



Castle Rock Water Commission Agenda - Final

Todd Warnke, Chair
Bill Leung, Vice Chair
Angie Brown
Kathryn Gienger
David Hammelman
Kevin McHugh
Tony Rathbun

Wednesday, March 22, 2023

6:00 PM

Castle Rock Water
175 Kellogg Ct., Bldg. 171
Castle Rock, CO 80109

This meeting is open to the public and will be held in a hybrid format in accordance with Town Council Electronic Participation, Connected, and Hybrid Meeting Policy. The in-person meeting will be held at 175 Kellogg Ct. Bldg. 171 Castle Rock CO 80104 or this meeting can be accessed online at:

<https://crgov.webex.com/crgov/j.php?MTID=m92cb42571097d1f8b206e0b9132d5aa0>

the Meeting password: Mar22WCMtg (62722926 from video systems) or phone in by calling (720) 650-7664, meeting code #24978923628#. One or more Council members may also attend this meeting, during which the items listed herein will be discussed.

6:00 pm CALL TO ORDER / ROLL CALL

COUNCIL UPDATE

COMMISSION COMMENTS

ADMINISTRATIVE BUSINESS

1. [WC 2023-028](#) Approval of the February 28, 2023 Water Commission Meeting

Attachments: [Attachment A: Feb Mtg Minutes](#)

2. [WC 2023-029](#) Water Commission Appreciation Event

ACTION ITEMS (HIGH PRIORITY / TIME CRITICAL)

3. [WC 2023-030](#) A Resolution Approving a Construction Contract between the Town of Castle Rock and Global Underground Corporation for the East Plum Creek Open Space Well Facility [Open space north of Plum Creek Water Purification Facility]

Attachments: [Attachment B: Site Map](#)

4. [WC 2023-031](#) A Resolution Approving a Construction Contract between the Town of Castle Rock and RME Ltd., LLC dba Elite Surface Infrastructure for the Prestwick Water Rehab Project [W. Prestwick Way]

Attachments: [Attachment B: Location Map](#)

5. [WC 2023-032](#) A Resolution Approving a Construction Contract between the Town of Castle Rock and XXXX to provide construction services for Castle Rock Reservoir No. 2 (CRR2) and Castle Rock Reservoir No. 1 (CRR1) [Sedalia, CO]

Attachments: [Attachment B: Location Map](#)
6. [WC 2023-033](#) A Resolution Waiving Formal Written Bidding Requirements on the Basis of a Sole Source and Approving a Professional Services Agreement to provide construction support services for the Castle Rock Reservoir No. 2 (CRR2) and Castle Rock Reservoir No. 1(CRR1) [5219 Rio Grande Ave, Sedalia, CO 80135]

Attachments: [Attachment B: Location Map](#)
 [Attachment C: Sole Source](#)
7. [WC 2023-034](#) A Resolution Approving a Professional Services Agreement between the Town of Castle Rock and Burns & McDonnell for the Pinery Water Pipeline Project [Along Castle Oaks Drive in the northwest part of the Town]

Attachments: [Attachment B: Location Map](#)
8. [WC 2023-035](#) A Resolution Approving a Services Agreement between Town of Castle Rock and Burns & McDonnell Engineering Company to complete Design Phase Engineering Services for PCWPF Expansion Project [1929 Liggett Rd. Castle Rock, CO 80109]

DIRECTOR FOLLOW-UP AND INFORMATIONAL / UPDATE ITEMS

9. [WC 2023-036](#) 2022-2023 Budget Recap
10. [WC 2023-037](#) A Resolution Approving a Variance Pursuant to Chapter 9.16.070.E of the Castle Rock Municipal Code for Nighttime Construction Activities Related to the Tank 18 Blue Zone Main Project [Located at the intersection of Castle Oaks Drive and Pleasant View Drive]

Attachments: [Attachment A: Staff Report](#)
11. [WC 2023-038](#) Upcoming Town Council Items

COMMISSIONER MEETING COMMENTS



Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 1. **File #:** WC 2023-028

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water

Approval of the February 28, 2023 Meeting Minutes
Town Council Agenda Date: NA

Executive Summary

Attached are the meeting minutes for the February 28, 2023 Water Commission board meeting.

Proposed Motion

"I move to approve the Minutes as presented"

Attachments

Attachment A: February 28, 2023 Meeting Minutes



Castle Rock Water Commission Meeting Minutes - Draft

Todd Warnke, Chair
Bill Leung, Vice Chair
Angie Brown
Kathryn Gienger
David Hammelman
Kevin McHugh
Tony Rathbun

Tuesday, February 28, 2023

6:00 PM

Castle Rock Water
175 Kellogg Ct., Bldg. 171
Castle Rock, CO 80109

SPECIAL MEETING

This meeting is open to the public. Three or more Council members may also attend this meeting, during which the items listed herein will be discussed

CALL TO ORDER / ROLL CALL

Present 7 - Chair Todd Warnke, Vice Chair Bill Leung, Angie Brown, Kathryn Gienger, David Hammelman, Tony Rathbun, and Kevin McHugh
Attendance 7 - Mark Marlowe, Matt Benak, Nichol Bussey, Heather Justus, Paul Rementer, David Van Dellen, and MaryJo Woodrick

COUNCIL UPDATE

Time was allowed for Mr. Marlowe to share a council update.

COMMISSION COMMENTS

Time was allowed for Commissioner Comments.

ADMINISTRATIVE BUSINESS

[WC 2023-013](#)

Interviews and Selection of New Water Commission Board member

Town Council Agenda Date: NA

Chairman Warnke reported that interviews, for the open Water Commission Board member position, were held in January and that the committee interviewed 5 excellent candidates. At the February 2, 2023 Town Council meeting Angie Brown was recommended and approved as the new Water Commission Board member.

Chairman Warnke welcomed Ms. Brown to the meeting.

[WC 2023-014](#)

Introduction of the New Castle Rock Water Assistant Director

Town Council Agenda Date: NA

Mr. Marlowe shared that David Van Dellen has been hired as the new

Assistant Director. Mr. Van Dellen has been with the Town of Castle Rock for a long time and will be a great asset in this new position.

[WC 2023-015](#)

**Approval of the January 25, 2023 Meeting Minutes
Town Council Agenda Date: NA**

It was moved by Kevin McHugh and seconded by Kathryn Gienger to approve the meeting minutes for the January 25, 2023 meeting as written. The motion passed 6-0-1 Angie Brown abstained.

Yes: 7 - Chair Warnke, Vice Chair Leung, Brown, Gienger, Hammelman, Rathbun, and McHugh

ACTION ITEMS (HIGH PRIORITY / TIME CRITICAL)

[WC 2023-016](#)

**A Resolution Approving the 2023 Conservation Rebate
Incentive Program [Entire Castle Rock Water Service Area]
Town Council Agenda Date: March 7, 2023**

Mr. Schultz shared that Castle Rock Water will have a conservation rebate program again this year. He shared an update on how the 2022 program went.

Mr. Schultz shared an update on changes to the program for 2023:

- Residential ColoradoScape Renovation - Increase the rebate amount from \$1.20 to \$1.50/square foot. Maintain the existing minimum area required of 400 square feet, or entire front yard. Maintain the existing 1,500 square foot maximum.
- Non-Residential ColoradoScape Renovation - Increase the rebate amount from \$1.20 to \$1.50/square foot. Maintain the existing minimum area required of 1,500 square feet. Maintain the existing 15,000 square foot maximum.
- Smart Irrigation Controller - Discontinue this rebate category.
- Rotary Nozzle Retrofit Rebate - Up to \$5 per nozzle; maximum rebate of \$2,000 for non-residential customers.
- Toilet Retrofit Rebate - Increase the rebate amount from \$100 to \$150 per toilet; maximum rebate of \$600 or four (4) toilets for residential and non-residential customers.
- Whole-home Water Monitoring System Rebate - fifty (50) percent of the cost of the system up to \$200 for residential and non-residential customers.

The budget for the conservation program will be \$200,000. This will include both residential and non-residential rebates.

Commissioner Hammelman asked if staff feels that with these changes will we reach the 100 gallons a day goal? Staff explained that the goal is more than a decade out so these changes will certainly help move us in the

direction of achieving the goal.

Commissioner Brown asked for an explanation of what a whole home monitoring system is? Mr. Schultz explained the system and how it works.

Kathryn Gienger moved to recommend to Town Council approval of the Resolution as presented. Kevin McHugh seconded the motion. Passed unanimously 7-0.

Yes: 7 - Chair Warnke, Vice Chair Leung, Brown, Gienger, Hammelman, Rathbun, and McHugh

[WC 2023-017](#)

**A Resolution Approving the 2023 Water Efficiency Master Plan [Entire Castle Rock Service Area]
Town Council Agenda Date: March 7, 2023**

Mr. Schultz explained that the WEMP is updated every seven years, the last time it was updated was in 2015 so it was time to re-evaluate how well it is working.

Mr. Schultz shared an update on what was completed from the last plan. This included:

- Water Budget Rate Structure changes;
- Public Right-of-Way and Town park landscape and irrigation retrofits. Retrofit areas include the Metzler Park ball fields, the Public Works Service Center, Centennial Park tennis courts, and Butterfield Park;
- ColoradoScape Retrofit Program expanded to non-residential customers with an increase in residential retrofits as well;
- Indoor conservation incentive program;
- Changes to Town Code allowing the use of graywater for toilet flushing;
- New residential landscape and irrigation fees for building permits;
- Water Wiser designation expiration and online course renewal;
- Complete removal of mono-culture Kentucky Bluegrass on new construction or renovations.
- Passing of an ordinance for “no turf” in the front yard and minimal turf in the backyard for new residential construction and no non-functional turf for non-residential development.

He also shared some of the key new goals that have been established in the 2023 plan.

- Implementation of Advanced Metering Infrastructure (AMI);
- Implementation of the Landscape and Irrigation Criteria Manual which includes the residential new construction program for ColoradoScape designs with no turf allowed in front yards and a maximum of 500 square feet of turf in back yards;
- Relocation and expansion of the Ray Waterman demonstration garden;
- Continued evaluation of alternative turf types;

- Implementation of 0.80 gallon per flush toilets required for all new construction;
- Expand irrigation criteria to include master valves and flow sensors for all new residential construction.

David Hammelman moved to recommend to Town Council approval of the Resolution as presented. Tony Rathbun seconded the motion. Passed unanimously 7-0.

Yes: 7 - Chair Warnke, Vice Chair Leung, Brown, Gienger, Hammelman, Rathbun, and McHugh

[WC 2023-018](#)

A Resolution Approving the 2023 Water Use Management Plan (WUMP)

Town Council Agenda Date: March 7, 2023

Mr. Schultz explained that CRW staff did not make any substantial changes to the Water Use Management Plan. Items that were updated were administrative items. The plan explains what the watering schedule is and why it is set up that way. It also explains how the violation system works. Commissioner Gienger asked if the water monitors were out during the day or only at night? Mr. Schultz explained that yes we have monitors that work seven days a week at all different times from May through September. Commissioner Gienger asked if a non-residential property has multiple meters are the violations specific to each meter or are they viewed as the whole? Mr. Schultz responded that they are specific to each meter. The Commission indicated a desire to see CRW look at increasing violation surcharge dollar amounts in the WUMP for 2024 for 3rd and greater violations.

Kevin McHugh moved to recommend to Town Council approval of the Resolution as presented. Angie Brown seconded the motion. Passed unanimously 7-0.

Yes: 7 - Chair Warnke, Vice Chair Leung, Brown, Gienger, Hammelman, Rathbun, and McHugh

[WC 2023-019](#)

A Resolution Approving a Water Rights Lease Agreement between the Town of Castle Rock and Turnpike, LLC. [Weld County, Co]

Town Council Agenda Date: March 7, 2023

Mr. Benak explained that this item is part of the Lost Creek water rights. The last few years Turnpike LLC has leased water for the purpose of irrigation. The cost of the water will be \$36.50 per acre foot (AF) which is a good price for agricultural leased water. Turnpike would like to lease up to 515 AF for a total potential revenue of \$18,797.50

Tony Rathbun moved to recommend to Town Council approval of the Resolution as presented. David Hammelman seconded the motion. Passed unanimously 7-0.

Yes: 7 - Chair Warnke, Vice Chair Leung, Brown, Gienger, Hammelman, Rathbun, and McHugh

[WC 2023-020](#)

**A Resolution Approving a Water Rights Lease Agreement
between the Town of Castle Rock and Ruppel Farms, LLC.**

[Weld County, Co]

Town Council Agenda Date: March 7, 2023

Mr. Benak explained that this item is part of the Lost Creek water rights. The last few years Ruppel Farms LLC has leased water for the purpose of irrigation. The cost of the water will be \$36.50 per acre foot (AF) which is a good price for agricultural leased water. Ruppel Farms would like to lease up to 527 AF for a total potential revenue of \$19,235.50.

Tony Rathbun moved to recommend to Town Council approval of the Resolution as presented. David Hammelman seconded the motion. Passed unanimously 7-0.

Yes: 7 - Chair Warnke, Vice Chair Leung, Brown, Gienger, Hammelman, Rathbun, and McHugh

[WC 2023-021](#)

**A Resolution Approving a Water Rights Lease Agreement
between the Town of Castle Rock and Dove Meadow Dairy**

Inc. [Weld County, Co]

Town Council Agenda Date: March 7, 2023

Executive Summary

Castle Rock Water is seeking Town Council approval of a resolution (**Attachment A**) for a water rights lease with Dove Meadow Dairy Inc. (Dove Meadow Dairy). Dove Meadow Dairy is a farmer located in Weld County adjacent to the Lost Creek Basin wells we purchased in 2017 as part of our Alternate Source of Supply Project. As part of their 2022 lease, the farmer used 150 acre-feet (AF) of water from these wells for irrigation and has paid the Town \$5,461.46. Dove Meadow Dairy is interested in an additional one-year lease of our Lost Creek Basin water rights. The Town of Castle Rock does not plan to export these water rights in 2023 as the infrastructure needed to move the water has not yet been designed or constructed. Dove Meadow Dairy wishes to lease up to 100 AF at a rate of \$36.50 per AF, which could amount to \$3,650.00 in revenue. The price is reasonable for agricultural leased water of this type at this location based on available data regarding other leases in the area. The agreement terminates on November 15, 2023. This lease agreement is consistent with Castle Rock Water's strategic plan. A key tactic in that plan is to maximize leasing opportunities for idle water rights.

History of Past Town Council, Boards & Commissions, or Other

Discussions

January 26, 2022, Castle Rock Water Commission recommended Town Council approve the 2022 water lease agreement.

February 15, 2022, Town Council unanimously approved the 2022 water lease agreement.

Discussion

As part of the Town's hybrid renewable water solution, the Town purchased several Lost Creek Basin wells in 2017 and 2021. These wells came with approximately 1,492 AF (annually) of fully exportable water rights which could be used for municipal and other purposes. Eventually, the Town intends to use these water rights directly or as an augmentation source. However, until infrastructure is built to transport this water to a treatment plant or place of augmentation, leasing this water for other purposes helps to generate some revenue for Castle Rock Water. In 2022, Dove Meadow Dairy used 150 AF of water from these wells for irrigation and has paid the Town \$5,461.46, with a lease rate of \$36.50/AF. The farmers are also planning to use this water in 2023.

The key terms of the 2023 Water Rights Lease Agreement are summarized below:

- Agreement will terminate November 15, 2023.
- Dove Meadow Dairy will lease up to 100 AF of water at a rate of \$36.50 per AF.

The following table outlines the wells (**Attachment B**) that will be used and the amount of water we will be leasing to Dove Meadow Dairy.

Well	Maximum Water to be Leased**, AF	Annual Water Rights, AF
12123*	0	163.1
12124	100	106.4
Total	100	269.5

*Well not operational

**Maximum water to be leased may exceed annual water rights of an individual well if banked water is available

As noted in the Executive Summary, maximizing the leasing of idle water rights is part of Castle Rock Water's strategic plan. Revenues from this leasing help to offset the costs for purchasing and developing long term

renewable water supplies.

Budget Impact

If Council approves the agreement, Castle Rock Water would receive up to \$3,650.00 in revenue in 2023. The revenue will be deposited into Water Resources Fund Capital Leases account 211-4375-393.70-00 <WRAWL>.

Staff Recommendation

Staff recommends approval of the 2023 Water Rights Lease Agreement with Dove Meadow Dairy for 100 AF of water which will generate a revenue of up to \$3,650.00.

Proposed Motion

"I move to recommend to Town Council approval of the Resolution as presented"

Attachments

Attachment A: Resolution (Not Attached)
Exhibit 1: Agreement
Attachment B: Location Map

Mr. Benak explained that this item is part of the Lost Creek water rights. The last few years Dove Meadow Dairy Inc. has leased water for the purpose of irrigation. The cost of the water will be \$36.50 per acre foot (AF) which is a good price for agricultural leased water. Dove Meadow Dairy Inc. would like to lease up to 100 AF for a total potential revenue of \$3,650.00.

Tony Rathbun moved to recommend to Town Council approval of the Resolution as presented. David Hammelman seconded the motion. Passed unanimously 7-0

Yes: 7 - Chair Warnke, Vice Chair Leung, Brown, Gienger, Hammelman, Rathbun, and McHugh

[WC 2023-022](#)

A Resolution Approving a Water Rights Lease Agreement between the Town of Castle Rock and H&H Farms [Weld County, Co]

Town Council Agenda Date: March 7, 2023

Mr. Benak explained that this item is part of the Lost Creek water rights. The last few years H&H Farms has leased water for the purpose of irrigation. The cost of the water will be \$36.50 per acre foot (AF) which is a good price for

agricultural leased water. H&H Farms would like to lease up to 275 AF for a total potential revenue of \$10,037.50.

Tony Rathbun moved to recommend to Town Council approval of the Resolution as presented. David Hammelman seconded the motion. Passed unanimously 7-0

Yes: 7 - Chair Warnke, Vice Chair Leung, Brown, Gienger, Hammelman, Rathbun, and McHugh

[WC 2023-023](#)

Resolution Approving Castle Rock's Portion of the Capital Assessments for the Wells Associated with the Walker Reservoir Construction Project *[Located in Douglas County near Franktown, CO]*

Town Council Agenda Date: March 7, 2023

Mr. Benak explained that Castle Rock entered into a Project Participation Agreement with the Cherry Creek Project Water Authority (CCPWA) in September 2021 for the construction of Walker Reservoir. The Reservoir construction has been ongoing (HPM Contracting is the General Contractor) with construction completion anticipated in Fall/Winter 2023. The second phase of the Walker Reservoir Project is for the wells and other associated infrastructure necessary to fill the reservoir. CCPWA's total approved budget in 2023 for this phase is \$3,662,500 and includes well drilling and equipping; site improvements; pipelines; grading and erosion control; and professional services during construction. Based on the Town's ownership percentage of the CCPWA (41.25%), the capital costs associated with this second phase of the project is equal to \$1,510,781.25. This item is to authorize the Town's share of the costs for the second phase of the project.

Kevin McHugh moved to recommend to Town Council approval of the Resolution as presented. Tony Rathbun seconded the motion. Passed 6-0-1, Kathryn Gienger abstained.

Yes: 6 - Chair Warnke, Vice Chair Leung, Brown, Hammelman, Rathbun, and McHugh

Abstain: 1 - Gienger

DIRECTOR FOLLOW-UP AND INFORMATIONAL / UPDATE ITEMS

[WC 2023-024](#)

A Resolution Approving the First Amendment to the 2022 Town of Castle Rock/Central Colorado Water Conservancy District Spot Water Lease Agreement *[Chatfield Reservoir, Douglas County]*

Town Council Agenda Date: February 21, 2023

The purpose of this item is to share the Memo that was presented at the February 21, 2023 Town Council meeting and answer any questions that Commission members may have.

[WC 2023-025](#)**Update on Timing of 2024 Budget Planning and
Re-prioritization of Capital Improvement Projects (CIP) due
to Reduction in SFE's****Town Council Agenda Date:** NA

Mr. Rementer shared a presentation on the schedule for the 2024 budget planning. He also shared information with the Board on the plans to re-evaluate Capital Improvement Projects (CIP). With the reduction in building permits staff will be re-evaluating current and future projects to make sure that the projects are prioritized correctly.

[WC 2023-026](#)**Update on Lake Nutrient Criteria****Town Council Agenda Date:** March 21, 2023

Mr. Marlowe shared an update on the Lake Nutrient Criteria.

[2023-104](#)**Upcoming Town Council Items****Town Council Agenda Date:** NA

This is a standing item that will be used to share information about projects that are being worked on at the time of the meeting but that staff doesn't have information ready yet.

COMMISSIONER MEETING COMMENTS

Time was allowed for Commissioner Comments.



Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 2. **File #:** WC 2023-029

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water

Water Commission Appreciation Event
Town Council Agenda Date: NA



Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 3. **File #:** WC 2023-030

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Roy Gallea, P.E., Engineering Manager
Matthew Hayes, P.E., Engineering Project Manager

A Resolution Approving a Construction Contract between the Town of Castle Rock and Global Underground Corporation for the East Plum Creek Open Space Well Facility *[Open space north of Plum Creek Water Purification Facility]*
Town Council Agenda Date: April 4, 2023

Executive Summary

Castle Rock Water (CRW) is seeking Town Council approval of a resolution approving a construction contract (**Attachment A**) with Global Underground Corporation (Global) for the East Plum Creek Open Space Well Facility Project. This facility is for the new Aquifer Storage and Recovery (ASR) wells, CR-234, CR-235, and CR-236 that are being drilled near the Plum Creek Water Purification Facility (PCWPF) (**Attachment B**). This project consists of constructing a new metering and control facility for the newly drilled wells. Global submitted the lowest responsive bid for a total construction cost of \$2,375,650.01. Staff also requests approval for a 10% Town-managed contingency of \$237,565, for a total project authorization of \$2,613,215.01.

Notification and Outreach Efforts

Notification letters were sent to the residents and businesses near the well facility site prior to commencing drilling activities. The project information will be posted on the Town's Development Activity map as one of the Water Projects.

History of Past Town Council, Boards & Commissions, or Other Discussions

Resolution 2022-115, Approving a Construction Contract with Hydro Resources - Rocky Mountain Inc. for Wells CR-234, CR-235, and CR-236, was approved by Town Council on October 18, 2012; 6 for and 0 against.

The drilling contract with Hydro Resources was presented to Castle Rock Water Commission (CRWC) on September 28, 2022. The CRWC unanimously recommended Town Council approve the sole source contract with Hydro for drilling of the three wells for \$4,483,540.

Discussion

Based on the Water Resources Supply and Demand Model, aging infrastructure, and the need for Aquifer Storage and Recovery (ASR) near PCWPF, it is necessary to keep pace with meeting our customers' water demands. With the variability of WISE deliveries, renewable water variability, and lower demands in the winter months, a storage option is needed when these supplies exceed demand. One of the solutions is ASR, which is the ability to store water in the aquifer and recover the water through pumping when needed. The design of an ASR well is slightly modified to take into consideration the water that will be delivered into the aquifer through the well which will cause the water level in the well to increase. The project will include the drilling, completion, and pump testing of one Arapahoe Aquifer well, one Denver Aquifer well and one Dawson Aquifer well. Staff anticipates that the Arapahoe Aquifer well will produce 250 to 300 gallons per minute (gpm), the Denver Aquifer well will produce 200 to 250 gpm, and the Dawson Aquifer well will produce 50 to 80 gpm or approximately a total of 0.72 to 0.90 million gallons per day (mgd).

This facility has been designed with the flexibility to produce water that can be sent to the PCWPF or the Meadows Water Treatment Plant (MWTP). This will give the operations team the ability to send water to the MWTP in the summer to maximize water production or to PCWPF for blending in the winter. Additionally, this facility is design for ASR to bank renewable water during the off peak season.

The request for bids for the project were sent to six qualified contractors. Bids were received by all six contractors, as summarized in the table below. The Engineer's estimate was \$2,700,000. The low bid was received by Global and is considered a responsive bid.

Consultant	Bid Amount
Global	\$2,375,650.01
T. Lowell	\$2,673,000.00
RME	\$2,885,759.00
Moltz	\$3,404,192.00
Velocity	No Bid
RN	No Bid

Assuming approval of this contract, the total project costs for these new wells are provided in the table below.

Consultant/ Contractor	Duties	Proposed Budget [^] or Staff Estimated Budget [*]
Leonard Rice Engineers, Inc.	design of wells and oversight of drilling	\$210,703 [^]
Hydro Resources, Rocky Mountain Inc.	drilling, completion and testing of wells	\$4,483,540 [^]

Item #: 3. File #: WC 2023-030

Hydro Resources, Rocky Mountain Inc.	Pumping equipment installation	\$2,500,000*
Facility Design Consultant	Design well facility	\$172,000^
Facility Contractor	Construction of the facility and yard piping	\$3,000,000*
Estimated Total Cost		\$10,366,243*

* = Staff Estimated Budget

The facility is anticipated to be ready for production in December of 2023.

Budget Impact

The funding for the construction contract will come from CIP Account 210-4275-442.75-39 (New Wells), which has a balance of \$0. Staff had decided not to carry forward 2022 funds as an estimate, opting to budget when actual project costs were established. Therefore, a budget amendment will need to be completed for this project. The Town will use these capital funds in reserve for the construction, which includes drilling, completion, and testing of this project. The Global's bid is \$2,375,650.01. Staff requests a Town-managed contingency in the amount of \$237,565 for a total authorization of \$2,613,215.01.

<u>Project</u>	<u>Amount</u>	<u>Contingency</u>	<u>Total Amount</u>
210-4275-442.75-39 New Wells	\$2,375,650.01	\$237,565	\$2,613,215.01

Staff Recommendation

Staff recommends Town Council approval of the resolution approving the construction contract between the Town of Castle Rock and Global for the construction for the East Plum Creek Open Space Well Facility Project in the amount of \$2,375,650.01 plus a 10% Town-managed contingency of \$237,565 for a total authorization of \$2,613,215.01.

Proposed Motion

"I move to recommend to Town Council approval of Resolution as presented"

Attachments

Attachment A: Resolution (Not Attached)
Exhibit 1: Contract (Not Attached)
Attachment B: Location Map





Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 4. **File #:** WC 2023-031

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Roy Gallea, P.E., Engineering Manager
Matthew Hayes, P.E., Engineering Project Manager

A Resolution Approving a Construction Contract between the Town of Castle Rock and RME Ltd., LLC dba Elite Surface Infrastructure for the Prestwick Water Rehab Project [W. Prestwick Way]

Town Council Agenda Date: April 4, 2023

Executive Summary

Castle Rock Water is seeking Town Council approval of a resolution (**Attachment A**) approving a construction contract (**Exhibit 1**) in the amount of \$1,095,135 with RME Ltd., LLC dba Elite Surface Infrastructure (ESI) along with \$ 109,513 (10%) staff-managed contingency, for a total authorization of \$1,204,648 to complete construction of the Prestwick Water Rehab Project.

The Prestwick Water Rehab Project is located along W. Prestwick Way in the Plum Creek subdivisions (**Attachment B**). This project will replace the aging potable water distribution main in W. Prestwick Way. This water main has had a significant number of main breaks in recent years.

Notification and Outreach Efforts

Preliminary project information is currently published on the Town's website and will be updated periodically throughout construction. Project information letters will be mailed to adjacent neighborhood residents prior to the beginning of construction activities.

The W. Prestwick Water Line Rehab Project is located west of Plum Creek Blvd., near the intersection of Plum Creek Blvd. and Mt. Royal Dr. This project will replace the aging potable water distribution piping in W. Prestwick Way. The water main in W. Prestwick Way has had a significant number of main breaks in recent years. The water main was constructed in the early 1980s with ductile iron pipe. The existing pipe does not appear to have been wrapped in plastic when it was installed. The breaks that have occurred appear to have been caused by corrosion. The Prestwick Water Rehab Project was designed by CR Water staff. The invitation to bid documents was sent to seven qualified contractors. Contractors are pre-qualified for projects annually through a request for qualifications that are advertised on BidNet. Bids were received from two contractors, as summarized in the table below. The Engineer's estimate was \$1,230,000. The

low bid was received from ESI and is considered a responsive bid.

Company	Bid
ESI	\$1,095,135.00
Global	\$1,141,480.02
T. Lowell	\$1,350,000.00
Iron Woman	\$1,324,975.00
53 Corp.	No Bid
C&L	No Bid

Budget Impact

Funding for this project will come from the 2023 budget as shown below.

Project	Account Number	Budget	Available Balance	This Authorization
Waterline Rehab	210-4275-442.75-35	\$1,019,450	\$1,019,450	\$1,019,450

The Waterline Rehab and Replacement Account has \$1,019,450 available in the budget. The current budget shortfall of \$185,198. A budget transfer of \$200,000 from Tank Rehab and Replacement, account number 210-4275-442-75-33 will be used to cover the shortfall.

Staff Recommendation

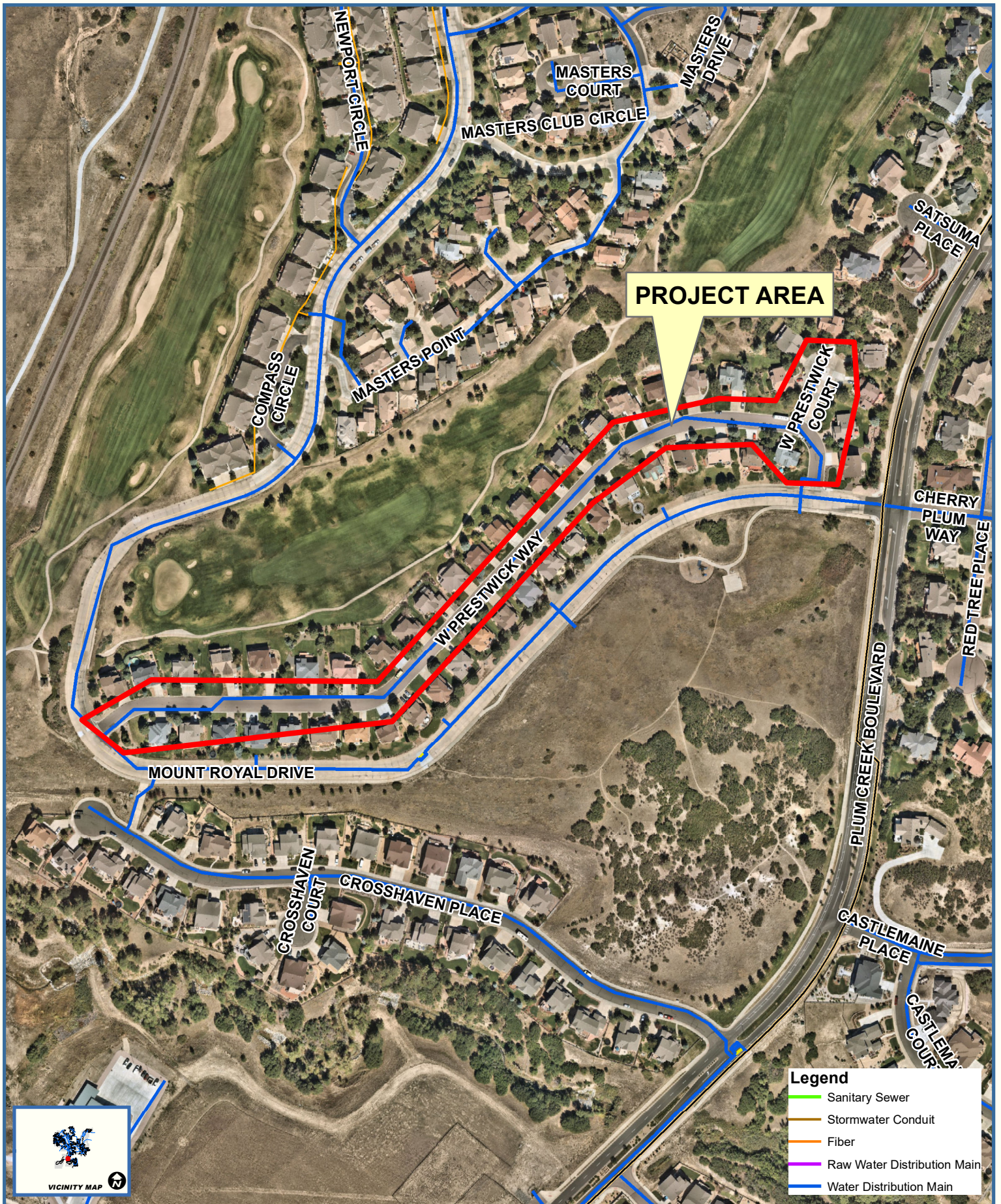
Staff requests Council approval of a construction contract for \$1,095,135 with ESI, along with a contingency of \$109,513 resulting in a total project authorization of \$1,204,648 for the Prestwick Water Rehab Project

Proposed Motion

"I move to recommend to Town Council approval of the Resolution as presented"

Attachments

Attachment A: Resolution (Not Attached)
Exhibit 1: Contract (Not Attached)
Attachment B: Location Map



- Legend**
- Sanitary Sewer
 - Stormwater Conduit
 - Fiber
 - Raw Water Distribution Main
 - Water Distribution Main





Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 5. **File #:** WC 2023-032

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Roy Gallea, P.E., Engineering Manager
Shantanu Tiwari, Engineering Project Manager

A Resolution Approving a Construction Contract between the Town of Castle Rock and XXXX to provide construction services for Castle Rock Reservoir No. 2 (CRR2) and Castle Rock Reservoir No. 1 (CRR1) [Sedalia, CO]
Town Council Agenda Date: April 4, 2023

Executive Summary

Castle Rock Water (CRW) is seeking Town Council approval of a Resolution (**Attachment A**) approving a construction contract agreement **Exhibit 1** with GC XX (XX) with a 10% contingency of \$XXX for a total authorization of \$XXX to provide construction services for the Castle Rock Reservoir No. 2 (CRR2) and capacity expansion construction services for the Castle Rock Reservoir No. 1 (CRR1). GC (XX) proposed a fee of \$AB Million. This cost includes the construction of CRR2 and capacity expansion of CRR1. Staff is requesting a 10% contingency to be added to this project for a total authorization of \$xxx.

Raw water storage is a key component of CRW's 2021 Water Resources Strategic Master Plan in order to ensure a 75% renewable water supply by 2050. CRW ultimately wants to have adequate storage to meet one full year of demand. This reservoir system on Plum Creek is being expanded to optimize the raw water storage capacity on the Plum Creek Trust property near Sedalia, Colorado. CRW enjoys a blanket easement on this property upon which the Town may build and operate water diversion, storage and pumping facilities. The two reservoirs will be used to store treated wastewater effluent, junior water rights from Plum Creek and eventually, water pumped back from Chatfield Reservoir. The total finished storage capacity of the two reservoirs is estimated to be 1,340 acre-feet (AF).

GC XX shall undertake the work upon execution of the agreement and shall complete work no later than May 31, 2025. A location map for the proposed Castle Rock Reservoir No. 2 is provided with this memorandum (**Attachment B**).

Discussion

CRW's long-term goal is to provide a sustainable, reliable, and renewable water supply for all of Castle Rock's citizens and businesses. Renewable water storage plays a primary role in CRW's long-term renewable water plan. As part of this water supply plan, the Town of Castle Rock purchased a surface water diversion, pumping, and raw water storage facilities located along Plum Creek near the Town of Sedalia. The diversion point is downstream from the confluence of East and West Plum Creek, which will allow the Town to maximize the use of its water rights, including reusable supplies and native supplies owned in East and West Plum Creek. Existing facilities include a diversion structure, two pump stations, and a raw water storage reservoir, Castle Rock Water Reservoir No. 1 (CRR1) with a current capacity of 240 AF. The 40 cubic-foot-per-second (CFS) capacity diversion structure provides for the controlled diversion of water from Plum Creek to the Plum Creek Pump Station, which delivers water to CRR1 and to the Ravenna Pump Station (RPS).

Construction of the new Plum Creek Diversion Pump Station (PCDPS) was completed in August 2020, which replaced the existing Plum Creek Pump Station, and now pumps raw water from Plum Creek to CRR1 and from CRR1 to Plum Creek Water Purification Facility (PCWPF). As discussed in the Water Resources Strategic Master Plan (WRSMP), Castle Rock Water is planning to construct Castle Rock Reservoir No. 2 (CRR2) with an estimated capacity of 790 AF immediately east of CRR1 and expanding the storage capacity of CRR1 to 550 AF. Both CRR2 and CRR1 will help CRW accommodate daily high demands during summer months in the coming years and as an additional storage vessel for those times when Castle Rock's junior surface water rights are in priority, or when free river conditions exist. These reservoirs will also be a location where water captured in Chatfield can be pumped back and then subsequently pumped to Castle Rock for treatment, or to Rueter-Hess Reservoir for storage on the east side of Castle Rock's system.

Construction services will include the construction of the CRR2 reservoir and the capacity expansion construction of CRR1.

CRR2 will be constructed on the Plum Creek Trust property which is located at 5219 Rio Grande Avenue in Sedalia. This 145-acre land parcel (Douglas County Parcel No. 2353-151-00-001) is owned by the Plum Creek Trust and is categorized as agricultural land. The Town of Castle Rock obtained a blanket easement at this property in 2017 as part of the purchase of numerous water assets located in Douglas County from United Water and Sanitation District (United).

An invitation to provide a Statement of Qualifications (SOQ) was posted on Bidnet on September 30, 2022 and a site visit was scheduled for October 21, 2022. As a result, 26 general contractors visited the site. After a review of the various SOQs, ten general contractors were short-listed as qualified to submit proposals for this project.

A Request for Bids was posted on Bidnet on February 2, 2023 to notify the prequalified general contractors to submit fee proposals for the construction of CRR2 and the capacity expansion of CRR1. As a result, XX fee proposals were submitted. The Engineer's Estimate for the project was \$XXM. After a careful review of the fee proposals, CRW staff selected the proposal from GC XX for \$XXM to recommend to Council.

Item #: 5. File #: WC 2023-032

The following table shows the fee proposals received from XX GCS.

General Contractor	Proposed Construction Fee
Ames Construction, Inc.	
Hudick Excavating, Inc.	
Odin Construction	
Sema Construction	
Kelly Trucking, Inc.	
Big Sky Civil Constructors/ Montana Civil Constructors, Inc. (JV)	
HPM, Inc. & Claystone Construction, Inc. (JV)	
ESCO Construction Company	
Moltz Constructors, Inc.	
Monks Construction & JHL Constructors (JV)	
Zak Dirt	

After a careful review of the proposals, CRW selection committee along with W. W. Wheeler & Associates (design engineers) recommends general contractor XX. GC XX has extensive prior reservoir construction experience, including the XXX reservoir. Staff is confident of GC XXs capabilities to complete this project within budget and on schedule, and we recommend award of the construction contract to GC XX.

Budget Impact

Funding for this project will come from the Reservoir Upgrades account (Account No. 211-4375-443.79-15, Project Codes WR_CRR and WRCRR2). This account has a current balance in the amount of \$???. Staff requests an additional \$ (Town-managed 10% contingency) be authorized for a total project authorization of \$. A budget amendment will be necessary to fund the Reservoir Upgrades account.

Staff Recommendation

Staff recommends approval of the Resolution approving a construction contract for the construction of Castle Rock Reservoir No. 2 with GC XX in the amount of \$AB Million (***Attachment A***).

Proposed Motion

"I move to recommend to Town Council approval of the Resolution as presented"

Item #: 5. File #: WC 2023-032

Attachments

Attachment A: Resolution (Not Attached)
 Exhibit 1: Construction Contract (Not Attached)
Attachment B: Location Map

ATTACHMENT B

Site Map





Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 6. **File #:** WC 2023-033

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Roy Gallea, P.E., Engineering Manager
Shantanu Tiwari, Engineering Project Manager

A Resolution Waiving Formal Written Bidding Requirements on the Basis of a Sole Source and Approving a Professional Services Agreement to provide construction support services for the Castle Rock Reservoir No. 2 (CRR2) and Castle Rock Reservoir No. 1 (CRR1) [5219 Rio Grande Ave, Sedalia, CO 80135]
Town Council Agenda Date: April 4, 2023

Executive Summary

Castle Rock Water staff is seeking approval of a Resolution (**Attachment A**) approving the Professional Services Agreement **Exhibit 1 (Attachment A)** with W. W. Wheeler & Associates, Inc. (Wheeler) to provide construction support services for the Castle Rock Reservoir No. 2 (CRR2) and Castle Rock Reservoir No. 1 (CRR1) located in northwest Douglas County. Wheeler proposed a fee of \$1,800,000. This cost includes construction support services, response to requests for information (RFIs) and materials testing for the CRR2 and CRR1 construction projects.

Wheeler shall undertake the work upon execution of the agreement and shall complete work no later than May 31, 2025. A location map for the CRR2 and CRR1 reservoirs is provided with this memorandum (**Attachment B**).

History of Past Town Council, Boards & Commissions, or Other Discussions

The Town and the Consultant are parties to the Town of Castle Rock Services Agreement (Castle Rock Reservoir No. 2 - Design and Permitting) dated September 15, 2020 ("Agreement").

Discussion

Castle Rock Water's long-term goal is to provide a sustainable, reliable, and renewable water supply for all of Castle Rock's citizens and businesses. Renewable water storage plays a primary role in Castle Rock Water's long-term renewable water plan. As part of this water supply plan, the Town of Castle Rock purchased surface water diversion, pumping, and raw water storage facilities located on Plum Creek near the Town of Sedalia. The diversion point is downstream from the confluence of

East and West Plum Creek, which will allow the Town to maximize the use of its water rights, including reusable supplies and native supplies owned in East and West Plum Creek. Existing facilities include a diversion structure, two pump stations, and a raw water storage reservoir, Castle Rock Water Reservoir No. 1 (CRR1) which has a 240 acre-foot (AF) capacity. The diversion structure provides for the controlled diversion of water from Plum Creek to the Plum Creek Pump Station, which delivers water to CRR1 and to the Ravenna Pump Station (RPS). Construction of the new Plum Creek Diversion Pump Station (PCDPS) was completed in August 2020, which replaced the existing Plum Creek Pump Station, and now pumps raw water from Plum Creek to CRR1 and from CRR1 to Plum Creek Water Purification Facility (PCWPF).

As described in the Water Resources Strategic Master Plan, Castle Rock Water is planning to construct Castle Rock Reservoir No. 2 (CRR2) with an approximate 790 AF capacity immediately east of CRR1 and expanding the storage capacity of CRR1 to 550 AF. Both of these storage reservoirs will help Castle Rock Water to accommodate daily high demands during summer months in the coming years and as an additional storage vessel for those times when Castle Rock's junior surface water rights are in priority, or when free river conditions exist. Furthermore, these reservoirs will allow for water from Chatfield to be pumped back when that infrastructure is ready in the future.

CRR2 will be constructed on the Plum Creek Trust property located at 5219 Rio Grande Avenue in Sedalia. This 145-acre land parcel (Douglas County Parcel No. 2353-151-00-001) is owned by the Plum Creek Trust and is categorized as agricultural land. The Town of Castle rock obtained a blanket easement at this property in 2017 as part of the purchase of numerous water assets located in Douglas County from United Water and Sanitation District.

Construction phase services will include the construction of the CRR2 reservoir and the capacity expansion construction of CRR1. These services will include construction oversight by a professional engineer, material testing (through a Wheeler subcontractor), and providing responses to Contractor's requests for information (RFIs) during construction.

Wheeler is the primary design engineer and engineer of records for both CRR2 (design) and CRR1 (capacity expansion design) reservoirs. In addition, Wheeler has designed several facilities for the Town, including the CRR1 diversion structure adjacent to the Plum Creek Water Purification Facility. Wheeler has designed many reservoir projects across Colorado including the Adobe Creek Dam near Las Animas, the Clear Creek Dam Replacement near Georgetown, and the Guanella Dam for the City of Golden. Staff is confident of Wheeler's capabilities to provide construction support services, and we recommend award of this professional services agreement for construction support services for the CRR2 and CRR1 construction projects. Wheeler's proposal is included in **Attachment A**.

Budget Impact

Funding for design of this project was approved by Resolution 20XX - XXX. The account currently has a balance of \$XX and contingency funds have been exhausted to accommodate contract amendment 1. Thus, a budget amendment will be necessary to fund this services agreement.

Project Code	Account Number	Amount Requested	Contingency Available
Capital Improvement Prgrm/Reservoir Upgrades	211-4375-443.79-15	\$1,800,000	\$0.00

Staff Recommendation

Staff recommends approval of the professional services agreement with Wheeler to provide construction support services for the CRR2 and CRR1 construction projects.

Proposed Motion

"I move to recommend to Town Council approval of the Resolution as presented"


Attachments

Attachment A: Resolution (Not Attached)
Exhibit 1: Professional Services Agreement (Not Attached)
Attachment B: Location Map
Attachment C: Sole Source Justification

Attachment B

Location Map-CRR1 and CRR2 Reservoir Site



	SUBJECT: APPENDIX J – SOLE SOURCE JUSTIFICATION FORM	Approval Date 1/1/2018
	DIVISION AND POLICY NUMBER PURCHASING	Revision Date 9/16/2022

COMMODITY OR SERVICE _____

VENDOR _____

AMOUNT OF PURCHASE \$ _____

REQUESTORS NAME _____

DEPARTMENT _____

DEPARTMENT DIRECTOR's Approval _____

FINANCE DEPARTMENT's Approval _____

TOWN MANAGER's (or Designee) Approval _____

TOWN COUNCIL's Approval, when necessary _____

PURCHASING POLICY EXCEPTION ITEM	CHECK ONE
1. Item(s) or service has been formally awarded to a vendor by the State of Colorado, MAPO, or other cooperative purchasing group and the product meets the needs of the Town of Castle Rock.	<input type="checkbox"/>
2. The product or service is of a unique nature, or allows for standardization with existing equipment and will provide exceptional value to the Town of Castle Rock.	<input type="checkbox"/>
3. Emergency purchases where the well-being of the citizens, employees or Town property may be endangered if the purchase is delayed.	<input type="checkbox"/>
4. Town of Castle Rock currently has a contract in place with a vendor for like products or services and the compatibility and/or continuity of those products or services are paramount to the success of the department or Town function.	<input type="checkbox"/>

Per Municipal Code 3.02.060:

Purchases over one thousand dollars (\$1,000.00) and up to and including five thousand dollars (\$5,000.00) require three (3) verbal bids unless approved by the Town Manager on the basis of sole source, emergency or unresponsive bidders.

Purchases over five thousand dollars (\$5,000.00) and up to seventy-five thousand dollars (\$75,000.00) require three (3) informal written bids unless approved by the Town Manager on the basis of sole source, emergency or unresponsive bidders.

Purchases over seventy-five thousand dollars (\$75,000.00) require formal written sealed bids unless waived by the Town Manager for purchases up to and including two hundred fifty thousand dollars (\$250,000.00) or by Town Council for purchases over two hundred fifty thousand dollars (\$250,000.00) on the basis of sole source, emergency or unresponsive bidders.

The requesting department must provide written justification to the Finance Department for review and forward it to the Accounting Manager. **Attach additional sheets as necessary.**



Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 7. **File #:** WC 2023-034

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Roy Gallea, P.E., Engineering Manager
Shantanu Tiwari, E.I., Engineering Project Manager

A Resolution Approving a Professional Services Agreement between the Town of Castle Rock and Burns & McDonnell for the Pinery Water Pipeline Project [Along Castle Oaks Drive in the northwest part of the Town]
Town Council Agenda Date: April 4, 2023

Executive Summary

Castle Rock Water staff is seeking approval of a Resolution (**Attachment A**) for the Professional Services Agreement (**Exhibit 1**) with Burns & McDonnell to provide design services for the Pinery Water Pipeline Project along the Castle Oaks Drive between The Pinery and the Town of Castle Rock. Burns & McDonnell proposed a fee of \$885,547. This cost includes topographic and property boundary survey plan sheets, geotechnical investigation report, design report, materials lists, and construction bid schedules. The Town intends to use Pinery Water Pipeline to convey Pinery Water to the RWRWTC for treatment and distribution throughout the town. In addition, Pinery Water Pipeline will also connect existing and future well sites to the town's water infrastructure.

Burns and McDonnell shall undertake the work upon execution of the agreement and shall complete work no later than Dec 31, 2023. A site map for the project is provided with this memorandum (**Attachment B**).

Discussion

The Town of Castle Rock (Town) has contracted with the Pinery Water and Wastewater District (Pinery) to receive between 0.25 and 1.0 MGD of water for use in the Town's distribution system. The origin of this water is the Cherry Creek Project Water Authority (CCPWA), of which, Castle Rock is a member. The interconnect will be located off Mentha Drive in the Cobblestone Ranch neighborhood. A map of the interconnect location is included in **Attachment B**. The Pinery has non-ground water under the direct influence of surface water (non-GWDUI) wells that have been chloraminated and sequestered with blended phosphate to sequester iron and manganese. The Town area that will be serviced by Pinery water currently receives water primarily from the Plum Creek Water Purification Facility (PCWPF) in the winter and from Ray Waterman Regional Water Treatment Center (RWRWTC) during the summer. The Cobblestone Ranch neighborhood may use

Pinery water as their only water source during certain times of the year and may use a blend of Town and Pinery water at other times. The Town seeks to achieve multiple objectives through the construction of this project.

- **Pinery Water Supply-** The Town of Castle Rock intends to send the Pinery water to the RWRWTC for treatment and better distribution throughout the Town. Treatment of this water will ensure that it has consistent palatability with the Town's other treated waters.
- **Future and Existing Well Sites-** Connect existing and future wells (**Attachment A**) to the Pinery Waterline. These two well sites in Cobblestone are expected to produce an average of 1.44 MGD (0.72 MGD per site; 2 wells per site).

Design services will include topographic and property boundary survey plan sheets, geotechnical investigation report, design report, materials list, and construction bid schedules.

A Request for Proposal (RFP) was published on Bidnet on January 26, 2023, requesting proposals for the design of the Pinery Water Pipeline. As a result, two engineering consulting firms provided proposals and fee schedules for the project. The following table shows the proposed design services fee received from engineering consulting firms. TRC's proposal was not considered at this time because their lack of consideration for the proposed pump station design fee and additional scope of work items (Pre-proposal meeting, Feb 13, 2023 and Addendum II, Feb 21, 2023)) as well as their lack of experience in relevant, local projects.

Engineering Consultant	Proposed Fee
TRC	\$435,000
Burns & McDonnell	\$805,043

Burns & McDonnell provided a comprehensive proposal and has been working with the Town since 2011 in designing several facilities, including Ray Waterman Regional Water Treatment Facility, Chatfield Pump Back Project, and Parker Mid-Section Pipeline Project, among others. In addition, their fee schedule is on par with relevant pipeline design projects (e.g. East Plum Creek Open Space Well Facility using Dewberry Engineers, Inc.). Staff is confident of Burns & McDonnell's capabilities to provide quality design services, and recommends the award of the design project to Burns & McDonnell.

Budget Impact

Funding for this project was approved by Resolution XX. The account currently has a balance of \$XX.

Account Name	Account Number	Amount Requested	Contingency Requested
CC Basin Infrastructure	211-4375-443.79-17	\$805,043	\$80,504

Staff Recommendation

Staff recommends approval of the professional services agreement with Burns & McDonnell to provide design services for the Pinery Water Pipeline Project.

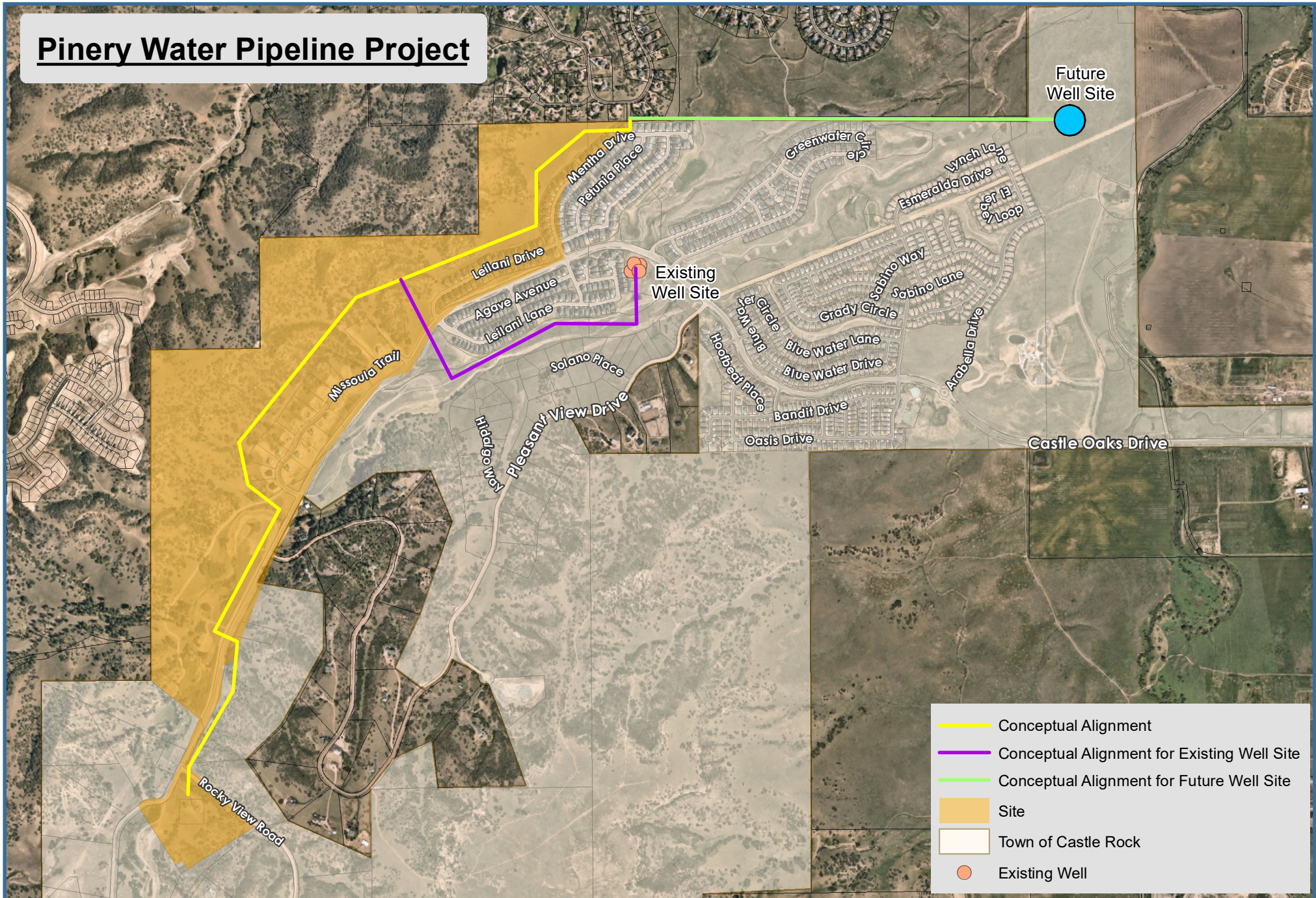
Proposed Motion

"I move to recommend to Town Council approval of _____ as presented"

Attachments

Attachment A: Resolution (Not Attached)
Exhibit 1: Professional Services Agreement (Not Attached)
Attachment B: Location Map

Pinery Water Pipeline Project





Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 8. **File #:** WC 2023-035

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Matt Benak, P.E., Water Resources Manager
Walt Schwarz, P.E., CIP Project Manager

A Resolution Approving a Services Agreement between the Town of Castle Rock and Burns & McConnell Engineering to complete the Design Phase Engineering Services for PCWPF Expansion Project [1929 Liggett Rd. Castle Rock, CO 80109] *DRAFT*
Town Council Agenda Date: April 18, 2023

Executive Summary

Castle Rock Water (CRW) staff requests approval of a Resolution (see **Attachment A**) approving a Services Agreement (see **Exhibit 1**) with Burns & McDonnell Engineering Company (BMcD) to complete design phase engineering services for the Plum Creek Water Purification Facility (PCWPF) Expansion project at a contract amount of \$_____. A competitive process was used to obtain proposals from qualified consulting firms and BMcD's proposal met the qualitative requirements. This project is a key component to Castle Rock's long term renewable water plan and will expand the PCWPF treatment capacity from 6 million gallons per day (MGD) to 12 MGD. Facility improvements include but are not limited to expanding water treatment and solids handling systems, increasing high service pumping, and installing an emergency electrical generator.

Five consulting firms were invited to submit proposals in response to the Request for Proposals (RFP) issued on February 6, 2023. The design services require full time commitment of the firm's core project team to complete these services within the project schedule. Four of the firms decided not to submit proposals and either did not have the available resources to commit to this project or have not been competitive on past Castle Rock Water (CRW) projects.

B&McD is a nationally recognized engineering firm with offices located in Douglas County. They have recent experience completing projects using similar treatment technologies and project delivery methods that are planned for the PCWPF Expansion Project. This project will employ a Guaranteed Maximum Price Construction Management (GMPCM) delivery method to complete the project. Prior experience with similar projects and alternate project delivery methods is a critical criterion in the consultant selection process and BMcD has the requisite experience.

Staff recommends approval of the services agreement for \$_____, plus a Town-managed contingency of \$_____, for a total project authorization of \$_____. Completion of the project is

expected by Spring of 2024.

Discussion

A need for a sustainable long-term water supply was identified in the Town's Water Resources Strategic Master Plan and one of the major goals of that plan is establishment of a renewable, sustainable water supply that accounts for 75% of the annual demand for water in Castle Rock. Renewable water sources include East and West Plum Creek alluvial wells, and surface water using existing Town Water Rights, and imported surface water from outside of the Plum Creek Basin.

PCWPF is currently a 6 MGD facility receiving raw water from three main sources: Castle Rock Reservoir 1 (CRR1 - connected with diversion on Plum Creek near Sedalia), CR1 (a diversion on East Plum Creek near PCWPF), and various groundwater wells. CRW is currently working with BMcD under separate contract on the Chatfield Pump Back Project. This pump back project will supply water to CRR1 from Chatfield Reservoir, expanding CRW's renewable water sources and providing a water source for total dissolved solids (TDS) blending.

The original PCWPF project was completed in 2014 and included 6 MGD capacity pretreatment facilities with aeration, rapid mix, flocculation, sedimentation, and greensand filtration (converted to biologically active carbon filters (BAC) with AT project). The BAC filtration is followed by membrane filtration and chemical addition to form chloramines for a disinfection residual in the distribution system. Other facilities constructed with the original PCWPF include a 174,000 gallon clearwell, high service pump station, chemical storage and feed systems. Where practical, areas like the chemical storage facilities were designed and constructed planning ahead for expansion to 12 MGD (no changes needed to chemical storage with this project). Additionally, items like engineered knock-out masonry wall sections are in place to facilitate access to the new pretreatment building.

In 2021 the PCWPF Advanced Treatment (AT) project was completed and added 6 MGD capacity of advance treatment systems such as pre-ozone, BAC filtration, ozone disinfection, granular activated carbon adsorption, and UV disinfection. The multiple barrier approach was designed to treat source waters for removal of pathogens, organics, regulated drinking water contaminants, and nonregulated contaminants of emerging concern (CECs). The primary goal of the PCWPF AT Project is to meet or exceed requirements of the US EPA Safe Drinking Water Act, as well as additional requirements from the Colorado Department of Public Health and Environment (CDPHE). This project also included a 1,250 kW diesel powered generator to power the AT Building up to 12 MGD capacity.

To continue using and expanding renewable water sources, CRW has decided to expand PCWPF's current treatment capacity of 6 MGD up to 12 MGD. Once expanded, PCWPF will be the largest facility in CRW's system. In general terms, with this project CRW will expand all treatment processes, modify the solids handling processes, install a new emergency electrical generator for the original PCWPF Building (houses high service pumping), and increase laboratory area for additional sampling and water quality testing needs. For example, treatment system improvements will include a new building adjacent to the existing pretreatment building to house 6 MGD capacity of a new rapid mix basin, flocculation and sedimentation treatment steps, and new BAC filter bays. The project will add membrane filtration racks with 78 modules each to match existing. Ozone system improvements will include additional liquid oxygen storage with vaporizers, new ozone generators with chillers,

ozone injection and destruct skids, and a new ozone loop reactor made of stainless steel piping.

To maintain project schedule and efficiencies, CRW anticipates developing two work packages with the assistance of BMcD. Work Package 1 is expected to include long-lead equipment procurement (such as the ozone system package). Work Package 2 would be the remainder of work needed to complete the project.

CRW envisions retaining a Contractor through a GMPCM contract at the completion of the Schematic Design phase (30% Design Documents) for two Work Packages. The Contractor shall provide pre-construction phase services, including but not limited to: cost estimating, scheduling, constructability reviews, and value engineering all with the intent of developing a Final Guaranteed Maximum Price (FGMP) contract. The Design Consultant will be asked to assist the Town in the Contractor selection process and provide coordination with the Contractor throughout the Design Phase to assure that the Final GMP based on completed design documents is within the Town's estimated budget.

B&McD has a proven track record of completing similar projects with CRW and with other municipalities along the Colorado Front Range. They also have proven records successfully working with permitting agencies such as the Town and CDPHE. Construction phase services are not part of this current contract and would be negotiated and considered for award under a separate future contract. BMcD has successfully completed design through facility start-up services and have consistently delivered excellent value and engineering services when completing CRW projects for the Town.

Budget Impact

Funding for this design project was budgeted in 2023 and will come from account 211-4375-443.77-75 Water Resources, CIP - Advanced Oxidation Facility, Project Code <WR >. This account has a budget remaining of \$3,195,000 for 2023.

Proposed Motion

"I move to recommend to Town Council approval of the Resolution as presented"

Attachments

Attachment A: Resolution (Not Attached)
Exhibit 1: Agreement (Not Attached)



Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 9. **File #:** WC 2023-036

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Nichol Bussey, Business Solutions Manager
Paul Rementer, Enterprise Fund Analyst

2022-2023 Budget Recap
Town Council Agenda Date: NA

Executive Summary

This will be a presentation only item.



Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 10. **File #:** WC 2023-037

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Roy Gallea, P.E., Engineering Manager
Matthew Hayes, P.E., Engineering Project Manager

A Resolution Approving a Variance Pursuant to Chapter 9.16.010.E of the Castle Rock Municipal Code for Nighttime Construction Activities Related to the Tank 18 Blue Zone Main Project [Located at the intersection of Castle Oaks Drive and Pleasant View Drive]
Town Council Agenda Date: March 21, 2023

Executive Summary

Attached is copy of the Staff Report that was presented at the March 21, 2023 Town Council meeting for the above referenced project.

Attachments

Attachment A: Staff Report



STAFF REPORT

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

From: Mark Marlowe, P.E., Director of Castle Rock Water
Roy Gallea, P.E., Engineering Manager
Matthew Hayes, P.E., Project Manager

Title: **A Resolution Approving a Variance Pursuant to Chapter 9.16.070.E of the Castle Rock Municipal Code for Nighttime Construction Activities Related to the Tank 18 Blue Zone Main Project** *[Located at the intersection of Castle Oaks Drive and Pleasant View Drive]*

Executive Summary

CR Water staff requests Town Council approval of a variance to allow construction work to be performed between 7:00 pm and 7:00 am in late March/early April for one night. The Town's municipal code for noise control prohibits construction noise between the hours of 7:00 pm and 7:00 am on weeknights and between 6:00 pm and 8:00 am on weekends (Chapter 9.16). A variance can be granted under 9.16.070 if no reasonable alternative is available. Reynolds Construction is under contract for the Tank 18 Blue Zone Main Project. The new main will be connected to the existing water main located in Castle Oaks Drive. The contractor is working on determining the exact location of the existing main within Castle Oaks, but the concern is that due to its potential location a single lane may not be safely maintained during the construction activities. The night work will allow the contractor to install the connection with minimal impact on traffic in Castle Oaks. Given the short duration of the planned night work (no more than one night), and the limited affected area (the intersection of Pleasant View and Castle Oaks), staff requests Town Council approval for night work on one evening between late March and early April. A time range for authorization is requested to accommodate any potential weather delays and approval of the road closure.

Notification and Outreach Efforts

Preliminary project information is currently published on the Town's website and will be updated periodically throughout construction. Project information letters were mailed to adjacent neighborhood residents in unincorporated Douglas County in December 2021. Staff has corresponded directly with some residents of unincorporated Douglas County regarding project inquiries.

The new water main is located within Douglas County Right of Way. The project was reviewed by the County as part of their Location and Extent (L&E) process. Part of that process includes notifying adjacent property owners about the project and allowing them to comment on the project.

Notification will be sent to the residents of Cobblestone Ranch and the local County residents notifying them of the upcoming work and road closures.

History of Past Town Council, Boards & Commissions, or Other Discussions

On December 1, 2021 Castle Rock Water Commission was briefed on Water Tank 18 history and the anticipated schedule for rebidding construction.

On February 23, 2022 Castle Rock Water Commission voted unanimously to recommend the award of a construction contract in the amount of \$4,386,765 with DN Tanks along with authorization of \$438,700 in staff-managed contingency to complete construction of Cobblestone Ranch 2 MG Water Storage Tank 18.

On March 15, 2022 Castle Rock Town Council voted unanimously to approve a construction contract in the amount of \$4,386,765 with DN Tanks along with authorization of \$438,700 in staff-managed contingency to complete construction of Cobblestone Ranch 2 MG Water Storage Tank 18.

On April 4, 2022 Douglas County Planning Commission voted unanimously to approve the Location and Extent application for the Tank 18 Blue Zone Transmission Project.

On July 27, 2022 Castle Rock Water Commission voted unanimously to recommend award of a construction contract in the amount of \$4,081,473 with Reynolds along with authorization of \$408,147 in staff-managed contingency to complete construction of Tank 18 Blue Zone Transmission Project.

On August 16, 2022 Castle Rock Town Council voted unanimously to approve a construction contract in the amount of \$4,081,473 with Reynolds along with authorization of \$408,147 in staff-managed contingency to complete the construction of Tank 18 Blue Zone Transmission Project.

Discussion

The Cobblestone Ranch Development on the far northeastern edge of Town is zoned for 1,245 single-family equivalents (SFEs). In accordance with the Development Agreement (DA), the Town, "in order to fully integrate the water system constructed by the Owner with the Town's municipal water system," intended to construct a storage tank and related infrastructure to serve the property at full buildout. The tank project was to be financed and constructed by the Town by reliance on the Owner to purchase water system development fees. The DA further stipulated that should the Town determine that equivalent water services may be provided in lieu of development of the Water Tank the Town could apply revenues received to construct such alternate infrastructure.

Water system development fees are currently \$5,700 per SFE. The development is rapidly approaching construction build-out of the 1,245 zoned SFE's which means water system tap fees collected have fully funded the new tank. The area is currently served by a single 16-inch pipeline from the Castle Oaks area (See **Attachment B**), with stored water from two existing red zone tanks. The water is fed down into the area through a series of pressure-reducing valves (PRVs) that reduce the red zone supply pressure down to blue zone pressure and then to yellow zone pressure to service the area. The two red zone tanks have a combined operational storage volume of 5.1 million gallons and have sufficient existing storage capacity to meet the operational storage needs of Cobblestone Ranch. However, the storage from these tanks is delivered to the development by a single 16-inch pipeline. The single feed connection through multiple pressure zones is the primary reason a storage tank is needed.

In 2007, one of the PRVs serving the area failed and the resultant high pressure caused a rupture in the pipeline. This resulted in a temporary loss of water service for the entire development. Subsequently, Castle Rock Water installed pressure relief devices on the PRVs so that in the case of a high-pressure event, the PRVs would divert water to relieve downstream pressure. Staff also completed an emergency interconnect waterline to the Pinery Water and Wastewater District system. This provided an immediate interim solution for a second source of water in an emergency.

The long-term solution to a secondary supply of water is a storage tank serving the development. An advantage of a storage tank in the area is that the tank can act as a "damper" in high-pressure events to mitigate pipeline rupture risks and provide an immediate supply for fire protection. Shortly after the high-pressure pipeline event, staff started planning the Tank 18 project.

The Tank 18 Blue Zone Transmission pipeline was identified in the Water Master Plan 2017 Update. This project will supply blue zone water up to the new Tank 18, which is a yellow zone tank. The flow of water into the tank will be controlled with an automated altitude valve. This will allow the flow of water through the tank, minimizing the water age within the tank. One of the Colorado Department of Public Health and Environment's questions about the tank project was how the Town planned on minimizing the water age in the tank.

Castle Oaks Drive at Pleasant View Drive may need to be closed to safely complete the tie-in to the existing water main. This is a result of the existing water main's location in the center of the road. The contractor would like to complete the work in the early hours to minimize the potential impact on the local residents that use this road. The alternate routes to Castle Rock would be Highway 86 or Crowfoot Valley Road during the closure. The work is anticipated to take 4 to 6 hours to complete.

Budget Impact

There is no additional impact on the project cost for this work.

Staff Recommendation

Staff requests Town Council approval of a resolution permitting relief from the Town Noise ordinance, allowing work overnight for the water main tie-in at Castle Oaks Drive and Pleasant View Drive as part of the Tank 18 Blue Zone Transmission Project for one night in late March or early April.

Proposed Motion

“I move to approve the Resolution as introduced by title.”

Alternative Motions

“I move to approve the resolution as introduced by title, with the following conditions: (list conditions).”

“I move to continue this item to the Town Council meeting on _____ date to allow additional time to (list information needed).”

Attachments

Attachment A: Resolution
Attachment B: Location Map



Town of Castle Rock

Agenda Memorandum

Agenda Date: 3/22/2023

Item #: 11. **File #:** WC 2023-038

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water

Upcoming Town Council Items
Town Council Agenda Date: NA

Executive Summary

This item is an informational update only, and is designed to give Commission a preview of time critical items that may need to go to Council prior to review at a Commission Meeting.

Items for this month include:

Proclamation: April is Water Conservation Month