

South Platte River Berm Removal City of Brighton

November 2018 Board Meeting



DETAILS	
Total Project Cost:	\$1,281,813
Water Plan Grant Request:	\$640,907
Funding Recommendation:	\$200,000
Other CWCB Funding:	\$0
Other Funding Amount:	\$0
Applicant Match:	\$640,907
Project Type(s): Construction	
Project Category(Categories): Environment	al & Rec
Measurable Result: 1000 LF stream, 3.7 acr	es habitat

The City of Brighton is located in Adams and Weld counties, Northeast of Denver, Colorado. Brighton is approximately 17 square miles in area and owns land adjacent to the South Platte River. Previously, The City of Brighton has acquired one CWCB grant for water storage.



Figure 1 - (Top) Flows hitting the berm and going over Brighton Ditch's Diversion, (Bottom) & Concept of what high flows would do if the project was allowed to stabilize a permanent overflow and create wetland habitat downstream. In both figures, the river is flowing from the top of the figure towards the bottom

On June 11th 2015 a heavy rainfall event produced flows in the South Platte River that reached upwards of 12,000cfs. A new channel was created beyond the Ken Mitchell intake structure that damaged the structure and rendered it unserviceable. The breach also created a new path through the floodplain benches on the east side of the Brighton Ditch Company's Diversion, preventing water from being diverted by the Brighton Ditch.

A temporary berm has been built to redirect water back over the Brighton Ditch Company diversion structure and the City of Brighton procured a design-build contract that allowed the re-construction of the Ken Mitchell intake structure. Currently, the berm is not allowing for healthy stream function in its current location.

The City of Brighton is now seeking grant funding to find a permanent solution to the berm issue that also adds additional control to high flows in this reach of the South Platte River. The Water Plan Grant would fund 15.6% of the project.

The project consists of the removal of the existing berm and construction of a permanent and stable spill structure. The future design can allow the stream to flow through the path it naturally took during the flood event, enhance wetland habitats in the overbank, restore approximately 1,000 feet of aquatic habitat along the river, prevent future washouts near the diversion structures, maintain the water supply needs of

stakeholders on the South Platte, and promote a stable river ecosystem that can accommodate high flows.



Colorado Water Conservation Board

Water Plan Grant Application

Instructions

To receive funding for a Water Plan Grant, applicant must demonstrate how the project, activity, or process (collectively referred to as "project") funded by the CWCB will help meet the measurable objectives and critical actions in the Water Plan. Grant guidelines are available on the CWCB website.

If you have questions, please contact CWCB at (303) 866-3441 or email the following staff to assist you with applications in the following areas:

Water Storage Projects Conservation, Land Use Planning Engagement & Innovation Activities Agricultural Projects Environmental & Recreation Projects Anna.Mauss@state.co.us Kevin.Reidy@state.co.us Ben.Wade@state.co.us Alexander.Funk@state.co.us Chris.Sturm@state.co.us

FINAL SUBMISSION: Submit all application materials in one email to waterplan.grants@state.co.us

in the original file formats [Application (word); Statement of Work (word); Budget/Schedule (excel)]. Please do not combine documents. In the subject line, please include the funding category and name of the project.

Water Project Summary											
Name of Applicant											
Name of Water Project	South Platte Ri	ver Berm Removal									
CWP Grant Request Amount		\$640,907									
Other Funding Sources		\$									
Other Funding Sources		\$									
Other Funding Sources		\$									
Applicant Funding Contribution	1	\$640,907									
Total Project Cost		\$1,281,813									



Last Updated: June 2018
Name of Grantee(s): City of Brighton
Mailing Address: 500 South 4th Ave. Brighton, CO 80601
FEIN: 84-6000567
Organization Contact: Curtis Bauers
Position/Title: Director of Utilities
Email: <u>cbauers@brightonco.gov</u>
Phone: (303)655-2033
Grant Management Contact: Karl Gannon
Position/Title: Utilities Finance Analyst
Email: kgannon@brightonco.gov
Phone: (303)655-2134
Name of Applicant (if different than grantee): Same as grantee
Mailing Address: N/A
Position/Title: N/A
Email: N/A
Phone: N/A
Description of Grantee/Applicant

Provide a brief description of the grantee's organization (100 words or less).

The City of Brighton is located in Adams and Weld Counties Northeast of Denver, Colorado. Brighton is approximately 17 square miles in area and owns land adjacent to the South Platte River, where this project is taking place.



Type of Eligible Entity (check one)

х	Public (Government): Municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. 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: Private parties may be eligible for funding.
	Non-governmental organizations (NGO): Organization that is not part of the government and is non-profit in nature.

Covered Entity: As defined in <u>Section 37-60-126 Colorado Revised Statutes</u>.

	Type of Water Project (check all that apply)
	Study
Х	Construction
	Identified Projects and Processes (IPP)
	Other

Category of Water Project (check the primary category that applies and include relevant tasks)

Water Storage - Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap..
 Applicable Exhibit A Task(s):
 Conservation and Land Use Planning - Activities and projects that implement long-term

strategies for conservation, land use, and drought planning. Applicable Exhibit A Task(s):

Engagement & Innovation - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website. Applicable Exhibit A Task(s):

Agricultural - Projects that provide technical assistance and improve agricultural efficiency. Applicable Exhibit A Task(s):

X Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. Applicable Exhibit A Task(s):

Other Explain:

CWP Grant Application | 3



	Location of Water Project							
	eral county and coordinates of the proposed project below in decimal degrees . o provide, in Exhibit C, a site map if applicable.							
County/Counties Adams County								
Latitude	39.973829							
Longitude	-104.8505							

Water Project Overview

Please provide a summary of the proposed water project (200 words or less). Include a description of the project and what the CWP Grant funding will be used for specifically (e.g., studies, permitting process, construction). Provide a description of the water supply source to be utilized or the water body affected by the project, where applicable. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, and area of habitat improvements, where applicable. If this project addresses multiple purposes or spans multiple basins, please explain.

The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.

On June 11th 2015 a heavy rainfall event produced flows in the South Platte River that reached upwards of 12,000 CFS. This flood event scoured a new channel beyond the Ken Mitchell intake structure, damaging the structure and rendering it unserviceable. The breach also scoured a new path through the floodplain benches on the east side of the Brighton Ditch Company's Diversion, preventing water from being diverting by the Brighton Ditch (*It is important to note that the Brighton Ditch is not owned by the City of Brighton*).

The City of Brighton and Representatives from the Brighton Ditch Company met and tried to come up with a solution to repair both facilities. The Brighton Ditch Company permitted and built a large earthen berm to redirect the water back over the Brighton Ditch Company diversion structure. According to the floodplain permit, this berm was intended to be temporary.

Later, the City of Brighton procured a design-build contract to replace the Ken Mitchell intake structure. The structure was re-constructed later that year into the following winter.

However, the large, temporary berm, still remains in the South Platte. To remedy this situation, the City of Brighton is seeking grant funding and committing funding of its own to help find a permanent solution to the berm issue that serves the interests of all the parties involved, and serves to add additional control to high flows in this reach of the South Platte River.

The City of Brighton is requesting Colorado's Water Plan Grant funding to enhance this controlled channel in the South Platte and promote a healthy ecosystem for this portion of the river. By removing the existing berm and constructing a permanent and stable spill structure, the future design can enhance wetland habitats in the overbank, prevent future washouts near the diversion structures, and make a more stable river ecosystem that can accommodate high flows passing into the newly carved flood pathway.



		Measurable Results								
To catalog measurable res values as applicable:	ults achie	eved with the CWP Grant funds, please provide any of the following								
N/A	New St	torage Created (acre-feet)								
N/A		ew Annual Water Supplies Developed or Conserved (acre-feet), onsumptive or Nonconsumptive								
N/A	Existing	Existing Storage Preserved or Enhanced (acre-feet)								
Approximately 1000 If	Length	Length of Stream Restored or Protected (linear feet)								
N/A	Efficier	Efficiency Savings (indicate acre-feet/year OR dollars/year)								
3.7 Acres	Area of	Area of Restored or Preserved Habitat (acres)								
N/A	Quantil	Quantity of Water Shared through Alternative Transfer Mechanisms								
N/A		Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning								
N/A	Numbe	r of Coloradans Impacted by Engagement Activity								
N/A	Other	Explain: N/A								

Water Project Justification

Provide a description of how this water project supports the goals of <u>Colorado's Water Plan</u>, the most recent <u>Statewide Water Supply Initiative</u>, and the applicable Roundtable <u>Basin Implementation Plan</u> and <u>Education Action Plan</u>. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers).

The proposed water project shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan Framework for State of Colorado Support for a Water Project (CWP, Section 9.4, pp. 9-43 to 9-44;)

This project will advance the goals of the Colorado's Water Plan by promoting watershed health and water quality. Restoring a natural wetland environment will benefit watershed health because "Rangelands, wetlands, and riparian corridors play a substantial role in water storage, transport, sediment control, water quality, wildlife habitat, and streamflows." (CWP, Section 7.1, pp. 7-4 to 7-5). The addition of a large wetland feature is fitting to this part of the South Platte River. It will be used heavily by migratory birds and aquatic animals whose habitat is stretched thin from development that has continued across the South Platte Corridor. In the 2015 flood, the river naturally carved the proposed flow path, meaning that if there were no other structures or development, this stretch would naturally recover into a diverse stream habitat. The imported berm fill was supposed to be temporary, and is not allowing for a healthy stream function at this location. Providing a stabilized overflow and designed wetland system will help the aquatic life, the numerous bird species, floodplain management, and allow the stream to flow through the path it naturally took during the flood event while maintaining the water supply needs of stakeholders on the South Platte.

This project also promotes the goals of the South Platte Basin Implementation Plan. The South Platte BIP states that "Additional projects... should be considered including environmentally friendly diversion structures, restoration of habitat and stream channels, and environmental pools in reservoirs with release timing to benefit the environment." (SP BIP, Section S.3.6, p. S-8). The South Platte River Berm Removal advances these objectives directly, by making the Brighton Ditch Diversion Structure



more environmentally friendly and restoring approximately 1000 feet of aquatic habitat along the river. By restoring this stretch of the river, Brighton will be promoting a healthy local environment, which serves a larger region downstream with the associated benefits. The proposed stream restoration would be particularly valuable in the South Platte River, as this stream is rapidly becoming more urbanized and therefore in greater need of protection and remediation.

This project also promotes a recommendation laid out in the Statewide Water Supply Initiative to "pursue projects and other strategies... that benefit consumptive water users, the riparian and aquatic environments, and stream recreation." (SWSI, Section 8, p. 8-1) This project directly benefits the aquatic environment in the area where the proposed wetlands are located. Also, by supporting the environmental health of a stream section, the area as a whole will benefit from the advantages of making a small but significant change to support the local riparian ecosystem.

Related Studies

Please provide a list of any related studies, including if the water project is complementary to or assists in the implementation of other CWCB programs.

No directly relevant studies have been completed in conjunction with this project.

Previous CWCB Grants, Loans or Other Funding

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order; 6) Percentage of other CWCB funding for your overall project.



 Last Updated: June 2018

 1) City of Brighton; 2) Water Storage – Construction; 3) South Platte; 4) DNK; 5) CTGG1 2018-1618 / Contract CMS No. 107735; 6) 12.9%

 Taxpayer Bill of Rights

 The Taxpayer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect your application.

 The City of Brighton does not have any TABOR issues that would impact the amount of grant money that the City is allowed to receive.

	Submittal Checklist
х	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.
Exhib	it A
х	Statement of Work(1)
Х	Budget & Schedule ⁽¹⁾
х	Engineer's statement of probable cost (projects over \$100,000)
N/A	Letters of Matching and/or Pending 3 rd Party Commitments ⁽¹⁾
Exhib	it C
Х	Map (if applicable) ⁽¹⁾
Х	Photos/Drawings/Reports
N/A	Letters of Support (Optional)
*	Certificate of Insurance (General, Auto, & Workers' Comp.) (2)
*	Certificate of Good Standing with Colorado Secretary of State ⁽²⁾
*	W-9 ⁽²⁾
*	Independent Contractor Form ⁽²⁾ (If applicant is individual, not company/organization)
Enga	gement & Innovation Grant Applicants ONLY
N/A	Engagement & Innovation Supplemental Application ⁽¹⁾



*Will be provided at a later date pending CWCB acceptance of grant application.

(1) Required with application.

(2) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.



Colorado Water Conservation Board

Water Plan Grant - Exhibit A

	Statement Of Work	
Date:	07-18-2018	
Name of Grantee:	City of Brighton	
Name of Water Project:	South Platte River Berm Removal	
Funding Source:		

Water Project Overview: Berm Removal and Spill Stabilization

The project would remove the temporary riprap berm and place a stable spill structure that would divert high flows into a new wetland habitat downstream of the spill. The stabilized structure would be designed to spill flows frequently enough so that wetland vegetation and plant growth can be created in the scoured section that was carved in 2015.

The design would benefit the river by protecting the pathway for future flood conveyance and by transforming the scoured path into a habitat for birds and aquatic species.

Any design will ensure that the water diversion rights for Brighton Ditch and Ken Mitchell are not impacted by the hydraulic performance of the new structure.

The City of Brighton has prepared conceptual layouts and preliminary construction costs for the work.



Figure 1 - (Top) Flows hitting the berm and going over Brighton Ditch's Diversion, (Bottom) A Concept of what high flows would do if the project was allowed to stabilize a permanent overflow and create wetland habitat downstream. In both figures, the river is flowing from the top of the figure towards the bottom.



Project Objectives: Remove temporary berm and construct a stable spill into wetland banks

- 1. Remove what was supposed to be temporary fill in the floodplain.
- 2. Develop a stabilized structure that can safely pass water into the scoured path carved by the river in 2015.
- 3. Enhance the scoured pathway and transform it into a wetland floodplain for migratory birds and aquatic species.
- 4. Design for recreational passage (optional, if desired) so that future boating or tubing can pass. (Note: Recreational passage may conflict with wetland design)

Tasks

Task 1 – Design and Analysis

Description of Task: Engineering Design and Analysis

Perform 30%, 60%, and final design. Develop and prepare final plan set with specifications for construction. The design task shall include a 30 percent report that defines the geomorphology, ecology, hydrology, and hydraulics of the river and the spill structure.

Method/Procedure: Professional Services

The analysis and design will be performed by a team of qualified engineers, geomorphologists, ecologists, and scientists.

Deliverable: Plan Set and Specifications

- 1. 30% Design Report and Conceptual Layout
- 2. 60% Design Plans and Specifications along with an Engineer's Estimate of Costs
- 3. 100% Signed and Sealed Plans and Specifications for bid



Tasks

Task 2 – Permitting and Construction

Description of Task: Procure qualified contractor to construct improvements

- 1. Perform necessary floodplain permitting.
- 2. Obtain US Army Corps of Engineers 404 Permit.
- 3. Obtain Stormwater Discharge Permit from State.
- 4. Obtain all necessary water discharge permits from State.
- 5. Mobilize equipment for construction.
- 6. Construct plans from Task 1.
- 7. Close out construction.
- 8. Demobilize equipment.

Method/Procedure: Contractor with Support from Engineer

Design engineer will continue services into construction to help with floodplain permitting and construction management. Qualified contractor will perform the construction and necessary dewatering.

Deliverable: Final Construction Completion



Budget and Schedule

This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format.

Reporting Requirements

Progress Reports: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status 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 Report: At completion of the project, the applicant shall provide the CWCB a Final Report on the applicant's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

The CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

Payment

Payment will be made based on actual expenditures and must include invoices for all work completed. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

Project costs not covered by those or other grants, and are therefore the responsibility of the grantee, will be eligible for CWCB funds at the following percentages of project costs:

		Percent of Project C	osts
	Recommended	Max Grant Funding	Minimum Funding
	Grant Funding	Request (All CWCB	Match (Non-CWCB
Type of Activity	Request	Sources)	Sources)
Engineering & Construction	20%	50%	50%
Feasibility Study	50%	50%	50%
Reducing Agricultural Dry Up	50%	80%	20%
Conservation/Efficiency Methods	50%	80%	20%
Educational Efforts	50%	80%	20%
Environmental Conservation	50%	80%	20%
Watershed Improvements	50%	80%	20%
Stream Improvements	50%	80%	20%
Land Use Planning	20%	50%	50%
Recreational Projects	20%	80%	20%

Costs incurred prior to the effective date of this contract are not reimbursable. The last 10% of the entire grant will be paid out when the final deliverable has been received. All products, data and information developed as a result of this contract must be provided to CWCB in hard copy and electronic format as part of the project documentation.

Water Plan Grant Exhibit A - Statement of Work |Page 4 of 5



Performance Measures

Performance measures for this contract shall include the following:

(a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum inkind contributions (if applicable) per the budget in Exhibit B. Per Water Plan Grant Guidelines, the CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

(b) Accountability: Per Water Plan Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per Water Plan Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.

(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.

(d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.

						Total	\$132,493	\$1,149,320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,281,813												
Colorado Water Colorado Water Colorado Water Conservation Board Department of Natural Resources Department of Natural Resources Colorado Water Conservation Board Water Plan Grant - Exhibit B Budget and Schedule																Match Funding	\$66,247	\$574,660												\$640,907		
A D O Board ral Resources 30ard						Grant Funding Request	\$66,247	\$574,660												\$640,907												
COLORA Colorado Water Colorado Water Conservation B Department of Natura Department of Natura Department of Natura I Schedule						Task End Date	8/1/2019	12/01/2020												Total	1 of 2											
COLOR Colorado Wat Colorado Wat Conservation Department of Maturation Mater Plan Grant - Exhibit B Budget and Schedule	2		noval			Task Start Date	10/1/2018	08/01/2019													Page 1 of 2											
Colora	Date: 07/18/2018	Name of Applicant: City of Brighton	Name of Water Project: South Platte Berm Removal	Project Start Date: 10/01/2018	Project End Date: 12/01/2020	Task Description	Engineering Design and Analysis	Construction						5																		
	Date: 07	Name of	Name of	Project	Project.	Task No.	+	5																								



