



# Five Year Strategic Plan

## 2019 - 2023

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Providing our community with exceptional service  
that protects public health and balances social, environmental  
and fiscal responsibilities in a sustainable manner.

May 2019

VON AHLENE  
PHOTOGRAPHY





# Five Year Strategic Plan: 2019 – 2023

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## Acknowledgements

The development of the Castle Rock Water Five Year Strategic Plan for 2019-2023, was a team effort led by Castle Rock Water staff across all divisions. The following staff members made significant contributions of time and input on this document, in collaboration with Mark Marlowe, Director of Castle Rock Water; Tim Friday, Assistant Director; and Jim Ginley, Independent Consultant.

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## Dear Customers, Stakeholders, and Castle Rock Water Staff:

Colorado is expected to continue to grow at a rapid pace in the coming decades, and Castle Rock is getting its fair share of this growth. With this growth comes the responsibility to develop in a sustainable manner, one where we can continue to enjoy the necessities of life along with the amenities afforded to us in this modern world of seemingly unlimited technology. Water in the Western U.S. is a precious commodity that we sometimes take for granted. Responsible use is paramount to thriving in our semi-arid climate and Castle Rock Water believes in using this resource responsibly, and working towards a long-term, sustainable water system for generations to come. The past fifteen years have proven to be challenging, yet we have reduced water consumption from an average of 137 gallons per person per day to 115. Along with the reduction in per capita use, we have diversified our water supply from 100 percent non-renewable groundwater to include more than 29 percent renewable water on an annual basis. Our ultimate goal is to achieve 75 percent or more renewable water supply by 2050 to ensure a sustainable supply.



Over the last decade, Castle Rock Water has grown into an industry leader, providing state-of-the-art water, wastewater and stormwater services to a growing community of more than 70,000 residents. In order to ensure that we fulfill our Mission and Vision and continue to provide sustainable water, the team has updated its strategic plan.

This strategic plan builds on the successes of the past while carrying Castle Rock Water forward. The specific strategies outlined in the plan include simple solutions and leading-edge technologies. These strategies are:

- 💧 Strategy 1: Ensure long-term water;
- 💧 Strategy 2: Support, engage and inspire our team;
- 💧 Strategy 3: Enhance customer satisfaction;
- 💧 Strategy 4: Maintain financial sustainability;
- 💧 Strategy 5: Optimize infrastructure performance; and
- 💧 Strategy 6: Demonstrate industry leadership.

Our team has worked diligently to develop a five-year plan for Castle Rock Water that will guide our priorities as we continue to serve our growing community and complete our Legacy Water Projects. Castle Rock's Legacy Water Projects are designed to secure our water future by focusing on renewable water solutions. In 2018, we completed the first phase of one of our legacy water projects, the WISE project, and began receiving

imported surface water in April 2018. This strategic plan continues the tradition behind our Legacy Water Projects of drawing on the most innovative solutions.

We will continue to be an industry leader focusing on customer satisfaction and delivering outstanding quality and value. The plan also will ensure that we continue to collaborate closely with the community, our neighbors and the region as we work to provide, yet conserve, this critical resource. Much of this will be demonstrated as we move ahead on the other Legacy Water Projects working with other statewide partners to bring renewable water from other sources to the Town.

Castle Rock Water looks forward to input from you on this strategic plan as we strive toward continuous improvement to meet our Mission of “providing our community with exceptional service that protects public health and balances social, environmental and fiscal responsibilities in a sustainable manner.” Our water is one of the most important resources to ensure the long-term health of our community. As we build on the past, Castle Rock Water is absolutely committed to protecting and sustaining it for our future. The plan is available online at [CRgov.com/plans](http://CRgov.com/plans). If you have questions about the plan, please feel free to contact us at 720-733-6000 or by email at [water@crgov.com](mailto:water@crgov.com).



**WISE Pipeline under construction**



## I. Introduction

From a small reservoir in the late 1800's to tapping into the deep aquifers in the 1950's and then acquiring renewable supplies in the 2010's, Castle Rock has continued to provide a safe and reliable water supply for its residents. The needs of the community have changed over the years and Castle Rock Water continuously evaluates, plans and prepares for those changes.

Over the last two decades, we have faced immense challenges. Castle Rock Water has more than doubled in size and now has over 22,000 customer connections with more than \$600 million dollars' worth of infrastructure assets to be managed, operated, optimized, and maintained. All aspects of the water business have become more heavily regulated and increasingly technical in nature. "Total" water management, the integration of the management of water, wastewater, and stormwater as a single resource, has become a natural progression. These challenges are coupled with the Town of Castle Rock growing from 8,800 in the early 1990's, to more than 70,000 in 2018, and to an estimated 90,000 by the year 2030. Additionally, water resources have become more valuable and harder to secure in Colorado.

The department's strategic planning process was developed as a leadership tool and built on industry leading approaches. The initial 2013 Strategic Plan was the culmination of a year's worth of planning, innovative thought by the Team, input from the entire department, and vetting from the Water Commission and Town Council. This plan also specifically incorporates enterprise based plans and documents, community vision documents, and the Town's strategic and financial plans.

In 2018, the five-year plan was reviewed and realigned to incorporate the needs for the growing community, advancements in technology and resources of the department. A majority of the tactics were completed including diversifying the water supply to include renewable water and imported supplies, while also developing industry partnerships. We have begun to incorporate a comprehensive asset management system to more effectively develop consistent and planned rehabilitation, improved projections for capital projects and refined operations. Financial management plans and forecasting have been brought in-house to be able to include more concise data for enhanced management of expenditures and revenues. The next five years will build upon these achievements and focus on continuing to diversify supply sources and increase sustainability, provide better service to our customers and invest in our organization and employees.





## II. Our Mission, Vision and Values

The Town, Castle Rock Water and its residents have recognized the need for a sustainable water supply. The Mission and Vision were developed several years ago and incorporated this basic concept along with a focus on the customer, our product, public health and overall sustainability. As the Town continues to grow and change, this plan provides a roadmap to help our team continue to fulfill the Mission and Vision utilizing our Town Values.

### Our Mission

*We provide our community with exceptional service that protects public health and balances social, environmental and fiscal responsibilities in a sustainable manner.*

### Our Vision

*We will be a national leader among water utilities, focused on customer satisfaction and delivering outstanding quality and value.*

### Our Values

*Clear, direct, honest communication is the essential vehicle by which the following values are demonstrated:*

- ◆ We are accountable for behaviors, work products, successes, and failures.
- ◆ We are committed to integrity, honesty, and the highest standard of conduct and professionalism.
- ◆ We are adaptable and open to change.
- ◆ We work as a team toward common goals with a spirit of cooperation.
- ◆ We respect others. We listen to ideas and are considerate of time and priorities.
- ◆ We encourage creativity and innovation.
- ◆ We recognize and celebrate accomplishments.
- ◆ We support balance between our professional and personal lives.
- ◆ We practice responsible care for our resources, assets, and environment.
- ◆ We provide exceptional public service to internal and external customers.



**Castle Rock**

Nick Lucey, Photographer



### III. Defining and Ensuring Success

#### Effective Management and Continual Improvement

In 2014, we developed six primary strategies in response to the biggest issues facing the department at the time. These became the foundation of the plan, which we continue to implement today. In this updated plan these strategies have been fine-tuned to reflect how we have progressed in the past five years, and they continue to be our focus as we move forward. For Castle Rock Water, the strategic planning process is continuous and ongoing. This is part of the core culture of the team and will allow us to refine our strategic planning and implementation efforts and help us stay focused on the strategies, goals and tactics that will help us achieve and continue to achieve our Mission and Vision.

One of the key components of each of our core strategies is the linkage to the nationally recognized Effective Utility Management (EUM) framework. Developed by organizations such as the U.S. Environmental Protection Agency (USEPA), the Water Environment Federation (WEF), and the Denver-based American Water Works Association (AWWA), the EUM framework is designed “by utility managers for utility managers.” It is intended to provide utilities with a simple and straightforward mechanism to identify core strengths (and build on them), and identify opportunities to improve – and then embark on a step-wise process to employ best practices on the way to building an effectively managed and sustainable organization.

Based on the fundamental concepts of organizational continual improvement, the EUM framework includes two major pieces: (1) the Ten Attributes of Effectively Managed Water Sector Utilities; and (2) the Five Keys to Management Success.

#### The Ten Attributes:

- 💧 Community Sustainability (SU)
- 💧 Customer Satisfaction (CS)
- 💧 Employee and Leadership Development (ED)
- 💧 Enterprise Resiliency (ER)
- 💧 Financial Viability (FV)
- 💧 Infrastructure Strategy and Performance (IS)
- 💧 Operational Optimization (OO)
- 💧 Product Quality (PQ)
- 💧 Stakeholder Understanding and Support (SS)
- 💧 Water Resources Sustainability (WS)

#### The Five Keys:

- 💧 Leadership
- 💧 Strategic Business Planning
- 💧 Measurement
- 💧 Knowledge Management
- 💧 Continual Improvement Management Framework

Castle Rock Water has embraced the Ten Attributes for more than a decade now, including the updated version of the Attributes that were crafted and released in 2017. We have used the organizational self-assessment tool (part of the EUM guidebook or “primer”), and identified both our areas of strength and our areas that need improvement.

For strategic planning purposes, we have focused on the results of the self-assessment tool where opportunities for potential improvement were identified. Areas for improvement and the relative priority of those areas are shown in the table below as identified by staff, supervisors and the Leadership Team (LT) using the self-assessment tool. The top priorities include Employee and Leadership Development, Operational Optimization and Water Resources Sustainability. Many of the strategies, goals and tactics identified in this plan focus on improvement in these identified areas of priority.

Priority	Staff	Supervisors	LT 1st	LT 2nd
<b>1</b>	ED	OO	OO	WS
<b>2</b>	IS	FV	FV, WS	ED
<b>3</b>	WS	PQ, ER, WS, IS	WS, FV	FV, IS

Further, we have made a conscious effort to link the Ten Attributes to our core strategies (see chart below). This is reflected in the text of each strategy in this document (see pages 7-22), and provides us with a ready-made set of organizational best practices that we can draw upon as we develop the strategic goals and tactics that we will implement year after year.

### Linking Core Strategies with EUM Attributes

Castle Rock Water Strategies	Supporting EUM Attributes
<b>Strategy 1:</b> Ensure long-term water	WS, ER, IS, SU
<b>Strategy 2:</b> Support, engage and inspire our team	ED, CS, SS
<b>Strategy 3:</b> Enhance customer satisfaction	CS, SS, SU
<b>Strategy 4:</b> Maintain financial sustainability	FV, ER
<b>Strategy 5:</b> Optimize infrastructure performance	PQ, IS, OO, ER
<b>Strategy 6:</b> Demonstrate industry leadership	All Ten Attributes

## Benchmarking and Performance Measurement

The linkage also helps us measure (one of the Five Keys) and report our progress in terms that are familiar to our water sector, allowing us to compare or “benchmark” our efforts with others and communicate in terms that are easily explained and understood by our customers and stakeholders as well. Accordingly, for each of the six core strategies we have developed a set of Key Performance Indicators (KPIs). These are also listed in the body of the plan by strategy area (pages 7-22).

Some of these measures are tied to our regular participation in the AWWA Benchmarking Survey. By submitting data (annually each spring), we receive a report that shows us how we are doing relative to the other high-achieving utilities that participated in the survey that year. We track our progress from survey to survey, and we have set many of our operational and managerial performance targets in alignment with this survey. With this knowledge and the data that we gather from our other KPIs (not tied to the survey), we can track our progress on the goals and targets we have set for each of our six strategies and in turn, report that progress both internally and externally. Definitions of each performance indicator and our current and historical results are provided in Appendix A (page 25).

## Implementing the Plan or “Strategic Doing”

With our strategic framework solidly based on continual improvement and effective utility management, what remains for our team is simply a lot of hard work. What enables us to go from this strategically-focused “game plan” to actually **doing** the many activities, projects, and programs that it entails is our “plan within the plan” – that is, the implementation plan and “tactics table” that goes with it. Found in Appendix B (page 29), the Tactics Table is a comprehensive document that organizes, prioritizes, schedules, and helps us monitor the progress we are making on the many strategically focused tactics that add up to being our Strategic Plan for 2019 to 2023.

In total, 117 tactics have been identified for completion over the next five years. Some of these are continuing from our previous plan and others are brand new. Some are slated for completion in the next year or two, while others come later. In every case, the Tactics Table is our working guide and our way to track, monitor and report our progress, which will be done regularly as we go.



Plum Creek Water Purification Facility



## IV. Strategies, Goals and Tactics



**Castle Rock Water staff**  
Nick Lucey, Photographer

***“We are committed to integrity, honesty and the highest standard of conduct and professionalism.”***

## Strategy 1: Ensure long-term water

***Build a sustainable and reliable water supply by securing new and diverse renewable water supplies, responsibly managing the Town's existing groundwater supplies, and protecting watersheds in the Town.***

Ensuring water for the Town of Castle Rock now and in the future is vital to the health of our community for quality-of-life, safety and beauty. Our arid environment, a past reliance on a single source of water, and continued projections of growth, are major considerations in planning for a sustainable water solution. The goals set forth will focus on attaining renewable water comprising 75 percent of supply by 2050.

A number of the attributes identified through the Effective Utility Management initiative are also covered under this strategy including Water Resources Sustainability (WS), Enterprise Resiliency (ER), Infrastructure Strategy and Performance (IS), and Community Sustainability (SU).

### **The Goals and Tactics**

**Goal #1: *Secure water supplies to meet our customer water demands.***

#### **Tactics:**

- 💧 **1-1-1:** Maintain a current water demand and water supply forecast model, including evaluation of potential service contracts with outlying rural customers or other rural water providers where financially beneficial.
- 💧 **1-1-2:** Based on the agreement with Parker Water and Sanitation District, construct a parallel pipeline within their district so that we can have adequate capacity to receive our WISE and Box Elder water allotments.
- 💧 **1-1-3:** Purchase at least 700 acre-feet of importable renewable water rights.
- 💧 **1-1-4:** Consummate WISE option for 1,000 acre feet and update the Water Delivery Agreement (WDA) as appropriate.
- 💧 **1-1-5:** Determine how much additional capacity is needed in the WISE core infrastructure and complete the purchase.
- 💧 **1-1-6:** Complete the Newlin Gulch pipeline to Rueter-Hess Reservoir.
- 💧 **1-1-7:** Complete the construction of Castle Rock Reservoir 2.



**Goal #2: *Fully utilize groundwater and renewable supplies.***

**Tactics:**

- 💧 **1-2-1:** Maximize the use of water rights, including stormwater and reclaimed water.
- 💧 **1-2-2:** Develop a Groundwater Optimization and Sustainability Program.
- 💧 **1-2-3:** Implement the Aquifer Storage and Recovery Program, including retrofitting two existing Denver Basin wells for ASR injection.
- 💧 **1-2-4:** Develop the Town's Lawn Irrigation Return Flows (LIRFs) program.
- 💧 **1-2-5:** Maximize the amount of water stored in Rueter-Hess Reservoir each year in advance of irrigation/highest demand season.
- 💧 **1-2-6:** Develop a plan to put the Converse Well water to use.
- 💧 **1-2-7:** Install required stream gauges along East Plum Creek and its tributaries to satisfy decree requirements.
- 💧 **1-2-8:** Install infrastructure to access and divert the Town's reusable water supplies along Plum Creek.
- 💧 **1-2-9:** Expand the Plum Creek Water Purification Facility (PCWPF) to include advanced treatment.
- 💧 **1-2-10:** File a plan for augmentation for the Box Elder Project.
- 💧 **1-2-11:** Settle the Castle Pines Metropolitan District golf course irrigation water dispute.
- 💧 **1-2-12:** Construct two new Denver Basin well facilities.

**Goal #3: *Emphasize water efficiency to help reduce overall water demands.***

**Tactics:**

- 💧 **1-3-1:** Update the Water Efficiency Master Plan.
- 💧 **1-3-2:** Build a demonstration garden and showcase progressive stormwater practices at the future Castle Rock Water Administration Building.
- 💧 **1-3-3:** Monitor the impact of water efficiency plans using the new water dedication code.
- 💧 **1-3-4:** Maximize and evaluate the non-residential retrofit SmartScape Program.



**ColoradoScape Examples**



**Goal #4: *Protect our water supply sources.***

**Tactics:**

- 💧 **1-4-1:** Verify compliance with the Chatfield Reservoir Control Regulation No. 73 and set strategic priorities to preserve water quality and minimize costs.
- 💧 **1-4-2:** Evaluate the effectiveness of the Cherry Creek Basin Water Quality Authority's organizational and financial structure.
- 💧 **1-4-3:** Complete detention pond retrofits to improve water quality and reduce operational burden.
- 💧 **1-4-4:** Implement the Source Water Protection Plan.
- 💧 **1-4-5:** Get permit for discharge of Plum Creek Water Reclamation Authority effluent to Rueter-Hess Reservoir.
- 💧 **1-4-6:** Evaluate opportunities to obtain regulatory support and expand renewable water supply opportunities through the implementation of regional stream channel improvements and other watershed controls.

**Goal #5: *Develop strategic partnerships to support long-term water.***

**Tactics:**

- 💧 **1-5-1:** Develop an agreement with Parker Water and Sanitation District (PWSD) to construct an inlet structure into Rueter-Hess Reservoir. This tactic will precede tactic 1-1-6.
- 💧 **1-5-2:** Develop an agreement with Parker Water and Sanitation District to purchase capacity in the Rueter-Hess Water Purification Facility.
- 💧 **1-5-3:** Develop an agreement with Roxborough Water and Sanitation District to use their water from the Bell Mountain Denver Basin Aquifer wells in exchange for our fully reusable effluent.
- 💧 **1-5-4:** Develop an agreement with the Castle Pines Metro District to share capacity in the Plum Creek Diversion and related reuse infrastructure.
- 💧 **1-5-5:** Develop an agreement with Plum Creek Water Reclamation Authority for use of pipeline in conjunction with our Newlin Gulch pipeline project.
- 💧 **1-5-6:** Establish an irrigation district partnership in the Box Elder region.
- 💧 **1-5-7:** Develop strategic partnerships in the Lost Creek Basin.

**Key Performance Indicators (KPI):**

- Renewable Water Usage Rate (%)
- Reusable Water Usage Rate (%)
- Total Renewable Water Amount
- Total Volume Water Metered (Residential Customers)
- Total Volume Water Produced/Total Population Served



**Securing high-quality renewable water with reservoir storage, reuse development, alluvial wells, drop structures, and diversion structures.**

## **Strategy 2: Support, engage and inspire our team**

***Grow our company culture where every employee is seen as a valued member of the team by contributing daily to fulfilling our Mission and Vision, while modeling Town values.***

Water professionals must be able to deal with complex technical operations and maintenance requirements, detailed and difficult regulatory issues, and daunting long-term planning and financial management challenges. With a staff of highly trained professionals, Castle Rock Water focuses on the performance, support and development of its employees through a values-based structure. The department aims to ensure a participatory, collaborative organization dedicated to continual learning and improvement.

Major items covered in this strategy include staffing levels, communications, employee hiring, performance and retention, succession planning, and accountability. This strategy also incorporates key attributes from the Effective Utility Management initiative, including Employee and Leadership Development (ED), Customer Satisfaction (CS), and Stakeholder Understanding and Support (SS).

### **The Goals and Tactics**

**Goal #1: *Invest in our organization by recruiting and retaining competent, talented people.***

#### **Tactics:**

- 💧 **2-1-1:** Work with Human Resources, through an annual review, to ensure we have appropriate compensation and benefits in place to be competitive in the water industry.
- 💧 **2-1-2:** Leadership Team members, managers, and supervisors will seek opportunities for team members to gain certifications, attend training, and further their education, fully utilizing training budgets as appropriate.
- 💧 **2-1-3:** Continue to develop an integrated and well-coordinated Leadership Team by updating and implementing performance improvement plans.
- 💧 **2-1-4:** Develop and implement a Succession Planning Strategy for all team members.
- 💧 **2-1-5:** Review the employee turnover rate and actual resignations over the last two years to determine any trends or concerns that need to be addressed.
- 💧 **2-1-6:** Review current recruitment techniques and compare with industry standards. Make recommendations for improvement as appropriate.



**Goal #2: *Live Town values to ensure a healthy organization that will drive high performance.***

**Tactics:**

- 💧 **2-2-1:** Define and communicate organization-wide expectations for timely and responsive internal communications.
- 💧 **2-2-2:** Train employees on effective communication techniques, with all team members receiving annual training at a minimum.
- 💧 **2-2-3:** Train and educate team members on the connection between Town values and a healthy, high-performance organization through monthly presentation (at the staff meeting) on one of the values.
- 💧 **2-2-4:** Actively obtain feedback from the team on performance for staff meetings, Leadership Team, and other areas related to Town values, with at least two staff-wide opportunities per year.
- 💧 **2-2-5:** Revisit work/life balance programs that have been in place since 2016 and recommend updates and improvements.
- 💧 **2-2-6:** Develop guidelines for conducting teambuilding activities at the Division level.



***“We work as a team toward common goals with a spirit of cooperation.”***

**Goal #3:** *Integrate health and safety into the daily functions of Castle Rock Water to systematically eliminate the root causes of deficiencies, and to consistently and continuously improve safety performance.*

**Tactics:**

- 💧 **2-3-1:** Develop and implement a Health and Safety Management System (HSMS).
- 💧 **2-3-2:** Establish processes to ensure effective employee participation in the HSMS.
- 💧 **2-3-3:** Identify and prioritize health and safety risks/issues; develop risk reduction objectives and implementation plans for achieving the objectives.
- 💧 **2-3-4:** Apply the implementation plans; conduct training; establish document and record control.
- 💧 **2-3-5:** Evaluate overall safety rating performance and establish corrective actions.
- 💧 **2-3-6:** Establish a HSMS review process.

**Key Performance Indicators (KPI):**

- Days without a Lost Time Injury/Illness
- Employee Turnover Rate
- MGD Processed/Employee (Wastewater)
- MGD/Employee (Water)
- OSHA Incident Rate
- Overtime Hours per Employee (by Division)
- Total Number of Incidents
- Training Hours per Employee

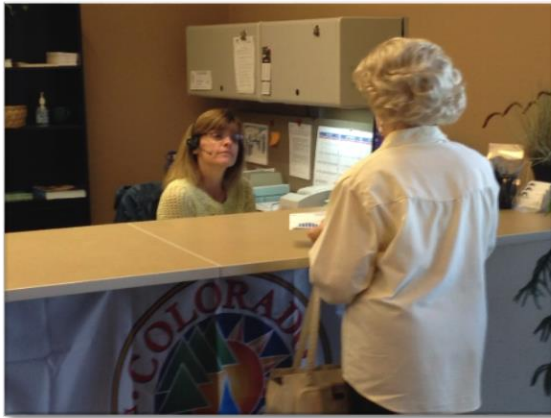


**Safety Stand-Down for all  
Castle Rock Water employees**



## Strategy 3: Enhance customer satisfaction

*In collaboration with our customers, seek and apply innovative approaches to provide exceptional customer service.*



*"We provide exceptional customer service to internal and external customers."*

Castle Rock Water's vision is to be a national leader among water utilities, focused on customer satisfaction and delivering outstanding quality and value. Customer Satisfaction (CS), Community Sustainability (SU) and Stakeholder Understanding and Support (SS) are the customer service focused attributes of an effectively managed utility that will assist Castle Rock Water in attaining its vision. Some of the major items covered in this strategy include appropriate levels of service, communications with internal and external customers, utilization of technology, and partnerships with others.

### The Goals and Tactics

**Goal #1:** *Identify and respond to stakeholder needs, perceptions and expectations through effective communication.*

#### **Tactics:**

- 💧 **3-1-1:** Identify and address specific services where the current level of service can be enhanced.
- 💧 **3-1-2:** Use the biennial Town-wide survey to better define customer needs, perceptions and expectations, and respond accordingly.
- 💧 **3-1-3:** Measure the effectiveness of our external communications to better strategize outreach efforts.



**Goal #2: *Provide innovative and cost-effective approaches to exceptional customer service.***

**Tactics:**

- 💧 3-2-1: Evaluate our billing system to determine if opportunities exist for improvement.
- 💧 3-2-2: Partner with others to broaden our outreach effort.
- 💧 3-2-3: Evaluate and identify enhancements to Castle Rock Water's websites.
- 💧 3-2-4: Develop and utilize an outgoing messaging system to customers.
- 💧 3-2-5: Evaluate business case for being able to take payments in the field for disconnects.
- 💧 3-2-6: Implement advanced metering infrastructure (AMI) solution.

**Goal #3: *Increase the effectiveness of communication and education to our customers.***

**Tactics:**

- 💧 3-3-1: Evaluate and define our social media strategy.
- 💧 3-3-2: Educate our customers on the value of water.
- 💧 3-3-3: Identify target audiences and implement education strategies for protecting stormwater quality.
- 💧 3-3-4: Develop and deliver messaging on flood safety.
- 💧 3-3-5: Create visual displays to educate the general public about water.
- 💧 3-3-6: Create an online Water Wiser course.
- 💧 3-3-7: Develop videos on how to program different smart irrigation controllers.

**Key Performance Indicators (KPI):**

- Cost of Residential Service (Average Monthly Bill)
- Customer Accounts per Employee
- Sewer Overflow Rate
- Stormwater Customer Inquiries per Total Single-Family Equivalents (SFEs)
- Technical Service Complaints (Water Quality)
- Total Volume Water Metered (Residential Customers)
- Total Volume Water Produced/Total Population Served
- Water Distribution System Integrity

## **Strategy 4: Maintain financial sustainability**

*Implement viable and sustainable financial programs that support the Town goals and initiatives.*

Castle Rock Water, being a cost of service entity, understands the importance of closely monitoring and updating the financials annually for each of the four enterprise funds to ensure affordable and sustainable financial performance. Reviewing the budget and conducting a rates and fees study annually provide updated cost, revenues, reserve balances, and overall financial stability of the organization, while continuing to provide transparency to the customer. Following closely the practices found in the EUM attributes of Financial Viability (FV) and Enterprise Resiliency (ER), and continuing to review the key performance indicators to help us compare our organization to others and ensure we are providing the best products, services and value to the customer.

### **The Goals and Tactics**

**Goal #1: *Strive to maintain sustainable rates and fees, and demonstrate fiscal responsibility, accountability and transparency.***

#### **Tactics:**

- 💧 **4-1-1:** Implement the Obligation Management Tool to ensure future financial commitments are being met.
- 💧 **4-1-2:** Develop an annual report to increase transparency to customers and stakeholders.
- 💧 **4-1-3:** Complete/implement cross connection database integration from XC2 to Billmaster.
- 💧 **4-1-4:** Consummate the two extra-territorial service agreements that are currently being negotiated, and utilize the surcharge allowed under the Town code in these agreements as needed.
- 💧 **4-1-5:** Maximize leasing opportunities for idle water rights.
- 💧 **4-1-6:** Evaluate the use of renewable energy, like solar power, to reduce operational costs.

**Goal #2: *Operate on a cost-of-service basis and effectively manage expenditures and revenues.***

**Tactics:**

- 💧 **4-2-1:** Create a risk assessment tool or approach to adequately plan and budget for replacement and rehabilitation of aging infrastructure.
- 💧 **4-2-2:** Identify a solution to allow electronic routing and signatures for financial and contractual documents.
- 💧 **4-2-3:** Change our water budget allocations for non-residential customers to reflect the actual landscape type.
- 💧 **4-2-4:** Change our water budget allocations for residential customers to reflect actual landscape type.
- 💧 **4-2-5:** Evaluate the applicability of using the most recent fly-over data to adjust impervious surface values for all customers.
- 💧 **4-2-6:** Optimize the balance/ratio between capital budgeting and actual capital projects spending on a year-over-year basis.

**Key Performance Indicators (KPI):**

- Apparent Water Loss
- Cost of Residential Service (Average Monthly Bill)
- Customer Accounts per Employee
- Debt Ratio
- Energy Consumption Efficiency (Water)
- Operating Ratio
- Operational Cost (\$/MGD) (Wastewater)
- Operational Cost (\$/MGD) (Water)
- Real Water Loss
- Triple Bottom Line Index



**Sellars Gulch**



**McMurdo Gulch**

## Strategy 5: Optimize infrastructure performance

*Identify and demonstrate best management practices for all of Castle Rock Water's infrastructure.*

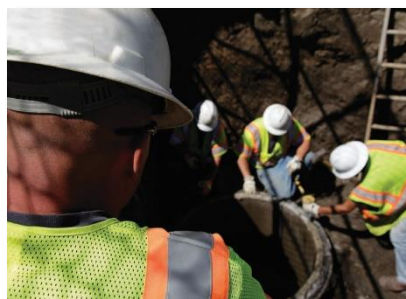
Castle Rock Water is responsible for operating more than \$638 million worth of infrastructure. In order to meet our Mission and Vision, we must continually evaluate the operation of this infrastructure and work to optimize its performance, both on a daily basis and over the long-term. Optimizing the operation and maintenance of the infrastructure today ensures that it will continue to operate for its full design life. Product Quality (PQ), Enterprise Resiliency (ER), Operational Optimization (OO), and Infrastructure Strategy and Performance (IS) are important Effective Utility Management attributes addressed in this strategy.

### The Goals and Tactics

**Goal #1: *Maintain and enhance infrastructure stability and performance to optimize life-cycle costs.***

#### **Tactics:**

- 💧 **5-1-1:** Develop and implement remaining preventive maintenance programs.
- 💧 **5-1-2:** Develop a strategically-focused Asset Management Plan.
- 💧 **5-1-3:** Improve water loss control through participation in the Colorado Water Loss Initiative.
- 💧 **5-1-4:** Evaluate the cost-benefit of adopting privately-owned stormwater facilities.
- 💧 **5-1-5:** Achieve annual preventive maintenance goals.



**Preventive and ongoing infrastructure maintenance**



**Goal #2: *Develop and manage infrastructure to keep pace with growth.***

**Tactics:**

- 💧 **5-2-1:** Complete design and construction of the Castle Rock Water Administration Building.
- 💧 **5-2-2:** Keep the Plum Creek Water Reclamation Authority's plant expansion on schedule, within budget and in accordance with design.
- 💧 **5-2-3:** Update the Drainageway Master Plans.
- 💧 **5-2-4:** Implement 24/7 coverage at the water treatment plants.
- 💧 **5-2-5:** Develop training and certification programs for construction inspectors.

**Goal #3: *Protect infrastructure through emergency preparedness, planning and response.***

**Tactics:**

- 💧 **5-3-1:** Perform a risk and resiliency assessment, and provide certification of completion to the EPA by December 31, 2020.
- 💧 **5-3-2:** Update our existing Emergency Response Plan (ERP) according to the risk and resiliency assessment.
- 💧 **5-3-3:** Provide periodic training and conduct periodic drills based on the Emergency Response Plan, including coordination with Douglas County and the Town of Castle Rock's Emergency Response Plan.
- 💧 **5-3-4:** Conduct training on the Emergency Action Plan.
- 💧 **5-3-5:** Develop and implement a written security plan and programs for physical and cyber threats.
- 💧 **5-3-6:** Develop and implement an on-call manual and related training.

**Key Performance Indicators (KPI):**

- Apparent Water Loss
- Compliance Rate
- Energy Consumption Efficiency (Water)
- MGD/Employee (Water)
- MGD Processed/Employee (Wastewater)
- Operating Ratio
- Operational Cost (\$/MGD) (Wastewater)
- Operational Cost (\$/MGD) (Water)
- Real Water Loss
- Sewer Overflow Rate
- Stormwater Operating Costs per Total SFEs
- Technical Service Complaints (Water Quality)
- Water Distribution System Integrity

## Strategy 6: Demonstrate industry leadership

*Demonstrate industry leadership through continuous improvement, investing in our infrastructure, and delivering the highest quality water.*

Being a leader in the industry requires that best management practices be incorporated into our operations every day. Industry leadership will benefit our customers and the community by ensuring that Castle Rock Water continues to provide the best possible service, highest level of public health, most advanced and robust infrastructure, and best value. This strategy includes elements of all of the attributes identified in the Effective Utility Management framework: Product Quality (PQ), Customer Satisfaction (CS), Operational Optimization (OO), Employee and Leadership Development (ED), Financial Viability (FV), Community Sustainability (SU), Enterprise Resiliency (ER), Infrastructure Strategy and Performance (IS), Water Resources Adequacy (WS), and Stakeholder Understanding and Support (SS).

### The Goals and Tactics

**Goal #1: Strive for continuous improvement throughout the organization through the application of the principles of Deming's Quality Cycle (Plan, Do, Check, Act).**

#### **Tactics:**

- 💧 **6-1-1:** Conduct a periodic organization-wide assessment using the Effective Utility Management (EUM) framework.
- 💧 **6-1-2:** Develop an action plan to address areas of improvement as identified by our annual participation in the AWWA Benchmarking Survey.
- 💧 **6-1-3:** Participate in the Partnership for Safe Water programs.



Storing renewable water



Drilling deep water wells

**Goal #2: *Deliver a high-quality product and service to our community.***

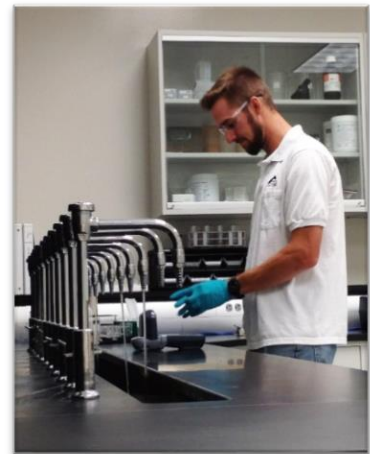
**Tactics:**

- 💧 **6-2-1:** Ensure 100 percent compliance with primary and secondary drinking water standards through an annual review and assessment of our performance.
- 💧 **6-2-2:** Establish health-based drinking water quality goals that go above and beyond federal and state standards, based on an annual review.
- 💧 **6-2-3:** Evaluate Operations performance annually relative to conformance with wastewater collection system Best Management Practices, and adjust accordingly.
- 💧 **6-2-4:** Request an annual review of Plum Creek Water Reclamation Authority's compliance record relative to the Colorado Discharge Permit System.
- 💧 **6-2-5:** Achieve top level performance on all state-conducted sanitary surveys and/or any sanitary surveys conducted by a third-party.
- 💧 **6-2-6:** Ensure 100 percent compliance with MS4 permit through an annual review and assessment of our performance.
- 💧 **6-2-7:** Ensure 100 percent compliance with revised backflow requirements by the end of 2020.

**Goal #3: *Be a forward-thinking organization.***

**Tactics:**

- 💧 **6-3-1:** Plan for Direct Potable Reuse (DPR) by designing systems to meet the expected regulatory requirements.
- 💧 **6-3-2:** Continue participation in the DPR guideline working group to assist with the development of regulatory guidelines for Colorado.
- 💧 **6-3-3:** Implement the ColoradoScapes Plan.
- 💧 **6-3-4:** Develop standards and processes for the implementation and use of graywater systems in Castle Rock.
- 💧 **6-3-5:** Evaluate opportunities to incorporate LEED standards into new buildings and implement if cost-effective.



**Plum Creek Water  
Purification Facility  
Laboratory**

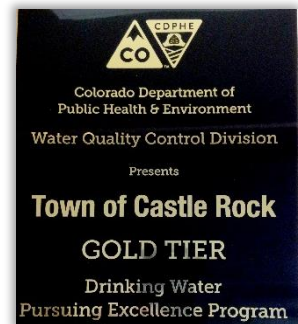
**Goal #4: *Be a recognized leader among our water utility peers.***

**Tactics:**

- 💧 **6-4-1:** Establish an Apprenticeship Program in collaboration with local colleges/universities that will attract new people to the water utility industry.
- 💧 **6-4-2:** Reduce per capita water consumption to 100 gpcd or less.
- 💧 **6-4-3:** Maintain Gold status in the State of Colorado Pursuing Excellence Program.
- 💧 **6-4-4:** Maintain Gold status in the Colorado State Environmental Leadership Program.

**Key Performance Indicators (KPI):**

- Apparent Water Loss
- Compliance Rate
- Cost of Residential Service (Average Monthly Bill)
- Customer Accounts per Employee
- Days without a Lost Time Injury/Illness
- Debt Ratio
- Employee Turnover Rate
- Energy Consumption Efficiency (Water)
- MGD/Employee (Water)
- MGD Processed/Employee (Wastewater)
- Operating Ratio
- Operational Cost (\$/MGD) (Wastewater)
- Operational Cost (\$/MGD) (Water)
- OSHA Incident Rate
- Real Water Loss
- Renewable Water Usage Rate (%)
- Sewer Overflow Rate
- Technical Service Complaints (Water Quality)
- Total Number of Incidents
- Total Renewable Water Amount
- Total Volume Water Metered (Residential Customers)
- Total Volume Water Produced/Total Population Served
- Training Hours per Employee
- Triple Bottom Line Index
- Water Distribution System Integrity





## V. Reporting and Updates

This Strategic Plan will be updated at least annually in response to new challenges and accomplished tactics from the previous year. Castle Rock Water will update Town Council and the Castle Rock Water Commission at least one time per year, on progress regarding this five year strategic plan. In addition, quarterly updates will be included in the Monthly Department Report which is distributed to Council, the Commission, the Town Manager, and the department staff each month and made available to the public on the Town's website. Progress on some of the strategies will be provided quarterly in the form of the KPIs identified in the various strategies, and again provided in the Monthly Department Reports. Further, key programs and tactics will be incorporated into the Major Projects Work Program for the Town, as appropriate. Town Council receives quarterly updates on the Major Projects Work Program.

Internally, Castle Rock Water's Leadership Team will meet to review progress at least two times per year. Updates will be provided to supervisors and managers at the Quarterly Supervisor Meeting. Updates will be provided to the full staff at monthly staff meetings, periodically.

## VI. References

*The Ten Attributes of Effectively Managed Water Sector Utilities*  
*Qualserve Self-Assessment and Peer Review, July 2006*  
*Columbus Water Works Five Year Strategic Plan FY 2013-2017*  
*Colorado Spring Utilities 2015 Strategic Plan*  
*Santa Clara Valley Water District Strategic Plan 2010-2015*  
*Tucson Water 2020 Strategic Plan*  
*Blue Horizon 2020, DC Water Strategic Plan*  
*Fairfax Water Strategic Plan 2020*  
*Strategic Plan Orange Water and Sewer Authority, Carrboro, NC*  
*2017 AWWA Utility Benchmarking, Performance Management for Water and Wastewater (2016 Data)*



**Community involvement at the annual Spring Up the Creek cleanup event.**

## VII. Appendices

**Appendix A: Key Performance Indicators (KPI)**

**Appendix B: Tactics Table**

**Appendix C: Yearly Updates**



***"We practice responsible care for our resources, assets and environment."***



## Appendix A

### Key Performance Indicators (KPI) Definitions

**Apparent Water Loss:** Total volume of water lost due to unauthorized consumption, customer metering inaccuracies and systematic data handling errors divided by (average daily production \* 365 days).

**Compliance Rate:** Number of days in compliance with applicable regulations divided by 365 days.

**Cost of Residential Service (Average Monthly Bill):** Average monthly cost of water/wastewater/stormwater service for residential customers.

**Customer Accounts per Employee:** Measure of employee efficiency as expressed by the total number of active accounts serviced by utility employees (as FTE's) per year. Total number of active accounts divided by the total number of Full-Time Employees (FTEs).

**Days without a Lost Time Injury/Illness:** Numbers of days without time lost due to an injury or illness.

**Debt Ratio:** Quantifies a utility's level of indebtedness. It is a measure of the extent to which assets are financed through borrowing. The higher the debt ratio, the more dependent the utility is on debt financing. Total liabilities divided by total assets.

**Employee Turnover Rate:** Quantifies annual employee departures normalized by the utility's workforce (as FTEs) per year. Number of regular employee departures during the reporting period divided by the total number of FTEs. Regular employee departures include employees who leave voluntarily, retire, or are let go during the reporting period.

**Energy Consumption Efficiency (Water):** The energy consumed to supply potable water on an annual basis normalized by water demand in million gallons (MG). Energy consumption based on purchases of electricity, natural gas, and other fuels (minus stored amounts) converted to kBTU divided by (average daily demand \* 365 days).

**MGD/Employee (Water):** Average daily production divided by total number of FTEs.

**MGD Processed/Employee (Wastewater):** A measure of employee efficiency as expressed by the amount of wastewater processed by utility employees (FTEs) per year. Average Million Gallons per Day (MGD) wastewater processed divided by the total number of FTEs.

**Operating Ratio:** Operating expenses divided by operating revenue or net sales, taking into account expansion or debt repayment. Total Operations & Maintenance (O&M) costs divided by total operating revenue.

**Operational Cost (\$/MGD) (Wastewater):** Total O&M costs for wastewater divided by (average daily production \* 365 days).

**Operational Cost (\$/MGD) (Water):** Total O&M costs for water divided by (average daily production \* 365 days).

**OSHA Incident Rate:** Total number of injuries or illnesses \* 200,000 divided by the total number of hours worked by all employees.

**Overtime Hours per Employee:** Total number of overtime hours divided by the total number of FTEs.

**Real Water Loss:** Total volume of water lost due to leakage on transmission and distribution mains, leakage and overflows at utility storage tanks, and leakage on service connections up to the point of customer metering divided by (average daily production \* 365 days).

**Renewable Water Usage Rate (%):** Total volume of renewable water produced divided by the total volume of water produced.

**Reusable Water Usage Rate (%):** Total volume of reusable water used divided by total volume of reusable water available.

**Sewer Overflow Rate:** Total number of sewer overflows \* 100 divided by total miles of collection system piping.

**Stormwater Customer Inquiries per Total Single Family Equivalents (SFEs):** Total number of stormwater customer inquiries divided by total Stormwater SFEs.

**Stormwater Operating Costs per Total SFEs:** Total stormwater operating costs divided by total Stormwater SFEs.

**Technical Service Complaints (Water Quality):** Total number of technical service complaints divided by the total number of active accounts.

**Total Number of Incidents:** Total number of incidents by division by injury type.

**Total Renewable Water Amount:** Total amount of renewable water in million gallons.

**Total Volume Water Metered (Residential Customers):** Total volume of water metered for residential customers.

**Total Water Volume Produced/Total Population Served:** Total water volume produced divided by total population served.

**Training Hours per Employee:** Total number of training hours completed divided by the total number of FTEs.



***Triple Bottom Line Index:*** Measures a utility's sustainability efforts based on a balanced view of environmental, social, and economic considerations.

***Water Distribution System Integrity:*** (Total number of leaks or breaks divided by total miles of distribution system piping) \*100.

Castle Rock Water AWWA KPI Dashboard													
↑ Performance Improving	Top Quartile AWWA												
↓ Performance Declining	Median Quartile AWWA												
↔ Performance Staying about the same	Bottom Quartile AWWA												

	Units	Frequency	2014	2015	2016	2017	2018	Quartile	Progress	AWWA Top	AWWA Median	AWWA Bottom
<b>Organizational Development</b>												
1. Customer Accounts per Employee	Accounts	A	533	458	492	481	440	↔	↔	609	492	367
2. Employee Turnover Rate	Employees / Year	A	12%	19%	15%	14%	19%	↔	↓	5%	8%	11%
3. Training Hours per Employee	Hours	A	31	30	35	39	32	↔	↑	27.1	13.9	5.9
4. Overtime Hours per Employee	Hours	A	32	33	28	54	43	↔	↑			
<b>OSHA Safety Indicators</b>												
5. OSHA Incident Rate	--	M	21	10	4	3	5	↔	↓	2.1	14.3	50.9
6. Days without a Lost time Injury/Illness	Days	M	187	207	573	938	48	↔	↓	-	-	-
7. Total # of Incidents	Incidents	M	17	13	9	2	7	↔	↓	4.3	16.0	47.8
<b>Business Operations</b>												
8. Debt Ratio	%	A	19%	15%	15%	13%	12%	↔	↔	20%	33%	52%
9. Operating Ratio	%	Q	33%	34%	32%	28%	31%	↔	↔	46%	55%	68%
10. Energy Consumption Efficiency (Water)	kBTU/MG/Year	A	38,938	39,098	42,585	36,668	32,946	↔	↑	3,924	6,123	8,766
11. Triple-Bottom-Line Index	%	A	70%	60%	60%	60%	70%	↔	↑	85%	65%	50%
<b>Customer Service</b>												
12. Customer Service Complaints - Don't Track	# Complaints/1,000 Accts	M	-	-	-	-	-	↔	↔	0.3	4.1	15.6
13. Technical Service Complaints (WQ)	# Complaints/1,000 Accts	M	1.01	1.07	0.0001	1.2700	0.8200	↔	↑	2.9	8.5	22.5
14. Cost of Residential Service (Average Monthly Bill)	\$/mo	A	\$ 102.35	\$ 103.17	\$ 109.32	\$ 116.28	\$ 126.11	↔	↓	\$ 70.95	\$ 88.70	\$ 120.51
<b>Water Operations</b>												
15. Compliance Rate	% Days in Compliance	A	100%	100%	100%	100%	100%	↔	↔	100%	100%	100%
16. Operation Cost (\$/MGD)	\$/MGD	Q	\$ 4,254.86	\$ 4,384.00	\$ 4,307.45	\$ 4,490.17	\$ 5,213.62	↔	↓	\$ 1,778.00	\$ 2,425.00	\$ 3,337.00
17. MGD/Employee	MGD/Employee	A	0.15	0.14	0.13	0.14	0.14	↔	↔	0.29	0.23	0.17
18. Water Distribution System Integrity	Breaks-Leaks/100 Miles of Pipe	M	3.08	4.86	3.72	4.99	7.35	↔	↓	4	8	22
<b>Nonrevenue Water</b>												
19. Apparent Water Loss	MG	A	32	35	38	39	42	↔	↔	-	-	-
20. Real Water Loss	MG	A	148	135	248	236	62	↔	↑	-	-	-
<b>Consumption (gpcd)</b>												
21. Total Volume Water Produced / Total Population Served	gpcd	A	109	112	118	116	114	↔	↔	-	-	-
22. Total Volume Water Metered (Residential Customers)	KG	A	1,337,702	1,429,900	1,553,604	1,640,470	1,754,892	↔	↑	-	-	-
23. Renewable Water Usage Rate (%)	%	M	13.2%	16.9%	11.0%	18.1%	29.0%	↔	↑	-	-	-
24. Total Renewable Water Amount	MG	M	295,888,149	272,000,804	300,545,089	497,951,044	857,786,345	↔	↑	-	-	-
25. Reusable Water Usage Rate (%)	%	M	-	-	-	-	-	↔	↔	-	-	-
<b>Wastewater Operations</b>												
26. Sewer Overflow Rate	SSO/100 Miles of Pipe	M	-	0.79	-	-	1.07	↔	↔	0.2	2.0	7.0
27. Operational Cost (\$/MGD)	\$/MGD	Q	\$ 3,546.99	\$ 3,358.49	\$ 3,481.61	\$ 3,532.53	\$ 3,820.58	↔	↔	\$ 1,607.00	\$ 2,318.00	\$ 3,581.00
28. MGD Processed / Employee	MGD/Employee	A	0.14	0.12	0.10	0.09	0.10	↔	↔	0.26	0.19	0.14
<b>Stormwater Operations</b>												
29. Stormwater Customer Inquires per Total Single Family Equivalent (SFEs)	# Complaints/SFE	Q	0.0069	0.0066	0.0059	0.0053	0.0055	↔	↔	-	-	-
30. Stormwater Operating Costs per Total SFEs	\$/SFE	Q	\$ 53.24	\$ 63.18	\$ 77.05	\$ 64.64	\$ 61.24	↔	↑	-	-	-

**Legend:**

MGD = million gallons per day  
kBTU = 1000 British Thermal Units  
gpcd = gallons per capita per day  
KG = 1000 gallons  
WQ = Water Quality

**Strategy 1: Ensure Long-term Water**

**Build a sustainable and reliable water supply by securing new and diverse renewable water supplies, responsibly managing the Town's existing groundwater supplies, and protecting watersheds in the Town.**

**Goal 1: Secure water supplies to meet our customer water demands.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-1-1	<p><b>Maintain current water demand and water supply forecast model, including evaluation of potential service contracts with outlying rural customers or other rural water providers where financially beneficial.</b></p> <p><i><b>Description:</b></i> The water demand/supply forecast model is a Microsoft Excel-based tool that is used to forecast our future water needs using growth, commercial demands, usage variability, and known and predicted water sources. The model will be updated to allow for potential service contracts with rural customers and outlying districts.</p> <p><i><b>Desired Outcome:</b></i> Water demand/supply model updated at least annually with population and growth data from the Development Services team.</p>	Ongoing	Water Resources Manager		
1-1-2	<p><b>Based on the agreement with Parker Water and Sanitation District (PWSD), construct a parallel pipeline within their district so that we can have adequate capacity to receive our WISE and Box Elder water allotments.</b></p> <p><i><b>Description:</b></i> There is a pipeline restriction in PWSD's system where PWSD's system demands will force Castle Rock's and Dominion's capacity out of the line. Presently, Castle Rock's WISE flows come through a 24" pipeline with 1 MGD of temporary firm capacity (reference 2018 Wheeling Agreement between Town of Castle Rock and Parker Water and Sanitation District), and this temporary capacity terminates on Dec. 31, 2024. It is contemplated that Castle Rock Water and Dominion will fund the design and construction of the 36" and 42" parallel sections, and PWSD will pay back the parties over time.</p> <p><i><b>Desired Outcome:</b></i> A completed parallel pipeline project with firm capacity for Castle Rock Water, Dominion and Parker.</p>	2022	Water Resources Manager		
1-1-3	<p><b>Purchase at least 700 acre-feet of importable renewable water rights.</b></p> <p><i><b>Description:</b></i> In 2012, the Town elected to pursue the "hybrid solution", which includes 2,500 acre-feet (AF) of renewable water from a new project and 1,000 AF from the WISE Program. This tactic focuses on obtaining renewable water rights to support the Box Elder project, to allow out-of-priority pumping at a future well field of approximately 2,500 AF. As of early 2019, Castle Rock Water has purchased 1,805 AF of water rights towards the Box Elder Project.</p> <p><i><b>Desired Outcome:</b></i> Close on an additional 700 AF of renewable water rights that will become part of an augmentation plan for the Box Elder project.</p>	2019	Water Resources Manager		
1-1-4	<p><b>Consummate WISE option for 1,000 acre feet and update the Water Delivery Agreement (WDA) as appropriate.</b></p> <p><i><b>Description:</b></i> Purchase an additional 1,000 acre-feet of subscription in the WISE Project by taking down some of the available Douglas County option water. This take-down will be coordinated with the South Metro Water Supply Authority, as will the update of the Water Delivery Agreement between SM-WISE and Denver/Aurora.</p> <p><i><b>Desired Outcome:</b></i> Castle Rock Water subscription amount in WISE totaling 2,000 AF.</p>	2020	Water Resources Manager		

**Strategy 1: Ensure Long-term Water**

**Build a sustainable and reliable water supply by securing new and diverse renewable water supplies, responsibly managing the Town's existing groundwater supplies, and protecting watersheds in the Town.**

**Goal 1: Secure water supplies to meet our customer water demands.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-1-5	<p><b>Determine how much additional capacity is needed in the WISE core infrastructure and complete the purchase.</b></p> <p><i>Description:</i> With the planned take-down of additional WISE subscription and our future water from northern sources, Castle Rock Water needs to evaluate our infrastructure capacity needs and develop a plan to acquire additional capacity from various entities as it may be available.</p> <p><i>Desired Outcome:</i> Adequate infrastructure capacity to move our full planned WISE subscription and three million gallons per day (MGD) of northern supplies through the 'Western Pipeline'.</p>	2019	Water Resources Manager		
1-1-6	<p><b>Complete the Newlin Gulch Pipeline to Rueter-Hess Reservoir.</b></p> <p><i>Description:</i> The Town owns 8,000 acre feet (AF) of storage space in Rueter-Hess Reservoir (RHR) and currently, through an Intergovernmental Agreement (IGA) with Parker, we can divert and pump only a small portion of our fully reusable effluent (treated under agreement at the Pinery Wastewater Treatment Plant) into RHR. Castle Rock Water currently has excess fully reusable effluent available from the Plum Creek Water Reclamation Authority (PCWRA) outfall. Being able to design and construct a transmission system and outfall into RHR from PCWRA would significantly bolster our storage volumes.</p> <p><i>Desired Outcome:</i> Successful permitting through the U.S. Army Corps of Engineers to modify the permit for RHR; cooperation with PCWRA and Castle Pines Metro District to share raw water transmission infrastructure; design and construction of a pipeline extension and new water outfall into RHR.</p>	2020	Assistant Director		
1-1-7	<p><b>Complete the construction of Castle Rock Reservoir 2.</b></p> <p><i>Description:</i> Castle Rock Reservoir No. 2 is planned to be 1,130 AF and be operated in conjunction with Castle Rock Reservoir No. 1. This new raw water storage reservoir is indicated in our Water Court Application (17CW3211).</p> <p><i>Desired Outcome:</i> Design and construct a new 1,130 AF reservoir, which will allow us to store more renewable water closer to the Town limits, and operate in conjunction with Castle Rock Reservoir No. 1.</p>	2022	Water Resources Manager		

**Goal 2: Fully utilize groundwater and renewable supplies.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-2-1	<p><b>Maximize the use of water rights, including stormwater and reclaimed water.</b></p> <p><i>Description:</i> As our infrastructure allows, and when exchanges can operate, Castle Rock Water will maximize the use of renewable and reusable supplies.</p> <p><i>Desired Outcome:</i> Castle Rock Water's goal is to achieve 75 percent renewable water usage (annually) by 2050. This is one of our key performance indicators and is reported internally each month.</p>	Ongoing	Water Resources Manager		



Strategy 1: Ensure Long-term Water					
Build a sustainable and reliable water supply by securing new and diverse renewable water supplies, responsibly managing the Town's existing groundwater supplies, and protecting watersheds in the Town.					
Goal 2: Fully utilize groundwater and renewable supplies.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-2-2	<b>Develop a Groundwater Optimization and Sustainability Program.</b>  <i>Description:</i> Castle Rock Water will review the annual production data for the wells and analyze the changes to determine the wells to be resized and rehabilitated to optimize and sustain the use of groundwater, and to minimize the down-time of the operating wells. Castle Rock Water will specify the use of stainless steel equipment to reduce the growth potential of iron bacteria.  <i>Desired Outcome:</i> The reduction of down-time for wells during the peak season and increase efficiency of the wells.	Ongoing	Water Resources Project Manager		
1-2-3	<b>Implement the Aquifer Storage and Recovery Program, including retrofitting two existing Denver Basin wells for ASR injection.</b>  <i>Description:</i> ASR can provide additional underground water storage for the Town when excess renewable water supplies are available.  <i>Desired Outcome:</i> Finalize ASR permitting for Wells CR-223 and CR-224 and begin operating them when practicable. Consider retrofitting Wells CR-217 and CR-218 for ASR (per our Firming Agreement with Dominion, Dominion will pay for these retrofits).	2020	Water Resources Project Manager		
1-2-4	<b>Develop the Town's Lawn Irrigation Return Flows (LIRFs) program.</b>  <i>Description:</i> As the Town continues to grow, more water will be used to irrigate lawns and parks. The irrigation water that is not fully consumed or evaporated returns to local streams through shallow aquifers - this is known as Lawn Irrigation Return Flows (LIRFs). LIRFs can be quantified and are reusable water rights available to the Town upon water court approval. Regularly updating studies to accurately track and quantify LIRFs in each drainage basin (East Plum Creek and Cherry Creek) can be a valuable water resource tool to enhance our water rights portfolio. Report on both Plum Creek basins and keep updated every five years, and complete quantification of Cherry Creek's LIRFs.  <i>Desired Outcome:</i> In early 2019, Castle Rock Water contracted with W.W. Wheeler and Associates to fully study and provide a plan for all LIRFs in both basins. Phase 1 of this study will carry over into 2020.	2020	Water Resources Program Analyst		
1-2-5	<b>Maximize the amount of water stored in Rueter-Hess Reservoir each year in advance of irrigation/highest demand season.</b>  <i>Description:</i> During the lower demand season (generally Oct - Mar), deliver fully reusable effluent from both the East Plum Creek and Cherry Creek to RHR. This will require additional piping infrastructure and a new outlet into RHR from the Plum Creek side, and upgrades to Parker's RHR pump station.  <i>Desired Outcome:</i> Agreements and infrastructure in place so that we can maximize our water inputs into RHR.	2023	Water Resources Manager		
1-2-6	<b>Develop a plan to put the Converse Well water to use.</b>  <i>Description:</i> The Town owns approximately 55 AF of renewable water in the Converse wells in the Cherry Creek basin.  <i>Desired Outcome:</i> A plan to put this water into beneficial use.	2020	Water Resources Manager		

**Strategy 1: Ensure Long-term Water**

**Build a sustainable and reliable water supply by securing new and diverse renewable water supplies, responsibly managing the Town's existing groundwater supplies, and protecting watersheds in the Town.**

**Goal 2: Fully utilize groundwater and renewable supplies.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-2-7	<p><b>Install required stream gauges along East Plum Creek and its tributaries to satisfy decree requirements.</b></p> <p><i>Description:</i> Install stream gauges along East Plum Creek to satisfy 09CW166 decree requirements.</p> <p><i>Desired Outcome:</i> Design and construct stream gauges along Cook Creek (to claim the Noe Ranch water rights) and the Highline Ditch water rights (needs to be installed when we deliver water to Chatfield).</p>	2021	Water Resources Program Analyst		
1-2-8	<p><b>Install infrastructure to access and divert the Town's reusable water supplies along Plum Creek.</b></p> <p><i>Description:</i> A pumping station and raw water return pipeline to convey our reusable water back to PCWPF from the Plum Creek Diversion near Sedalia.</p> <p><i>Desired Outcome:</i> A fully functional pump station and pipeline that delivers our reusable (and other renewable) water supplies back to the PCWPF for treatment.</p>	2020	Water Resources Manager		
1-2-9	<p><b>Expand the Plum Creek Water Purification Facility (PCWPF) to include advanced treatment.</b></p> <p><i>Description:</i> Design and install additional unit treatment process to PCWPF to adequately treat effluent-impacted source waters, particularly the Town reuse water being conveyed from the Plum Creek Diversion near Sedalia.</p> <p><i>Desired Outcome:</i> Fully functional treatment process additions at PCWPF, including raw-water homogenization tank, ozonation, biologically-activated filtration, granular activated carbon (GAC) units, and ultraviolet (UV) plug flow reactors.</p>	2020	Engineering Manager		
1-2-10	<p><b>File a plan for augmentation for the Box Elder Project.</b></p> <p><i>Description:</i> To be able to pump the well field in the Box Elder Creek alluvium, the Town will need to file a plan for augmentation with the Water Court, and have this plan approved.</p> <p><i>Desired Outcome:</i> A defensible plan for augmentation filed with District 1 Water Court.</p>	2019	Water Resources Manager		
1-2-11	<p><b>Settle the Castle Pines Metropolitan District golf course irrigation water dispute.</b></p> <p><i>Description:</i> Settle the dispute in the PCWRA Establishing Agreement regarding the quantity, timing and use of treated effluent by the golf courses in Castle Pines.</p> <p><i>Desired Outcome:</i> Castle Pines Metro District and the Town in agreement.</p>	2020	Assistant Director		
1-2-12	<p><b>Construct two new Denver Basin well facilities.</b></p> <p><i>Description:</i> To maintain long-term yield of our Denver Basin water supplies, construct two new Denver Basin well facilities at the Ridge Road site.</p> <p><i>Desired Outcome:</i> Two fully operational Denver Basin wells.</p>	2021	Water Resources Project Manager		

**Strategy 1: Ensure Long-term Water**

**Build a sustainable and reliable water supply by securing new and diverse renewable water supplies, responsibly managing the Town's existing groundwater supplies, and protecting watersheds in the Town.**

**Goal 3: Emphasize water efficiency to help reduce overall water demands.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-3-1	<b>Update the Water Efficiency Master Plan.</b>  <i><b>Description:</b></i> The Colorado Water Conservation Board (CWCB), through the Office of Water Conservation and Drought Planning, requires that water providers with a total demand of 2,000 acre-feet per year (AF/yr) or more develop and implement plans that encourage customers to use water efficiently. These plans are to be updated at least every seven years.  <i><b>Desired Outcome:</b></i> Castle Rock Water updated its Water Efficiency Master Plan in 2015 and the next update is slated for 2022.	2022	Water Conservation Specialist		
1-3-2	<b>Build a demonstration garden and showcase progressive stormwater practices at the future Castle Rock Water Administration Building.</b>  <i><b>Description:</b></i> Utilize ColoradoScape and low impact development principles to help select plants, landscaping and infiltration galleries in a customer-facing area fronting the future Castle Rock Water Administration Building.  <i><b>Desired Outcome:</b></i> With input from Water Conservation and Stormwater management, construct a demonstration garden and other site improvements as part of the Castle Rock Water Administration Building project.	2020	Assistant Director		
1-3-3	<b>Monitor the impact of water efficiency plans using the new water dedication code.</b>  <i><b>Description:</b></i> As part of the Town's water dedication-code changes, developers that are 'water-short' have the opportunity to develop Water Efficiency Plans to reduce their overall water needs. These plans must be approved by Castle Rock Water and become part of the Town-approved Development Agreements.  <i><b>Desired Outcome:</b></i> A report (annually) on water savings that have been realized by new developments using a Castle Rock Water-approved Water Efficiency Plan.	Ongoing	Water Resources Manager		
1-3-4	<b>Maximize and evaluate the non-residential retrofit Smartscape program.</b>  <i><b>Description:</b></i> In 2018, the Smartscape program (rebates for removal of high-water use turf to low water use plant material and other landscaping) was expanded from residential only to commercial properties.  <i><b>Desired Outcome:</b></i> A report (annually) to determine the level of water use reduction from before a Smartscape retrofit to after.	Ongoing	Water Conservation Specialist		

**Goal 4: Protect our water supply sources.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-4-1	<b>Verify compliance with the Chatfield Reservoir Control Regulation No. 73 and set strategic priorities to preserve water quality and minimize costs.</b>  <i><b>Description:</b></i> Work cooperatively with the Authority to evaluate the control regulation, better understand the issues in the watershed, prioritize tasks to maintain compliance, promote appropriate standards, and focus on projects with the greatest value and equitable funding by members.  <i><b>Desired Outcome:</b></i> Preserve and protect regional water supplies in Chatfield Reservoir.	2021	Stormwater Manager		

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**Goal 4: Protect our water supply sources.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-4-2	<p><b>Evaluate the effectiveness of the Cherry Creek Basin Water Quality Authority's organizational and financial structure.</b></p> <p><i>Description:</i> Evaluate current statutory requirements for feasibility, effectiveness and efficiency in meeting the Authority's mission of protecting the beneficial uses at Cherry Creek Reservoir related to nutrients and algae population.</p> <p><i>Desired Outcome:</i> Recommend and implement changes to Authority structure as appropriate.</p>	2020	Stormwater Manager		
1-4-3	<p><b>Complete detention pond retrofits to improve water quality and reduce operational burden.</b></p> <p><i>Description:</i> Evaluate the effectiveness of existing detention ponds, prioritize facilities based on greatest value and burden, and implement retrofit improvements based on available budget.</p> <p><i>Desired Outcome:</i> Maintain Overall Condition Index (OCI) of 75 and above for all existing detention ponds.</p>	2023	Stormwater Manager		
1-4-4	<p><b>Implement the Source Water Protection Plan.</b></p> <p><i>Description:</i> Castle Rock Water completed a Source Water Protection Plan in 2018. This tactic seeks to ensure that this plan is implemented (do what we say we are going to do). In addition, this plan will need to be revised to incorporate the entire Plum Creek Basin upstream of the Plum Creek Diversion in Sedalia.</p> <p><i>Desired Outcome:</i> Protection of our water resources within the Plum Creek Basin.</p>	2019	Assistant Director		
1-4-5	<p><b>Get permit for discharge of Plum Creek Water Reclamation Authority effluent to Rueter-Hess Reservoir (RHR).</b></p> <p><i>Description:</i> Sending renewable effluent water to RHR is a critical component of utilizing the Town's storage capacity in the reservoir. With the expansion of the Plum Creek Water Reclamation Authority plant complete in the fall of 2020, staff will be in a position to evaluate the effectiveness of the advanced treatment at the facility to reduce phosphorous to levels that can be introduced into the reservoir. Work with PCWRA to optimize processes.</p> <p><i>Desired Outcome:</i> PCWRA effluent meet permissible limits and permit is obtained for sending the water to RHR.</p>	2021	Engineering Manager		
1-4-6	<p><b>Evaluate opportunities to obtain regulatory support and expand renewable water supply opportunities through the implementation of regional stream channel improvements and other watershed controls.</b></p> <p><i>Description:</i> Investing funding in stream channel improvements and other mitigating watershed controls has the potential for adding value and regulatory buy-in on water supply projects. This tactic should be incorporated in preliminary design and alternative selection on renewable projects moving forward.</p> <p><i>Desired Outcome:</i> Overall reduction in cost for meeting regulatory requirements and increased water quality benefit for renewable water supplies.</p>	Ongoing	Engineering Manager		



Strategy 1: Ensure Long-term Water					
Build a sustainable and reliable water supply by securing new and diverse renewable water supplies, responsibly managing the Town's existing groundwater supplies, and protecting watersheds in the Town.					
Goal 5: Develop strategic partnerships to support long-term water					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-5-1	<p><b>Develop an agreement with Parker Water and Sanitation District (PWSD) to construct an inlet structure into Rueter-Hess Reservoir. This tactic will precede tactic 1-1-6.</b></p> <p><b>Description:</b> In conjunction with CDPHE permitting of the PCWRA effluent into the reservoir, ensure applicable agreements are in place with PWSD.</p> <p><b>Desired Outcome:</b> An Agreement in place for PWSD to accept reuse effluent into Rueter-Hess Reservoir.</p>	2021	Assistant Director		
1-5-2	<p><b>Develop an agreement with Parker Water and Sanitation District to purchase capacity in the Rueter-Hess Water Purification Facility.</b></p> <p><b>Description:</b> To ensure that Castle Rock can have its raw water (that is stored in Rueter-Hess Reservoir) treated, we need to purchase firm treatment capacity in PWSD's Rueter-Hess Water Purification Facility. Long-term projections are for 12 MGD of treatment capacity in this facility. Purchase timing (and plant expansion projects) shall be coordinated with the Water Supply/Demand Forecast model.</p> <p><b>Desired Outcome:</b> Firm capacity in the PWSD plant congruent with our expected needs.</p>	2024	Water Resources Manager		
1-5-3	<p><b>Develop an agreement with Roxborough Water and Sanitation District to use their water from the Bell Mountain Denver Basin Aquifer wells in exchange for our fully reusable effluent.</b></p> <p><b>Description:</b> The Bell Mountain water rights are owned by Roxborough, Lochbuie and Castle Rock in varying quantities amongst the three principal Denver Basin aquifers. Castle Rock has the ability to capture water pumped from the existing Bell Mountain wells at our CR-1 diversion. An agreement with Roxborough to pump their water rights, in addition to the Town's, would increase the water available at CR-1 for diversion when necessary to bolster supply.</p> <p><b>Desired Outcome:</b> A fully executed agreement with Roxborough to use their Bell Mountain water in exchange for some quantity of the Town's fully reusable effluent.</p>	2019	Water Resources Manager		
1-5-4	<p><b>Develop an agreement with the Castle Pines Metro District to share capacity in the Plum Creek Diversion and related reuse infrastructure.</b></p> <p><b>Description:</b> To achieve an agreement with Castle Pines Metro District (CPMD), the Town would require that CPMD's water rights as related to their decreed 'G' wells and 'S' diversion structures be subordinated to the Town and a potentially higher yield of native water could be yielded at the Plum Creek Diversion, benefiting both the Town and CPMD. Additionally, this agreement may help clear some of the arguments related to the PCWRA Establishing Agreement.</p> <p><b>Desired Outcome:</b> Castle Rock Water has engaged the services of an outside rates/fees consultant to study the participation costs for CPMD for use of our Plum Creek Diversion, storage and transmission infrastructure. The results of this study will help inform CPMD of the costs associated with participation and drive the terms of an agreement.</p>	2020	Water Resources Manager		

**Strategy 1: Ensure Long-term Water**

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**Goal 5: Develop strategic partnerships to support long-term water**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
1-5-5	<p><b>Develop an agreement with Plum Creek Water Reclamation Authority for use of pipeline in conjunction with our Newlin Gulch pipeline project.</b></p> <p><b>Description:</b> In the short-term, in conjunction with the Newlin Gulch pipeline and the permitting of PCWRA effluent into Rueter-Hess Reservoir, work with golf course partners on the utilization of existing infrastructure to convey reuse effluent to Rueter-Hess Reservoir.</p> <p><b>Desired Outcome:</b> Agreements in place to utilize existing infrastructure for conveyance of reusable effluent to Rueter-Hess Reservoir.</p>	2021	Engineering Manager		
1-5-6	<p><b>Establish an irrigation district partnership in the Box Elder region.</b></p> <p><b>Description:</b> A large irrigation district operates in the vicinity of the Town's Box Elder property in Weld/Adams County. This irrigation district has significant infrastructure available to move and store water.</p> <p><b>Desired Outcome:</b> An agreement in place to work on mutually beneficial projects.</p>	2022	Water Resources Manager		
1-5-7	<p><b>Develop strategic partnerships in the Lost Creek Basin.</b></p> <p><b>Description:</b> Aurora Water desires to become more active in the Lost Creek Basin for a variety of reasons, and Castle Rock Water owns water rights and wells within the basin. Castle Rock Water could allow the use of its water to benefit Aurora in the short term and longer term, could have this water treated by Aurora and delivered within the WISE infrastructure to Town.</p> <p><b>Desired Outcome:</b> An IGA with Aurora for use of our Lost Creek water in exchange for upgrades to our Lost Creek wells.</p>	2019	Water Resources Manager		

Strategy 2: Support, engage and inspire our team.					
Grow our company culture where every employee is seen as a valued member of the team by contributing daily to fulfilling our Mission and Vision, while modeling Town values.					
Goal 1: Invest in our organization by recruiting and retaining competent, talented people.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
2-1-1	<p><b>Work with Human Resources, through an annual review, to ensure we have appropriate compensation and benefits in place to be competitive in the water industry.</b></p> <p><b>Description:</b> HR has a process in place for reviewing salaries by grade and position on an annual basis. The Director will develop a process to review the annual HR process, coordinate on local competitors included in the survey and provide input to HR from AWWA surveys and other sources.</p> <p><b>Desired Outcome:</b> Keep salaries at Castle Rock Water competitive with both the water industry as a whole and with local water and sanitation districts in the South Metro region and Colorado.</p>	2019	Director		
2-1-2	<p><b>Leadership Team members, managers, and supervisors will seek opportunities for team members to gain certifications, attend training, and further their education, fully utilizing training budgets as appropriate.</b></p> <p><b>Description:</b> We will review our use of training funds on an annual basis for purposes of ensuring that we are effectively using the funds across the organization. The review will include a check against the national AWWA benchmarking, a review of the actual types of training and number of staff receiving the various training, and the expenditures against the budget. This will help inform the next year's budget. Leadership Team member's, managers, and supervisors will be encouraged to develop an actual training plan for their staff.</p> <p><b>Desired Outcome:</b> Leadership Team member's, managers, and supervisors have training plans for their staff in place, key training items are identified for staff as goals in annual evaluations, and our training key performance indicator stays in the top quartile for AWWA benchmarking.</p>	2020	Director		
2-1-3	<p><b>Continue to develop an integrated and well-coordinated Leadership Team by updating and implementing performance improvement plans.</b></p> <p><b>Description:</b> Hold up to three retreats per year with the team, focus on improving our weekly Leadership Team meetings, increase our communications and coordination, and continue to update and implement our leadership action plan to improve all aspects of our performance.</p> <p><b>Desired Outcome:</b> Internal ratings by the Leadership Team team continue to improve and/or stay above historical levels. External ratings of the Leadership Team by staff improve year-over-year in the annual staff survey.</p>	2019	Director		
2-1-4	<p><b>Develop and implement a Succession Planning Strategy for all team members.</b></p> <p><b>Description:</b> Starting with implementing an Apprenticeship Program in 2019, a department-wide succession plan will be formulated to ensure that qualified candidates will be recruited and retained for long-term careers in the water utility industry.</p> <p><b>Desired Outcome:</b> A qualified pool of candidates for work in our industry.</p>	2021	Assistant Director		

**Strategy 2: Support, engage and inspire our team.**

**Grow our company culture where every employee is seen as a valued member of the team by contributing daily to fulfilling our Mission and Vision, while modeling Town values.**

**Goal 1: Invest in our organization by recruiting and retaining competent, talented people.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
2-1-5	<p><b>Review the employee turnover rate and actual resignations over the last two years to determine any trends or concerns that need to be addressed.</b></p> <p><i>Description:</i> Review available records in the Human Resources Information System and identify trends, and compare to our industry employment benchmarks.</p> <p><i>Desired Outcome:</i> Summarize data and adapt recruiting methods/techniques to overcome issues.</p>	2019	Assistant Director		
2-1-6	<p><b>Review current recruitment techniques and compare with industry standards. Make recommendations for improvement as appropriate.</b></p> <p><i>Description:</i> Evaluate current recruiting methods, compare to regional techniques and change accordingly to improve recruitment of new employees.</p> <p><i>Desired Outcome:</i> A qualified candidate pool for open positions.</p>	2019	Assistant Director		

**Goal 2: Live Town values to ensure a healthy organization that will drive high performance.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
2-2-1	<p><b>Define and communicate organization-wide expectations for timely and responsive internal communications.</b></p> <p><i>Description:</i> Communication is critical to good operations. We will develop an internal policy with follow-up training for the team on expectations for timely and responsive internal communications.</p> <p><i>Desired Outcome:</i> Improve communications to internal and external customers.</p>	2019	Director		
2-2-2	<p><b>Train employees on effective communication techniques, with all team members receiving annual training at a minimum.</b></p> <p><i>Description:</i> We have held annual training for staff on communication for the last three to four years. We need to ramp up our efforts and improve this communication training, as communication continues to be an issue of concern. We will evaluate both outside and inside services for this training. We will work to include training that goes beyond annual training for each team member.</p> <p><i>Desired Outcome:</i> Improve ratings on the annual staff survey for performance in this area, as well as overall improvement in performance by the organization as a whole.</p>	2019	Director		



**Strategy 2: Support, engage and inspire our team.**

**Grow our company culture where every employee is seen as a valued member of the team by contributing daily to fulfilling our Mission and Vision, while modeling Town values.**

**Goal 2: Live Town values to ensure a healthy organization that will drive high performance.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
2-2-3	<p><b>Train and educate team members on the connection between Town values and a healthy, high-performance organization through monthly presentation (at the staff meeting) on one of the values.</b></p> <p><i><b>Description:</b></i> The Town values are a key part of our culture and who we are as an organization, but we do not currently train on or discuss these as a point of regular work. HR has a training session, but once that session is done, the topic is not typically revisited. The idea here is to present on the values and discuss what they mean to staff on a regular basis in staff meetings to keep these values at top of mind beyond just the annual performance evaluations. This will also reinforce that leadership is thinking about the values and weighing them in how we work.</p> <p><i><b>Desired Outcome:</b></i> An improved understanding of what the values mean by staff, and helping staff keep them top of mind on a daily basis as they go about their work. Higher morale amongst staff as measured by annual surveys.</p>	2020	Director		
2-2-4	<p><b>Actively obtain feedback from the team on performance for staff meetings, Leadership Team, and other areas related to Town values, with at least two staff-wide opportunities per year.</b></p> <p><i><b>Description:</b></i> Utilize surveys to obtain feedback and then lead efforts to use the feedback to make improvements to overall performance on staff meetings, Leadership Team and other areas. At least two surveys will be performed using either Survey Monkey or another survey mechanism. Where possible, the same questions will be repeated to develop trends on performance as viewed by the staff.</p> <p><i><b>Desired Outcome:</b></i> Improvement in performance with respect to staff meetings, Leadership Team, and use of Town Values as evidenced by survey results. Results will be shared with staff.</p>	2019	Director		
2-2-5	<p><b>Revisit work/life balance programs that have been in place since 2016 and recommend updates and improvements.</b></p> <p><i><b>Description:</b></i> Do a five year review of our work/life balance programs including a complete update of the memo prepared in 2016. The review will include a look at overtime and other typical parameters, as well as the programs in place to help staff maintain balance in their lives.</p> <p><i><b>Desired Outcome:</b></i> Keep high performing staff as evidenced by an annual review of the Turnover Rate, maintain high morale as evidenced by results from the annual staff survey.</p>	2021	Director		
2-2-6	<p><b>Develop guidelines for conducting teambuilding activities at the Division level.</b></p> <p><i><b>Description:</b></i> Review ideas/options for teambuilding activities used by organizations and solicit ideas from employees. Present to Leadership Team for discussion and build consensus for implementing guidelines.</p> <p><i><b>Desired Outcome:</b></i> Effective teambuilding exercises.</p>	2020	Assistant Director		

**Strategy 2: Support, engage and inspire our team.**

**Grow our company culture where every employee is seen as a valued member of the team by contributing daily to fulfilling our Mission and Vision, while modeling Town values.**

**Goal 3: Integrate health and safety into the daily functions of Castle Rock Water to systematically eliminate the root causes of deficiencies, and to consistently and continuously improve safety performance.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
2-3-1	<p><b>Develop and implement a Health and Safety Management System (HSMS).</b></p> <p><i>Description:</i> To utilize Management System principles found in the ANSI Z-10 Standard, and OSHA Recommended Practices. The tactics shown below address the core elements of a Management System based on the "Plan-Do-Check-Act" cycle.</p> <p><i>Desired Outcome:</i> A safety culture of continuous improvement.</p>	2021	EHS Program Manager		
2-3-2	<p><b>Establish processes to ensure effective employee participation in the HSMS.</b></p> <p><i>Description:</i> The most important element for the success of the Management System - Top level management leadership, and effective employee involvement.</p> <p><i>Desired Outcome:</i> The involvement of all employees in planning, reporting, corrective actions, etc. (all aspects of the system).</p>	2021	EHS Program Manager		
2-3-3	<p><b>Identify and prioritize health and safety risks/issues; develop risk reduction objectives and implementation plans for achieving the objectives.</b></p> <p><i>Description:</i> The "planning" element of the Management System - A review of safety performance, and hazards and risks for the purpose of eliminating root causes.</p> <p><i>Desired Outcome:</i> To continually find realistic 'targets' that offer opportunity for improvement and risk reduction.</p>	2021	EHS Program Manager		
2-3-4	<p><b>Apply the implementation plans; conduct training; establish document and record control.</b></p> <p><i>Description:</i> The "Doing" element of the System - This is the pursuit of the risk reduction 'targets' mentioned above.</p> <p><i>Desired Outcome:</i> To gain knowledge and experience, which is continually fed back to planning to support continual improvement.</p>	2021	EHS Program Manager		
2-3-5	<p><b>Evaluate overall safety rating performance and establish corrective actions.</b></p> <p><i>Description:</i> The "Check" element of the system - This includes processes for monitoring and measuring hazards and controls; incident investigations; inspection/audits. The results are fed back into the planning element.</p> <p><i>Desired Outcome:</i> To determine if the system is functioning as it is intended.</p>	2021	EHS Program Manager		
2-3-6	<p><b>Establish a HSMS review process.</b></p> <p><i>Description:</i> Management, with assistance from the EHS Program Manager, will review the system at defined intervals to perform a strategic and critical evaluation of system performance.</p> <p><i>Desired Outcome:</i> The focus is on opportunities for continual improvement, as well as an evaluation of how well the system integrates with other business systems.</p>	2021	EHS Program Manager		

**Strategy 3: Enhance customer satisfaction**

In collaboration with our customers, seek and apply innovative approaches to provide exceptional customer service.

**Goal 1: Identify and respond to stakeholder needs, perceptions and expectations through effective communication.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
3-1-1	<p><b>Identify and address specific services where the current level of service can be enhanced.</b></p> <p><i>Description:</i> Identify who the stakeholders of Castle Rock Water are. Identify the services we provide to them. Develop and conduct a customer satisfaction baseline survey to establish desired service levels. Formalize survey results and prepare an action plan. Implement the action plan and conduct follow-up surveys to determine if the desired level of customer service is being met.</p> <p><i>Desired Outcome:</i> Customer Satisfaction Scorecard</p>	Ongoing	Business Solutions Manager		
3-1-2	<p><b>Use the biennial Town-wide survey to better define customer needs, perceptions and expectations, and respond accordingly.</b></p> <p><i>Description:</i> This is to be based on the surveys done in 2019, 2021 and 2023.</p> <p><i>Desired Outcome:</i> Address and respond to each of the areas of concern in a timely manner after the survey results are final.</p>	Ongoing	Business Solutions Manager		
3-1-3	<p><b>Measure the effectiveness of our external communications to better strategize outreach efforts.</b></p> <p><i>Description:</i> Identify methods to track the effectiveness and reach of external communications, such as social media comments and email opens.</p> <p><i>Desired Outcome:</i> Identify the more effective outreach avenues and messaging techniques.</p>	2020 Ongoing	Community Relations Program Manager		

**Goal 2: Provide innovative and cost-effective approaches to exceptional customer service.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
3-2-1	<p><b>Evaluate our billing system to determine if opportunities exist for improvement.</b></p> <p><i>Description:</i> Continue to evaluate business processes and practices to ensure they are the most effective and efficient.</p> <p><i>Desired Outcome:</i> Optimization and effective business processes.</p>	Ongoing	Business Solutions Manager		
3-2-2	<p><b>Partner with others to broaden our outreach effort.</b></p> <p><i>Description:</i> Broaden relationships with regional and statewide water organizations to share content, graphics and messaging for a more cohesive and consistent message within the region.</p> <p><i>Desired Outcome:</i> Establish new partnerships and coordinate current relationship outreach efforts.</p>	2020 Ongoing	Community Relations Program Manager		
3-2-3	<p><b>Evaluate and identify enhancements to Castle Rock Water's websites.</b></p> <p><i>Description:</i> Enhance the websites by using analytics, providing additional educational elements and creating a schedule for updates.</p> <p><i>Desired Outcome:</i> Increase visits to the websites from new and current visitors.</p>	2019 Ongoing	Community Relations Program Manager		

Strategy 3: Enhance customer satisfaction					
In collaboration with our customers, seek and apply innovative approaches to provide exceptional customer service.					
Goal 2: Provide innovative and cost-effective approaches to exceptional customer service.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
3-2-4	<b>Develop and utilize an outgoing messaging system to customers.</b>  <i><b>Description:</b></i> Use phone messaging as an additional venue to reach customers, especially for emergency and special events.  <i><b>Desired Outcome:</b></i> To reach customers in a timely and direct manner.	2020	Business Solutions Manager		
3-2-5	<b>Evaluate business case for being able to take payments in the field for disconnects.</b>  <i><b>Description:</b></i> Evaluate the technology options and the costs associated with each. Identify any safety concerns. Conduct a benchmarking survey to determine if other municipalities are using this method, and their success/failure.  <i><b>Desired Outcome:</b></i> Make a decision whether or not to implement the process in the field.	2020	Business Solutions Manager		
3-2-6	<b>Implement Advanced Metering Infrastructure (AMI) solution.</b>  <i><b>Description:</b></i> Conduct a prop study to determine the towers needed to achieve 100 percent coverage of Castle Rock. Create a cost benefit analysis and implementation timeline. Install all meter infrastructure, including towers, meter replacements and MXU replacements. Research, evaluate and install internal software application and external customer portal for water demand management and meter reading. Outreach throughout the process as needed to keep stakeholders informed. Educate and train customers on the use of the customer portal. Evaluate the addition of a possible data miner or AMI coordinator.  <i><b>Desired Outcome:</b></i> Implementation of all AMI meter infrastructure for all active accounts. Customer portal capability for all active accounts.	2023	Business Solutions Manager		

Goal 3: Increase the effectiveness of communication and education to our customers.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
3-3-1	<b>Evaluate and define our social media strategy.</b>  <i><b>Description:</b></i> Align and expand social media with overall outreach strategy, identify trends and engage in social listening.  <i><b>Desired Outcome:</b></i> Increase followers and responses in current and new social media platforms.	2020 Ongoing	Community Relations Program Manager		
3-3-2	<b>Educate our customers on the value of water.</b>  <i><b>Description:</b></i> Expand communication with customers beyond conservation to include infrastructure improvements, stormwater value, flood safety, etc.  <i><b>Desired Outcome:</b></i> Increase positive feedback from customers regarding projects and rate changes.	2019 Ongoing	Community Relations Program Manager		
3-3-3	<b>Identify target audiences and implement education strategies for protecting stormwater quality.</b>  <i><b>Description:</b></i> Evaluate current outreach efforts and strategize on opportunities to expand the effectiveness and value.  <i><b>Desired Outcome:</b></i> Revise outreach efforts as needed.	2021	Stormwater Manager		

Strategy 3: Enhance customer satisfaction					
In collaboration with our customers, seek and apply innovative approaches to provide exceptional customer service.					
Goal 3: Increase the effectiveness of communication and education to our customers.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
3-3-4	<b>Develop and deliver messaging on flood safety.</b>  <i><b>Description:</b></i> Flood safety messaging is needed to educate the public on risks and behaviors around flood control facilities.  <i><b>Desired Outcome:</b></i> Utilize conventional and social media venues to deliver message.	2022	Stormwater Manager		
3-3-5	<b>Create visual displays to educate the general public about water.</b>  <i><b>Description:</b></i> Create more awareness about the value of water through tangible displays placed in high-traffic areas. For example, the Water Conservation Tower.  <i><b>Desired Outcome:</b></i> Increased acceptance of conservation actions, investment for projects and rate changes as identified by lower water consumption and increased positive customer feedback.	2019	Community Relations Program Manager		
3-3-6	<b>Create an online Water Wiser course.</b>  <i><b>Description:</b></i> In 2018, Castle Rock Water instituted time limitations on residential Water Wiser designations. Now, a Water Wiser designation lapses after five years and must be renewed. Residents can renew by taking a full (three hour) course, a shortened (two hour) course, or have the option to complete an on-line course on their own time.  <i><b>Desired Outcome:</b></i> A web-based Water Wiser course that presents the key material and tests the user for content knowledge. Passing the exam at the end of the course would qualify the resident for a new five-year Water Wiser designation.	2019	Community Relations Program Manager		
3-3-7	<b>Develop videos on how to program different smart irrigation controllers.</b>  <i><b>Description:</b></i> Every irrigation season, the Conservation Division fields many calls from customers about how to set or adjust their irrigation controller. With multiple manufacturers and styles on the market, our Conservation staff often has to make face-to-face visits to customers to help them through this process. Videos to help the customers through this process would likely benefit many of these customers.  <i><b>Desired Outcome:</b></i> Create either original, or obtain permission to use third-party, video content that guides customers through the key irrigation control settings.	2019	Water Conservation Specialist		



Strategy 4: Maintain financial sustainability					
Implement viable and sustainable financial programs that support the Town goals and initiatives.					
Goal 1: Strive to maintain sustainable rates and fees, and demonstrate fiscal responsibility, accountability and transparency.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
4-1-1	<p><b>Implement the Obligation Management Tool to ensure future financial commitments are being met.</b></p> <p><i>Description:</i> This is full implementation of the tool that was created in 2018 to monitor multiyear commitments and make sure we are fulfilling them. Implementation means we are entering multiyear agreements into the system as they are created, all past agreements have been entered, and we are monitoring obligations at the Leadership Team level on a quarterly basis.</p> <p><i>Desired Outcome:</i> We will not miss any obligations in terms of receiving funds, paying funds or other non-fund related obligations. This will have a direct benefit to our rate payers.</p>	2019	Director		
4-1-2	<p><b>Develop an annual report to increase transparency to customers and stakeholders.</b></p> <p><i>Description:</i> An annual snapshot of the financial health of the organization for the previous year ending, five years of history and financial outlook for the next five years. This will be a small brochure or electronic form posted to the website.</p> <p><i>Desired Outcome:</i> An annual report either produced in paper or electronic form.</p>	Ongoing	Business Solutions Manager		
4-1-3	<p><b>Complete/implement cross connection database integration from XC2 to Billmaster.</b></p> <p><i>Description:</i> Conversion of the cross connection data currently recorded in XC2 to BillMaster so all the information is in the main billing system. This includes the clean-up of data, conversion of data and assurance of a complete database for all active accounts. This will also include the creation and validation of reports.</p> <p><i>Desired Outcome:</i> Successful conversion of an accurate and complete database.</p>	2021	Business Solutions Manager		
4-1-4	<p><b>Consummate the two extra-territorial agreements that are currently being negotiated, and utilize the surcharge allowed under the Town code in these agreements as needed.</b></p> <p><i>Description:</i> Assist Bell Mountain Ranch with obtaining renewable water through Castle Rock and ensure Canyons South obtains both water and wastewater services from one provider.</p> <p><i>Desired Outcome:</i> Service agreements that ensure long-term service with adjacent developments that are beneficial to all parties.</p>	2021	Assistant Director		
4-1-5	<p><b>Maximize leasing opportunities for idle water rights.</b></p> <p><i>Description:</i> Castle Rock Water has water rights available that are not being fully utilized each day for a number of reasons. The purpose of this tactic is to explore opportunities to put these water rights to use by other parties, in exchange for compensation or to leverage other deals. Leasing idle water rights has the ability to provide additional revenue to help offset the costs of other water resource capital projects.</p> <p><i>Desired Outcome:</i> Sensible lease arrangements with other parties for water rights that are not being used.</p>	Ongoing	Water Resources Manager		

Strategy 4: Maintain financial sustainability					
Implement viable and sustainable financial programs that support the Town goals and initiatives.					
Goal 1: Strive to maintain sustainable rates and fees, and demonstrate fiscal responsibility, accountability and transparency.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
4-1-6	<p><b>Evaluate the use of renewable energy, like solar power, to reduce operational costs.</b></p> <p><i>Description:</i> Investigate alternative power sources and implement where feasible.</p> <p><i>Desired Outcome:</i> Reduce reliance on fossil fuel and reduce carbon footprint.</p>	2020	Assistant Director		
Goal 2: Operate on a cost-of-service basis and effectively manage expenditures and revenues.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
4-2-1	<p><b>Create a risk assessment tool or approach to adequately plan and budget for replacement and rehabilitation of aging infrastructure.</b></p> <p><i>Description:</i> Develop a risk assessment tool and/or approach that utilizes asset information (pipe type, year of install, history of failure, criticality of failure, etc.) to assist in capital planning for short and long-term rehabilitation of water infrastructure.</p> <p><i>Desired Outcome:</i> A risk assessment tool is developed.</p>	2020	Engineering Manager		
4-2-2	<p><b>Identify a solution to allow electronic routing and signatures for financial and contractual documents.</b></p> <p><i>Description:</i> Research options or possible solutions for electronic signature approvals for contractual documents, check requests, billing adjustments, etc. that will eliminate paper costs, reduce time and increase efficiencies.</p> <p><i>Desired Outcome:</i> Present options for consideration.</p>	2020	Business Solutions Manager		
4-2-3	<p><b>Change our water budget allocations for non-residential customers to reflect the actual landscape type.</b></p> <p><i>Description:</i> Prior to the 2019 irrigation season each customer (approximately 900) will be given their 2018 actuals compared to budget, 2019 allocated water budget and their new proposed 2020 adjusted water budget based on a fly-over conducted in October 2018. Periodically throughout the 2019 irrigation season, staff will provide each customer their 2019 budget compared to actual usage and their new proposed 2020 budget compared to the 2019 usage to begin to manage within budget with no financial impact in 2019. However, in 2020, the expectation is that customers will be maintaining usage at or below these new 2020 adjusted budgets to avoid a financial impact into higher rate tiers. This gives each customer one irrigation season to track actual to budget usage and make adjustments as needed.</p> <p><i>Desired Outcome:</i> Non-residential customers will manage to the adjusted allocated budgets by the beginning of 2020.</p>	2020	Business Solutions Manager		
4-2-4	<p><b>Change our water budget allocations for residential customers to reflect actual landscape type.</b></p> <p><i>Description:</i> Using current fly-over data, adjust irrigated areas and plant type requirements to create updated water budgets for all residential accounts. Roll out over a two-year period, giving customers a year of data and outreach to manage within budgets before there are any financial consequences.</p> <p><i>Desired Outcome:</i> Residential customers will manage to the adjusted allocated budgets by the beginning of 2022.</p>	2022	Business Solutions Manager		

**Strategy 4: Maintain financial sustainability****Implement viable and sustainable financial programs that support the Town goals and initiatives.****Goal 2: Operate on a cost-of-service basis and effectively manage expenditures and revenues.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
4-2-5	<p><b>Evaluate the applicability of using the most recent fly-over data to adjust impervious surface values for all customers.</b></p> <p><i><b>Description:</b></i> Current calculations for monthly service charges are based on average assumed data. Aerial imagery provides the opportunity for site specific calculation of impervious area. The evaluation will consider potential impacts to individual customers and overall rates.</p> <p><i><b>Desired Outcome:</b></i> Determine if individual assessments are feasible and equitable.</p>	2020	Stormwater Manager		
4-2-6	<p><b>Optimize the balance/ratio between capital budgeting and actual capital projects spending on a year-over-year basis.</b></p> <p><i><b>Description:</b></i> To more efficiently manage the amount of capital that is budgeted each year to the amount of capital that is actually spent.</p> <p><i><b>Desired Outcome:</b></i> Within twenty percent.</p>	Ongoing	Business Solutions Manager		

Strategy 5: Optimize infrastructure performance					
Identify and demonstrate best management practices for all of Castle Rock Water's infrastructure.					
Goal 1: Maintain and enhance infrastructure stability and performance to optimize life-cycle costs.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
5-1-1	<p><b>Develop and implement remaining preventive maintenance programs.</b></p> <p><b>Description:</b> The different divisions each have established objectives for Preventative Maintenance (PM) programs. Stormwater has a five-year rotation that is in its second year. Standard Operating Procedures need to be written. The development and implementation of a PM and Emergency Repair Team needs to happen. Currently this team does not exist, but it is being formulated and justified to be able to complete PM's.</p> <p><b>Desired Outcome:</b> The Stormwater teams needed to have a benchmark, with methodology, on how to complete, then repeat, the five-year cycle. The PM and Emergency Repair Team will provide consistent and planned in-house maintenance on all Castle Rock Water assets.</p>	2021	Operations Manager		
5-1-2	<p><b>Develop a strategically-focused Asset Management Plan.</b></p> <p><b>Description:</b> Develop a written strategic asset management plan to unify the formal activities of the department associated with asset management, and to maximize value from these assets for our stakeholders.</p> <p><b>Desired Outcome:</b> A written plan that defines the Asset Management Program for Castle Rock Water.</p>	2020	Assistant Director		
5-1-3	<p><b>Improve water loss control through participation in the Colorado Water Loss Initiative.</b></p> <p><b>Description:</b> Participate in the Colorado Water Loss Initiative (CWLI), a comprehensive program of AWWA M36 water loss training and technical assistance for urban water systems across Colorado.</p> <p><b>Desired Outcome:</b> Implement best management practices for tracking water loss and actively decreasing it through informed decision-making for water loss control and revenue recovery.</p>	2019	Assistant Director		
5-1-4	<p><b>Evaluate the cost-benefit of adopting privately-owned stormwater facilities.</b></p> <p><b>Description:</b> Upon completion of the first five-year inspection and maintenance cycle on stormwater ponds, evaluate results to estimate the cost for assuming responsibility of privately owned facilities.</p> <p><b>Desired Outcome:</b> Identify the most cost-effective approach to ensuring long-term maintenance of private owned facilities.</p>	2023	Stormwater Manager		
5-1-5	<p><b>Achieve annual preventive maintenance goals.</b></p> <p><b>Description:</b> Revise and implement preventive maintenance strategies for Collections, Distribution, and Stormwater assets.</p> <p><b>Desired Outcome:</b> Water: Achieve targeted number of valve and hydrant inspections. Collections: Achieve targeted footage for both CCTV and jetting. Stormwater: Achieve remediation goals in each one of the five areas for ponds, outfalls, and other stormwater assets.</p>	2022	Operations Manager		

Strategy 5: Optimize infrastructure performance					
Identify and demonstrate best management practices for all of Castle Rock Water's infrastructure.					
Goal 2: Develop and manage infrastructure to keep pace with growth.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
5-2-1	<b>Complete design and construction of the Castle Rock Water Administration Building.</b>  <i>Description:</i> Design and construction of a new building to house administrative, customer service and water resources staff.  <i>Desired Outcome:</i> Efficient office space to provide permanent housing for all office staff, eliminate three modular buildings, provide customer-friendly access at ground level to customers, and provide a public meeting space accessible to the public without compromising security.	2020	Assistant Director		
5-2-2	<b>Keep construction on schedule, within budget, and in accordance with design for the Plum Creek Water Reclamation Authority's Wastewater Treatment Plant expansion.</b>  <i>Description:</i> The 3.0 MGD expansion is completed on time and on budget.  <i>Desired Outcome:</i> Plant expansion is complete by Fall 2020.	2020	Engineering Manager		
5-2-3	<b>Update the Drainageway Master Plans.</b>  <i>Description:</i> Nineteen plans have been developed for major drainageways within the Town. The plans need to be revisited and updated periodically to remain current.  <i>Desired Outcome:</i> Update the plans as budget allows.	2023	Stormwater Manager		
5-2-4	<b>Implement 24/7 coverage at the water treatment plants.</b>  <i>Description:</i> Castle Rock Water now has five operating Water Treatment Plants. These plants run 24/7 during the irrigation months. Production of water and the security of the plant and the associated personnel will rely on 24/7 coverage. Castle Rock Water has been planning for the 24/7 coverage since 2017, hired three FTE's in 2018 and will look for three more operators in 2020 and 2021.  <i>Desired Outcome:</i> The 24/7 schedule will maximize production and minimize down time. It will provide a safe environment for operators and enhance security around the water treatment plants.	2020	Operations Manager		
5-2-5	<b>Develop training and certification programs for construction inspectors.</b>  <i>Description:</i> Enforce standards for development by providing oversight and training for the development inspectors who are tasked with installing Castle Rock Water's infrastructure.  <i>Desired Outcome:</i> The appropriate installation of below grade infrastructure is tantamount to minimizing the premature emergency repair of Castle Rock Water assets. It saves the customers from being out of service and saves expensive repairs for Castle Rock Water.	2022	Operations Manager		



Strategy 5: Optimize infrastructure performance					
Identify and demonstrate best management practices for all of Castle Rock Water's infrastructure.					
Goal 3: Protect infrastructure through emergency preparedness, planning and response.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
5-3-1	<p><b>Perform a risk and resiliency assessment, and provide certification of completion to the EPA by December 31, 2020.</b></p> <p><i>Description:</i> This action is in response to the America's Water Infrastructure Act of 2018. Castle Rock Water performed a Vulnerability Assessment in 2004 in response to the Bioterrorism Act, but the key aspect of the new law is that the R&amp;R assessment include all hazards, and be updated at least every five years.</p> <p><i>Desired Outcome:</i> Continued vigilance of the assessment of vulnerabilities, and the planning to eliminate or reduce their consequences.</p>	2020	EHS Program Manager		
5-3-2	<p><b>Update our existing Emergency Response Plan (ERP) according to the risk and resiliency assessment.</b></p> <p><i>Description:</i> Edit the existing ERP accordingly.</p> <p><i>Desired Outcome:</i> Ensure that plans are adequate for the elimination or reduced consequences of assessed vulnerabilities.</p>	2021	EHS Program Manager		
5-3-3	<p><b>Provide periodic training and conduct periodic drills based on the Emergency Response Plan, including coordination with Douglas County and the Town of Castle Rock's Emergency Response Plan.</b></p> <p><i>Description:</i> To plan and carry out various drills according to the updated ERP as they relate to source water supply, finished water and distribution, wastewater collection, and stormwater management, in conjunction with the surrounding authorities.</p> <p><i>Desired Outcome:</i> The constant readiness of Castle Rock Water employees to respond appropriately to all hazard situations.</p>	2021	EHS Program Manager		
5-3-4	<p><b>Conduct training on the Emergency Action Plan (EAP).</b></p> <p><i>Description:</i> The EAP is a functioning program within the Castle Rock Water Health and Safety Manual. Employees to be trained in an on-going manner to respond to emergencies which can impact their safety.</p> <p><i>Desired Outcome:</i> The constant readiness of Castle Rock Water employees to respond appropriately to all hazard situations.</p>	2019	EHS Program Manager		
5-3-5	<p><b>Develop and implement a written security plan for physical and cyber threats.</b></p> <p><i>Description:</i> A draft Security Plan has been written and is in the process of review. This plan currently includes physical security and cyber security.</p> <p><i>Desired Outcome:</i> The appropriate stakeholders from Castle Rock Water, DoIT and outside organizations need to provide direction and funding to successfully implement a comprehensive security system.</p>	2020	Operations Manager		
5-3-6	<p><b>Develop and implement an on-call manual and related training.</b></p> <p><i>Description:</i> Operations developed an emergency on-call response team in 2018. The response team consists of four rotating Response Supervisors and five team members. The individual teams respond to after hour emergency damage to Castle Rock Water's infrastructure. While each response is different, the safety, notification, and reporting procedures are very similar.</p> <p><i>Desired Outcome:</i> The development of the on-call response team will move Castle Rock Water into the next phase of being able to accommodate increased population and aging infrastructure. This phase should include a Repair and Maintenance/Emergency response team that is solely dedicated to those tasks. The full development of procedures is essential to provide continuity and consistency.</p>	2020	Operations Manager		

Strategy 6: Demonstrate industry leadership					
Demonstrate industry leadership through continuous improvement, investing in our infrastructure, and delivering the highest quality water.					
Goal 1: Strive for continuous improvement throughout the organization through the application of the principles of Deming's Quality Cycle (Plan, Do, Check, Act).					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
6-1-1	<p><b>Conduct periodic organization-wide assessment using the Effective Utility Management (EUM) framework.</b></p> <p><b>Description:</b> The EUM framework was developed by American Water Works Association and a number of other key industry organizations. This framework provides an approach for assessing conditions, planning changes, implementing and then reassessing. Castle Rock Water did the assessment in 2018 ahead of preparing the new strategic plan. We will do a periodic check sometime during the five year strategic plan that will give us insight into our performance and give us actions to continue improvement. We will do an additional organization wide assessment at the end of the strategic plan period before building the next five year plan. All of the results of the assessments will be maintained and compared from previous years to track progress.</p> <p><b>Desired Outcome:</b> Continued improvement in all attributes of EUM as identified by the organization wide assessment results.</p>	2023	Director		
6-1-2	<p><b>Develop an action plan to address areas of improvement as identified by our annual participation in the AWWA Water Utility Benchmarking Survey.</b></p> <p><b>Description:</b> Continue participating in the AWWA Benchmarking survey annually, evaluate results and make adjustments to demonstrate continuous improvement.</p> <p><b>Desired Outcome:</b> Improved performance.</p>	2020	Assistant Director		
6-1-3	<p><b>Participate in the Partnership for Safe Water programs.</b></p> <p><b>Description:</b> To take advantage of existing programs that exist with the EPA, AWWA, and others to voluntarily enhance water system performance.</p> <p><b>Desired Outcome:</b> To minimize consumer risk to pathogenic organisms through continuous improvement of surface water treatment and water distribution.</p>	2022	EHS Program Manager		

Strategy 6: Demonstrate industry leadership					
Demonstrate industry leadership through continuous improvement, investing in our infrastructure, and delivering the highest quality water.					
Goal 2: Deliver a high-quality product and service to our community.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
6-2-1	<p><b>Ensure 100 percent compliance with primary and secondary drinking water standards through an annual review and assessment of our performance.</b></p> <p><b>Description:</b> Castle Rock Water intends to deliver only the highest quality of water by meeting Primary MCL's, as well as Secondary MCL's. The plant operations team will become knowledgeable on MCL's and SMCL's and routinely monitor for all of them.</p> <p><b>Desired Outcome:</b> Castle Rock Water will be moving away from non-renewable water and relying on multiple sources of renewable water. The plant operators and the Water Quality Team will be able to react to the changing water sources quickly and often.</p>	2019	Operations Manager		
6-2-2	<p><b>Establish health-based drinking water quality goals that go above and beyond federal and state standards, based on an annual review.</b></p> <p><b>Description:</b> The procurement of a highly qualified drinking water consultant for operational support and to provide direction with our water reuse system.</p> <p><b>Desired Outcome:</b> To ensure the highest quality product, and continue to anticipate the regulatory horizon.</p>	2023	EHS Program Manager		
6-2-3	<p><b>Evaluate Operations performance annually relative to conformance with wastewater collection system Best Management Practices, and adjust accordingly.</b></p> <p><b>Description:</b> Through the use of enhanced CCTVing and aggressive cleaning programs, the Collections Team will try to achieve 100 percent compliance with Castle Rock Water standards and the Federal Capacity, Management, Operations and Maintenance guidelines (CMOM) for maintenance and repair.</p> <p><b>Desired Outcome:</b> Castle Rock Water will minimize or eliminate Sanitary Sewer Overflows (SSO) and conduct inspections of the appurtenances to identify and record the Overall Condition Index (OCI). This will better prepare Castle Rock Water for predicting future budget and replacement needs.</p>	2021	Operations Manager		
6-2-4	<p><b>Request an annual review of Plum Creek Water Reclamation Authority's compliance record relative to the Colorado Discharge Permit System.</b></p> <p><b>Description:</b> Review compliance record of Plum Creek Water Reclamation Authority.</p> <p><b>Desired Outcome:</b> 100 percent compliance of all discharge permit requirements.</p>	2019	Assistant Director		
6-2-5	<p><b>Achieve top level performance on all state-conducted sanitary surveys and/or any sanitary surveys conducted by a third party.</b></p> <p><b>Description:</b> Castle Rock Water has achieved very high marks on the recent sanitary surveys. It is the intention of the Castle Rock Water team and Castle Rock Water leadership to work with an outside party to conduct an unannounced sanitary survey to prepare all divisions of Castle Rock Water for the Colorado Department of Public Health and Environment (CDPHE) survey.</p> <p><b>Desired Outcome:</b> Achieve top level performance on all state-conducted sanitary surveys and/or any sanitary surveys conducted by a third party.</p>	2019	Operations Manager		

Strategy 6: Demonstrate industry leadership					
Demonstrate industry leadership through continuous improvement, investing in our infrastructure, and delivering the highest quality water.					
Goal 2: Deliver a high-quality product and service to our community.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
6-2-6	<p><b>Ensure 100 percent compliance with MS4 permit through an annual review and assessment of our performance.</b></p> <p><b>Description:</b> As per the permit, conduct an annual review of program requirements and report out on compliance through the MS4 annual reporting process. Additionally, the permit requires the Program Description Document (PDD) and record keeping remain current throughout the duration of the permit term.</p> <p><b>Desired Outcome:</b> On-going compliance with the MS4 permit.</p>	Annually	Stormwater Manager		
6-2-7	<p><b>Ensure 100 percent compliance with revised backflow requirements by the end of 2020.</b></p> <p><b>Description:</b> Ensure that we have 100 percent of all non-residential and fire suppression accounts surveyed and have 90 percent of those surveyed test reports with passing results.</p> <p><b>Desired Outcome:</b> 100 percent compliance by 12-31-2020.</p>	2020	Business Solutions Manager		

Goal 3: Be a forward-thinking organization.					
Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
6-3-1	<p><b>Plan for Direct Potable Reuse (DPR) by designing systems to meet the expected regulatory requirements.</b></p> <p><b>Description:</b> All of the systems that Castle Rock Water is building for indirect reuse water will be planned and designed to meet expected future regulatory requirements for DPR to save future costs. This includes staying up-to-date on regulatory requirements for DPR in Texas, California, New Mexico, and other states, closely monitoring regulatory developments in Colorado, and planning our systems accordingly. This task includes continued community outreach about our planning and designing of these systems for DPR and our plans to ultimately go to DPR to ensure the community supports this longer term approach.</p> <p><b>Desired Outcome:</b> Have systems in place to meet the ultimate requirements for DPR in Colorado so that a change to DPR can be made relatively quickly in response to long-term drought or other local water supply conditions.</p>	2019	Director		
6-3-2	<p><b>Continue participation in the DPR guideline working group to assist with the development of regulatory guidelines for Colorado.</b></p> <p><b>Description:</b> WaterReuse Colorado, CDPHE and other utilities are working to develop regulations for Colorado for DPR. Castle Rock is part of this working group. We will continue to maintain our role on this working group, including financial contributions where appropriate until an actual regulatory framework is completed.</p> <p><b>Desired Outcome:</b> Regulatory framework in place for Colorado that is consistent with industry best practices and other States.</p>	2022	Director		
6-3-3	<p><b>Implement the ColoradoScapes Plan.</b></p> <p><b>Description:</b> Provide information, education, events, and displays to encourage customers to transition landscapes into low-water use landscapes.</p> <p><b>Desired Outcome:</b> Reduced customer water consumption in the landscape.</p>	2019 Ongoing	Community Relations Program Manager		

**Strategy 6: Demonstrate industry leadership**

**Demonstrate industry leadership through continuous improvement, investing in our infrastructure, and delivering the highest quality water.**

**Goal 3: Be a forward thinking organization.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
6-3-4	<p><b>Develop standards and processes for the implementation and use of graywater systems in Castle Rock.</b></p> <p><i>Description:</i> Work with Development Services and their Building Division to develop standards and processes to incorporate greywater systems into new construction, as a tool to help Castle Rock Water meet water conservation goals.</p> <p><i>Desired Outcome:</i> More widespread use of greywater systems in Castle Rock.</p>	2020	Engineering Manager		
6-3-5	<p><b>Evaluate opportunities to incorporate LEED standards into new building and implement if cost-effective.</b></p> <p><i>Description:</i> Evaluate and incorporate Leadership in Energy and Environmental Design (LEED) elements into the new Administration and Customer Service Building where feasible.</p> <p><i>Desired Outcome:</i> A more sustainable building that will save energy, water and resources, and generate less waste and support human health.</p>	2019	Assistant Director		

**Goal 4: Be a recognized leader among our water utility peers.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
6-4-1	<p><b>Establish an Apprenticeship Program in collaboration with local colleges/universities that will attract new people to the water utility industry.</b></p> <p><i>Description:</i> Provide students enrolled in a college curriculum an opportunity to gain skills and earn operator certification in the water and wastewater utility industry, with the goal of preparing the student for a career in water utilities while earning school credit.</p> <p><i>Desired Outcome:</i> A stronger candidate pool for the water utility industry at the local and regional level.</p>	2019	Assistant Director		
6-4-2	<p><b>Reduce per capita water consumption to 100 gpcd or less.</b></p> <p><i>Description:</i> Efficient water use is a key element of living in Castle Rock's semi-arid environment and a critical part of our water resource strategy. As part of the Town's water resource planning, managing water demand is key and being a leader in conservation and efficiency has the potential to save the customers and community tens of millions of dollars in renewable water investments over the next thirty years. At the end of 2018, the five year rolling average per capita water usage rate was 114 gpcd.</p> <p><i>Desired Outcome:</i> With continued education programs for our customers, water conservation rebate incentives and policies that drive down the use of water-intensive turf types, Castle Rock Water believes that per capita water use can be reduced to 100 gpcd or less.</p>	2050	Water Conservation Specialist		
6-4-3	<p><b>Maintain Gold status in the State of Colorado Pursuing Excellence Program.</b></p> <p><i>Description:</i> Continue to participate in CDPHE's Pursuing Excellence Program and share knowledge/experience with other water systems to improve public health.</p> <p><i>Desired Outcome:</i> Gold status in Pursuing Excellence.</p>	2023	Assistant Director		



**Strategy 6: Demonstrate industry leadership**

Demonstrate industry leadership through continuous improvement, investing in our infrastructure, and delivering the highest quality water.

**Goal 4: Be a recognized leader among water utility peers.**

Tactic #	Tactic	Target Completion Year	Champion	Status	
				Completed	Ongoing
6-4-4	<p><b>Maintain Gold status in the Colorado State Environmental Leadership Program.</b></p> <p><b>Description:</b> Provide on-going direction for the maintenance of the highest environmental status within the state environmental program.</p> <p><b>Desired Outcome:</b> Continual improvement with our environmental programs, and to go above and beyond the federal and state regulations.</p>	2021	EHS Program Manager		

## **Appendix C**

### **Yearly Updates**

The first yearly update will be added to Appendix C at the end of 2019.



## Five Year Strategic Plan 2019-2023

