



Castle Rock Water Commission Agenda - Final-Amended

David Hammelman, Chair
Tony Rathbun, Vice Chair
Angie Brown
Brian Gaddie
Ole Gjerde
KiKi Miller
Melanie Penoyar-Perez

Wednesday, February 26, 2025

6:00 PM

Castle Rock Water
175 Kellogg Ct., Bldg. 183
Castle Rock, CO 80109

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. If you are unable to access any portion of these materials due to a disability as defined under Colorado House Bill 21-1110, please call us at 303-663-4440, email the Town’s accessibility team at accessibility@CRgov.com or submit an accommodation request form at CRgov.com/A11yRequest.

6:00 pm CALL TO ORDER / ROLL CALL

COUNCIL UPDATE

DOUGLAS COUNTY WATER COMMISSION MTG. UPDATE

COMMISSION COMMENTS

ADMINISTRATIVE BUSINESS

1. [WC 2025-014](#) Approval of the January 22, 2025 Meeting Minutes

Attachments: [Attachment A: Jan 22nd Mtg. Minutes](#)

ACTION ITEMS (HIGH PRIORITY / TIME CRITICAL)

2. [WC 2025-015](#) Resolution Approving the 2025 Water Conservation Rebate Program Budget and Increasing the ColoradoScape Conversion Rebate [The entire Castle Rock Water Service Area]

Attachments: [Attachment B: Average Consumption Report.pdf](#)
[Attachment C: Funding Summary .xlsx](#)

3. [WC 2025-016](#) An Ordinance Approving Changes to the 2025 Water Use Management Plan (WUMP) [Castle Rock Service Area]

Attachments: [Attachment B: Residential Watering Schedule.docx](#)
[Attachment C: Non-Residential Watering Schedule.docx](#)
[Attachment D: Summary of Changes.docx](#)

4. [WC 2025-017](#) An Ordinance Amending the Castle Rock Municipal Code by the Addition of a New Chapter 4.06 Regarding Plumbing Fixtures [The entire Castle Rock Service Area]

5. [WC 2025-018](#) Resolution Approving a Third Amendment to the Plum Creek Water Purification Facility Expansion Project Construction Agreement with Garney Companies, Inc. for Work Package Three [1929 Liggett Road Castle Rock, CO]

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

6. [WC 2025-019](#) Resolution Approving the Purchase of a Vac Truck

7. [WC 2025-020](#) Resolution Approving a Construction Contract Between the Town of Castle Rock and 53 Corporation, LLC for the East Plum Creek Reach 5 Phase II Project [East Plum Creek west of the Plum Creek Water Purification Facility]

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

8. [WC 2025-021](#) Resolution Approving a Construction Contract with XXX for the 2025 Denver Basin Aquifer Wells Rehabilitation and Pumping Equipment Replacement Project [Three wells within the Meadows, Founders, and Castle Oaks subdivisions]

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

DIRECTOR FOLLOW-UP AND INFORMATIONAL / UPDATE ITEMS

9. [WC 2025-022](#) AMI Program Update
10. [WC 2025-023](#) Update on Tallgrass Project
11. [WC 2025-024](#) Upcoming Town Council Items

COMMISSIONER MEETING COMMENTS



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 1. File #: WC 2025-014

To: Members of the Castle Rock Water Commission

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

**Approval of the January 22, 2025 Meeting Minutes
Town Council Agenda Date: NA**

Executive Summary

Attached are the meeting minutes for the January 22, 2025 Water Commission Board Meeting.

Proposed Motion

"I move to approve the Minutes as presented"

Attachments

Attachment A: January 22, 2025 Meeting Minutes



**Castle Rock Water Commission
Meeting Minutes - Draft**

David Hammelman, Chair
Tony Rathbun, Vice Chair
Angie Brown
Brian Gaddie
Ole Gjerde
KiKi Miller
Melanie Penoyar-Perez

Wednesday, January 22, 2025

6:00 PM

**Castle Rock Water
175 Kellogg Ct., Bldg. 183
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CALL TO ORDER / ROLL CALL

- Present** 6 - Chair David Hammelman, Angie Brown, Brian Gaddie, KiKi Miller, Melanie Penoyar-Perez, and Ole Gjerde
- Not Present** 1 - Vice Chair Tony Rathbun
- Attendance** 7 - Jason Gray, Mark Marlowe, Nichol Bussey , Paul Rementer, Shawn Griffith, John Chrestensen, and MaryJo Reese

COUNCIL UPDATE

Time was allowed for Mayor Gray to share a council update.

COMMISSION COMMENTS

Time was allowed for Commissioner Comments.

DOUGLAS COUNTY WATER COMMISSION

Mr. Marlowe shared an update on the Douglas County Water Commission meeting.

ADMINISTRATIVE BUSINESS

[WC 2025-001](#)

**Approval of the December 11, 2024 Meeting Minutes
Town Council Agenda Date: NA**

I move to approve the Minutes as presented.

Yes: 6 - Chair Hammelman, Brown, Gaddie, Miller, Penoyar-Perez, and Gjerde

Not Present: 1 - Vice Chair Rathbun

ACTION ITEMS (HIGH PRIORITY / TIME CRITICAL)

[WC 2025-002](#)

Resolution Approving an Equipment and Services

Acquisition Agreement between the Town of Castle Rock and Burns & McDonnell Engineering for Phase V of the SCADA Master Plan Design Project [Entire Castle Rock Water Service area] *DRAFT*

Town Council Agenda Date: February 18, 2024

Mr. Griffith shared a quick overview of what the Supervisory Control and Data Acquisition (SCADA) Master Plan is and what has been completed to date. He then explained that this agreement is to request approval for a design agreement for Phase V of the SCADA Master Plan. Phase V design will encompass:

- Site investigations and data gathering
- Progress meetings and project management
- Technical Memorandum summarizing the Statement of Work for each site
- SCADA programmable logical control (PLC) cabinet design requirements and drawings
- Individual Control Narratives for each site
- New Process and Instrumentation Diagrams (P&ID) drawings for each site, aligned with CRW standards
- Electrical site plans
- Instrumentation lists
- Input/Output (I/O) lists
- Electrical lists
- Network diagrams
- Design and project scope documents
- Bid Phase services

Phase V will include Ray Waterman Regional Water Treatment Facility (Ray Waterman) and all of the well sites, pressure reducing valve vaults, wastewater sites and other remote facilities that feed into Ray Waterman.

Castle Rock Water (CRW) invited three vendors to bid on this project and received two bids back. Burns & McDonnell Engineering was selected as the vendor. The contract amount is \$437,308. The schedule is to complete the design phase by the summer of 2025 with bidding and construction to take place from the Fall 2025 to the Fall 2027.

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

Yes: 6 - Chair Hammelman, Brown, Gaddie, Miller, Penoyar-Perez, and Gjerde

Not Present: 1 - Vice Chair Rathbun

[WC 2025-003](#)

Resolution to Adopt the 2025-2029 Supervisory Control and Data Acquisition (SCADA) Master Plan [Serves the entire Castle Rock Water Service Area] *DRAFT*

Town Council Agenda Date: February 18, 2025

Mr. Griffith explained that CRW approved the SCADA Master Plan in 2019 for the purpose of standardization of hardware and software. As part of the 2019 plan

staff created cybersecurity segregation, completed the backhaul & radio network project, updated the Founders Water Treatment Plant (FWTP) & remote sites that feed into FWTP.

Mr. Griffith then shared that this item is to request approval of the 2025-2029 SCADA Master Plan. In this plan staff have identified what has been completed and recommends new projects to optimize CRW's performance and resiliency. Some of the items that were identified include:

- Outstanding Project Closure
- Cybersecurity
- SCADA Standardization
- New Site Identification
- Documentation and Procedure Standardization- Control Narratives and Process and Instrument Diagrams.
- Physical Security
- Staffing
- Data Study-Action Plan for data management, security, and governance
- Computerized Maintenance Management System

Mr. Griffith also shared that spending year to date for this project is \$11,426,119, the remainder of the project is \$9,021,084, with the anticipated completion in 2029 and a total cost of \$20,447,203.

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

Yes: 6 - Chair Hammelman, Brown, Gaddie, Miller, Penoyar-Perez, and Gjerde

Not Present: 1 - Vice Chair Rathbun

[WC 2025-007](#)

**Discussion/Direction related to item #3: Addition of Town New SCADA Positions, an Operational Technology Network Engineer and an Operational Technology Systems Administrator [Entire Castle Rock Service Area]
Town Council Agenda Date: February 18, 2025**

Mr. Griffith shared that the 2024-2029 SCADA Master Plan identified a need to hire two additional SCADA staff members, an Operational Technology Network Engineer (OT) position and an OT Systems Administrator with Information Technology (IT) experience. Both of these positions are specialized and specific to the needs of the SCADA system and team. The original plan was to add them in a year or two but staff have realized that these two positions are necessary now due to the fact that in the past CRW has contracted with outside firms for this work and the immediate availability of contractors has become a challenge. The cost for the two additional positions and a vehicle is \$396,000 the first year. This will go to Town Council as part of the 1st Quarter Budget Amendment. Commissioner Hammelman asked if CRW has any internal candidates to fill these positions? Mr. Griffith explained that at this time CRW did not have anyone that could fill the roles. Commissioner Gjerde asked what the likely chance of finding someone would be?

It was explained that we believe there are individuals in the water industry with this skill set.

[WC 2025-008](#)

Discussion/Direction item related to item #3: Castle Rock Water (CRW) Cybersecurity Update *[Serves entire Castle Rock Water Service Area]*

Town Council Agenda Date: February 18, 2025

Mr. Griffith explained that as part of the 2025-2029 SCADA Master plan update, Tetra Tech's security team provided a proposal "Operational Technology Cybersecurity Projects". This document provided guidance and recommendations for improving and enhancing the security of CRW's Operation Technology. The document references the National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF) and the necessity to have an All-Hazards Assessment completed to meet regulatory requirements for the America Water Infrastructure Act (AWIA) Risk and Resiliency Assessment by December 31, 2025.

Commissioner Brown asked if the All-Hazards Assessment was for the entire Water Department or just SCADA? Mr. Griffith explained that it is for SCADA and the Operations team.

[WC 2025-004](#)

Resolution Waiving formal Written Bidding Requirement on the Basis of sole Source and Approving an Equipment ad Services Agreement with Trojan Technologies Corp for the Plum Creek Water Purification Facility Aria Membrane Filter #3 Module Replacement Project *[Serves entire Castle Rock Water Service Area with project occurring at Plum Creek Water Purification Facility, 1929 Liggett Road]*

Town Council Agenda Date: February 18, 2025

Mr. Chrestensen explained that this is for maintenance items that need to be completed at Plum Creek Water Purification Facility (PCWPF). This agreement is for the replacement of the Aria Filtra Membrane Module Rack #3 (previously known as the Pall membrane).

Mr. Chrestensen shared that PCWPF currently has four membrane module racks. Each rack has a life expectancy of 10-15 years. The original racks (1-3) started production in 2013. In 2016 a fourth rack was added increasing PCWPF's firm capacity by 2 million gallons per day (MGD) for a total of 6 MGD.

In January of 2024 the first rack was replaced, in August of 2024 rack #2 was replaced so this item is to request approval to replace rack #3.

The price to replace this rack is \$376,409.

Commissioner Brown asked that with this being the end of their life cycle what type of maintenance is staff doing? Mr. Chrestensen explained that they are having to trouble shoot, clean and fix more often.

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

Yes: 6 - Chair Hammelman, Brown, Gaddie, Miller, Penoyar-Perez, and Gjerde

Not Present: 1 - Vice Chair Rathbun

DIRECTOR FOLLOW-UP AND INFORMATIONAL / UPDATE ITEMS

[WC 2025-005](#)

Resolution Approving a Spot Water Lease Agreement between the Town of Castle Rock and Central Colorado Water Conservancy District [Chatfield Reservoir, Douglas County]

Town Council Agenda Date: January 7, 2025

Mr. Marlowe shared that this item was presented to Town Council on January 7, 2025. The purpose of this item was to request approval of a spot water lease with Central Colorado Water Conservancy District (Central). Central has requested to lease some of the Town’s surplus water stored in Chatfield Reservoir, in order to increase their storage supplies within Chatfield. This will help them to make projections for their well pumping augmentation plans. Currently the Town owns 848 AF of storage in Chatfield. The CWCB allows for rental of the remaining permitted amount, for a total of 2,000 AF of storage. The Town currently has about 1,400 AF of water stored in the reservoir which would allow us to lease water to Central. Central would like to lease up to 400 AF. The agreement states that the Town will lease the water for \$110 per AF. Payment will be required with-in 30 days of request. The potential revenue for this lease is up to \$44,000.

[WC 2025-006](#)

Discussion/Direction: Request for Two Raw Water System Operator Staff with Excavator and Truck Purchase for Raw Water Operations Team and first Quarter Budget Amendment

Town Council Agenda Date: February 18, 2025

Mr. Chrestensen explained that a goal of CRW is to consistently increase the use of renewable water for treatment and distribution. As part of that goal CRW has identified the need for two additional full-time Raw Water System Operators. These two positions will mainly focus on the operation and maintenance of the two surface water diversions. Diversion maintenance is a labor-intensive project that requires multiple hours per day to keep them at peak efficiency. A secondary objective is the reactive maintenance and repairs associated with the pumping infrastructure of the raw water systems. As part of these new positions, staff will need a truck and Cat 308 mini-excavator to complete the work.

The cost for the two additional positions, a truck and a CAT 308 mini-excavator is \$487,718 in the first year. This will go to Town Council as part of the 1st Quarter Budget Amendment.

[WC 2025-009](#)

Resolution Approving a Contract Amendment with Applied Ingenuity PM, LLC to Provide Funding for 2024 Emergency Repairs to Castle rock Water Deep Wells 31R, 27 and 227 [Castle Rock wells located in various areas of the service territory]

Town Council Agenda Date: January 21, 2025

Mr. Marlowe explained that this is a housekeeping item to update the 2024 On-Call Repair services agreement to include the emergency deep well repairs on Wells 110, 20, 125 & 22 that happened in December 2024.

[WC 2025-010](#)

Discussion/Direction: Fifth Street Water and Sewer Improvement Project *[Sanitary and Water Service on Fifth Street near Valley Drive]*
Town Council Agenda Date: January 7, 2025

Mr. Marlowe gave a short presentation on the upcoming Fifth Street Water and Sewer Improvement Project. The purpose of this project is to design and construct water and sanitary sewer utilities along Fifth St. CRW will share more information on this project over the next few months.

[WC 2025-011](#)

2024 Financial Performance and the 2025 Rates & Fees Calendar
Town Council Agenda Date: NA

Mr. Rementer and Ms. Bussey gave a presentation on the 2024 Financial Performance of Castle Rock Water and also gave an update on the 2025 Rates & Fees Schedule.

[WC 2025-012](#)

2024 Castle Rock Water Year In-Review
Town Council Agenda Date: NA

Mr. Marlowe shared a presentation on items that CRW accomplished in 2024.

[WC 2025-013](#)

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: 2/26/2025

Item #: 2. **File #:** WC 2025-015

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
Rick Schultz, Water Efficiency Supervisor
Tim Dagg, Water Conservation Technician

Resolution Approving the 2025 Water Conservation Rebate Program Budget and Increasing the ColoradoScape Conversion Rebate [*The entire Castle Rock Water Service Area*]

Town Council Agenda Date: March 4, 2025

Executive Summary

The purpose of this memorandum is to request Town Council approval of a Resolution (**Attachment A**) for the 2025 Water Conservation Rebate Incentive Program. Conservation rebates are in place to encourage indoor and outdoor water conservation measures. These programs are evaluated annually for effectiveness and each category is adjusted accordingly.

Currently there are four rebate programs in place and include:

- ColoradoScape conversions replacing existing non-functional turf;
- Toilet retrofit with an ultra-high-efficiency (UHE) 0.8 gallon per flush (GPF) unit;
- Rotary nozzle replacement;
- Whole Home Water Monitoring System (with automatic shut off).

Two changes are proposed for the current rebate program. The changes are specifically proposed for ColoradoScape conversions that will be removing non-functional turf and converting to a low water use ColoradoScape design:

- Increase the rebate amount from \$2.50 per square foot to \$3.25 per square foot
- Discontinue artificial / synthetic turf as an eligible landscape material as it does not promote the ColoradoScape design principle

Discussion

One of CRW's strategic goals is to achieve a per person water usage rate of 100 gallons per capita

Item #: 2. File #: WC 2025-015

per day (gpcd) by 2050. Through being efficient and providing incentives to our customers to use water wisely, CRW believes this goal is reachable. The attached graph (**Attachment B**) shows the trend in per capita water usage over the past 5 years.

A summary of the CRW Rebate programs include:

- ColoradoScape Conversion

The ColoradoScape conversion rebate encourages customers to replace high-water use turf with native or regionally adapted plants by offering \$3.25 per square foot to do so (limited to 1,500 square feet per residential customer and 15,000 square feet for non-residential accounts). Any high-water use turf replaced exclusively with hardscape materials such as patios, decks or synthetic turf would not qualify for the rebate.

Converting to a ColoradoScape ensures a true water savings because of the transition from a high-water use turf that requires 30 inches plus of water per year to one that requires only 10 inches or less annually.

In 2024, the ColoradoScape Rebate assisted residents in converting 92,062 square feet (sf) of high-water use turf into a low-water use ColoradoScape. Another 21,055 sf was converted as hardscapes. A total of \$251,210 in rebate money was awarded through this program to our residential customers.

For non-residential customers, there was a total of 199,574 sf of turf converted in which 144,276 sf qualified for rebate dollars. The total amount rebated to non-residential customers in 2024 was \$360,690.

- Ultra-High-Efficiency (UHE) Toilet Replacement

The UHE toilet replacement rebate encourages customers to exchange high-water use toilets for UHE 0.8 gallons per flush (gpf) units. This program offers customers up to \$150 toward the purchase price and recycles the ceramic and porcelain of the exchanged older toilet. In 2024, 90 high-water use toilets were collected and exchanged for 0.8 gpf, UHE units. The total dollar amount rebated to customers for toilet replacements in 2024 was \$12,700.

- Rotary Nozzle Replacement

The rotary nozzle replacement rebate offers customers up to \$5 for each traditional spray nozzle replaced with a higher efficiency rotary nozzle. A rotary nozzle provides better coverage and delivers water at a slower rate (0.4 - 0.6 inches per hour) compared to a traditional spray nozzle (1.5 - 2.0 inches per hour). A slower application rate of water is more efficient and will provide an increased absorption while reducing water run-off. Rotary nozzles also tend to be more wind resistant due to the larger droplet size. In 2024, 272 spray nozzles were exchanged and \$1,370 in rebates were rewarded.

- Whole Home Water Monitoring System (with automatic shut-off valve)

The whole home water monitoring rebate will reimburse half the purchase price of qualifying products, up to \$200. These systems continuously monitor both indoor and outdoor water use and signals an alert in the event of a leak. These systems not only save water but can also reduce the amount of damage to a home, in the event of a leak. This program had 7 participants in 2024 and rebated \$1,307.

Please see **Attachment C** for the 2024-year Conservation rebate funding summary which shows the rebates that were granted in the past five years.

Another benefit of the conservation rebate program is that CRW staff is able to interact with its customers, educating them on water conservation and rewarding their efforts. Water Wiser and ColoradoScape workshops are also offered to our customers at no charge to help with any questions or challenges customers may have in areas of water conservation and management.

Budget Impact

The 2025 program will continue to be funded with revenue generated from watering restriction violations and a portion of funds from the Block 4 surcharge rate. However, these revenues will not cover the entire requested budget line item. Rebates will continue to be processed through account number 211-4330-443.81-10, Conservation Rebates. Should approved applications for rebates exceed the current budget as happened in 2024, then additional funds will be provided through a budget transfer or budget amendment.

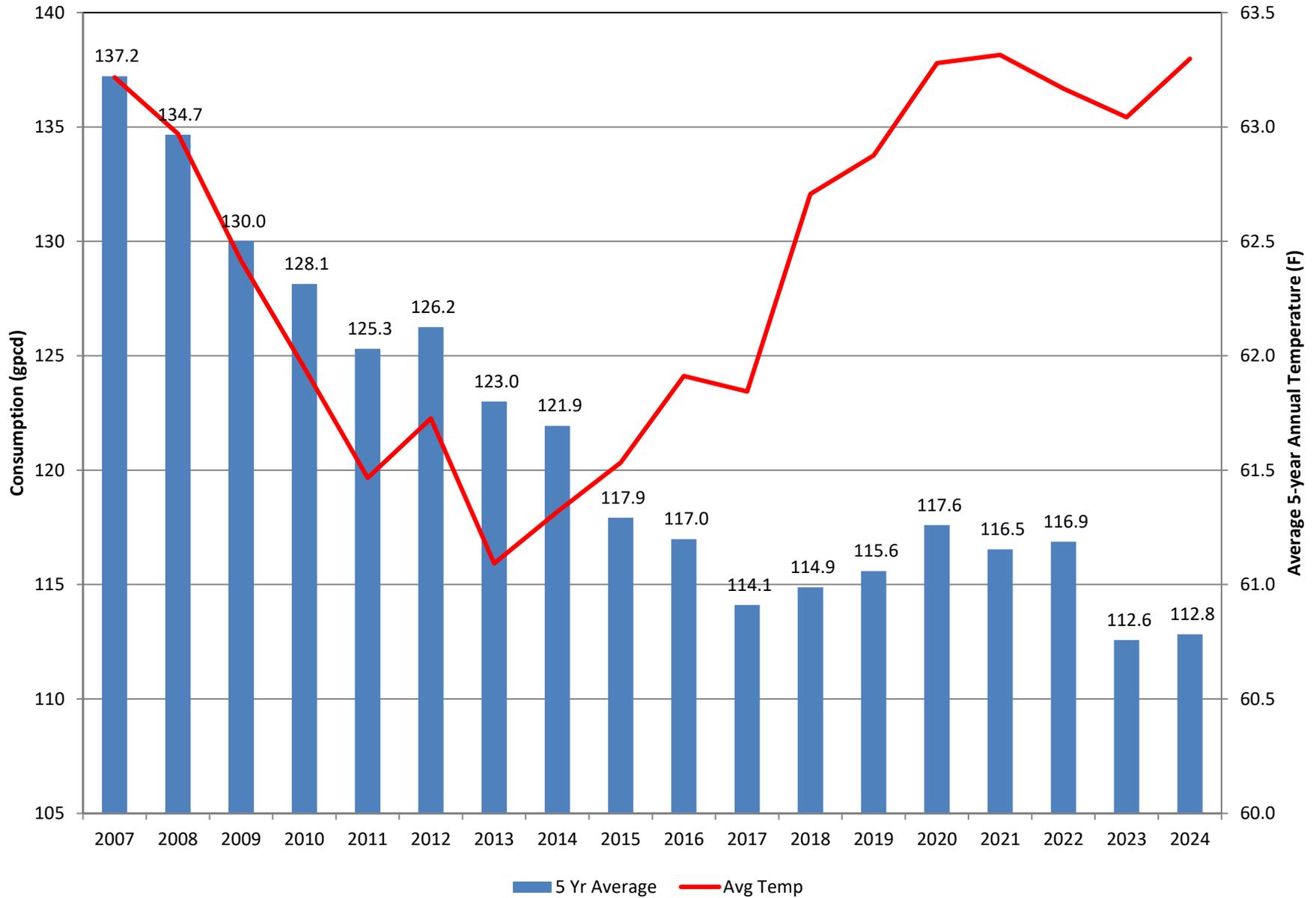
Proposed Motion

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

Attachments

Attachment A: Resolution (**Not Attached**)
Attachment B: 5-Year Average Consumption
Attachment C: Past 5-year Conservation Rebate Funding Summary

5-year Average Consumption



Attachment C

Rebate Category	Rebate Program Funding Summary		
	2020		2021
	Total Dollar Amount	% of Total	Total Dollar Amount
Residential ColoradoScape Renovation	\$34,027	35%	\$42,193
Non-Residential ColoradoScape Renovation	\$42,290	43%	\$35,895
Rotary Nozzle Retrofit	\$1,815	2%	\$1,653
Smart Irrigation Controller*	\$9,093	9%	\$8,364
Ultra-High Efficiency Toilet Retrofit	\$8,797	9%	\$2,700
Whole-Home Water Monitoring System	\$1,350	1%	\$1,697
Total	\$97,372	100%	\$92,502

* The smart irrigation controller rebate was discontinued at the end of 2022

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	2022		2023		2024	
% of Total	Total Dollar Amount	% of Total	Total Dollar Amount	% of Total	Total Dollar Amount	% of Total
46%	\$80,941	54%	\$130,982	54%	\$251,210	40%
39%	\$60,665	40%	\$103,247	43%	\$360,690	58%
2%	\$1,439	1%	\$1,625	1%	\$1,307	0.1%
9%	\$5,608	4%	\$0	0%	\$0	0%
3%	\$1,200	1%	\$3,867	2%	\$12,700	1.8%
2%	\$337	0%	\$1,200	0.5%	\$1,370	0.1%
100%	\$150,191	100%	\$240,921	100%	\$627,277	100%

Attachment C

Rebate and Customer Assistance Program Funding Summary								
Category	2019		2020		2021		Average %	2022 (pro)
	Total \$	% of Total	Total \$	% of Total	Total \$	% of Total	of Prior Years	\$ per Category
Residential ColoradoScape Renovation Rebate	\$22,221	22%	\$34,027	35%	\$42,193	46%	34%	\$50,000
Non-Residential ColoradoScape Renovation Rebate	\$61,554	60%	\$42,290	43%	\$35,895	39%	47%	\$60,000
Rotary Nozzle Retrofit Rebate	\$3,029	3%	\$1,815	2%	\$1,653	2%	2%	\$2,000
Smart Irrigation Controller Rebate	\$16,238	16%	\$9,093	9%	\$8,364	9%	11%	\$20,000
Toilet Retrofit Rebate	N/A	N/A	\$8,797	9%	\$2,700	3%	6%	\$10,000
Whole Home Water Monitoring System Rebate	N/A	N/A	\$1,350	1%	\$1,697	2%	2%	\$3,000
Total	\$103,042	100%	\$97,372	100%	\$92,502	100%	N/A	\$145,000

Proposed)
% of Total
34%
41%
1%
14%
7%
2%
100%

Attachment C

Rebate and Customer Assistance Program Funding Summary								
Category	2018		2019		2020		Average % of Prior Years	2021 (pro) \$ per Category
	Total \$	% of Total	Total \$	% of Total	Total \$	% of Total		
SmartScape Renovation Rebate	\$29,344	35%	\$22,221	22%	\$34,027	35%	30%	\$43,000
Rotary Nozzle Retrofit Rebate	\$6,946	8%	\$3,029	3%	\$1,815	2%	4%	\$2,000
Smart Irrigation Controller Rebate	\$15,411	18%	\$16,238	16%	\$9,093	9%	14%	\$20,000
Toilet Retrofit Rebate	N/A	N/A	N/A	N/A	\$8,797	9%	N/A	\$10,000
Whole Home Water Monitoring System Rebate	N/A	N/A	N/A	N/A	\$1,350	1%	N/A	\$3,000
Non-Residential SmartScape Renovation Rebate	\$30,566	36%	\$61,554	60%	\$42,290	43%	46%	\$67,000
Irrigation Assessments	\$2,339	3%	N/A		N/A		N/A	N/A
Total	\$84,606	100%	\$103,042	100%	\$97,372	100%	N/A	\$145,000

posed)
% of Total
30%
1%
14%
7%
2%
46%
100%

Attachment E

Rebate and Customer Assistance Program Funding Summary

Category	2018		2019		2020		Average %	2020 (proposed)	
	Total \$	% of Total	Total \$	% of Total	Total \$	% of Total	of Prior Years	\$ per Category	% of Total
SmartScape Renovation Rebate	\$29,344	35%	\$22,221	22%		#DIV/0!	#DIV/0!	\$25,000	17%
Rotary Nozzle Retrofit Rebate	\$6,946	8%	\$3,029	3%		#DIV/0!	#DIV/0!	\$4,000	3%
Rain Sensor Rebate, Residential	\$0	0%	\$0	0%		#DIV/0!	#DIV/0!	\$0	0%
Smart Irrigation Controller Rebate	\$15,411	18%	\$16,238	16%		#DIV/0!	#DIV/0!	\$16,000	11%
Irrigation Assessments	\$2,339	3%	\$0	0%		#DIV/0!	#DIV/0!	\$0	0%
Toilet Retrofit Rebate	N/A	N/A	N/A	N/A		N/A	N/A	\$10,000	7%
Whole Home Water Monitoring System Rebate	N/A	N/A	N/A	N/A		N/A	N/A	\$5,000	3%
Non-Residential SmartScape Renovation Rebate	\$30,566	36%	\$61,554	60%		#DIV/0!	N/A	\$90,000	60%
Total	\$84,606	100%	\$103,042	100%	\$0	#DIV/0!	N/A	\$150,000	100%



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 3. **File #:** WC 2025-016

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
Rick Schultz, Water Efficiency Supervisor
Tim Dagg, Water Efficiency Technician

An Ordinance Approving Changes to the 2025 Water Use Management Plan (WUMP)
[Castle Rock Service Area]
Town Council Agenda Date: March 4, 2025

Executive Summary

The purpose of this memorandum is to request Town Council approval of a Resolution (**Attachment A**) adopting the 2025 Water Use Management Plan (WUMP). The WUMP is a demand management tool that provides regulations and watering schedules as a method to encourage water conservation during peak irrigation demand and throughout the year. The WUMP identifies a fee structure in the areas of surcharges and water violations as a way to deter non-compliance with these measures. Practices outlined in the WUMP help to minimize the effects of changing drought conditions. The WUMP supports sustainable habits for a growing community to preserve the water supply of Castle Rock’s semi-arid environment. The WUMP is one of the methods Castle Rock Water (CRW) utilizes to assist the community in reaching the 100-gallon per capita per day water usage goal and still maintain a high standard of living for residents. The WUMP is referenced in Municipal Code Chapters 13.15.040 and 13.15.050. For this year, CRW is proposing to increase the residential surcharge beginning with the third violation, as outlined in the table below.

Notification and Outreach Efforts

As defined in Chapter 13.15 of the Town’s Municipal Code, all customers will receive the 2025 water schedule via United States Mail within thirty (30) days prior to the commencement of the outdoor watering schedule months of May through September. Additionally, this information will be available on the Town’s websites (CRgov.com and CRconserve.com) and promoted through Community Relations’ outreach avenues such as Facebook, X (fka Twitter), Town Talk, and a press release.

Discussion

Public education is necessary towards embracing a cultural shift of appreciation for the natural

Item #: 3. File #: WC 2025-016

environment and what appropriate landscape and water use should be in a semi-arid climate. The WUMP provides an outline of practices during peak water use demand. It also focuses on individual water use impacts along with the necessity and purpose of demand management of our water resources. Demand management utilizes watering schedules that are enforced through the issuance of violation notices and surcharges when compliance is not met.

Multiple workshops offered throughout the year are the primary form of in-person outreach. These are offered at no cost to the customer and include Water Wiser workshops and ColoradoScape design workshops.

Water Wiser is a three-hour workshop that covers the awareness of water waste centered around outdoor and indoor water demands. It provides education to Town residents on practices that help achieve less water use and save on monthly utility bills. The course also covers rebates offered through CRW that can help reduce total costs to residents that upgrade any rebated area to become more water efficient. The workshops are interactive and encourage individuals to ask questions and participate in discussion.

Once residents have attended a Water Wiser Workshop and learn about water conservation practices, they are then given a Water Wiser designation in the billing system and receive a Water Wiser placard. This designation gives them an exemption from the every-third day watering schedule. Participating in a Water Wiser Workshop does not exclude participants from receiving a violation due to water-waste or watering during off hours.

Due to evolving regulations and efforts to continue education, beginning in 2018, the Water Wiser designation expires after five (5) years. Those residents choosing to continue their status can attend another in-person workshop or request a link to an online renewal class to keep the designation. In 2024, 160 individuals opted to take the online renewal course and retained Water Wiser status. The following chart below shows the number of Water Wiser Workshop participants since 2017.

<u>Water Wiser Participants</u>	
2017	3,020
2018	3,993
2019	3,187
2020	3,316
2021	3,497
2022	3,507
2023	2,884
2024	2,926

The Town of Castle Rock has used mandatory water demand management for landscape irrigation since 1985. The residential 2025 watering schedule places each house on an every third-day cycle based on the last digit of the home address. This digit correlates to a circle, diamond or square. These shapes represent dates on the calendar year from May 1st through September 30th to assist residents in managing their watering program during the irrigation season (**Attachment B**).

This watering schedule is designed to prevent multiple houses on the same street or area from drawing too much water from the Town’s system at one time and creating a low-pressure event. This also helps CRW’s system to be in a stronger state for any firefighting needs that may arise in any particular area of Town. There are some exceptions to this schedule located in Founders Village where multiple addresses on the same street end in the same digit. For these individual homes, there is a special schedule mailed directly to the address. Accounts with Water Wiser designations are not restricted to the every third-day schedule on the basis that Water Wiser participants have a better awareness of irrigation needs and are encouraged to water only when needed. To prevent water waste and maximize watering efficiency, all residences are restricted from watering before 8 p.m. and after 8 a.m., other than hand watering.

Non-residential irrigation creates the highest water demand because of the size of the irrigable area. Due to this high-water demand, non-residential accounts have fewer watering hours per day and are divided into two groups. These groups are determined by proximity of the north and south sides of interstate 25 (I-25). Non-residential watering hours are from 12 a.m. to 8 a.m. Non-residential accounts east of I-25 are designated Tuesday, Thursday, and Saturday. Non-residential accounts west of I-25 are designated Monday, Wednesday, and Friday. **Attachment C** is the non-residential watering schedule.

As an effort to accommodate park use and programmed events, watering hours for Town-owned and managed parks are from 9 p.m. on their designated day and finish no later than 5 a.m. the following morning.

In addition to the watering schedule, the WUMP covers alternative schedules for special circumstances including customers with hardships and exemptions for residents installing new sod or vegetation.

Enforcement of regulations and restrictions outlined in the WUMP is largely dependent on CRW Water Monitors. It is the Water Monitor’s task to identify violations and process them accordingly. The Water Monitor’s first directive is to make contact with the customer in violation, explain the situation and help provide a solution whenever possible. Water Monitors are responsible for issuing an official violation. For both residential and non-residential accounts, the first violation is a warning. A change to increase the fee schedule for residential surcharges is being proposed for third, fourth, fifth and subsequent violations. In the summary of changes (**Attachment D**), you will find the previous year’s residential surcharges along with the reasoning for a change. For Non-residential surcharges, these remain the same as past years. The table below represents the proposed 2025 fee schedule for violations.

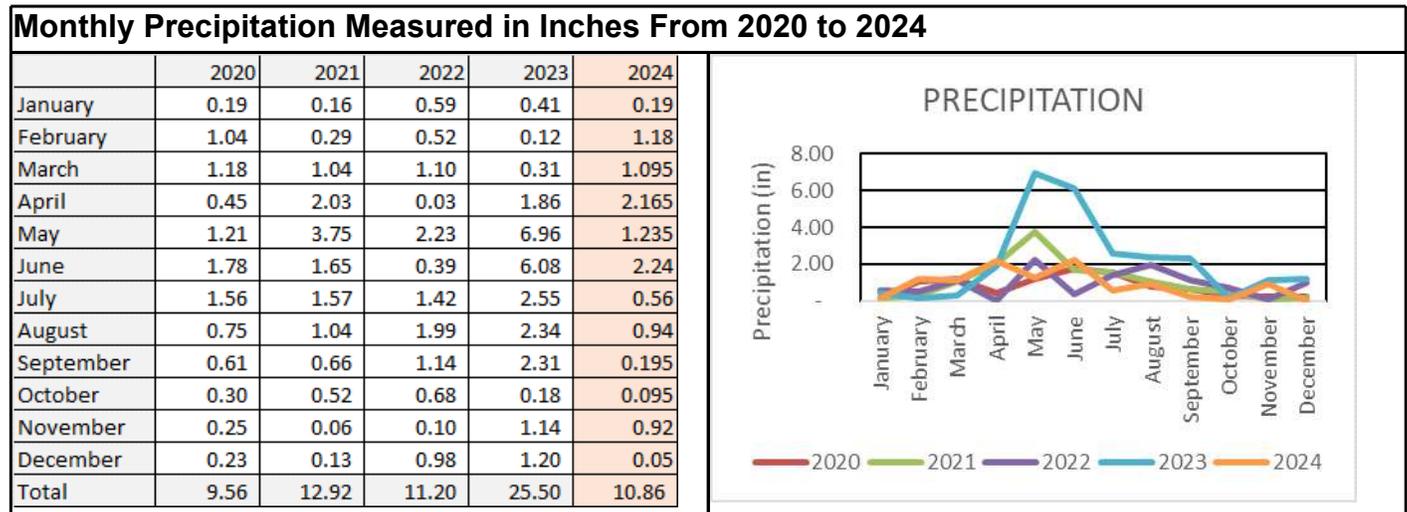
Residential	Non-residential
1 st - Warning, no surcharge	1 st - Warning, no surcharge
2 nd - \$25 surcharge	2 nd - \$100 surcharge*
3 rd - \$75 surcharge	3 rd - \$200 surcharge*

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4 th - \$150 surcharge	4 th - \$400 surcharge*
5 th - \$300 surcharge	5 th - \$800 surcharge*
Subsequent - \$300 surcharge*	Subsequent - \$800 surcharge*
*Subject to service discontinuance	*Subject to service discontinuance

The total number of violations vary from year to year. It is believed that the more education efforts successfully received by residents, the fewer the violations. The largest factor influencing the number of violations is the amount of rainfall received during the irrigation season. Part of our educational outreach is an emphasis on providing irrigation water to outdoor landscapes when only needed. Educating residents to have a better understanding of irrigation practices while converting landscapes to a ColoradoScape design, encourages a water conservation culture.

The following table and graph represent the five-year precipitation averages in Castle Rock.



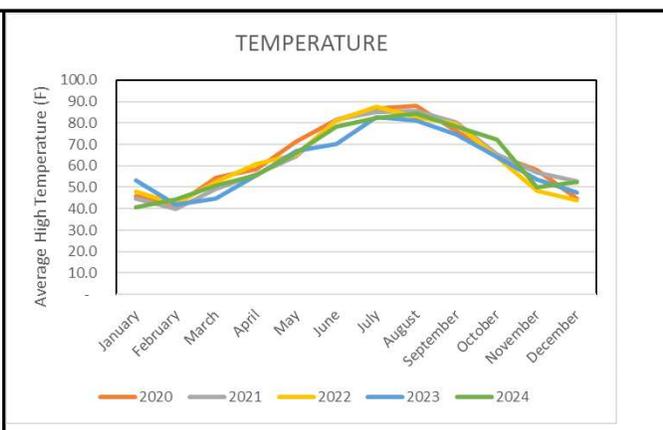
Overall, 2024 precipitation was the second driest of the past five years.

The following table and graph represent the past five-year monthly average temperatures in Castle Rock.

Monthly Average Temperature in Fahrenheit from 2020 to 2024

Item #: 3. File #: WC 2025-016

	2020	2021	2022	2023	2024
January	46.2	44.6	47.9	53.4	40.6
February	41.7	39.8	42.2	41.9	44.3
March	54.4	49.1	52.4	44.9	50.9
April	58.4	56.1	60.9	55.7	55.5
May	71.3	64.7	65.5	67.2	66.1
June	81.7	81.5	81.2	70.2	78.1
July	86.6	85.2	87.6	82.6	82.3
August	88.0	85.6	82.8	81.0	84.3
September	76.1	80.4	79.7	74.6	78.4
October	64.8	65.5	64.0	64.2	72.4
November	57.9	56.7	48.5	53.6	50.1
December	44.9	52.9	43.9	47.5	52.4



Overall, 2024 temperatures were fairly moderate with the exception of October which was one of the hottest on record and almost 8 degrees hotter on average than the previous four years.

As the Town’s population and the CRW service area continues to grow with extraterritorial customers such as Macanta, Bell Mountain Ranch and the Crowfoot Valley Road corridor, so does the need for seasonal water monitors. CRW relies heavily on its monitors to be the eyes in the field. Their presence serves as enforcement to the watering restrictions and ensures that responsible management of the Town’s water resources is an active practice.

The full 2025 WUMP will be made available following council adoption at the March 4, 2025 meeting and can be found at CRGov.com/waterplans.

Budget Impact

The 2025 seasonal water conservation staff budget is \$61,168 and is covered under account number 211-4330-443.10-30. The revenue budget estimate for watering surcharges is \$107,402. Seasonal water conservation salaries are not expected to exceed the budget amount even with six seasonal water monitoring staff.

Proposed Motion

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

Attachments

- Attachment A: Resolution
- Exhibit 1: 2025 WUMP
- Attachment B: 2025 Residential Watering Schedule
- Attachment C: 2025 Non-Residential Watering Schedule
- Attachment D: 2025 WUMP Summary of Proposed Changes

CASTLE ROCK *water* 2025 RESIDENTIAL WATERING SCHEDULE

On your watering day, water only: **before 8 a.m. or after 8 p.m.**

Your schedule is determined by your street address.

- Addresses ending in 0, 1, 2, 3
- Addresses ending in 4, 5, 6
- Addresses ending in 7, 8, 9

Certain streets in Founders Village have a special schedule, mailed separately.

MAY

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

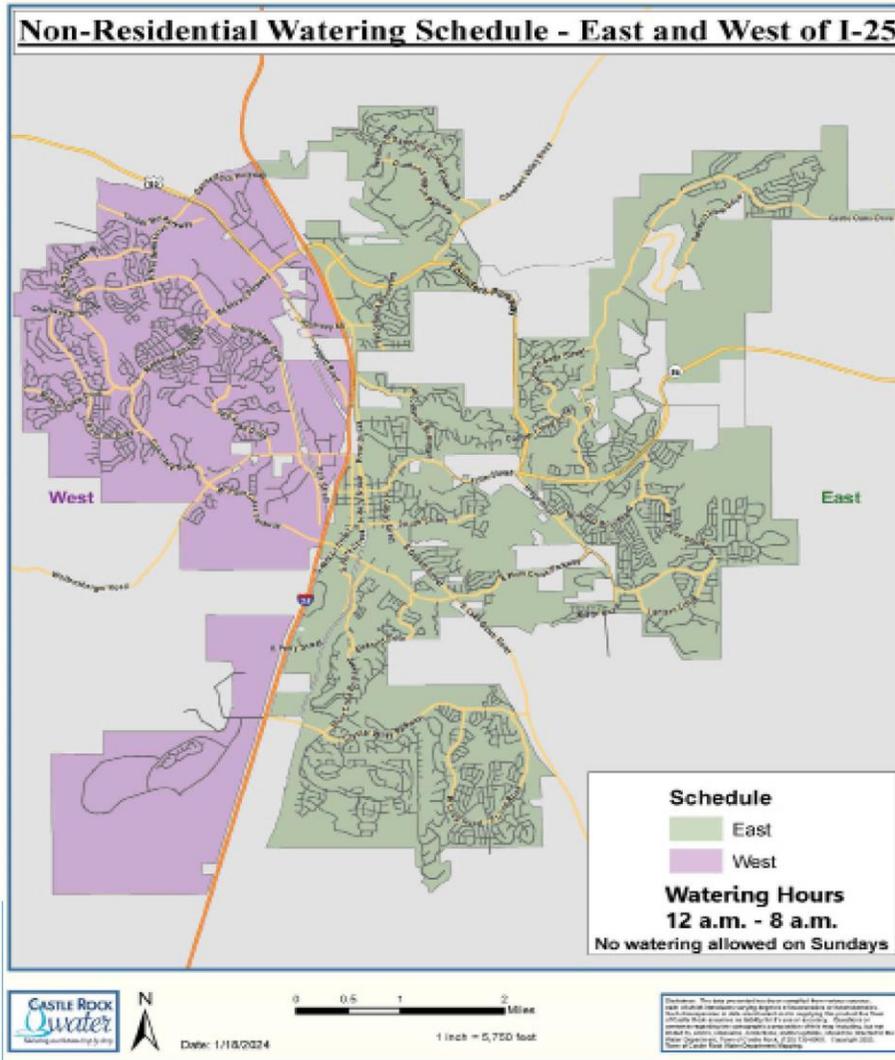
AUGUST

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

CASTLE ROCK *Water* 2025 WATERING SCHEDULE



The Town of Castle Rock has mandatory water schedules in place. Failure to follow these regulations, or incurring water waste, can result in a watering violation.

Attachment D: Summary of Changes to the 2025 WUMP

Amendment Location	Addition(s)	Removal(s)	Reasoning
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3.5.4 Surcharge Values	Residential violation 3 rd \$75 4 th \$150 5 th \$300 Subsequent \$300	Residential violation 3 rd \$50 4 th \$100 5 th \$200 Subsequent \$200	The violation fee was increased to discourage non-compliance and water waste occurrences. This surcharge for residential violations has never been increased from any past year that the program has been in place.
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Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 4. **File #:** WC 2025-017

To: Members of the Castle Rock Water Commission

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

An Ordinance Amending the Castle Rock Municipal Code by the Addition of a New Chapter 4.06 Regarding Plumbing Fixtures [The entire Castle Rock Water Service Area]
Town Council Agenda Date: March 4, 2025

Executive Summary

The purpose of this memorandum is to request Town Council approval of an Ordinance (**Attachment A**) to require the installation of ultra-high-efficiency (UHE) toilets for all new residential construction. Specifically, calling for the installation of 0.8 gallons per flush (GPF) or less tank-type toilets, and flushometer-style toilets not to exceed 1.0 GPF. Flushometer-style toilets require a slightly higher volume of water to function properly.

As part of Castle Rock Water's (CRW) goal to drive water conservation to 100 gallons per capita per day (GPCPD) by 2050, staff is proposing this requirement, which requires no behavioral changes or disruption to CRW customers.

This ordinance is scheduled to go into effect under all new building permits within the Town's service area starting May 15, 2025. The cost impact of this change in building code is estimated to be approximately +/- \$\$ per toilet.

Notification and Outreach Efforts

In order to inform the development community and elicit feedback about the Town's intent to make a change to Municipal Code, Castle Rock Water presented information to the Economic Development Council (EDC) Water Subcommittee on June 16, 2023, July 21, 2023, September 22, 2023 and February 21, 2025. Castle Rock Water also updated the full EDC Developer's Roundtable on the planned ordinance on February 19, 2025. There were not any concerns raised by the Developer's Roundtable at that meeting.

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

Town Council adopted the 2021 Water Resource Strategic Master Plan by Resolution 22-048 on April 19, 2022 which identified this code change as a means to conserve water within our community.

Item #: 4. File #: WC 2025-017

The current federal standard, adopted in 1994, limits toilets to a maximum of 1.6 gpf. With Senate Bill 14-103, Colorado became a WaterSense state, now requiring all plumbing fixtures to be WaterSense labeled. Under this legislation, Colorado now limits toilets to no more than 1.28 gpf.

Discussion

Toilets that use 0.8 gpf are readily accessible to individuals and builders. Several manufacturers offer a variety of styles with multiple options that are comparable to conventional toilets and are competitively priced.

Distributors of these UHE toilets can be found on the EPA WaterSense website at [WaterSense Product Search - Toilets <https://lookforwatersense.epa.gov/Product-Search-Results-Toilets.html>](https://lookforwatersense.epa.gov/Product-Search-Results-Toilets.html). According to the EPA WaterSense product search there are currently 77 different makes and models meeting the 0.8 gpf specification with XX different manufacturers.

During the construction of the Castle Rock Water Administration building in 2021, only 0.8 gpf toilets were installed. The installation of these UHE toilets creates a water savings of 0.48 gpf from the current required 1.28 gpf toilets which staff estimates to result in a 37.5% overall water savings within our own facilities for toilet water use. CRW is the first known municipality to propose these standards for new construction.

Castle Rock Water created a Toilet Retrofit Rebate in 2020. This rebate program encourages participants to replace high water use toilets with 0.8 gpf or less toilets, offering up to \$150 towards the purchase price of each toilet.

Since this program began, 243 UHE toilets have replaced the older higher water use ones through the Town's rebate offerings. Looking at the data for the past five years, the average rebate amount awarded back to our Customers through this program is \$6,338.20 per season. Currently, Castle Rock Water is in partnership with Colorado Springs Utilities to recycle the ceramic which is then crushed, and the aggregate is used as road base or other building material. To date, CRW is not aware of any issues with the UHE toilets from customers who have used the rebate to purchase UHE toilets.

Based on a 2050 population estimate of 140,000 to 155,000 residents, this equates to approximately 20,690 to 25,690 new homes at buildout. According to data from the 2016 Residential End Uses of water study report, the average home flushes 13 times per day. The 0.8 gpf toilets will generate an estimated savings of 47,123,690 to 58,511,725 gallons annually or 145 to 179 acre feet (AF). This equates to a projected water supply development savings of approximately \$6,500,000 to over \$8,000,000.

Budget Impact

Adoption of this ordinance will have significant impact to reducing the need for developing additional water supplies and has the potential to save approximately \$6,500,000 to \$8,000,000 or more in the water resources fund over time depending on long term development of the community.

Item #: 4. File #: WC 2025-017

Staff Recommendation

Staff recommends approval of a change to Town Code to require the installation of 0.8 gpf or less tank type toilets, and Flushometer-style toilets not to exceed 1.0 gpf for all new residential installations.

Proposed Motion

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

Attachments

Attachment A: Ordinance (Not Attached)



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 5. **File #:** WC 2025-018

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

Resolution Approving a Third Amendment to the Plum Creek Water Purification Facility (PCWPF) Expansion Project Construction Agreement with Garney Companies, Inc. for Work Package Three [1929 Liggett Road Castle Rock, CO]
Town Council Agenda Date: March 4, 2025

Executive Summary

Castle Rock Water (CRW) staff requests Town Council approval of a resolution (**Attachment A**) approving a Third Amendment to the Plum Creek Water Purification Facility (PCWPF) Expansion Construction Agreement (**Exhibit 1**) with Garney Companies, Inc. (Garney).

The amount of the contract amendment is \$41,821,534 and represents Work Package #3 (WP#3). This portion of the construction will include site concrete work, constructing the masonry building additions, process piping, HVAC, electrical with system integration work, and all other site and facility improvements. This proposed WP#3 is the final work package necessary to complete the overall PCWPF Expansion project.

As previously presented to Town Council, the PCWPF Expansion construction contract will be a Guaranteed Maximum Price Construction Management (GMPCM) arrangement. PCWPF is one of the most advanced water treatment plants in the nation and has won numerous awards including the Engineering Excellence Award 2022 (American Council of Engineering Companies). Construction work is to be awarded in three separate work packages. Garney was selected as the Construction Manager and General Contractor (CM/GC) through a competitive process and has a proven track record in the water and wastewater industry. GMPCM was successfully utilized by the Town for design and construction of the PCWPF Project completed in 2014 and PCWPF Advanced Treatment (AT) Project completed in 2021 (CM/GC was Garney for AT project). Upon authorization to award WP#3, Garney will begin ordering long lead electrical equipment. Garney has mobilized onsite at the PCWPF and is in the process of preparing foundation work for the new pre-treatment building addition. Overall construction completion of the project is planned for Spring 2028 (including startup of new facility).

The Final GMP for WP#3 based on project bidding documents (drawings and specifications),

Item #: 5. File #: WC 2025-018

including General Conditions and other fees, developed by the Town and the design consultant in cooperation with Garney, was \$41,821,534. Staff recommends executing an Amendment to the contract with Garney for WP#3 to construct the associated components of the Project.

Current known and estimated project costs are shown below:

Burns & McDonnell Engineering (BMcD)	Design (including \$119,444 contingency)	\$ 2,508,324
TCR Permit Fees	Est. based on PCWPF Advanced Treatment project	\$ 120,000
Garney Companies BMcD	Pre-construction services	\$ 311,022
	Constr. Phase Engineering Services (approximately 6% of Construction cost)	\$ 4,016,202
Garney Companies	Construction costs WP#1 (FGMP) WP#2 (FGMP) WP#3 (FGMP)	\$ 18,571,591* \$ 6,739,585* \$ 41,821,534*
	TOTAL	\$ 74,088,258

*Actual

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

Town Council approved Resolution 2023-055 on April 18, 2023 approving a Services Agreement with BMcD for the design of the PCWPF Expansion.

Town Council approved Resolution 2023-152 on December 19, 2023 approving a Construction Contract with Garney for Preconstruction Services on the PCWPF Expansion.

Town Council approved Resolution 2024-046 on May 7, 2024 approving a First Amendment to the Construction Contract with Garney for Work Package #1 on the PCWPF Expansion.

Town Council approved Resolution 2024-072 on July 2, 2024 approving a Second Amendment to the Construction Contract with Garney for Work Package #2 on the PCWPF Expansion.

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 100% of the annual demand for water in Castle Rock by 2065. Renewable water sources include East Plum Creek alluvial wells, surface water using existing Town Water Rights, and imported surface water from outside of the Plum Creek Basin (e.g., WISE water). PCWPF also purifies a majority of Castle Rock's reusable water supplies.

PCWPF is currently a 6 Million Gallon per Day (MGD) facility receiving raw water from four main sources: Castle Rock Reservoir 1 (CRR1 - connected with diversion on Plum Creek (PCD) near

Sedalia and the source of most of CRW's reusable water), CR1 (a diversion on East Plum Creek near PCWPF), various alluvial wells along East Plum Creek (renewable) and deep (Denver Basin/nonrenewable) 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 and Castle Rock Reservoir 2 (CRR2) from Chatfield Reservoir, expanding CRW's renewable water sources and providing a high quality, low total dissolved solids (TDS) water source for TDS blending and additional renewable water yield.

CRW is also working on redesigns for the two surface water diversions that feed PCWPF, CR1 and PCD. Both of these diversions are unable to operate at the fully permitted intake due to design issues leading to sanding and debris shutting down the diversions during various creek conditions. These redesigns are currently scheduled for construction in 2025 through 2026.

The original PCWPF project was completed in 2014 and included 6 MGD capacity pretreatment facilities with aeration, rapid mix, flocculation, sedimentation, and greensand filtration. The greensand filtration was 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 are 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 AT project was completed and added 6 MGD capacity of advanced treatment systems such as pre-ozone, biologically active carbon (BAC) filtration (previously greensand filters converted to BAC), advanced oxidation with ozone and hydrogen peroxide, granular activated carbon (GAC) adsorption, and ultraviolet (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 goals of the PCWPF AT Project were 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) and meet or exceed requirements for direct potable reuse to allow reuse of all of CRW's reusable supplies. The facility already meets the treatment requirements for the latest drinking water standards issued by US EPA in 2024, the standards for perfluoro alkyl substances (PFAS), three years ahead of the deadline for water providers across the country. This project also included a 1,250-kilowatt (kW) diesel powered generator to power the AT Building up to 12 MGD capacity.

In order to continue using and expanding renewable water sources, CRW must implement our long-term plan to expand PCWPF's current treatment capacity of 6 MGD up to 12 MGD. Expanding PCWPF will coincide with the completion of CRR2 and redesign and improvement of CR1 and PCD and provide for keeping up with growing demands as the Town adds additional residents and businesses. Once expanded, PCWPF will be the largest water treatment facility in CRW's system.

In general terms, with this project CRW will expand all treatment processes, modify the solids handling processes, and install a new emergency electrical generator for the original PCWPF Building (houses high service pumping). 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 three membrane filtration racks with 78 modules each to match existing racks. Ozone system improvements will include additional liquid oxygen storage with vaporizers, new ozone generators with a chiller, ozone injection and destruct skids, and a new ozone loop reactor made of stainless-steel piping. Ten GAC filters will also be added in an expansion of the PCWPF AT building.

Attachment B provides a general layout of the proposed expansion of PCWPF.

CRW staff is utilizing the GMPCM project delivery method for construction of the PCWPF Expansion Project. The GMPCM method involves hiring a CM/GC to perform contract administration and to guarantee a maximum price for the complete project. The owner and CM/GC agree on the price before the construction phase begins and all work is awarded through a competitive subcontractor bidding process.

The Owner, CM/GC and Engineer work collaboratively to design a project that fits a given budget and adjustments to the project design and/or budget are made during the design phase to ensure a successful project that meets the Owner's expectations regarding cost, quality and schedule. The CM/GC's expertise in construction, contracting, and estimating can influence decisions made by the design consultant to keep project costs to a minimum in a manner consistent with the owner's objectives for quality and functionality. With this end in mind, CRW selected Garney Companies, Inc. in December 2023 through a competitive process that included advertising for requests for qualifications and requests for proposals.

Garney's preconstruction services have included, but were not limited to; project management, budgeting, estimating, scheduling, constructability reviews, value analysis of all systems and components, determination of sequencing the work, information and reporting systems, subcontractor bid strategies and procurement throughout the construction document design phase. Garney attended all regularly scheduled project meetings during the design phase.

WP#1 (First Amendment to Construction Contract) was awarded to Garney in May 2024 and allows Garney to purchase equipment systems with long lead times and to maximize earthwork and piping activities beginning later this year. The design team pulled the ozone system from WP#1 to allow Garney additional time to receive bids from Pinnacle Ozone Solutions, LLC (Pinnacle), another qualified ozone system provider. Garney also received additional bids for vertical turbine pumps which were moved from WP#1 to WP#2. WP#2 (Second Amendment) was awarded in July 2024 to Garney and included the ozone system and high service and membrane feed pumps that provided the best value and quality for the project.

This currently proposed WP#3 (Third and final Amendment) will include reinforced concrete work to construct the below grade concrete basins for the pre-treatment building addition. Also included is facility process piping & equipment, masonry and roofing work for the pre-treatment building plus a new building addition to house additional GAC treatment units. All HVAC and electrical work necessary for new building additions and for wiring new treatment systems is also part of WP#3. The electrical subcontract includes the supervisory control and data acquisition (SCADA) work item with all the software and hardware necessary to integrate new treatment systems with the original PCWPF Operator control stations.

Item #: 5. File #: WC 2025-018

The total construction cost including FGMP's for WP#1, WP#2, and WP#3 is \$67,443,732. The design team worked together to keep overall project costs the same compared with the original IGMP for total project.

WP#3 was advertised publicly by Garney and included the remaining work needed to complete the project. Approving WP#3 allows Garney to purchase long lead items like electrical and building components at the current best pricing. Garney will contact suppliers upon notification of award and begin working on submittal packages to be reviewed by the CRW design team.

The schedule for constructing the facility proposed by Garney fits within the Town's expectations and requirements. Final construction completion of the project is scheduled for spring 2028. This completion schedule will be on time for when water from the facility will be needed to meet the summer demands of 2028.

Budget Impact

Funding for this project was included in the 2025 budget in the project fund shown below. Current account balance in this account is approximately \$52,273,254.

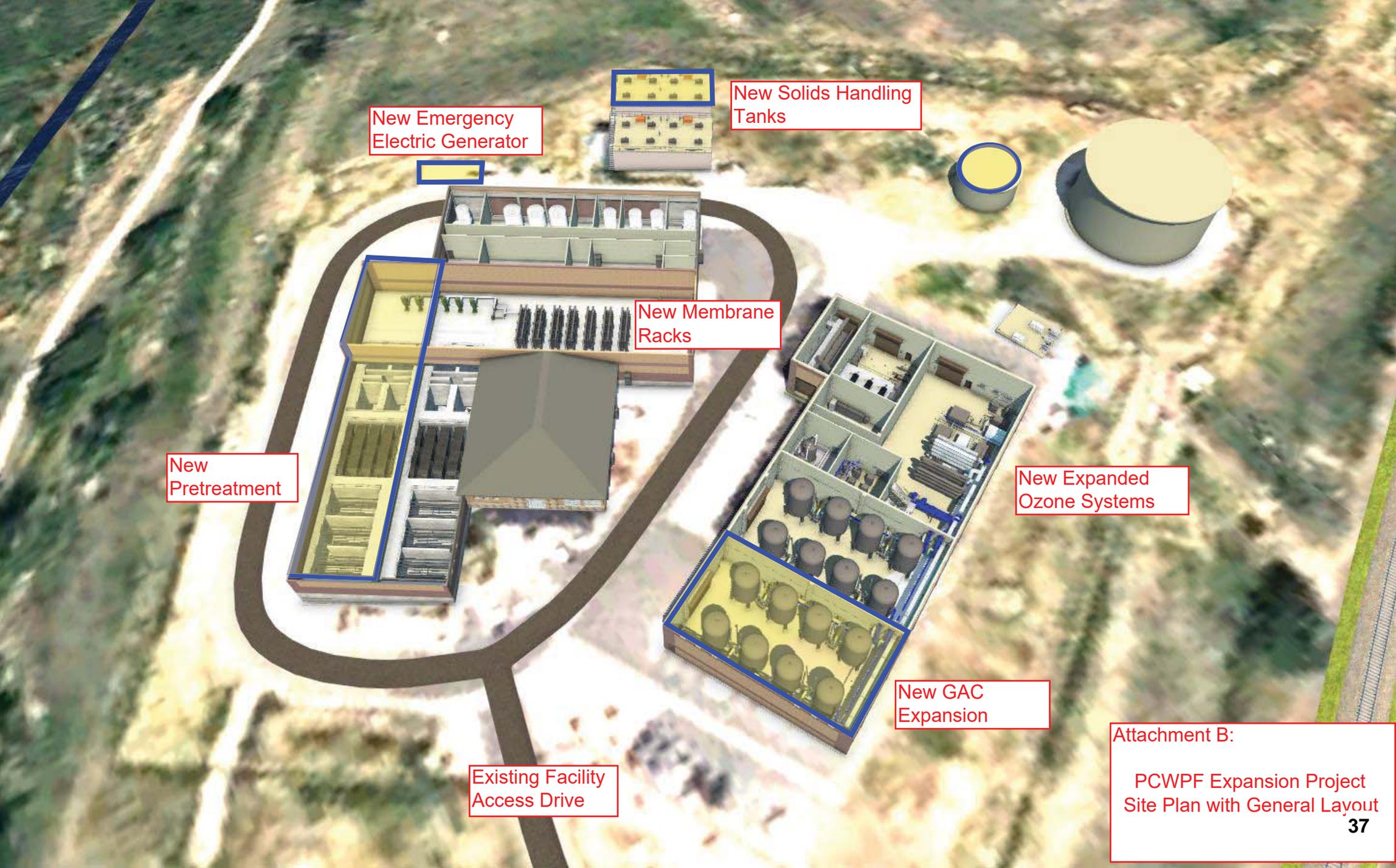
Project	Account Number	This Contract
Advanced Oxidation Facility	211-4375-443-77-75	\$41,821,534

Proposed Motion

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

Attachments

- Attachment A: Resolution *(Not Attached)*
- Exhibit 1: Third Amendment to the Construction Agreement *(Not Attached)*
- Attachment B: Location Map



New Emergency Electric Generator

New Solids Handling Tanks

New Membrane Racks

New Pretreatment

New Expanded Ozone Systems

New GAC Expansion

Existing Facility Access Drive

Attachment B:
PCWPF Expansion Project
Site Plan with General Layout
37



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 6. **File #:** WC 2025-019

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Shawn Griffith, Assistant Director of Operations

Resolution Approving the Purchase of a Vac Truck
Town Council Agenda Date: March 18, 2025

Executive Summary

Proposed Motion

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

Attachments



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 7. **File #:** WC 2025-020

To: Members of the Castle Rock Water Commission

From: Mark Marlowe, P.E., Director of Castle Rock Water
Roy Gallea, P.E., Engineering Manager
Erik Dam, P.E., CFM, Project Manager

Resolution Approving a Construction Contract Between the Town of Castle Rock and 53 Corporation, LLC for the East Plum Creek Reach 5 Phase II Project [East Plum Creek west of the Plum creek Water Purification Facility]
Town Council Agenda Date: March 18, 2025

Executive Summary

Proposed Motion

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

Attachments

Attachment A: Resolution or Ordinance
Exhibit 1: Construction Contract
Attachment B: Project Site Map



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 8. **File #:** WC 2025-021

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
Lauren Moore, Water Resources Project Manager

Resolution Approving a Construction Contract with ???? for the 2025 Denver Basin Aquifer Wells Rehabilitation and Pumping Equipment Replacement Project [Three wells within the Meadows, Founders, and Castle Oaks subdivisions] **DRAFT**
Town Council Agenda Date: March 4, 2025

Executive Summary

The purpose of the resolution (**Attachment A**) is to request Town Council approval of a Construction Contract (**Exhibit 1**) with XXX (XXX) for the 2025 Denver Basin Aquifer Well Rehabilitation and Pumping Equipment Replacement Project. In 2016, Castle Rock Water started a planned well rehabilitation program. This program is designed to help maintain water production yields from our current deep well assets and to reduce the likelihood of emergency well failures. The program targets wells that are showing declines in well yield and/or have been identified as equipped with older pumping equipment. This program has proven successful over the past nine years due to limited well failures during peak demand season, increased well efficiencies, decreased power consumption, and increases in well yield. The 2023/2024 rehab project included five wells and contributed to an increase in well efficiency of 9% over the past year, as shown below.

Year	Well Production of 2023/2024 Rehab Project Wells
2023 (pre-rehab)	727 gpm
2024 (post-rehab)	790 gpm

This spring, CRW is targeting three Denver Basin wells for planned rehabilitation and equipment replacement with XXX. **Attachment B** shows the locations of the wells that will be rehabilitated. CRW recommends approval of a construction contract with XXX in the amount of \$XXX,XXX.XX plus a ten percent Town-managed contingency in the amount of \$XX,XXX for a total project cost with XXX of \$XXX,XXX.XX. The schedule is critical for this project given the need for these wells during irrigation season. Work will begin immediately upon contract approval and is scheduled for substantial completion by May 2025.

Notification and Outreach Efforts

All work will be completed on Town of Castle Rock property. Notification and outreach efforts will include postcard mailers to nearby homes describing the project details such as location, dates, and work hours. Additionally, the project will be listed on the Castle Rock Water website.

Discussion

It is important to keep our existing infrastructure operating in an efficient manner to ensure that peak water demands during the summer months can be met, without resorting to water curtailment measures due to well failures. In order to do this, the Water Resources Division has established a yearly rehabilitation and equipment replacement program for priority deep Denver Basin wells. A formalized program helps mitigate emergency well services due to pumping equipment failure. This is accomplished by identifying the wells that are showing declines in production due to biofouling and wells with older pumping equipment. Replacing older pumping equipment often provides the opportunity to resize equipment so that better well efficiency is achieved, reducing the long-term costs of operating the wells. CRW typically budgets \$1,000,000 annually for repair and maintenance.

The following wells are identified for the 2025 Denver Basin Aquifer Well Rehabilitation and Pumping Equipment Project: Arapahoe Aquifer Wells CR-28R, CR-39, and CR-123. The combined daily production from the wells is 1.0 million gallons per day, which collectively represents approximately 5% of our 5-year average peak Summer daily demand.

Castle Rock Water sent out an Invitation to Bid on Rocky Mountain BidNet. The following table is a summary of the bids:

XXX	XXX	XXX
\$XXX	\$XXX	\$XXX

Following conversations with the bidders related to schedule and pricing, CRW Staff decided to move forward with XXX. XXX has successfully worked with the Town on previous well rehabilitation projects, including XXX.

Budget Impact

Funding for the project will come from the following account: CIP Repair and Maintenance - Wells 210-4250-442.40-37, which has a balance of \$1,000,000.

Project Account	Contract Amount	Contingency	Total Authorization
210-4275-442.40-37 Repair & Maintenance - Wells - 2025	\$XXX	\$XXX	\$XXX

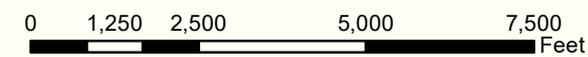
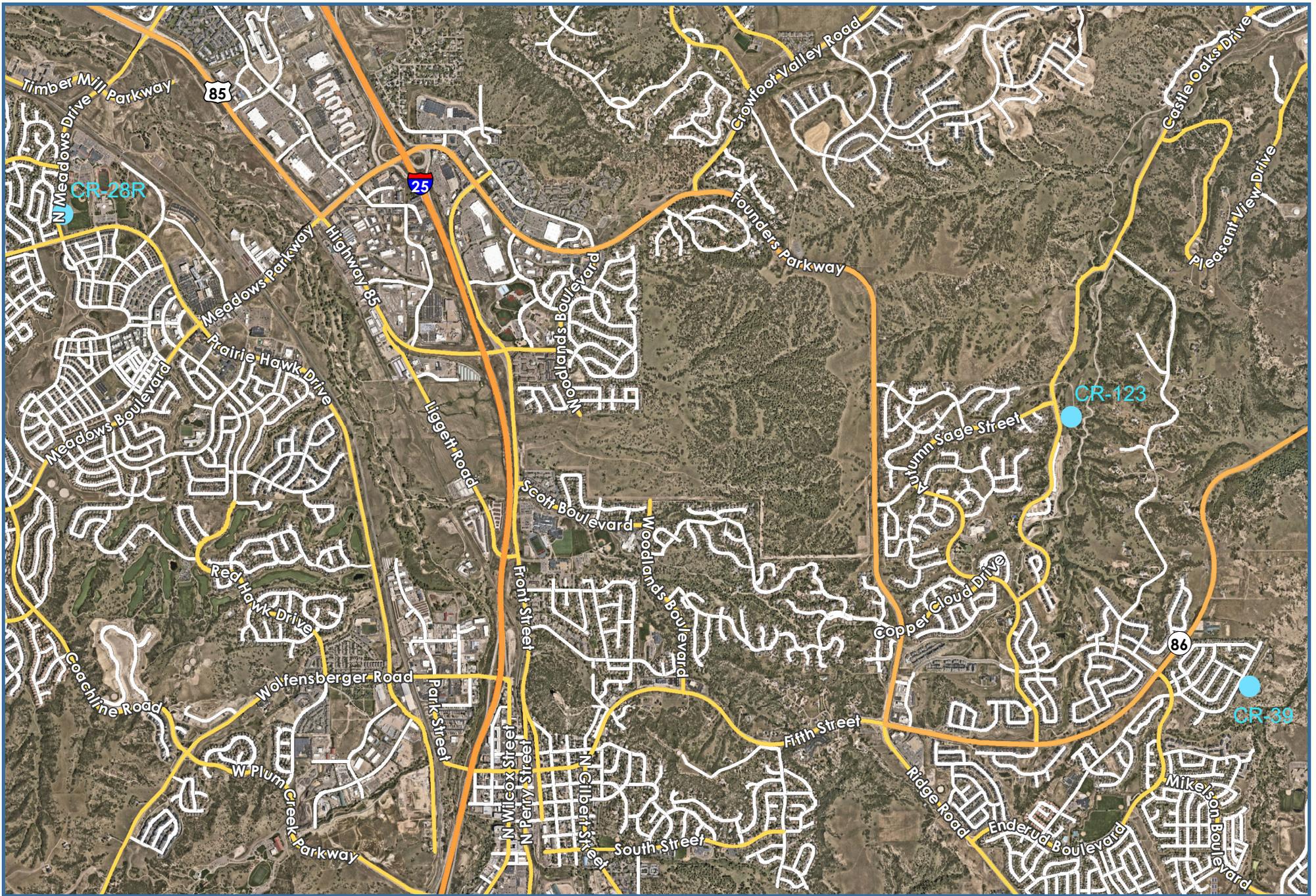
Item #: 8. File #: WC 2025-021

Proposed Motion

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

Attachments

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



Date: 1/22/2025 1 inch = 2,845 feet

Document Path: \\crsan1\UTShare\GIS\Standard Maps\10.6\Letter LndScp.mxd



Disclaimer: The data presented has been compiled from various sources, each of which introduces varying degrees of inaccuracies or inconsistencies. Such discrepancies in data are inherent and in supplying this product the Town of Castle Rock assumes no liability for its use or accuracy. Questions or comments regarding the cartographic composition of this map including, but not limited to, errors, omissions, corrections, and/or updates, should be directed to the Utilities Department, Town of Castle Rock, (720) 733-6000. Copyright 2024, Town of Castle Rock Utilities Mapping.

CASTLE ROCK UTILITIES MAP
(INTERNAL USE ONLY)



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 9. **File #:** WC 2025-022

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

AMI Program Update

Town Council Agenda Date: March 4, 2025

Executive Summary

This will be a presentation only item.



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 10. **File #:** WC 2025-023

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
Scott Tait, P.E. Water Resources Project Manager

Update on Tallgrass Project
Town Council Agenda Date: NA

Executive Summary

This will be a presentation only item.



Town of Castle Rock

Agenda Memorandum

Agenda Date: 2/26/2025

Item #: 11. File #: WC 2025-024

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 the month include:

There are no items at this time.