



Five Year Strategic Plan

2014 through 2018



Excellence · Dedication · Service

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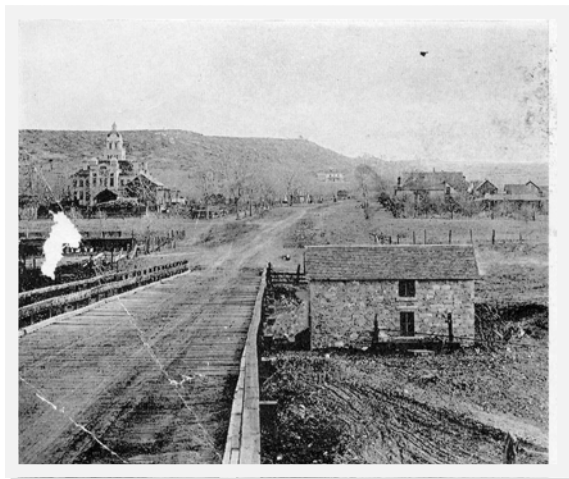
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Our Vision

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

Our Mission

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



Water Works Pumping Station - early 1900s

Dear Customers, Stakeholders, and Castle Rock Water Staff,

In 1893, with 2.5 miles of wooden pipeline, a few water mains and one reservoir, the department began its first service to just a few hundred people. This was the beginning of the Town's commitment to delivering residents this vital and important natural resource.

Over a century later, we are an industry leader, providing state-of-the-art water, wastewater and stormwater services to a growing Town of more than 62,000 residents.

In order to ensure that we fulfill our Vision and Mission and continue our national leadership, the team has updated its strategic plan. 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.

This strategic plan is designed to build 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. They showcase our innovation and rely on continued community support.

Castle Rock's Legacy Water Projects were designed to secure our water future by focusing on renewable water solutions. We cut the ribbon on one of those projects in 2013. The Plum Creek Water Purification Facility (PCWPF) is capable of purifying a wide range of water supplies into top-quality drinking water. This facility gave us a chance to demonstrate innovative thinking as we utilized the best technology available. 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 will also ensure that we continue to partner 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 with our partners 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 will be available online at CRgov.com/Water. If you have questions about the plan, please feel free to contact us at 720-733-6000 or CRgov.com/water.

Sincerely,
Castle Rock Water Team



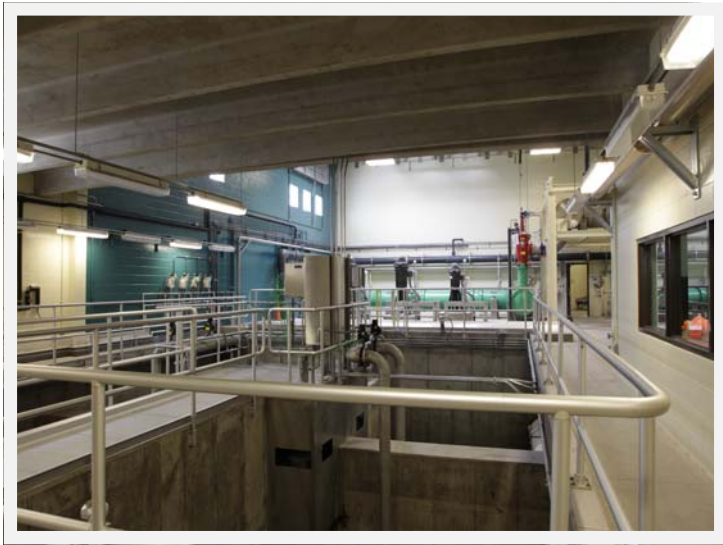
Introduction: A National leader

From its inception more than a century ago, the Town and its residents have recognized the need for a sustainable water supply. Due to limited rainfall and expensive requirements for treating surface water, the Town has been, until recently, almost fully reliant on non-renewable groundwater. That's why residents and Castle Rock Water have been conservation-minded and focused on future innovation. Ongoing strategic planning and innovative approaches to issues over the last 10 years have helped us become a leader in many areas of the water business. The vision, of course, is to become a **national leader** among water utilities.



The membrane expansion is the heart of our new Plum Creek Water Purification Facility.

Over the last decade, Castle Rock Water has almost doubled in size and now embodies more than 20,000 customer connections and more than \$567 million worth of infrastructure assets to be managed, operated, optimized, and maintained. In this same timeframe, the Town of Castle Rock has grown to a population of more than 65,000.



Green sand filters allow our new plant to treat a range of varying raw water supplies.

As we look to the future, water resources are becoming more valuable and harder to secure in Colorado. All aspects of the water business have become more heavily regulated and increasingly technical in nature. The challenges for water utilities have grown exponentially. Integrated or “total” water management, meaning the management of water, wastewater, and stormwater as a single resource has become the expectation. This natural progression makes sense as these resources are connected. Castle Rock Water faces significant challenges in this increasingly complex environment. We must maintain existing supplies and secure additional long term sustainable water supplies.

The department's strategic planning process was developed as a leadership tool to help our team become oriented in the same direction ensuring that everyone's individual efforts will move us forward as a team in a mode of continuous improvement. This strategic plan is the culmination of approximately a year's worth of planning and innovative thought by the Team, as well as annual updates to that culture of innovation. The goal, which has successfully been achieved, was to take the previous strategic planning efforts and build on them to design a plan that will help us focus our energies for the next five years. The plan's development process engaged the entire team ensuring input from the various divisions and also pulled from the best planning documents and approaches used in the water industry.

Castle Rock Water reviewed strategic plans from top ranked utilities across the nation as well as industry leading approaches to strategic planning including *The Ten Attributes of Effectively Managed Water Sector Utilities*, a comprehensive document developed as a part of the Effective Utility Management (EUM) initiative through the American Water Works Association (AWWA). Sources for benchmarking our performance were also identified, including the 2011 Benchmarking Report prepared by the AWWA. As part of our annual updates to this Plan, we participated in the 2013 Benchmarking Report and used that to inform updates to our strategic planning.

The team set many important goals initially, including:

- ◆ Meet the needs of our community (account for our political, social, financial and physical environment), and our team (uniquely ours, match our culture).
- ◆ Marry this plan with the Town's strategic plan.
- ◆ Should take into account our specific needs.
- ◆ Recognize national trends in our business and utilize current best practices.
- ◆ Incorporate the Vision and Mission of Castle Rock Water and Town Values.
- ◆ Ensure consistency with our master planning.

The starting point for the strategic planning process was to revisit the communities' priorities in the Town's 2030 Comprehensive Plan, and the 2010 Town's Strategic Plan And the 2013 financial plan. These priorities were incorporated into the strategic planning process.

The plan was developed in stages, starting with six strategies first followed by the supporting goals and objectives. Input was then sought from the entire staff to see if the strategies and supporting goals and objectives were on target. This input was obtained through focused team meetings in each division, discussion of the draft plan at staff meetings, and emails to staff with the plan attached and direction on providing input. Staff input was provided and the strategies and supporting goals and objectives were modified taking into consideration the input received. Once the strategies and supporting goals and objectives were established based on staff input, the final draft was taken to the Castle Rock Water Commission for input and review in September 2013. These strategies, goals and objectives were then provided to Town Council in November 2013. Annual input has been obtained from Commission and Council each subsequent year.



Rueter-Hess Reservoir - A Legacy Project and key component of Castle Rock Water's long-term water supply.

Once the strategies, goals and objectives had been finalized, a tactics and implementation plan was created to further define meeting the goals and objectives for each strategy as well as provide for a method for measuring success. Over 130 SMART (Specific, Measurable, Attainable, Realistic and Timely)

tactics were identified by the team to this end. Key Performance Indicators (KPIs) are associated with many of these tactics and accomplishment of tactics and tracking of KPIs have been and will continue to be used to report progress on this plan at least annually to the Castle Rock Water team, Council, the community and our other internal and external stakeholders.

A final draft document incorporating input from staff, commission and Council was then prepared. This document was once again reviewed with staff through a series of team meetings. After considering final comments, a final document was prepared and taken back to the Castle Rock Water Commission in January 2014 and Council in March 2014 for approval and adoption. The end result - this Strategic Plan. This Plan has been updated each year since adoption.

This plan looks out over a five year period consistent with our other more detailed planning process horizons and accounts for the various Castle Rock Water master planning efforts. We are entering the fifth year of the Plan. One of the primary functions of this strategic plan is to tie together enterprise based master plans and documents, the community vision documents, and the Town strategic and financial plans to allow clear focus on the overall priorities of Castle Rock Water given the goals and objectives within each enterprise and the other critical strategic concerns of the utility. This Strategic Plan is a living document and has been and will continue to be updated as master plans are updated, the Community Vision 2030 document is rolled out, and the Town's overall strategic and financial plans are updated.



Examples of the leadership Castle Rock has shown in efficient use of water and water conservation. Pictures (left to right) show Xeriscaping at the Ray Waterman Regional Water Treatment Center, medians in The Woodlands and Festival Park.

Our Vision, Mission and Values

The Town, Castle Rock Water and its residents have recognized the need for a sustainable water supply. The Vision and Mission 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 Vision and Mission utilizing our Town Values.

Our Vision

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

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 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.



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.

The first strategy identified by the team is a common theme in all of the strategic and community documents for the Town of Castle Rock. In simple form, this strategy is to ensure long-term water. The Water Resources Strategic Master Plan focuses on key aspects of this strategy including renewable water supply. This strategic plan provides additional goals and objectives coming from all divisions within Castle Rock Water which support the overall strategy of ensuring long-term water including the development of a long-term renewable water supply as outlined in the Water Resources Strategic Master Plan. A number of the attributes identified through the Effective Utility Management Initiative are also covered under this strategy including water resource adequacy, operational resiliency, infrastructure stability and community sustainability. Goals and objectives for Strategy 1 are:



East Plum Creek is a key source of renewable water for our community

Goal #1: Secure adequate water supplies in a manner that spreads the costs evenly through 2055.

Objectives:

- ◆ Acquire renewable surface water comprising 75 percent of supply by 2050.
- ◆ Minimize the cost of the water supply by forging partnerships.
- ◆ Minimize unaccounted and non-revenue water to reduce the total amount of imported water.
- ◆ Reassess the Town Municipal Code related to water supply.
- ◆ Maintain a current water demand and water supply forecast model.
- ◆ Maximize the use of water rights including stormwater and reclaimed water.

Goal #2: Fully utilize existing groundwater infrastructure to maintain long-term water security.

Objectives:

- ◆ Develop a Groundwater Optimization and Sustainability program.
- ◆ Implement Aquifer Storage and Recovery program.
- ◆ Protect our groundwater supply by implementing guidelines and regulations, or an aquifer protection plan.

Goal #3: Increase conservation and reduce seasonal peak demands in the community.

Objectives:

- ◆ Update the Water Conservation Master Plan.
- ◆ Decrease peak demand to average demand ratio to decrease long-term water cost of additional water supply and storage.

Goal #4: Develop plans and preparations for dealing with future droughts.

Objectives:

- ◆ Develop a Drought Mitigation Plan.
- ◆ Diversify water supply where possible.
- ◆ Develop a detailed Conjunctive Use Plan.

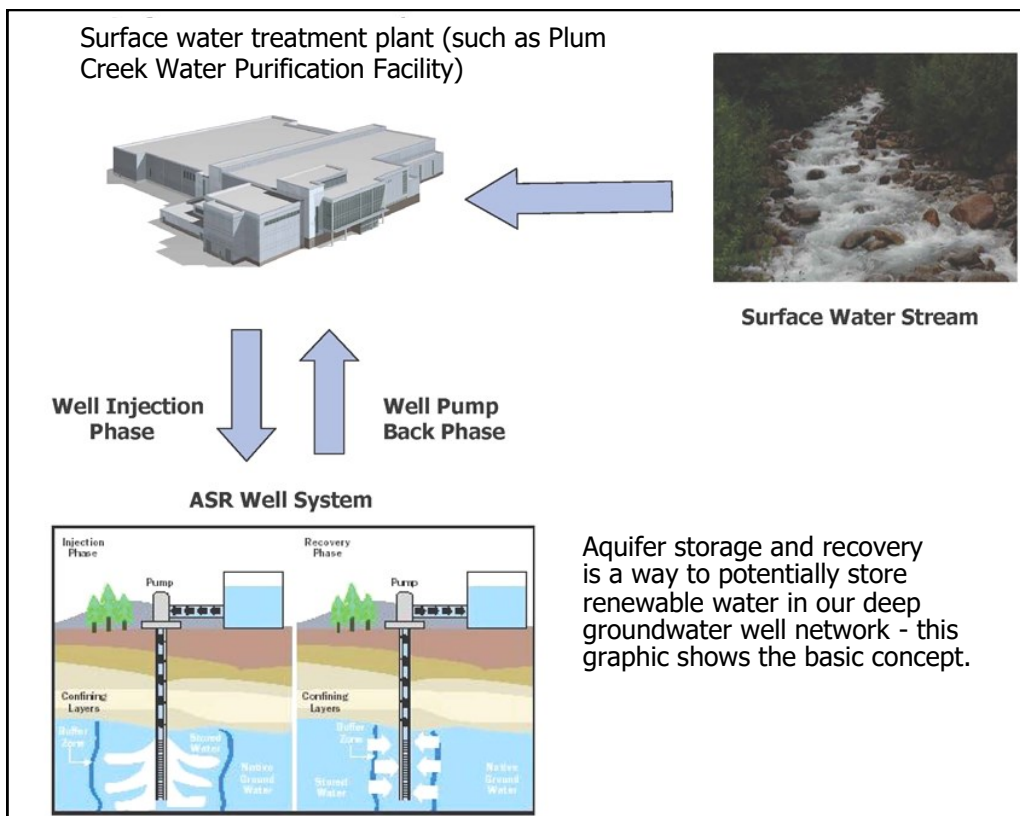
Goal #5: Protect the watershed and shallow alluvial aquifers from whence our supply comes.

Objectives:

- ◆ Further refine Stormwater Program to ensure proper funding for all necessary stormwater improvements.
- ◆ Engage in regional water quality groups and efforts.
- ◆ Comply with all state and federal NPDES Phase II MS4 Permit requirements.
- ◆ Monitor oil and gas (O/G) drilling operations with the potential to impact regional groundwater/surface water supplies.
- ◆ Investigate the need for and/or develop local regulations for O/G drillers in order to protect our resources.



Castle Rock Water maintains an extensive network of deep groundwater wells.



Aquifer storage and recovery is a way to potentially store renewable water in our deep groundwater well network - this graphic shows the basic concept.

Strategy 2: Utilize Town values to the Vision and Mission

Grow our culture where every employee contributes daily to fulfilling our Vision and Mission while modeling Town values.

Any organization is only as good as its people. The water industry is no exception. The provision of these services requires high performing professionals in a competitive environment. These 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 more than 84 highly trained professionals, Castle Rock Water must focus on the performance and support of this team. Strategy 2 is designed to provide this focus. The Town is a value-based organization, and Castle Rock Water has incorporated the active use of these values in every aspect of our strategic planning and operations, including the leadership and growth of the team. Shining this light on the health of our organization will help the team to fulfill our Vision and Mission. Major items covered in this strategy include staffing levels, communications, employee performance and retention, succession planning and accountability, and more. This strategy also incorporates key attributes from the Effective Utility Management Initiative including employee leadership and development, customer satisfaction, and stakeholder understanding and support. Goals and objectives for Strategy 2 are:



Our team loves their work, and it is this kind of attitude we seek in our team members.

Goal #1: Communicate in a clear, direct and honest manner, internally and externally.

Objectives:

- ◆ Evaluate, refine and improve, on a continuous basis, current methods for communication with internal and external customers.
- ◆ Provide timely communications to external and internal customers.
- ◆ Focus and train team members on good communication and communication techniques.
- ◆ Develop tools to measure the effectiveness of our communications.
- ◆ Ensure that each employee feels like a valued member of the team.

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

Objectives:

- ◆ Complete our goals with a sense of urgency appropriate for the importance of our work and hold each other accountable for results.
- ◆ Work as a team with other Town departments to ensure that the overall community vision and Town strategic plans are achieved.
- ◆ Develop a team culture where every member contributes to the provision of exceptional service and protects public health.



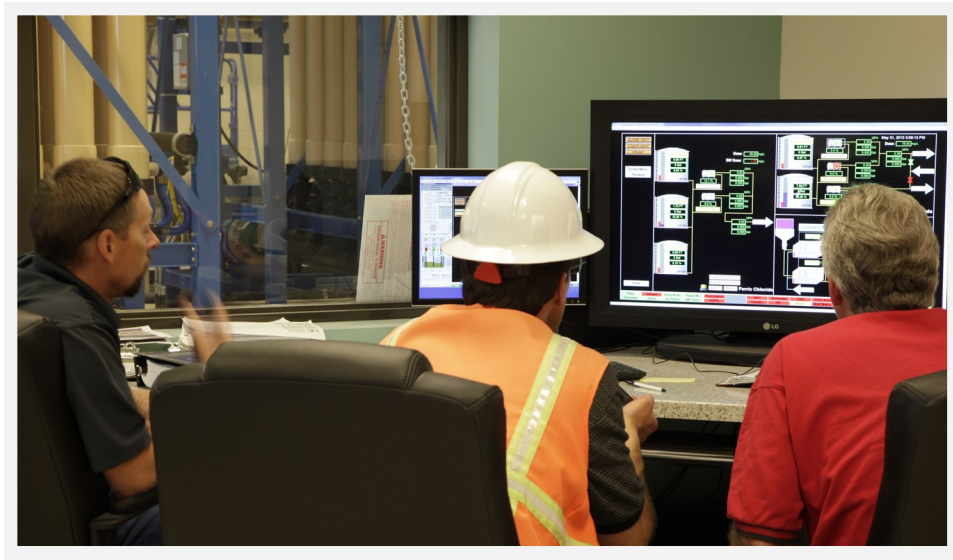
The team, working at night, to fix a leak.

- ◆ Train and educate team members on the connection between Town values and a healthy, high performance organization.
- ◆ Promote Town values through our interactions with internal and external customers and stakeholders.

Goal #3: Invest in our employees and recruit competent, talented employees who are motivated, adaptive and safe in their working environment.

Objectives:

- ◆ Work with the Town to ensure we have appropriate compensation and benefits in place to be competitive in the water industry.
- ◆ Provide opportunities for team members to gain certifications, attend training, and further their education.
- ◆ Refine and implement a comprehensive health and safety program that minimizes risks to team members.
- ◆ Ensure that we challenge employees to achieve more than would normally be expected.



Castle Rock Water utilizes a high tech monitoring system to optimize operations at our newest water plant.

Strategy 3: Enhance customer satisfaction

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

This strategy was developed in a manner consistent with the philosophy at Castle Rock Water that all staff are in the customer service business and must participate in the continuous improvement of that service. This customer-centric approach has been in place for many years. This strategic plan identifies goals and objectives to continue this focus and fulfill the Vision and Mission for the department by continuing to improve service to our customers. This strategy covers objectives ranging from analysis of appropriate levels of service to improved communications, and utilization of technology to make us more efficient and more customer-oriented. Effective Utility Management Initiative attributes covered in this strategy encompass customer satisfaction, community sustainability and stakeholder understanding and support at a minimum. Goals and objectives for Strategy 3 are:

Goal #1: Understand stakeholder needs, perceptions and expectations.

Objectives:

- ◆ Define our current level of service, identify appropriate level of service, and implement that level of service.
- ◆ Ensure that our rates and fees, given local constraints, are comparable with surrounding water providers.
- ◆ Evaluate and utilize Town efforts in community engagement and visioning to better define customer needs, perceptions and expectations.

Goal #2: In collaboration with our customers, seek and apply innovative approaches to provide exceptional customer service.

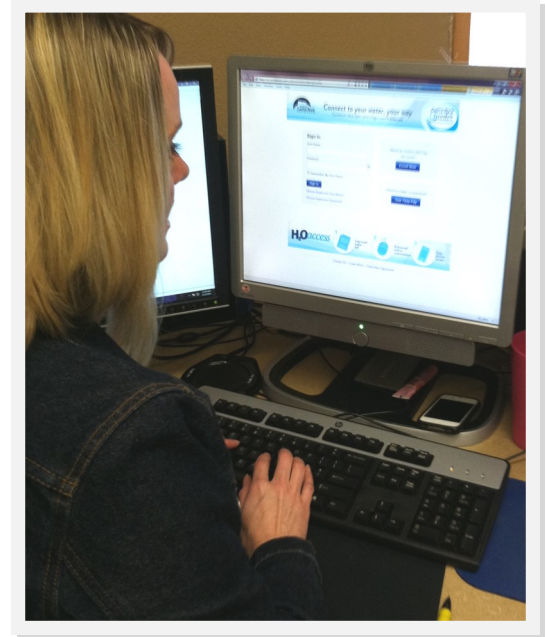
Objectives:

- ◆ Integrate technology to provide multiple customer interface options.
- ◆ Utilize technology to streamline and optimize staffing and business processes.

Goal #3: Communicate the value of products and services provided to our customers.

Objectives:

- ◆ Develop and implement a comprehensive communication strategy.
- ◆ Maintain consistent message with regional and state-wide communication efforts.
- ◆ Partner with others to broaden our outreach effort.
- ◆ Track and leverage industry specific messaging regarding the value of water.



H2Oaccess - Our new technology-based billing system.



H2Oaccess means you can connect to your water, your way.

Strategy 4: Maintain financial sustainability

Implement viable financial programs that support community goals and initiatives.

Water utilities are inherently infrastructure intensive entities. A well run utility operation requires significant initial investments in pipes, tanks, plants, and other infrastructure and the continuing re-investment in existing infrastructure. Significant financial resources are required to accomplish this basic mission. As such, a focus on maintaining the financial sustainability of the utilities infrastructure through optimum management of the four associated enterprise funds is critical to the success of the community and the utility. The funds for the proper financial management of the utility come from the customers of Castle Rock Water. This strategy provides the necessary focus on the financial management of assets and infrastructure for the long-term benefit of the our customers. Many of the attributes promoted in the Effective Utility Management initiative are part of this strategy including, of course, financial viability. Goals and objectives for Strategy 4 are:



Castle Rock Water uses the latest in meter technology - the iPerl.

Goal #1: Maintain sustainable rates and fees.

Objectives:

- ◆ Operate on a cost-of-service basis, effectively managing expenditures and revenues.
- ◆ Evaluate business processes and practices to leverage efficiencies.
- ◆ Ensure coordination and collaboration of enterprise fund management with overall Town financial goals.

Goal #2: Demonstrate fiscal accountability and transparency.

Objectives:

- ◆ Meet or exceed industry financial standards.
- ◆ Maintain effective customer account management processes and procedures.
- ◆ Evaluate and manage contracts, agreements and commitments to ensure the best value for our customers.
- ◆ Develop financial policies to optimize capital project financing, investments and overall money management.
- ◆ Communicate the financial status of each utility enterprise fund to stakeholders.

Strategy 5: Optimize infrastructure performance
Embrace innovation and creativity, identify and demonstrate best management practices for all Castle Rock Water's assets.

Castle Rock Water is responsible for operating more than \$567 million worth of infrastructure. In order to meet our Vision and Mission, 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. Much of the infrastructure being managed has been designed to last for decades. Optimizing the operation of the infrastructure today including proactive maintenance, ensuring that it continues to operate for its full designed life and beyond. This strategy entails a broad range of goals and objectives designed ultimately to increase the efficiency of the Utilities operations and extend the life of the assets being managed by the utility for the benefit of the customers being served by this infrastructure. Product quality, operational resiliency, operational optimization, and infrastructure stability are important Effective Utility Management initiative attributes addressed in this strategy. Goals and objectives for Strategy 5 are:



Inside of a water tank after completing construction. In Castle Rock, the total storage volume available is 35.6 million gallons which balances daily demands with potential emergency needs.

Goal #1: Examine and implement cost-effective and sustainable performance improvements.

Objectives:

- ◆ Develop an Energy Management Plan to target and ensure efficient operation of high consumption assets.
- ◆ Enhance water treatment and distribution operating plans that balance water resources, operational efficiency and preventive maintenance perspectives.
- ◆ Provide adequate operations and maintenance facilities to allow for staff development, equipment maintenance and forecasted growth.
- ◆ Provide adequate administrative and customer service facilities to allow for staff development, customer interface and forecasted growth.

Goal #2: Maintain and enhance infrastructure stability to optimize life-cycle costs.

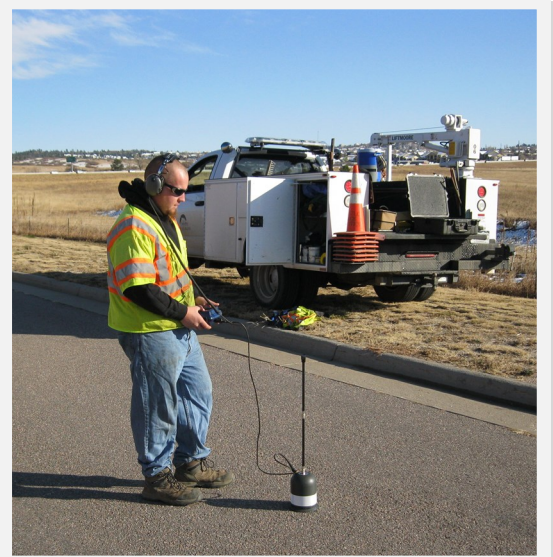
Objectives:

- ◆ Perform periodic review and update of O&M specific plans and programs.
- ◆ Develop an Asset Management Program, complete with asset condition assessments and recommended replacement schedules.
- ◆ Develop and implement a Preventive Maintenance Program.

Goal #3: Launch operational resiliency initiatives to enhance emergency response.

Objectives:

- ◆ Implement mobile technology and wireless access for field employees to reduce customer response time.



Special listening equipment helps us find leaks before they surface.

Strategy 6: Demonstrate industry leadership

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

One of the best ways to improve is to compete with others in your industry. Castle Rock Water desires to be a leader within the industry. This leadership will ensure that the best management practices are incorporated into its operations every day. It will focus the department on benchmarking against other utilities and incentivize the department to adopt new and leading edge ways of doing business and providing service. This kind of leadership will benefit the customers and the community by ensuring that Castle Rock Water provides the best possible service, highest level of public health, most innovative and robust infrastructure, and competitive pricing for all of it. This strategy touches on all of the attributes identified in the Effective Utility Management initiative. Goals and objectives for Strategy 6 are:

Goal #1: Strive for continuous improvement throughout the organization.

Objectives:

- ◆ Set team performance goals and benchmarking standards across department divisions.
- ◆ Conduct organizational health assessments/industry peer reviews periodically.
- ◆ Implement appropriate changes to keep pace with industry direction aligned with customer and stakeholder expectations.
- ◆ Strive to create an integrated and well-coordinated senior leadership team.

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

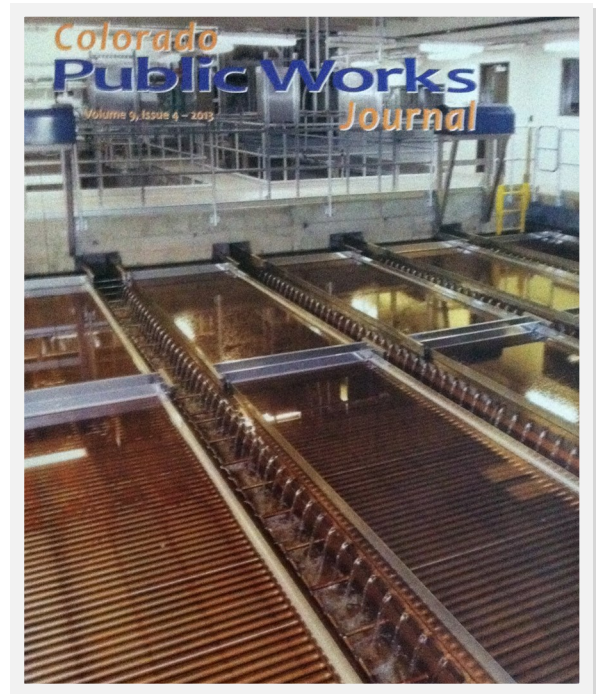
Objectives:

- ◆ Ensure compliance with Safe Drinking Water Act and exceed National Primary Drinking Water Standards.
- ◆ Comply with all state and federal Stormwater permit requirements.
- ◆ Implement wastewater collection system Best Management Practices including federal Capacity, Management, Operations and Maintenance (CMOM) guidelines.
- ◆ Support Plum Creek Water Reclamation Authority in meeting all treatment requirements.

Goal #3: Be a forward-thinking organization and a recognized leader among our water utility peers.

Objectives:

- ◆ Benchmark our performance against industry standards and comparable public water utilities.
- ◆ Be recognized by other utilities for high performance, targeting levels of service that exceed industry standards relevant to local conditions.
- ◆ Apply new technologies and innovative programs to advance the utility.
- ◆ Keep criteria manuals/standard details up to date.



The Colorado Public Works Journal devoted an entire issue to the industry leadership displayed by the Castle Rock Water through the innovative concepts in its new water plant.

Strategies, Goals and Objectives

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 strategies going forward making sure everyone stays focused on the goals and objectives that will help us achieve and continue to achieve our Vision and Mission. Six primary strategies were developed by the team in response to the biggest issues currently facing the department.

The selected strategies encompass aspects from the *Ten Attributes of Effectively Managed Water Sector Utilities* that have come from American Water Works Association initiatives. The attributes identified in this Initiative are called the Effective Utility Management (EUM) initiative and served as guiding tools for the department over the last several years.

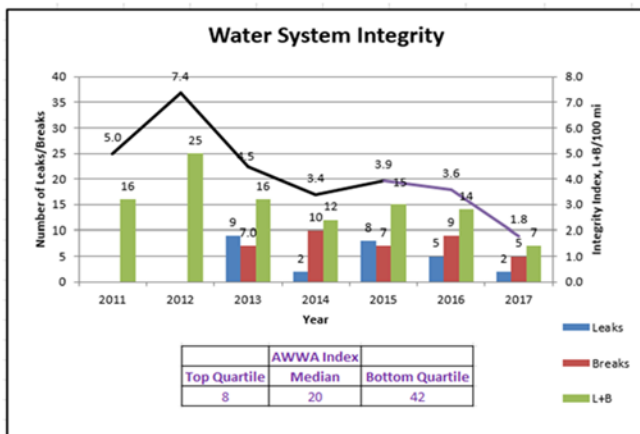
These attributes include:

- | | |
|--------------------------|---------------------------------------|
| Product Quality | Customer Satisfaction |
| Operational Optimization | Employee and Leadership Development |
| Financial Viability | Community Sustainability |
| Operational Resiliency | Infrastructure Stability |
| Water Resource Adequacy | Stakeholder Understanding and Support |

Incorporating these attributes, each strategy is summarized in a short action-oriented phrase for easy recollection by the team as follows:

- Strategy 1: Ensure long-term water
- Strategy 2: Utilize Town values to fulfill the Vision and Mission
- Strategy 3: Enhance customer satisfaction
- Strategy 4: Maintain financial sustainability
- Strategy 5: Optimize infrastructure performance
- Strategy 6: Demonstrate industry leadership

An extended and more detailed version of each strategy follows later in this document. Major goals supporting each strategy were then identified with a set of more specific objectives under each goal. The complex and high level aspects of each strategy required the breaking down of each strategy into more defined sets of goals and objectives. This allowed the team to develop tactics and key performance indicators (KPIs) on the front line for use in measuring success and progress against the goals and objectives outlined under each strategy.



The key performance indicator of water system integrity measures the number of leaks and line breaks we experience relative to other utilities nationally.

Defining and Ensuring Success: The Tactics and Implementation Plan

In order to be successful in any strategic planning process, there must be a way to track progress and measure success at the staff level. The Castle Rock Water team spent extensive time developing an implementation plan to ensure the success of our strategic plan. This implementation plan will allow team members at all levels to track and see progress with respect to the overall strategic plan. Like the strategic plan, the implementation plan will be a living document. Tactics will be added, tracked, adjusted, and changed as appropriate within the implementation plan.

In the original implementation plan, the team identified Specific, Measurable, Attainable, Realistic and Timely (SMART) tactics that support the strategies, goals and objectives. Staff identified more than 130 important tactics to support the strategies, goals and objectives. As noted above, due to the sheer number of tactics and the fact that some of them may change over time as implementation proceeds, the full list of tactics has not been included in this document.

The identified tactics were prioritized by the team under each strategy. The team then created a roadmap identifying the timing of each tactic, selected a champion for each tactic, and where appropriate, identified key performance indicators (KPIs), and defined successes. The measures of success, including the KPIs, will allow staff to determine progress on a regular basis and will also allow staff to report back to the Council and the community on progress as has been done the last three years. Many of the KPIs that will be used in the Tactics and Implementation Plan are standard KPIs that will allow us to benchmark our progress against other similar utilities, both on a national basis as well as a regional basis.



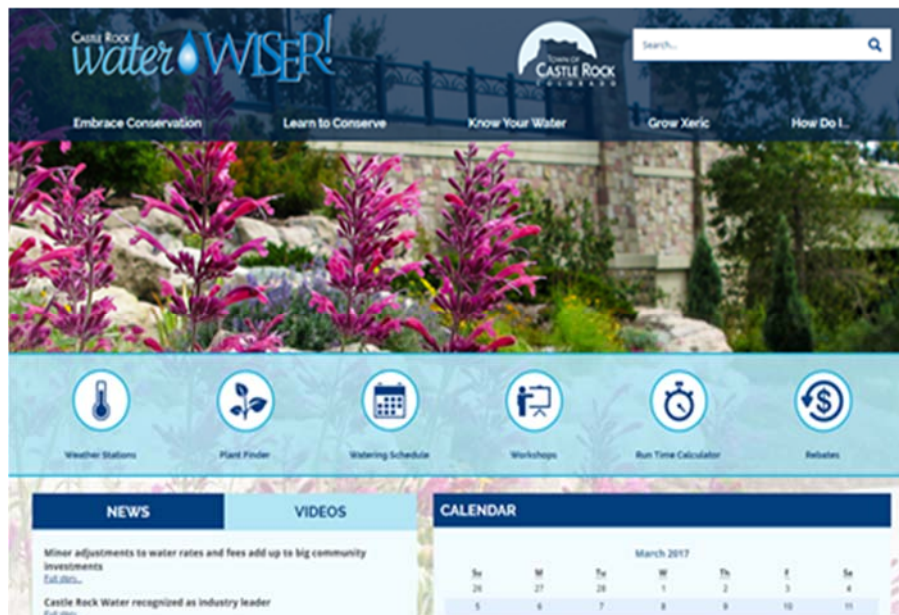
Developing an asset management program is a key tactic.

One of the primary sources for KPIs is the *Benchmarking Performance Indicators for Water and Wastewater Utilities: Survey Data and Analysis Report*, published by the American Water Works Association. The American Water Works Association has been the lead entity and key source for this data in the water business producing the first survey in 2005. The results of the surveys are available each year with 2016 being the most recent. Each year, survey data is collected from more than 100 leading water and wastewater utilities across the country. There is no charge for participation in the survey, and participants receive a free benchmarking report. As such, the department will continue to participate in this survey annually going forward. Other benchmarking data will be incorporated into KPIs that go beyond those defined by the American Water Works Association. For example, for safety, data from the Occupational Safety and Health Administration (OSHA) will be used.

Implementation of the various tactics began in 2014 with completion of many of the tactics. The Tactics and Implementation Plan has been updated for 2017- 2018. Progress on the Tactics and Implementation Plan will continue to be reviewed with staff on a monthly basis at staff meetings, team meetings, and in various other venues. Key tactics identified for 2017 - 2018 are shown on the next three pages:

2017-2018 Key Tactics

Tactic #	Tactic Summary	KPIs	Success	Key Tactic	Priority	Champion
Strategy 1 Ensure long term water						
1-1-1	Install infrastructure to import 1,000 acre-feet (AF) of WISE water to Town customers.	Cost per AF	Infrastructure built within budget and in place to import 1,000 AF by 2017.	2016, 2017	High	Water Resources Manager
1-1-3	Negotiate agreements with Parker Water & Sanitation District for the use of existing infrastructure and new infrastructure to reduce the cost of WISE.	Cost per AF	Agreements in place that are financially beneficial to the Town of Castle Rock.	2017	High	Water Resources Manager
1-1-13	Evaluate additional raw water supply options for Rueter-Hess Reservoir and Chatfield Reservoir	N/A	Evaluation completion	2016, 2017	High	Water Resources Manager
1-1-14	Maximize and track the use of reuse water.	Percentage reuse water used	Tracking system in place.	2016, 2017	High	Water Resources Manager
1-3-5	Audit and assist in optimizing Town irrigation systems.	Percent water reduction per square foot.	Town irrigation systems optimized.	2017	High	Water Conservation Specialist
1-4-1	Development of a Drought Mitigation Plan.	N/A	Plan complete.	2017	High	Water Resources
1-5-1	Develop the Town's current source water protection plan/code and adjust as necessary.	N/A	Updated source water protection plan/code in place.	2017	High	Assistant Director
Strategy 2 Utilize Town values to fulfill the Mission and Vision						
2-3-12	Update and overhaul the Safety Manual					



Castle Rock Water has an entire website devoted to water conservation with Town-specific information and tools.

Tactic #	Tactic Summary	KPIs	Success	Key Tactic	Priority	Champion
Strategy 3 Enhance customer satisfaction						
3-2-5	Evaluate and recommend integrated voice response (IVR) system or similar solution.	Number of outgoing messages	Reduced disconnect deployment, increased customer satisfaction.	2017	High	Business Solutions Manager
3-2-8	Pilot test customer-driven advanced metering infrastructure solution.	Number of pilot systems in place	Pilot test underway.	2016, 2017	Medium	Business Solutions Manager
Strategy 4 Maintain financial sustainability						
4-2-13	Evaluate interfund loans to minimize rates and fees impacts.	N/A	Evaluation complete and recommendations implemented in the Rates and Fees Study.	2016, 2017	High	Business Solutions Manager
4-2-14	Create agreement/commitments monitoring program.	N/A	List of annual and upcoming commitments.	2017	High	Director / Administrative Assistant
Strategy 5 Optimize infrastructure performance						
5-1-9	Plan and design next Plum Creek Water Reclamation Authority wastewater treatment plant expansion.	N/A	Costs identified, preliminary design complete.	2016, 2017	High	Engineering Manager
5-2-3	Identify assets and rate overall condition ratings.	Schedule	Complete identification and ratings on schedule.	2016, 2017	High	Asset Manager
5-2-6	Evaluate and update procedures for identifying capital rehabilitation and replacements..	N/A	Evaluation complete and procedure updated.	2016, 2017	High	Engineering Manager



The WISE pipeline - a critical piece to ensuring a sustainable water supply.

Tactic #	Tactic Summary	KPIs	Success	Key Tactic	Priority	Champion
Strategy 6 Demonstrate industry leadership						
6-2-2	Achieve top level performance on 2017 Sanitary Survey.	N/A	100 percent compliance	2016, 2017	High	Operations Manager
6-3-8	Update master plans for water, wastewater, stormwater and water resources.	N/A	Plans updated.	2016, 2017	High	Engineering Division
6-3-11	Achieve Gold status in Colorado State Environmental Leadership Program.	N/A	Pursue gold status in program.	2016, 2017	High	Water Resources Manager/ Water Quality Regulatory and Compliance/ EHS Program Analyst
6-3-12	Develop an annual review process to identify changes in water quality science as it relates to standards, public health goals, and other technical parameters which may provide opportunities for Castle Rock Water to continually improve operational performance.	N/A	Annual review completed each year.	2016, 2017	High	Water Resources Manager/ Water Quality Regulatory and Compliance



Our water treatment plants are key to providing water to the community.

Reporting and Updates

Updates to the first update to the Plan were presented to Council in May 2015, and the second in April 2016. Key tactics for 2014, 2015, and 2016 and the status of these tactics are shown in the following tables.

Tactic #	Tactic Summary	KPIs	Success	Timing / Roadmap	Champion	Status
1-1-1	Have infrastructure in place by 2017 to import 1,000 AF of WISE water to the Town customers.	Cost per acre-foot	2,500 AF of renewable water rights within budget	2017	Water Resources Manager	Ongoing
1-1-7	Revise/update Water Dedication Code	N/A	Municipal Code Revised	Year End 2014	Water Resources Manager	Complete
1-1-11	Track and reduce non-revenue water	Percent water loss	Above median	Year End 2014 Annual	Engineering Manager	Complete
1-1-12	Maximize/track use of renewable water	Percent renewable water	Fully utilize available renewable sources and water rights	Year End 2014 Annual	Water Resources Manager	Complete, ongoing
1-1-13	Evaluate additional raw water supply options for Rueter-Hess Reservoir and Chatfield Reservoir.	N/A	Evaluation complete	2017	Assistant Director	Ongoing
1-1-14	Maximize and track the use of reuse water.	Percent reuse water used	Tracking system in place	2017	Water Resources Manager	Ongoing
1-2-3	Complete Phase II Aquifer Storage and Recovery (ASR) Pilot Study.	Schedule/budget	Design/ Construction complete on schedule/budget	Year End 2014	Engineering Manager	Complete, ongoing
1-3-10	Revise Water Conservation Master Plan	Schedule/budget	Water conservation plan revise on schedule/budget	Year End 2014	Water Resources Manager	Complete
1-5-5	Refine and solicit stormwater rates and fees that account for capital projects, operation and maintenance needs and compliance programs.	N/A	Adequately funded Stormwater Program	2017	Stormwater Manager	Complete, ongoing
2-1-5	Develop/implement SOP for review regulatory submissions	Schedule	SOP completed / implemented	Year End 2014, ongoing	Assistant Director	Complete
2-1-13	Communication training	Percent trained	100% of employees within one year	2017	Director	Completed, ongoing
2-3-9	Evaluate / Adjust staffing levels	AWWA and schedule	Evaluation completed	Year End 2014, annual	Director	Complete, ongoing
3-1-1	Identify stakeholders, perform survey, prepare action plan, implement action plan and conduct follow-up survey	N/A	Customer satisfaction scorecard	Year end 2015	Business Solutions /All Divisions	Ongoing
2-3-11	Closeout all incident reports	Percent of reports closed out timely	100% reporting completed	2017	EHS Program Analyst	Completed, ongoing
3-2-3	Paperless statement (ebill)	Number and percentage of customers adopting paperless billing	Reduced printing and postage costs, increased customer satisfaction	Ongoing	Business Solutions	Ongoing
3-2-7	AMI/AMR	N/A	Reduce read time, reduce infield leak detections performed by staff, increased customer satisfaction	Develop phase of roll-out plan by year end 2014	Business Solutions	Complete
3-2-8	Pilot test customer-driven advanced metering infrastructure	Percent of pilot systems in place	Pilot test underway	2017	Business Solutions Manager	Ongoing

Tactic #	Tactic Summary	KPIs	Success	Timing / Roadmap	Champion	Status
4-1-1	Review/update special charges	Schedule	Complete annually	Year End 2014, annual	Business Solutions	Complete, ongoing
4-2-10	Review/update contingency funds	Schedule	Complete on schedule	Year End 2014	Business Solutions Manager	Complete, ongoing
4-2-12	Review Certificates of Participation (COP) for new management strategy and implement changes as appropriate.	N/A	Review complete and recommendations implemented	2016	Business Solutions Manager	Completed
4-2-13	Evaluate interfund loans to minimize rates and fees impacts	N/A	Evaluation complete and recommendations implemented in the Rates and Fees Study.	2016	Business Solutions Manager	Ongoing
5-1-1	Develop/implement Energy Management Plan	AWWA and schedule/budget	Complete plan on schedule / budget	Year End 2014, ongoing	O&M Manager	Complete, ongoing
5-1-9	Move planning / design forward for next PCWRA Wastewater Treatment Plant expansion.	N/A	Costs identified; preliminary design complete	2017	Engineering Manager	Complete, ongoing
5-2-3	Asset identification and overall condition ratings	Schedule	Complete identification and ratings on schedule	2019	Asset Manager	Ongoing
5-2-6	Evaluate and update procedures for identifying capital rehabilitation and replacements	Schedule	Evaluation complete and procedure updated	2018	Engineering Manager	Ongoing
5-3-4	Emergency Response Plan	Schedule	Evaluated every three years; revised every five years	2017	EHS Program Analyst	Complete, ongoing
6-1-1	Establish key performance indicators (KPIs) for department that include all divisions	Schedule	Complete on schedule	2014	Assistant Director	Complete
6-1-2	Participate AWWA benchmarking surgery	Schedule	Complete on schedule	2014	Assistant Director	Complete
6-2-2	Achieve top level performance on 2017 Sanitary Survey	N/A	Achieve zero "Significant Deficiencies" or "Other Violations". Top level performance on survey.	2017	Operations Manager	Ongoing
6-3-8	Update master plans for water, stormwater, wastewater and water resources	N/A	Plans updated	2017	Engineering Manager	Ongoing
6-3-10	Participate in State of Colorado Pursuing Excellence Program	N/A	Award received for program participation	2016	Assistant Director/ Customer Relations Program Manager	Ongoing
6-3-11	Achieve gold status in Colorado State Environmental Leadership Program	N/A	Pursue gold status in program	2018	Water Resources Manager/ Regulatory & Water Quality Compliance Analyst/EHS Program Analyst	Ongoing
6-3-12	Develop an annual review process to identify changes in water quality science as it relates to standards, public health goals, and other technical parameters which may provide opportunities for Castle Rock Water to continually improve operational performance.	N/A	Annual review completed each year	2018	Water Resources Manager/ Regulatory & Water Quality Compliance Analyst	Ongoing

The KPIs developed as part of the initial Tactics and Implementation Plan have now been tracked for four years. The KPIs and current status of each are shown below:

Castle Rock Water AWWA KPI Dashboard													
KPI	Units	Frequency	2014	2015	2016	1st Qtr 2017	1st Qtr 2018	Quantile	Progress	Comments	AWWA		
											Top	Bottom	
Operational Development													
1. Customer Accounts per Employee	Accounts	A	533	458	414	402	419	3	0		645	465	303
2. Employee Turnover Rate	Employees / Year	A	12%	19%	15%	15%	4%	4%	0		5%	8%	12%
3. Training Hours per Employee	Hours	A	31	30	38	N/A	N/A	0	0		33.2	11.1	5.3
OSHA Safety Indicators													
4. OSHA Incident Rate		M	21	10	4	4	6	0	0	0	3.9	4.9	7.2
5. Days without Lost Time Injury/Illness	Days	M	187	207	275	293	664	0	0	0	-	-	-
6. Total # of incidents	Incidents	M	17	11	9	9	2	0	0	0	-	-	-
Business Operations													
7. DRII Ratio	%	A	10%	15%	15%	11%	13%	0	0	0	21%	25%	16%
8. Operating Ratio	%	Q	35%	34%	32%	24%	25%	0	0	0	77%	81%	64%
9. Energy Consumption Efficiency (Water)	kWh/Year/Gallon	A	38,538	55,098	42,585	N/A	37,329	0	0	0	3,469	6,181	8,313
10. Triple Bottom Line Index	%	A	70%	68%	60%	N/A	N/A	0	0	0	85%	65%	45%
Customer Service													
11. Customer Service Complaints - Don't Track	# Complaining/1000 Acts	M	-	-	-	-	-	-	-	-	0.5	1.6	8.0
12. Technical Service Complaints (TSC)	# Complaining/1000 Acts	M	1.01	1.07	0.0001	0.0006	0.0016	0	0	0	2.1	7.9	36.9
13. Cost of Residential Service (Average Monthly Bill)	\$/line	A	\$ 133.27	\$ 103.17	\$ 90.49	\$ 90.49	\$ 90.98	0	0	0	\$ 65.61	\$ 86.37	\$ 109.97
Water Operations													
14. Compliance Rate	% Day in Compliance	A	100%	100%	100%	100%	100%	0	0	0	100%	100%	100%
15. Operation Cost (\$/MGD)	\$/MGD	Q	\$ 4,254.86	\$ 4,284.00	\$ 4,307.45	\$ 2,891.69	\$ 2,618.03	0	0	0	\$ 1,726.00	\$ 2,283.00	\$ 3,677.00
16. MGD/Employee	MGD/Employee	A	0.15	0.14	0.13	0.05	0.05	0	0	0	0.29	0.21	0.16
17. Water Distribution System Integrity	Breaks/Leak/100Mile of Pipe	M	3.88	4.86	3.72	0.79	1.02	0	0	0	3	9	24
Nonrevenue Water													
18. Apparent Water Loss	MG	A	32	35	38	N/A	N/A	0	0	0	-	-	-
19. Real Water Loss	MG	A	148	135	248	N/A	N/A	0	0	0	-	-	-
Consumption (gpd)													
20. Total Volume Water Produced/ Total Population Served	gpd	A	109	112	118	N/A	N/A	0	0	0	-	-	-
21. Total Volume Water Metered (Residential Customers)	KG	A	1,337,702	1,459,600	1,553,604	208,365	276,360	0	0	0	-	-	-
22. Residential Water Usage Rate (g)	%	M	13.2%	16.9%	11.0%	13.1%	15.4%	0	0	0	-	-	-
23A. Total Residential Water Amount	MG	M	295,883.29	272,040.604	300,545.089	46,797.575	73,859.702	0	0	0	-	-	-
Wateruse Operations													
23. Smart Condition Rate	\$/100 Mile of Pipe	M	0.79	0.79	0.38	0.38	0.36	0	0	0	1.1	3.8	11.2
24. Operational Cost (\$/MGD)	\$/MGD	Q	\$ 3,546.99	\$ 3,558.48	\$ 3,401.61	\$ 2,840.43	\$ 1,976.86	0	0	0	\$ 1,727.00	\$ 2,587.00	\$ 3,977.00
25. MGD/10003668 of Employee	MGD/Employee	A	0.14	0.11	0.10	0.04	0.04	0	0	0	0.28	0.19	0.12

Legend:
 MGD = million gallons per day
 KGD = 1000 British Thermal Units
 KG = million per capita per day
 MG = million gallons
 MGD = Water Quality

Any annual 2017 numbers are at N/A as they have not been tracked yet.

*** KPIs 4.6 and 13.23 are not part of the AWWA survey and do not have Benchmark standards to measure against.

Castle Rock Water will continue to update Council at least one time per year on progress regarding this five year strategic plan. In addition, periodic 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 monthly 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 as appropriate. This Strategic Plan and the Tactics and Implementation Plan will also be updated at least annually in response to new challenges and accomplished tactics from the previous year.

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 2009-2013 Strategic Plan*
- Denver Water Strategic Plan 2011*
- Anchorage Water and Wastewater Utility 2008-2009 Strategic Plan*
- Seattle Public Utilities Strategic Business Plan 2007-2008*
- Santa Clara Valley Water District Strategic Plan 2010-2015*
- Portland Water Bureau Strategic Plan 2008-2011*
- 2011 Benchmarking Performance Indicators for Water and Wastewater Utilities: Survey Data and Analysis Report, AWWA, 2013*



Community devotion is appreciated by Castle Rock Water at the annual Spring Up the Creek clean-up event.

Excellence • Dedication • Service