that time. Most significantly, the Firing Project was still in the design phase and there was ongoing litigation challenging the US Army Corps of Engineers' issuance of a 404 permit. These uncertainties and other factors led to actual costs well in excess of the 2017 estimate. When the construction contract was awarded in 2020, the total Firing Project cost estimate was \$609 million. The current cost estimate has increased further to \$682 million.

See the attached Project Data Sheet for a location map and a Project Summary and the original board memo dated November 2017.



Background

The original Windy Gap Project was constructed between 1981 and 1985 to supply municipal water to several Front Range communities by taking advantage of the preexisting Colorado Big-Thompson (CB-T) infrastructure. The Windy Gap Project consists of a diversion dam on the Colorado River, a 445 AF reservoir, a pump plant, and a six-mile pipeline located in Grand County. When completed, the Windy Gap Project successfully supplemented the water supply of the participating communities, but the firm yield—the quantity of water available on a reliable basis—was limited by a lack of water storage space on the Front Range.

In order to increase the firm yield of the Windy Gap Project, the Municipal Subdistrict began developing the Windy Gap Firming Project with the creation of the Firming Enterprise in 1999. Over the course of the following two decades, environmental, engineering, legal, and other analyses related to the construction of Chimney Hollow Reservoir were conducted. Chimney Hollow Reservoir, a 90,000 AF reservoir west of Loveland, is the primary component of the Windy Gap Firming Project. Twelve Front Range water providers signed Storage Allotment Contracts in order to participate in the Firming Project.

In 2017, the Municipal Subdistrict, acting through the Firming Enterprise, secured a \$90 million loan from the CWCB Water Project Loan Program. Also in 2017, the US Army Corps of Engineers issued a 404 permit, the final major permitting requirement for the Firming Project to move forward. However, the issuance was challenged, which led to three years of litigation in federal court and the delay of construction.

Anticipating a favorable outcome to the litigation, the Municipal Subdistrict issued bonds to cover anticipated project costs not already covered by the Water Projects Loan Program loan and cash brought by the Project participants. The issuance of the bonds was a condition of the loan contract which set the Time of Performance and interest rate on the loan.

The Municipal Subdistrict contracted with Barnard Construction Company Inc. as the primary contractor in late 2020. Barnard's bid revised the total Firming Project cost estimate to \$609 million.

Project Update

The federal litigation was favorably concluded in April 2021 and the groundbreaking took place in August 2021. Work was commenced simultaneously on access roads, the main dam, a smaller saddle dam, a pipeline and interconnects to tie into the CB-T infrastructure, a valvehouse, the inlet/outlet tunnel, and the spillway. In the summer of 2023, the Municipal Subdistrict celebrated the second anniversary of the groundbreaking and reached approximately the half-way point in the construction. By then, all of the access roads were in place, the main dam had reached a height of 100-feet, the grout curtain for the saddle dam was complete, the CB-T interconnects were in place, the slabs for the valvehouse were complete, the inlet/outlet tunnel was being lined, and concrete for the spillway was being poured.

At full construction pace Barnard crews work two 11-hour shifts with 350 employees working during the day shift and 150 during the night shift. Barnard is expensing an average of \$20 million per month. As of June 2023, a total of \$211 million had been expended on the Firming Project as shown in Table 1.

TABLE 1: PROJECT EXPENSES THROUGH JUNE 2023

Tasks	Cost
Construction	\$181,200,000
Engineering & Construction Management	\$19,600,000
Environmental & Mitigation	\$6,900,000
Owner's Cost	\$3,700,000
TOTAL (Rounded)	\$211,000,000

The Municipal Subdistrict estimates that \$471 million remains to be expended on the Firming Project, bringing the final cost to \$682 million. Table 3 provides a summary of costs as estimated in 2017, as estimated at the time of Barnard's bid in 2020, and as presently estimated.

TABLE 2: UPDATED TOTAL PROJECT COST ESTIMATE

Tasks	Original (2017)	Bid (2020)	Current (2023)
General Construction Items	\$12,570,000	\$44,552,750	\$49,011,250
Access Roads	\$-	\$15,799,770	\$16,292,260
Main Dam	\$154,560,000	\$257,107,730	\$283,438,044
Saddle Dam	\$7,330,000	\$9,849,945	\$11,868,356
Chimney Hollow Pipeline	\$22,390,000	\$24,496,000	\$27,430,000
Bald Mountain & Carter Lake Interconnects	\$-	\$15,291,550	\$16,619,730
Valve House	\$-	\$37,643,452	\$39,888,314
Inlet/Outlet Structure & Tunnel	\$13,680,000	\$51,528,623	\$53,576,239
Spillway	\$5,990,000	\$29,095,180	\$31,375,180
Change Orders through 2023	\$-	\$-	\$44,100,472
Estimated Change Orders after 2023	\$-	\$-	\$10,542,532
SUBTOTAL A (Barnard Construction)	\$216,520,000	\$485,365,000	\$584,142,377
Mitigation & Voluntary Enhancements	\$22,700,000	\$17,200,000	\$33,200,000
Indirects & Allowances ¹	\$92,700,000	\$-	\$-
O&P, Bonds & Insurance ¹	\$42,300,000	\$-	\$-
Administration & Management	\$55,930,000	\$58,600,000	\$64,500,000
SUBTOTAL B (Other Firming Cost)	\$213,630,000	\$75,800,000	\$97,700,000
Contingency ²	\$10,000,000	\$48,000,000	\$-
TOTAL (Rounded)	\$440,000,000	\$609,000,000	\$682,000,000

¹ These costs for the Bid (2020) and Current (2023) columns are reflected in Subtotal A

² Contingencies for the Current (2023) column are reflected in the individual line items

Permitting: All necessary permits including the US Army Corps of Engineers 404 permit are secured. No additional permits are expected.

Schedule: Construction will continue for an additional two years and be completed in the summer of 2025.

Financial Analysis

Table 3 provides a summary of the Firming Project’s financial aspects as calculated in 2017, as calculated at the time of Barnard’s bid in 2020, and as presently calculated. The loan term shall remain 30 years at the negotiated rate of 2.08% per annum.

TABLE 3: UPDATED FINANCIAL SUMMARY

Project Item	Original (2017)	Bid (2020)	Current (2023)
Project Cost	\$440,000,000	\$609,000,000	\$682,000,000
Municipal Subdistrict Cash on Hand	\$-	\$16,200,000	\$16,200,000
Participant Cash Contribution	\$40,000,000	\$299,800,000	\$299,800,000
Revenue Bond Proceeds for Construction	\$310,000,000	\$204,100,000	\$204,100,000
CWCB Maximum Loan Amount	\$89,108,911	\$89,108,911	\$154,108,911
1% Service Fee	\$891,089	\$891,089	\$1,541,089
CWCB Annual Loan Payment	\$4,062,831	\$4,062,831	\$7,026,441
CWCB Annual Loan Obligation (1 st Ten Years)	\$4,469,114	\$4,469,114	\$7,729,085
Revenue Bond’s Maximum Annual Debt Service	\$18,150,000	\$13,468,200	\$13,472,650
Project Cost per AF of Storage (90,000 AF)	\$4,889/AF	\$6,769/AF	\$7,578/AF

Creditworthiness: Firming Enterprise’s debt is reflected in Table 4. Besides the current CWCB Water Project Loan Program loan, the only debt held by the Firming Enterprise is the Senior Revenue Bonds, Series 2021. The annual payment on this debt is not fixed for the entire repayment period. The annual payment will be about \$8 million until 2026, will increase to \$13.5 million through 2040, after which a lump sum payment will be made, and annual payments will continue at about \$4 million until the end of the term in 2051.

TABLE 4: EXISTING DEBT

Lender	Original Balance	Current Balance	Maximum Annual Debt Service ¹	Maturity Date	Collateral
Senior Revenue Bonds Series 2021	\$218,486,669	\$215,159,841 ²	\$13,472,650	2051	Pledged Revenues

¹ The annual payment is not fixed over the entire term of repayment. The Maximum Annual Debt Service (MADS) for the period from 2026 through 2041 is \$13,472,650. The MADS for the period from 2042 through 2051 is \$4,018,000.

² Original balance includes \$48,781,669 of unamortized premium. Current balance includes \$45,454,841 of unamortized premium.

Updated Financial Ratios are shown in Table 5. While costs have increased significantly, the Firming Project participants have brought more of their own cash to offset those costs. The Senior Revenue Bonds, Series 2021 is also smaller than originally expected.

TABLE 5: UPDATED FINANCIAL RATIOS

Financial Ratio	Past Years ¹	Future w/ Project ¹	Future w/ Increase
Operating Ratio (revenues/expenses) weak: <100% average: 100% - 120% strong: >120%	352% (strong) \$5.60M/\$1.59M	110% (average) \$26.1M/\$23.8M	105% (average) \$25.2M/\$24.2M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% average: 100% - 120% strong: >120%	NA	110% (average) (\$26.1M-\$1.0M) \$22.8M	105% (average) (\$25.2M-\$3.0M) \$21.2M
Cash Reserves to Current Expenses weak: <50% average: 50% - 100% strong: >100%	792% (strong) \$12.6M/\$1.59M	53% (average) \$12.6M/\$23.8M	53% (average) \$12.9M/\$24.2M

¹As calculated in November 2017

Collateral: Security for this loan will remain a pledge of the revenues due to the Firming Enterprise, from the Firming Project participants under the Storage Allotment Contracts, provided that such pledge will be subordinate to the payment of the Senior Revenue Bonds, Series 2021 issued for constructing the Windy Gap Firming Project. This security is, and remains, a variance from CWCB Financial Policy #5 (Collateral).

Note on Authorization Procedure

The Colorado General Assembly authorized the Board to loan up to \$90 million for the Firming Project in the 2017 Projects Bill (HB17-1248). Section 12(3) of the 2017 Projects Bill allows the Board to increase the authorized loan amount “as may be justified by reason of ordinary fluctuations in construction costs...or as may be justified by reason of changes in the plans for the project due to differing or unforeseen site conditions, errors or omissions in the plans and specifications, changes instituted by regulatory agencies, or changes in material quantities beyond contract limits.” Because the cost increases experienced on the Firming Project fall under these descriptions, the Board would ordinarily be empowered to increase the loan without further authorization by the General Assembly. However, because the increase request is more than \$10 million—the threshold for General Assembly review of new loan requests—Staff recommends this increase be included in the 2024 Projects Bill. Inclusion of the increase in the Projects Bill will not affect Project timing. If authorized as part of the 2024 Projects Bill, the increase will be incorporated into the current loan contract without further review by the Board.

cc: Jonathan Hernandez, Senior Project Manager, Northern Colorado Water Conservancy District
 Jeff Drager, Director of Engineering, Northern Colorado Water Conservancy District
 Jennifer Mele, Colorado Attorney General’s Office

Attachments: Water Project Loan Program - Project Data Sheet
 Original Board Memo (November 2017)



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John Hickenlooper, Governor
Robert Randall, DNR Executive Director
Rebecca Mitchell, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Jonathan Hernandez, P.E., Project Manager
Kirk Russell, P.E., Finance Section Chief

DATE: November 15-16, 2017 Board Meeting

AGENDA ITEM: 19a. Water Project Loans
Municipal Subdistrict, Northern Colorado Water Conservancy District - Windy
Gap Firing Project

Introduction

The Municipal Subdistrict, Northern Colorado Water Conservancy District (Municipal Subdistrict) owns the Windy Gap Firing Project Water Activity Enterprise (Firing Enterprise). The Firing Enterprise is applying for a loan for the Windy Gap Firing Project (Project). The purpose of the Project is to increase the firm yield of the existing Windy Gap project to approximately 30,000 AF by constructing Chimney Hollow Reservoir, a new 90,000 AF reservoir located in Larimer County. The current Project cost is estimated to be \$440 million. To help project participants finance the Project, the Firing Enterprise is creating a pooled financing program which will include this loan and a revenue bond. The Firing Enterprise is seeking a loan from CWCB for \$90,000,000 to cover a portion of Project costs. See attached Project Data Sheet for a location map and Project summary.

The CWCB requested the General Assembly to include this loan in the 2017 Projects Bill at the November 2016 Board Meeting. The 2017 Projects Bill (HB17-1248), signed on May 23, 2017, authorized the CWCB to loan up to \$90,000,000 from the Construction Fund for the Windy Gap Firing Project.

Staff Recommendation

Staff recommends the Board approve a loan not to exceed \$90,000,000 to the Windy Gap Firing Project Water Activity Enterprise owned by the Municipal Subdistrict, Northern Colorado Water Conservancy District for costs related to the Windy Gap Firing Project, from the Construction Fund. The loan terms shall be 30 years at an interest rate of 3.10% per annum. Security for the loan shall be a pledge of Firing Enterprise revenues, namely the revenue from Storage Allotment Contracts of the pooled financing participants. Such pledge will be subordinate to the payment of the revenue bonds issued for constructing the Windy Gap Firing Project.

Additionally staff recommends the following loan approval condition prior to executing a contract:

- 1) The CWCB shall be provided the executed Storage Allotment Contracts of each pooled financing participant. The contracts shall include, but not be limited to, the following requirements:
 - a. Debt obligations under the Storage Allotment Contracts shall have parity status with any other first-lien debt obligations of the respective participant.
 - b. All payments owed to the Firing Enterprise under the Storage Allotment Contracts shall be subject to take-or-pay and step-up provisions.



Background

The Municipal Subdistrict was established in 1970 to develop a water supply project for six Northern Colorado municipalities, known as the Windy Gap project. The Windy Gap participants have since expanded to include the Platte River Power Authority; the municipalities of Boulder, Broomfield, Fort Lupton, Greeley, Lafayette, Longmont, Louisville, Loveland, Superior, Estes Park and Erie; and the Little Thompson and the Central Weld County Water Districts. The areas served by the Municipal Subdistrict are situated north of Denver along the Front Range. The Municipal Subdistrict established the Windy Gap Water Activity Enterprise (Windy Gap Enterprise) in 1993 in order to construct and operate the Windy Gap project.

The Windy Gap project currently consists of a small reservoir and diversion dam on the Colorado River, and a pump station and a pipeline to pump and transport diverted Windy Gap water to Lake Granby. Windy Gap water is then conveyed through the Adams Tunnel of the Colorado-Big Thompson (C-BT) project for distribution to the participants on the East Slope. The Windy Gap project became operational and began making water deliveries in 1985. The Municipal Subdistrict has a Carriage Contract with the U.S. Bureau of Reclamation (Reclamation) and the Northern Colorado Water Conservancy District (Northern Water) whereby the Windy Gap project may utilize unused capacity in the C-BT Project. The agreement specifies that when Lake Granby's storage capacity is fully needed for storage, conveyance, and delivery of C-BT water, then the Windy Gap water must either be delivered to participants or spilled out of Lake Granby.

The annual delivery of Windy Gap water is not reliable in years of low spring runoffs due to Windy Gap's junior water rights. Conversely, the annual delivery of Windy Gap water is not reliable in years of high spring runoff, since storage space in Lake Granby is not guaranteed to be available. For this reason, the firm yield of Windy Gap water is zero. Using strategic water management, Windy Gap water has thus far been delivered each year even though there have been periods when Windy Gap water was not able to be diverted and pumped.

In 1999, the Municipal Subdistrict established the Firming Enterprise with a purpose of pursuing activities that would lead to a firm yield of Windy Gap water. Participants in the Firming Enterprise are the same as in the Windy Gap Project with the exception of Boulder and Estes Park. The Windy Gap Enterprise manages and operates the water diversion and delivery system, while the Firming Enterprise will manage and operate the east slope storage component.

Loan Feasibility Study

John Budde, CPA, Financial Services Manager for Northern Water, prepared the Loan Feasibility Study titled, "Windy Gap Firming Project Loan Feasibility Study," dated October 1, 2017. The feasibility study was prepared in accordance with CWCB guidelines. Audited financial statements of the Municipal Subdistrict, which includes the Firming Enterprise, were provided by CliftonLarsonAllen, LLP. The Feasibility Study relied on the extensive engineering and environmental studies performed including the April 1997 Feasibility Study by GEI Consultants, the March 2014 Preliminary Design Report by AECOM, the Final EIS and the Bureau of Reclamation's December 2014 Record of Decision.

Borrower - Windy Gap Firming Project Water Activity Enterprise, owned by Municipal Subdistrict, Northern Colorado Water Conservancy District

The Firming Enterprise is a government-owned business within the meaning of Article X, Section 20(2)(d), of the Colorado Constitution, organized pursuant to C.R.S. § 37-45.1-101 et seq., owned by the Municipal Subdistrict. As a water activity enterprise, it is excluded from the application of Article X, Section 20, of the Colorado Constitution (TABOR). Revenues of the Firming Enterprise come solely from Windy Gap Firming Project participants.

The Municipal Subdistrict was organized as a subdistrict of Northern Water by decree of the District Court of Weld County in 1970, pursuant to the Water Conservancy Act. The Municipal Subdistrict is a separate and independent conservancy district with the same powers and legal standing as its parent district and is an independent political subdivision of the State of Colorado.

By statute, the Municipal Subdistrict has the same 12-member Board of Directors as Northern Water, members of which are appointed by the presiding District Court Judges of four out of the five judicial districts within Northern Water’s boundaries. The Municipal Subdistrict has the authority to undertake projects separately from those undertaken by Northern Water. The Municipal Subdistrict has no employees but has an agreement with Northern Water whereby Northern Water provides all administrative, operation, and maintenance functions for the Municipal Subdistrict, and is reimbursed by the two Municipal Subdistrict’s enterprises (Firming Enterprise and Windy Gap Enterprise) for the services rendered.

Water Rights

The water rights of the Windy Gap Water System are shown in Table 1.

TABLE 1: WINDY GAP WATER SYSTEM WATER RIGHTS

Name	Amount	Appropriation Date	Adjudication Date	Water Court Case No.
Windy Gap Pump, Pipeline and Canal	300 CFS	6/22/1967	5/31/1972	88CW298
Windy Gap Pump, Pipeline and Canal, First Enlargement	100 CFS	7/9/1976	12/31/1978	89CW298
Windy Gap Pump, Pipeline and Canal, Second Enlargement	200 CFS	4/30/1980	12/31/1980	89CW298
Windy Gap Reservoir	445 AF (1,104.14 AF Conditional)	6/22/1967	5/31/1972	88CW169 (08CW92)

Over the last ten years, Project participants took an average delivery of 16,164 AF of water per year. Storage of Windy Gap water in Chimney Hollow Reservoir will be adjudicated in the overall Windy Gap Firming decree which will also incorporate the settlement agreement with Grand County and other related documents. Requested findings by and from the water court include: 1) confirmation that the conditions within the Water Conservancy Act have been satisfied; 2) approval of water releases to Middle Park Water Conservancy District and on behalf of Grand County; 3) confirmation of the envisioned operation of the Windy Gap Firming Project; and 4) confirmation of the Windy Gap connectivity operations.

Project Description

The purpose of the Project is to increase the firm yield of the existing Windy Gap project to approximately 30,000 AF. Over 170 different alternatives were extensively screened using National Environmental Policy Act (NEPA) criteria and Clean Water Act Section 404(b)(1) guidelines. That process led to the development of the following five alternatives which were analyzed in detail within the Final EIS. The following alternatives were compared and contrasted based on: surface and ground water hydrology; stream morphology and floodplains; surface water and air quality; aquatic resources (fish habitat); vegetation, wetlands, and other waters; wildlife; threatened and endangered species; geology, paleontology, and soils; noise and land use; recreation, cultural and visual resources; and socioeconomics.

Alternative 1 - No Action: This alternative was not selected because without dedicated storage, the firm yield of Windy Gap project water would remain at zero, not allowing participants to rely on Windy Gap water for meeting a portion of their annual water demand. The Final EIS noted the No Action alternative would likely lead to the enlargement of Ralph Price Reservoir by 13,000 AF for storage of Longmont's Windy Gap water. No action would similarly lead the other participants to find new storage projects on their own.

Alternative 2 - Chimney Hollow Reservoir and Jasper East Reservoir: This alternative consists of a 70,000 AF Chimney Hollow Reservoir on the East Slope and a 20,000 AF Jasper East Reservoir on the West Slope. The availability of a new West Slope reservoir would allow water diversions from Windy Gap Reservoir to be delivered to Lake Granby, or when Lake Granby is full or the Adams Tunnel is at capacity, to Jasper East. Construction costs were estimated to be \$240 million and annual operating & maintenance (O&M) costs were expected to be \$1,375,000 (both in 2005 dollars).

Alternative 3 - Chimney Hollow Reservoir and Rockwell/Mueller Creek Reservoir: This alternative consists of a 70,000 AF Chimney Hollow Reservoir on the East Slope and a 20,000 AF Rockwell/Mueller Creek Reservoir on the West Slope. This alternative is the same as Alternative 2 except for the West Slope reservoir location. Construction costs were estimated to be \$252 million and annual O&M costs were expected to be \$1,730,000 (both in 2005 dollars).

Alternative 4 - Dry Creek Reservoir and Rockwell/Mueller Creek Reservoir: This alternative consists of a 60,000 AF Dry Creek Reservoir on the East Slope and a 30,000 AF Rockwell/Mueller Creek Reservoir on the West Slope. This alternative is similar to Alternative 3 except for the East Slope reservoir location and the size of the reservoirs. Construction costs were estimated to be \$289 million and annual O&M costs were expected to be \$2,240,000 (both in 2005 dollars).

Selected Alternative 5 - Chimney Hollow Reservoir: This alternative consists of a 90,000 AF Chimney Hollow Reservoir on the East Slope, and no new reservoir on the West Slope. Water will be conveyed to Chimney Hollow Reservoir via a new pipeline connection to existing East Slope C-BT Project facilities, allowing the delivery of water using existing C-BT Project infrastructure. This alternative does not require any new West Slope infrastructure. Instead, water management will involve a concept referred to as "prepositioning" where at times of allowable capacity, C-BT Project water would be delivered from Lake Granby into Chimney Hollow Reservoir, creating space in Lake Granby for Windy Gap water. When Windy Gap water is diverted into Lake Granby, the C-BT Project water in Chimney Hollow Reservoir would be exchanged for a similar amount of Windy Gap water in Granby Reservoir. If operated in this manner, Chimney Hollow Reservoir would be nearly full most of the time. Prepositioning also eliminates the need for a new west slope reservoir. Construction costs were estimated to be \$223 million and annual O&M costs were expected to be \$795,000 (both in 2005 dollars). After an extensive comparison of alternative's features and impacts, this alternative was selected as Reclamation's preferred alternative.

Mitigation and Enhancements: As part of the NEPA permitting process, and Colorado's mitigation requirements, the Municipal Subdistrict worked with biologist to develop the state fish and wildlife mitigation plan (approved in 2011) which has operational considerations to mitigate higher stream temperatures, increased flushing flows to clean sediment in the stream, and nutrient removal to offset water quality impacts in Grand Lake and the Colorado River. Additionally, as a result of a decade of discussions, the Project will include voluntary enhancements, including the Windy Gap Connectivity Channel and stream restoration projects to enhance river habitat. The CWCB authorized \$2,000,000 in the 2013 Projects Bill (SB 13-181) and an additional \$200,000 in the 2016 Projects Bill (SB16-174) to fund a portion of the cost of planning, design, and construction of the connectivity channel. State

biologist, Grand County officials, and Trout Unlimited experts believe the Project, coupled with the required mitigation and voluntary enhancements, will lead to a healthier Colorado River than currently exists.

Project Participation and Storage Allotment Contracts: The participant’s storage amounts are shown in Table 2. Each Project participant will enter into Storage Allotment Contracts with the Firming Enterprise. These contracts will obligate each participant to pay its pro-rata share of annual O&M costs and debt service. Conditions that will be required within each contract are that the debt service owed under the contract will be on a parity status with that participant’s other existing first-lien debt. Additionally, each participant will be subject to “take-or-pay” provision which obligates the participant to pay their pro-rata share of O&M and debt service regardless of water deliveries each year. Finally, “step-up” language will be added to protect revenues should a participant leave, or reduce their participation.

TABLE 2: PARTICIPANTS STORAGE AMOUNTS IN CHIMNEY HOLLOW RESERVOIR

Participant	Storage Volume (AF)	Percentage
Broomfield	26,464	29.40%
Platte River Power Authority	14,136	15.71%
Longmont	10,000	11.11%
Loveland	9,451	10.50%
Greeley	9,189	10.21%
Erie	6,000	6.67%
Little Thompson Water District	4,850	5.39%
Superior	4,726	5.25%
Louisville	2,835	3.15%
Fort Lupton	1,103	1.23%
Lafayette	900	1.00%
Central Weld County Water District	346	0.38%
TOTAL	90,000	100%

Project Costs: The May 2017 cost estimate for this Project is \$440 million as shown in Table 3. Design, permitting, and property acquisition costs that have already been funded by the participants to date (approximately \$40 million) are included in that cost estimate but will not be reimbursed with the revenue bonds or loan. A refined cost estimate is expected in November 2017 and will be the cost used as the basis for the Storage Allotment Contracts. The revenue bonds will be sold after the Project has received hard contractor bids. This CWCB loan request will remain at \$90 million and the revenue bond will fluctuate up or down based on final construction cost.

TABLE 3: ESTIMATED PROJECT COST

Tasks	Cost
General Construction Items	\$12,570,000
Main Dam	\$154,560,000
Saddle Dam	\$7,330,000
Chimney Hollow Pipeline	\$22,390,000
Inlet/Outlet Structure & Tunnel	\$13,680,000
Spillway	\$5,990,000
SUBTOTAL A	\$216,520,000
Required Mitigation	\$10,700,000
Voluntary Enhancements	12,000,000
Indirects & Allowances	\$92,700,000
O&P, Bonds & Insurance	\$42,300,000
Administration & Management	\$55,930,000
SUBTOTAL B	\$213,630,000
Contingency	\$10,000,000
TOTAL (Rounded)	\$440,000,000

Permitting: Federal permitting began in 2003 and was completed in May 2017. Table 4 shows a summary of permits received. Colorado officially endorsed the Project in April 2016.

TABLE 4: PERMITTING SUMMARY

Permit/Document	Date
State Fish and Wildlife Mitigation Plan	June 2011
Final Environmental Impact Statement (EIS)	November 2011
Grand County 1041 Permit	December 2012
Reclamation's Record of Decision	December 2014
State Water Quality Control Commission 401 Certification	March 2016
State of Colorado Endorsement	April 2016
Army Corps of Engineer's 404 Permit (final federal requirement)	May 2017

Schedule: The Storage Allotment Contracts between the participants and the Firming Enterprise will be finalized by March 2018. Contractor prequalification will occur from January 2018 through March 2018 and the Project will be put out to bid from April 2018 through June 2018. The contractor will be selected in July 2018 at which point the revenue bonds will be sold. The Notice to Proceed is planned to be issued in September 2018, followed by 41 months of construction. The Reservoir is expected to be operational in 2022.

Financial Analysis

Table 5 provides a summary of the Project's financial aspects. Project participants are responsible for all Project costs based on a pro-rata share of storage ownership. To assist Project participants in financing the project, the Firming Enterprise will offer a pooled financing program, comprised of this CWCB loan and revenue bonds.

In order to attract buyers for the revenue bonds at a more favorable interest rate by meeting a favorable debt coverage ratio, CWCB staff is recommending CWCB to accept a subordinate position to the revenue bonds. This will benefit the pooled financing participants by leading to substantial interest savings over the life of the bonds. In consideration of CWCB taking a subordinate position, this loan interest rate was negotiated to be the market rate of a AA bond at the time of loan application

(10/2/2017), which was determined to be 3.10% for a 30-year term. A subordinate position is a variance from CWCB Financial Policy #5 (Collateral) and a market rate determination for the lending rate is a variance from CWCB Financial Policy #7 (Lending Rate Determination).

It is expected the Enterprise will receive an indicative rating for the revenue bonds in early 2018. The participants will then finalize the decision to be in the pooled financing program or to fund their participation independently. For purposes of this financial review, it was conservatively estimated that all participants will participate in the pooled financing. To provide budget numbers, the revenue bond interest rate was conservatively estimated to be 4.0% per annum. The actual interest rate will be determined upon selling the bonds in summer 2018.

TABLE 5: FINANCIAL SUMMARY

Project Cost	\$440,000,000
Participant Cash Contribution (paid to-date)	\$40,000,000
Estimated Revenue Bond	\$310,000,000
Estimated Revenue Bond's Annual Debt Service	\$18,150,000
CWCB Maximum Loan Amount	\$90,000,000
1% Service Fee	\$900,000
CWCB Annual Loan Payment	\$4,651,286
CWCB Annual Loan Obligation (1 st Ten Years)	\$5,116,414
Project Cost per AF of Storage (90,000 AF)	\$4,889/AF

Creditworthiness: The Firming Enterprise has no existing debt. Additionally, the Municipal Subdistrict and Windy Gap Enterprise has no existing long-term liabilities as the outstanding indebtedness incurred for the construction of the Windy Gap Project was defeased in 2016.

Table 6 presents the financial ratios of the Firming Enterprise. Activities of the Firming Enterprise have thus far consisted of permitting, preliminary engineering activities, and property acquisitions for Chimney Hollow Reservoir, and have been paid through capital contributions from Project participants. The 'Future with Project' ratios analyze the Firming Enterprise after construction is finished. Expenses of the Firming Enterprise post Project will only include O&M of Chimney Hollow Reservoir, power interference charges assessed by Reclamation, and debt service payments. For purposes of financial review the Enterprise's O&M and power interference charges are estimated to be \$1,000,000 per year. All Firming Enterprise revenue will be provided through the participant's Storage Allotment Contracts.

TABLE 6: FINANCIAL RATIOS

Financial Ratio	Past 3 Years	Future w/ Project
Operating Ratio (revenues/expenses) weak: <100% - average: 100% - 120% - strong: >120%	352% (strong) \$5.60M/\$1.59M	110% (average) \$26.1M/\$23.8M
Debt Service Coverage Ratio (revenues-expenses)/debt service weak: <100% - average: 100% - 120% - strong: >120%	NA	110% (average) (\$26.1M-\$1.0M) \$22.8M
Cash Reserves to Current Expenses weak: <50% - average: 50% - 100% - strong: >100%	792% (strong) \$12.6M/\$1.59M	53% (average) \$12.6M/\$23.8M

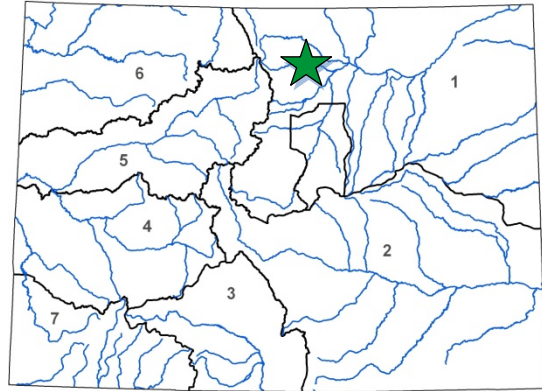
Collateral: Security for this loan will be a pledge of the revenues due to the Firming Enterprise, from the Project participants under the Storage Allotment Contracts, provided that such pledge will be subordinate to the payment of the revenue bonds issued for constructing the Windy Gap Firming Project. This security is a variance from CWCB Financial Policy #5 (Collateral).

cc: John Budde, Financial Services Manager, Northern Colorado Water Conservancy District
 Jennifer Mele, Colorado Attorney General's Office

Attachment: Water Project Loan Program - Project Data Sheet



L O A N D E T A I L S	
Project Cost:	\$440,000,000
CWCB Loan (with Service Fee):	\$90,000,000
Loan Term and Interest Rate:	30 years @ 3.10%
Funding Source:	Revenue Bonds & Construction Fund Loan
B O R R O W E R T Y P E	
Municipal	
P R O J E C T D E T A I L S	
Project Type:	New Reservoir
New Storage Capacity:	90,000 AF



L O C A T I O N	
County:	Larimer, Boulder, Broomfield, Weld
Water Source:	Colorado River
Drainage Basin:	South Platte
Division:	1 District: 2,3,4,5,6

In 1970, six Northern Colorado cities formed the Municipal Subdistrict to plan, finance, and build the Windy Gap project. That project was completed in 1985. The annual delivery of Windy Gap water is not reliable because in dry years the junior water rights may not come into priority, and in wet years, there may not be room in Lake Granby to store Windy Gap water.

In 1999, The Subdistrict formed the Windy Gap Firing Water Activity Enterprise with the purpose of pursuing activities that would lead to firming the yield of Windy Gap water. Participants identified 30,000 AF as a goal for total firm yield. After a review of over 170 alternatives, the Bureau of Reclamation and project participants identified the construction of a 90,000 AF Chimney Hollow Reservoir as the preferred alternative. This Project will consist of the construction of Chimney Hollow Reservoir and associated pipelines to deliver water from the existing C-BT infrastructure, as well as environmental mitigation and enhancements. Construction is anticipated to begin in fall of 2018 and be complete in 2022.

