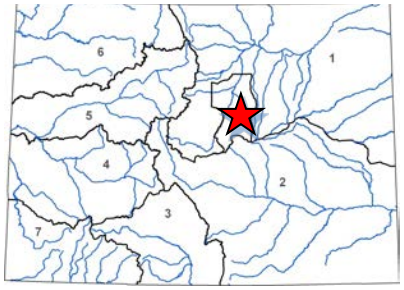
COLORADO
Colorado Water Conservation Board
Department of Natural Resources

New Irrigation System Construction
Cottonwood Metro District

November 2019 Board Meeting

Water Plan Grant Application



LOCATION	
County/Counties:	Douglas
Drainage Basin:	Metro

DETAILS	
Total Project Cost:	$786,912
Water Plan Grant Request:	$259,681
Recommended Amount:	$0
Other CWCB Funding:	$0
Other Funding Amount:	$0
Applicant Match:	$527,231
Project Type(s): Construction	
Project Category(Categories): Conservation and Land Use Planning	
Measurable Result: no estimate	

CWP funding will be used directly for the design and construction of a new, approximately $787,000 irrigation system for the Metro District, which includes 18 acres of bluegrass/fescue fields within the irrigated open space for the community of 1,750 homes. The new system replaces the current 35-year old irrigation system that is both unreliable and inefficient.

Water supply for this project is the Cherry Creek aquifer and is supplied by the Cottonwood Water and Sanitation District. There is a dedicated raw water well for this irrigation system and all water is taken directly from the aquifer.

The new irrigation system will have approximately 35,000 linear feet of pipe, approximately 1,000 all-new high-efficiency irrigation heads, booster pump station, smart controllers, and rain sensors. The CWP grant funds will be used directly for the construction of the new system.

This construction project will begin in March, 2020 and conclude by July, 2020. The project will be funded by the Metro District capital reserve along with the CWP grant.

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Last Updated: July 2019

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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	Anna.Mauss@state.co.us
Conservation, Land Use Planning	Kevin.Reidy@state.co.us
Engagement & Innovation Activities	Ben.Wade@state.co.us
Agricultural Projects	Alexander.Funk@state.co.us
Environmental & Recreation Projects	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	Cottonwood Metropolitan District
Name of Water Project	New Irrigation System Construction

CWP Grant Request Amount	$ 259,681
Other Funding Sources _____	$ 0
Other Funding Sources _____	$ 0
Other Funding Sources _____	$ 0
Applicant Funding Contribution	$ 527,231
Total Project Cost	$ 786,912

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Applicant & Grantee Information
Name of Grantee(s): Cottonwood Metropolitan District
Mailing Address: PO Box 2917, Littleton, CO 80161
FEIN: 84-0929655
Organization Contact: Anthony Boone
Position/Title: District Manager
Email: booneanthony@comcast.net
Phone: (720) 363-1117
Grant Management Contact: Anthony Boone
Position/Title: District Manager
Email: booneanthony@comcast.net
Phone: (720) 363-1117
Name of Applicant: Cottonwood Metropolitan District (same as grantee) (if different than grantee)
Mailing Address
Position/Title
Email
Phone

Description of Grantee/Applicant
Provide a brief description of the grantee's organization (100 words or less).
The Cottonwood Metropolitan District (referred to as "Metro District") is a quasi-municipal corporation and is governed pursuant to the provisions of the Colorado Special District Act. The Metro District was established to provide and maintain open-space parks, recreational facilities and programs, landscaping improvements, sub-drainage systems, and mosquito control. The Metro District maintains two parks, which contain approximately 110 acres in Parker, Colorado. The parks include pavilions, grass ball fields, basketball courts, playgrounds, a roller hockey rink, and open spaces available for use by both Cottonwood subdivision residents and the general public.

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Type of Eligible Entity (check one)	
	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.
X	**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 Section 37-60-126 Colorado Revised Statutes.

Type of Water Project (check all that apply)	
	Study
X	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):*	
X	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):*	
	Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. *Applicable Exhibit A Task(s):*	
	Other	Explain:

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Location of Water Project	
Please provide the general county and coordinates of the proposed project below in **decimal degrees**. The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Counties	Parker, CO / Douglas County
Latitude	N39.559
Longitude	W104.789

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.
CWP funding will be used directly for the design and construction of a new, approximately $787,000 irrigation system for the Metro District, which includes 18 acres of bluegrass/fescue fields within the irrigated open space for the community of 1,750 homes. The new system replaces the current 35-year old irrigation system that is both unreliable and inefficient. Water supply for this project is the Cherry Creek aquifer and is supplied by the Cottonwood Water and Sanitation District. There is a dedicated raw water well for this irrigation system and all water is taken directly from the aquifer. The new irrigation system will have approximately 35,000 linear feet of pipe, approximately 1,000 all-new high-efficiency irrigation heads, booster pump station, smart controllers, and rain sensors. The CWP grant funds will be used directly for the construction of the new system. This construction project will begin in March, 2020 and conclude by July, 2020. The project will be funded by the Metro District capital reserve along with the CWP grant.

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Measurable Results		
To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:		
	New Storage Created (acre-feet)	
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive	
	Existing Storage Preserved or Enhanced (acre-feet)	
	Length of Stream Restored or Protected (linear feet)	
	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
	Area of Restored or Preserved Habitat (acres)	
	Quantity of Water Shared through Alternative Transfer Mechanisms	
5,483[1]	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning	
	Number of Coloradans Impacted by Engagement Activity	
	Other	Explain:

[1] The Metro District is home to approximately 1,750 households that have free, open access to the Cottonwood Parks. Per the Colorado Department of Local Affairs, the 2019 estimated population of the Metro District is 5,483 residents. The Cottonwood Parks are also available for fee-based reservations of the facilities to all non-district residents, as well as unrestricted access to all transient residents/non-residents using the integrated trail system along the Cherry Creek Trail.

Water Project Justification
Provide a description of how this water project supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the applicable Roundtable Basin Implementation Plan and Education Action Plan. 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;)

The Metro District irrigation replacement project is the culmination of planning to replace a 35-year old system. Residents and transients alike frequent the Cottonwood Parks, and the Metro District recognizes the need to replace the system from conservation, efficiency, effectiveness, modernization, and even cosmetic and perception reasons. The Metro District is proceeding with this replacement in the spring of 2020 because of the need, regardless of funding sources. The project will be time-phased if necessary based on available cash flow, but the desire is for cost efficiency and completing the project in a single season. If supplemental funding is available, the project will be completed by July of 2020 and immediate water efficiency goals will be realized in an incredibly short time.

The following are excerpts where the new irrigation system project directly addresses the CWP framework for support of a water project.

CWP Section 9.4:

Does the project proponent demonstrate a commitment to collaboration? Does the project proponent:

- *Involve multiple participants where appropriate*
- *Consult with a broad set of local stakeholders and local governments before or early in the regulatory process*
- *Provide meaningful opportunities for input*

The Metro District continuously works closely with the Cottonwood Water and Sanitation District (CWSD) for day-to-day operations, as regular cooperation is required for current water supply needs of all of the Cottonwood Parks. CWSD conducted previous studies, at their own cost, to determine which well(s) would provide the required volume for the Metro District irrigation system and future planned development. These studies resulted in the determination of a well that will be targeted for the Metro District irrigation project. CWSD also uses the determined well for water commitments at a down-stream, joint water purification plant.

CWSD also provided invaluable input on the control mechanisms needed for the proposed pump station to ensure the well infrastructure can provide on-demand supply flow when called upon.

The Metro District and CWSD are continual partners in every-day activities, as well as long-term plans and projects. CWSD is a supporter of the Metro District's irrigation system upgrade, as shown by the Letter of Support provided in Exhibit C.

Does the project proponent demonstrate sustainability? Does the project proponent:

- *Maximize the use of water resources (through reuse, firming the yield of existing supplies, water sharing arrangements, improving or modernizing aging infrastructure, or aquifer storage and recharge projects)*
- *Partner with the local government(s) being served by the water project to incorporate best water use practices into land use planning efforts*

The new irrigation system will allow the Metro District to irrigate during the optimal irrigation hours of 9PM-7AM. Irrigating during these evening hours when air temperatures are low, humidity is higher, and wind is lighter is proven to maximize water usage. Currently the Metro District has to apply a significant amount of irrigation during the daytime when air temperatures are high and humidity is low. This process wastes a lot of water due to evaporation and wind loss. Not only does the daytime watering affect efficiency but is also not a good example of sustainability for the rest of the community. As the largest users of irrigation water in the area, the Metro District should set the example of sustainability by watering during optimal hours.

During years of drought, when water restrictions are in place, the Metro District will not have enough hours in an evening to apply sufficient irrigation to properly maintain plant health. With the proposed

system, the district will be able to apply a sufficient amount of water to maintain plant health when watering hours are minimized.

Currently the irrigation system contains minimal irrigation heads with check valves. After zones operate, many of the heads slowly leak water and partially drain lateral lines. Every new irrigation head in the proposed system will have a check valve to eliminate head and line drain after operation.

The Metro District at this point has not been able to quantify the estimated water usage savings under the new irrigation system. The estimate is difficult to calculate based on comparisons to the 35-year old system and other variables such as the unknown water lost because of line breakage. However, new systems typically save between 25 to 30 percent through combinations of more robust piping and efficiency improvements in sensors and controllers.

Does the project proponent establish the fiscal and technical feasibility of the project? Does the project proponent demonstrate:

- *Local investment or contribution*
- *Financial commitment to repay debt (bonds, loans, or debt instruments)*
- *An intent to leverage any state grant or loan with private, local, or federal funding*
- *Technical and legal availability of water supplies for the project*
- *Readiness to proceed upon receipt of necessary funding and permits (i.e. completed preliminary planning and design work, obtained necessary water rights, secured necessary financial commitments)*

The irrigation project is fiscally and technically sound and ready to proceed immediately. The Metro District has already commissioned the studies at their own expense, and is proceeding to solicit bids from contractors currently. The investment from the Metro District is allowing the project to commence, regardless of external funding sources. The additional commitment from the CWSD to determine and provide well sources for adequate water supplies is also a strong indicator of the financial support and readiness to proceed with the actual construction project. The project is ready to commence in March of 2020, and will be completed in a compressed timeline with the anticipated grant funding.

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.

The Metro District commissioned HydroSystems*KDI to conduct a thorough irrigation system evaluation in the Cottonwood Parks and provide a proposal for upgrade based on findings. This evaluation found many issues with the aging system. The pertinent findings were published in a report to the Metro District, with the major findings summarized below.

The existing irrigation mainline has multiple leaks and cannot maintain pressure without excessive cycling of the pumps. Because of these leaks and the ancillary problems created, the system must run 24 hours a day until adequate water is applied to the area.

Most watering occurs Monday-Friday. One complete irrigation cycle takes 42 hours. In order to get two water cycles in one week, the system must run for 3.5 days straight. Scheduling conflicts occur when sports teams and residents want to use the park's facilities and irrigation is operating. Watering in the middle of day is extremely inefficient and is not a good example to set for the surrounding community.

There have been numerous changes to the landscaping over the years, but the irrigation system has not been updated to match some of these changes. Sidewalks have been added in the middle of zones. Shrub beds have been added in some areas where there used to be turf. Turf and shrubs

have different water requirements and should be zoned separately. The plant material does not require as much water as turf and is being heavily overwatered in these areas. There are some turf zones that have pop-up heads and rotor heads on the same zone. These types of heads should never be mixed because they have different precipitation rates and apply different amounts of water. In order to keep these areas green, they will be overwatered due to the different types of heads.

Additional findings include:

- *Most heads do not have pressure control or check valves, causing water loss*
- *No rain shut off devices*
- *None of the rotor zones have pressure control, causing varying pressures at the heads and poor uniformity of coverage*
- *Spacing of heads is too far apart, causing dry spots in between heads*

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.

None

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.

None

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Submittal Checklist	
X	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.
Exhibit A	
X	Statement of Work(1)
X	Budget & Schedule(1)(3)
X	Engineer's statement of probable cost (projects over $100,000)
N/A	Letters of Matching and/or Pending 3rd Party Commitments(1)
Exhibit C	
X	Map (if applicable)(1)(4)
N/A	Photos/Drawings/Reports
X	Letters of Support (Optional)
X	Certificate of Insurance (General, Auto, & Workers' Comp.) (2)
N/A	Certificate of Good Standing with Colorado Secretary of State(2)(5)
X	W-9(2)
N/A	Independent Contractor Form(2) (If applicant is individual, not company/organization)
Engagement & Innovation Grant Applicants ONLY	
N/A	Engagement & Innovation Supplemental Application(1)

(1) Required with application.
(2) Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.
(3) Marked as Exhibit B per the naming of the Excel budget template.
(4) The map for the Metro District shows approximately 23 acres of irrigated property. This total includes sections to the west of Jordan Road, and just north of Cottonwood Drive. Those two sections are not included in the newly proposed irrigation project, which accounts for the ~5 acre discrepancy between the proposed land area and the map image. The ~110 acre total land also includes the Cherry Creek basin, which is not considered in the map image.
(5) The Metro District is a quasi-municipality and is not required to be registered with the Colorado Secretary of State.

Last Updated: July 2019

Colorado Water Conservation Board
Water Plan Grant - Exhibit A

Statement Of Work	
Date:	7/31/19
Name of Grantee:	Cottonwood Metropolitan District
Name of Water Project:	New Irrigation System Construction
Funding Source:	Self-funded/CWCB Conservation and Land Planning Grant

Water Project Overview:

The Metro District is working towards construction of a new, approximately $787,000 irrigation system, which includes 18 acres of bluegrass/fescue fields within the irrigated open space for the community of 1,750 homes. The new system replaces the current 35-year old irrigation system that is both unreliable and inefficient.

Water supply for this project is the Cherry Creek aquifer and is supplied by the Cottonwood Water and Sanitation District. There is a dedicated raw water well for this irrigation system and all water is taken directly from the aquifer.

Project Objectives:

The new irrigation system will have approximately 35,000 linear feet of pipe, approximately 1,000 all-new high-efficiency irrigation heads, booster pump station, smart controllers, and rain sensors.

This construction project will begin in March, 2020 and conclude by July, 2020. The project will be funded by the Metro District capital reserve along with the CWP grant.

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Tasks
Task 1 – Pump Station
Description of Task:
Preparation of pump station construction drawings and final execution of installation.
Method/Procedure:
The Metro District shall consult and contract with subcontractors as appropriate to complete the necessary design and installation. The Metro District shall evaluate the existing pump station and design a new installation to meet current and future demands, within the current footprint, if possible. The Metro District shall complete pump station upgrades required to meet the water demand needed by the upgraded irrigation systems of the Cottonwood Parks.
Deliverable:
Pump Station Mechanical Plans and Detail – Detailed plans for the pump station modifications. Pump Station Modification and Certification – Completion of project and certification of conformance to goals (i.e. quality inspection).

Last Updated: July 2019

Tasks
Task 2 – West Park
Description of Task:
Preparation of west-park construction drawings and final execution of installation.
Method/Procedure:
The Metro District shall consult and contract with subcontractors as appropriate to complete the necessary design and installation. The Metro District shall evaluate the existing west-park irrigation system and design a new installation to meet current and future demands. The Metro District shall complete west park upgrades required to meet land-use demands, while maximizing water efficiency.
Deliverable:
West Park Mechanical Plans and Detail – Detailed plans for the west-park irrigation system installation. West Park Installation and Certification – Completion of project and certification of conformance to goals (i.e. quality inspection).

Last Updated: July 2019

Tasks
Task 3 – East Park
Description of Task:
Preparation of east-park construction drawings and final execution of installation.
Method/Procedure:
The Metro District shall consult and contract with subcontractors as appropriate to complete the necessary design and installation. The Metro District shall evaluate the existing west-park irrigation system and design a new installation to meet current and future demands. The Metro District shall complete west park upgrades required to meet land-use demands, while maximizing water efficiency.
Deliverable:
East Park Mechanical Plans and Detail – Detailed plans for the west-park irrigation system installation. East Park Installation and Certification – Completion of project and certification of conformance to goals (i.e. quality inspection).

Last Updated: July 2019

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.

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.

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 in-kind 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.

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Performance Measures
(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.

Cottonwood Metro District - West Park
IRRIGATION CONSTRUCTION ESTIMATE
Prepared by Hydro-Systems, Inc.
Date: 6/24/2019

Qty	Unit	Description	Unit Cost	Total Cost
474	Ea	Hunter Inst - PR 6"w plstc nozz spray head	$28.64	$13,575
141	Ea	Hunter I-20 SS 6" Rotor	$65.88	$9,289
10	Ea	Hunter I-20 12" Rotor	$73.94	$739
165	Ea	Hunter I-25 SS Rotor	$87.38	$14,418
3	Ea	Hunter ICV-FS - 1" valve	$184.16	$552
9	Ea	Hunter ICV-FS - 1.5" valve	$235.22	$2,117
49	Ea	Hunter ICV-FS - 2" valve	$286.28	$14,028
1	Ea	Rain Bird 300 BPES - 3" valve	$627.88	$628
18	Ea	Hunter HQ-44-LRC Quick Cplr	$250.00	$4,500
8	Ea	Drip Valve Assembly	$306.44	$2,452
1	Ea	Gate Valve - 3"	$294.38	$294
6	Ea	Gate Valve - 6"	$627.68	$3,766
8215	Lf	CL200' PVC Lateral - 1"	$2.25	$18,484
4680	Lf	CL200' PVC Lateral - 1.25"	$2.60	$12,168
3515	Lf	CL200' PVC Lateral - 1.5"	$2.94	$10,334
2295	Lf	CL200' PVC Lateral - 2"	$3.16	$7,252
2025	Lf	CL200' PVC Lateral - 2.5"	$3.80	$7,695
1175	Lf	CL200' PVC Lateral - 3"	$4.72	$5,546
3300	Lf	CL200RT PVC Mainline 3"	$5.38	$17,754
4950	Lf	CL200RT PVC Mainline 6"	$12.42	$61,479
310	Lf	CL160 PVC Sleeve 2"	$12.79	$3,965
80	Lf	CL160 PVC Sleeve 4"	$14.27	$1,142
230	Lf	CL160 PVC Sleeve 6"	$19.97	$4,593
75	Lf	CL160 PVC Sleeve 8"	$41.77	$3,133
1375	Lf	Drip Tubing	$1.00	$1,375
16	Ea	Drip Blow-Out Box w/Indicator	$82.03	$1,312
20	Ea	Manual Drain Valve	$230.00	$4,600
1	Ea	Moisture Sensing Unit	$1,112.50	$1,113
1	Ea	Flow decoder	$1,362.50	$1,363
1	Ea	Master valve decoder	$700.00	$700
1	Ea	Event Decoder	1,250.00	$1,250
2	Ea	Mini-Clik - wireless installation	244.44	$489
10000	Lf	2-wire decoder cable	0.60	$6,000
69	Ea	Valve decoders	637.50	$43,988
17	Ea	Lightning arrestors	387.50	$6,588
1	Ea	Baseline Controller	22,625.00	$22,625
1	Ea	Baseline modem	7,125.00	$7,125
1	Ea	Flow Station	6,000.00	$6,000
1	Ea	Ethernet Radio	6,362.50	$6,363
				$330,792

Cottonwood Metro District - East Park
IRRIGATION CONSTRUCTION ESTIMATE
Prepared by Hydro-Systems, Inc.
Date: 6/24/2019

Qty	Unit	Description	Unit Cost	Total Cost
115	Ea	Hunter Inst - PR 6"w plstc nozz spray head	$28.64	$3,294
86	Ea	Hunter I-20 SS 6" Rotor	$65.88	$5,666
0	Ea	Hunter I-20 12" Rotor	$73.94	$0
108	Ea	Hunter I-25 SS Rotor	$87.38	$9,437
3	Ea	Hunter ICV-FS - 1" valve	$184.16	$552
3	Ea	Hunter ICV-FS - 1.5" valve	$235.22	$706
31	Ea	Hunter ICV-FS - 2" valve	$286.28	$8,875
0	Ea	Rain Bird 300 BPES - 3" valve	$627.88	$0
8	Ea	Hunter HQ-44-LRC Quick Cplr	$250.00	$2,000
5	Ea	Drip Valve Assembly	$306.44	$1,532
1	Ea	Gate Valve - 3"	$294.38	$294
5	Ea	Gate Valve - 6"	$627.68	$3,138
3775	Lf	CL200' PVC Lateral - 1"	$2.25	$8,494
3700	Lf	CL200' PVC Lateral - 1.25"	$2.60	$9,620
2475	Lf	CL200' PVC Lateral - 1.5"	$2.94	$7,277
1225	Lf	CL200' PVC Lateral - 2"	$3.16	$3,871
1275	Lf	CL200' PVC Lateral - 2.5"	$3.80	$4,845
825	Lf	CL200' PVC Lateral - 3"	$4.72	$3,894
175	Lf	CL200RT PVC Mainline 3"	$5.38	$942
2830	Lf	CL200RT PVC Mainline 6"	$12.42	$35,149
60	Lf	CL160 PVC Sleeve 2"	$12.79	$767
30	Lf	CL160 PVC Sleeve 4"	$14.27	$428
15	Lf	CL160 PVC Sleeve 6"	$19.97	$300
40	Lf	CL160 PVC Sleeve 8"	$41.77	$1,671
1350	Lf	Drip Tubing	$1.00	$1,350
10	Ea	Drip Blow-Out Box w/Indicator	$82.03	$820
8	Ea	Manual Drain Valve	$230.00	$1,840
1	Ea	Moisture Sensing Unit	$1,112.50	$1,113
0	Ea	Flow decoder	$1,362.50	$0
0	Ea	Master valve decoder	$700.00	$0
1	Ea	Event Decoder	$1,250.00	$1,250
1	Ea	Mini-Clik - wireless installation	$244.44	$244
3500	Lf	2-wire decoder cable	$0.60	$2,100
42	Ea	Valve decoders	$637.50	$26,775
5	Ea	Lightning arrestors	$387.50	$1,938
1	Ea	Baseline Controller	$22,625.00	$22,625
0	Ea	Baseline modem	$7,125.00	$0
0	Ea	Flow Station	$6,000.00	$0
1	Ea	Ethernet Radio	$6,362.50	$6,363
				$179,168

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Exhibit B
Budget and Schedule

Prepared Date: 8/15/19

Name of Applicant: Cottonwood Metropolitan District

Name of Water Project: New Irrigation System Construction

Project Start Date: 3/1/2020

Project End Date: 7/31/2020

Task No.	Task Description	Task Start Date	Task End Date	Grant Funding Request	Match Funding	Total
1	Pump Station	3/1/2020	7/31/2020	$ 42,253	$ 85,787	$128,040
2	West Park	3/1/2020	7/31/2020	$ 141,012	$ 286,298	$427,310
3	East Park	3/1/2020	7/31/2020	$ 76,416	$ 155,146	$231,562
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
			Total	$ 259,681	$ 527,231	$786,912

COTTONWOOD

WATER AND SANITATION DISTRICT

C/O Mulhern MRE, Inc.
188 Inverness Drive West, Suite 150
Englewood, CO 80112
303-649-9857 Fax 303-414-0671

July 31, 2019

Colorado Water Conservation Board
Attn: Kevin Reidy
1313 Sherman Street Room 718
Denver, CO 80203

Mr. Reidy,

The Cottonwood Water and Sanitation District ("Water District") would like to submit this letter in support of the grant application by the Cottonwood Metropolitan District's ("Metro District") Irrigation System Construction Project.

Based on the information provided to the Water District, it fully supports the proposed project and would ask the CWCB to consider the Metro District's application for a grant. The Water District provides renewable supplies from Cherry Creek to the Metro District for irrigation purposes. We believe that the proposed upgrades to their main irrigation system is expected to eliminate recurring mainline breaks that result in wasted supplies.

Please feel free to contact me with any questions.

Sincerely,

COTTONWOOD WATER & SANITATION DISTRICT

Randall S. Warren, District Manager

NOTE:
LOCATIONS AND AREAS ARE APPROXIMATE.
THIS INFORMATION IS FOR GENERAL BIDDING PURPOSES ONLY.

IRRIGATED TURF AREAS	22.72 ACRES	
DRYLAND	36.46 ACRES	
ROCK/WALL PLANTERS	1.34 ACRES	
XERISCAPE	0.07 ACRES	
PARKING LOTS	2.28 ACRES	
TOTAL =	62.87 ACRES	

N

200 100 0
ORIGINAL SCALE: 1" = 200'

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
COTTONWOOD METRO DISTRICT
8334 SANDREED CIRCLE
PARKER, CO 80134
CONTACTS:
ANTHONY BOONE
RICHARD NIELSEN

J·R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=200'
V-SCALE	NA
DATE	2-4-14
DESIGNED BY	LMH
DRAWN BY	LMH
CHECKED BY	

COTTONWOOD METRO DISTRICT
DISTRICT TURF AREAS

SHEET 1 OF 1
JOB NO. 15616.00