

# FIVE-YEAR WATER EFFICIENCY PLANNING STRATEGY

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## TOWN OF EAGLE



December 2017

Prepared by



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SGM Project 2011-318.007

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## 1.0 Introduction

The Town of Eagle requested SGM's support in developing a Water Efficiency Planning Strategy for purposes of supporting their Branding Strategy and Lower Basin Water Treatment Plant (LBWTP) education efforts. This report describes specific implementation activities, milestones, and metrics for achieving the identified water use goals over a five-year period. A summary of the Town's current water efficiency efforts, past water use and efficiency trends, and suggested methods for achieving its near-term and long-term water efficiency goals is also included as part of this report.

### 1.1 Location and Background

The Town of Eagle (Town) is in Eagle County, Colorado, within the Eagle River (along the I-70 corridor), at the confluence of the Eagle River and Brush Creek. The average elevation of the Town is 6,600 feet.

The population of the Town is approximately 6,670 people. The Town estimates that it currently provides water service for 2,978 accounts.

The Town is involved in the design and financing processes to support construction of a new 5.0 million gallons per day (MGD) surface water treatment plant for the Town of Eagle's public water system, the Lower Basin Water Treatment Plant (LBWTP). The construction of the facility will occur in three phases. The first phase aims to more reliably serve existing development, offering better redundancy. Future phases of the project will expand the LBWTP to accommodate projected growth.

### 1.2 Regional and Local Context

The Colorado Water Conservation Board (CWCB) describes efficiency as "doing more with less" in its July 2012 Municipal Water Efficiency Plan Guidance Document (CWCB Efficiency Guidance Document). The CWCB Efficiency Guidance Document also describes water efficiency as the "practices, techniques, and technologies that extend water supplies ... by either saving water or through substituting with alternative supplies such as reuse. This, in turn, frees up water supplies for other uses, such as new development, stored drought reserves, agricultural leases, and environmental uses (e.g. instream flows)."

The Town's water efficiency goals fit into the broader efficiency goals set in the Colorado Water Plan, which "sets a measurable objective to achieve 400,000 acre feet of municipal and industrial water conservation by 2050." The 2010 Statewide Water Supply Initiative projected that the Colorado Basin could experience 140% growth between 2008 and 2050. Water efficiency allows municipalities to meet growing demands without using additional supplies.

The Town's water efficiency goals also align with local watershed planning efforts, such as the Eagle River Watershed Plan (2013) and the Brush Creek Watershed Management Plan (2011).

## 2.0 Current Water Efficiency Efforts

The Town has implemented several techniques since 2000 to improve water efficiencies including, but not limited to the following:

- Leak detection program
- Preventative maintenance program
- Adopted Uniform Plumbing Code
- Mandatory Water Conservation Ordinance
- Tiered rate structure

These measures have had, and will continue to provide, measurable improvements on the Town's water usage trends. It is important that the Town continue to pursue water efficiency techniques and measures to support its Branding Strategy and become a leader in water efficiency.

### 2.1 Leak Detection Program

The Town developed a leak detection program to reduce water losses in its distribution system. In this program, staff sounded the entire water system and documented the locations of noisy hydrants. Staff further investigated the sources of noise to detect potential leaks in the distribution system. Once located, these leaks were repaired or sections of pipe were replaced.

### 2.2 Preventative Maintenance Program

The Town developed a preventative maintenance program to identify possible leaks early, thus avoiding inefficient water practices and waste. The preventative maintenance program also schedules the repair and replacement of aging infrastructure based on the installation date and the lifetime of the equipment.

Between 2006 and 2009 the Town implemented an aggressive water main replacement program, targeting leaking and aging steel water lines, spending approximately one million dollars per year. This aggressive plan resulted in the reduction of system loss to less than 10 percent (10 to 20 percent system loss is typical, and less than 10 percent is considered very good).

The Town also updates and implements a Capital Improvement Plan and Schedule for maintenance projects, including: water main replacement; water tank replacement; water treatment plant maintenance and upgrades; replacement of diversion screens; pump station repairs and improvements; and other distribution system maintenance.

### 2.3 Adopted Uniform Plumbing Code for Low Flow Appliances

The Town adopted the Uniform Plumbing Code for low flow appliances, which specifies maximum flow rates for each type of water fixture, ensuring that new water fixtures installed use water efficiently.

## **2.4 Mandatory Water Conservation Ordinance**

The Town adopted a Mandatory Water Conservation Ordinance which limits outdoor watering from April 15 through October 15, to three days per week on an even/odd schedule; prohibits water use from 10 am to 5 pm; and prohibits wasting water. Town staff observe frequent violations. Town staff hang citation tags on doors of customers when violations are observed.

## **2.5 Tiered Rate Structure**

The Town already encourages water efficiency by using a tiered water rate structure. Currently, the Town's rate structure assesses a monthly base fee for each customer category [in-town versus out-of-town customers, with an additional dwelling unit (ADU) versus without an ADU, and commercial versus residential]. The rate structure uses an increasing block model that applies higher water rates to higher consumption tiers in addition to the base fee. The American Water Works Association (AWWA) also supports the use of implementing increasing block structures for communicating the need for water conservation across each customer category.

### **2.5.1 Evaluation of Existing Rate Structure**

The Town is evaluating the need to modify the water rate structure to further promote the implementation of additional water efficiency and conservation practices among its water consumers. SGM performed a Water Rate and Tap Fee Study for the Town of Eagle, dated November 2016 and revised July 2017. This report recommended that the Town adopt a new rate structure which would increase rates in certain water usage blocks.

This new structure would add a base charge for the lowest-use tier (0-6,000 gallons per month), which is currently not charged for water use, to an amount roughly equal to the cost of production, over two years. This would generate more revenue for the Town while at the same time conveying a message that water is a valuable resource and is not free. Customers who use less than 6,000 gallons per month would pay lower fees, providing an incentive for conservation while, at the same time, reinforcing the importance of water as a commodity that must not be wasted.

The new structure would also adjust water costs for high volume water uses, increasing the rate for those who exceed median water consumption during peak months more steeply than those below the median. Ideally, this would promote conservation among the greatest water users during highest-use months.

Overall, this revised tiered rate structure should provide incentives for conservation through cost savings as well as provide a reliable source of income to use for maintenance and upgrades to the system.

### 3.0 Past Water Usage and Efficiency Trends

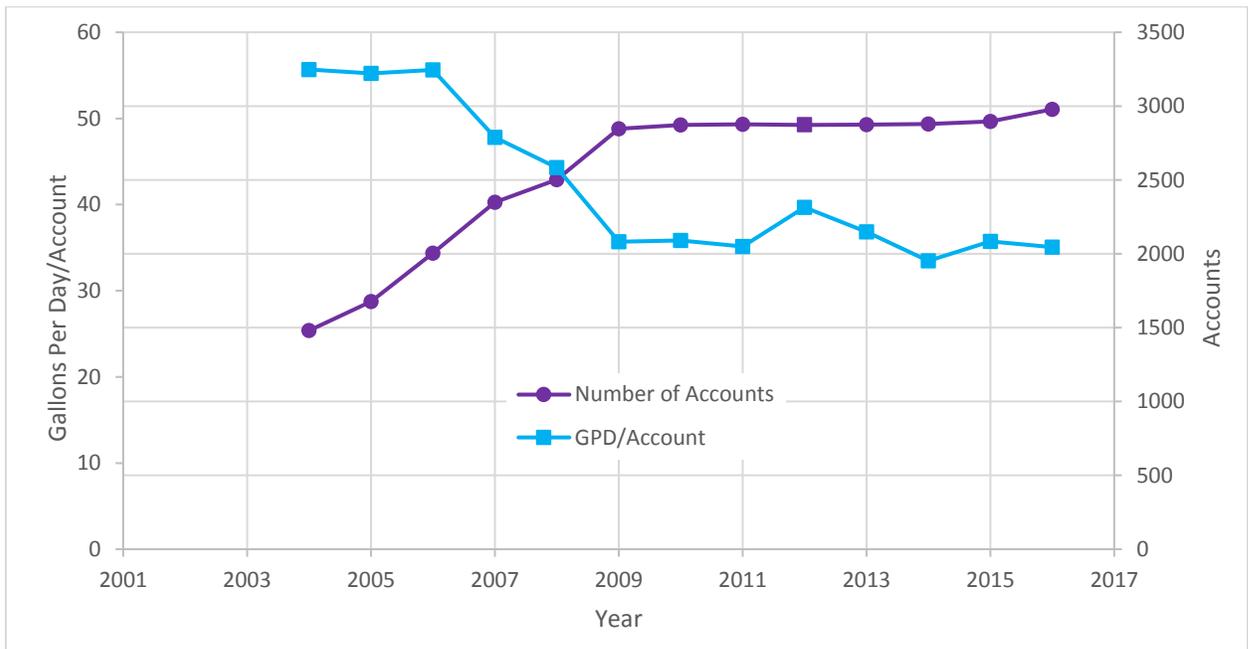
The Town’s population has roughly doubled since 2000. The number of water accounts served by the Town has approximately doubled since 2004. In 2004, the Town served 1,480 accounts. By 2016, this number had grown to 2,978 accounts, increasing water usage. With each account, has been an incremental increase in water demand over this period, depending upon the type of account, providing a challenge for the Town in maintaining its delivery of high quality water and reducing its total water usage.

#### 3.1 Past Water Usage

**Figure 1** reflects that although the number of accounts increased from 2004 to 2016, the Town’s water usage decreased by approximately 20 gallons per day per account (GPD/account).

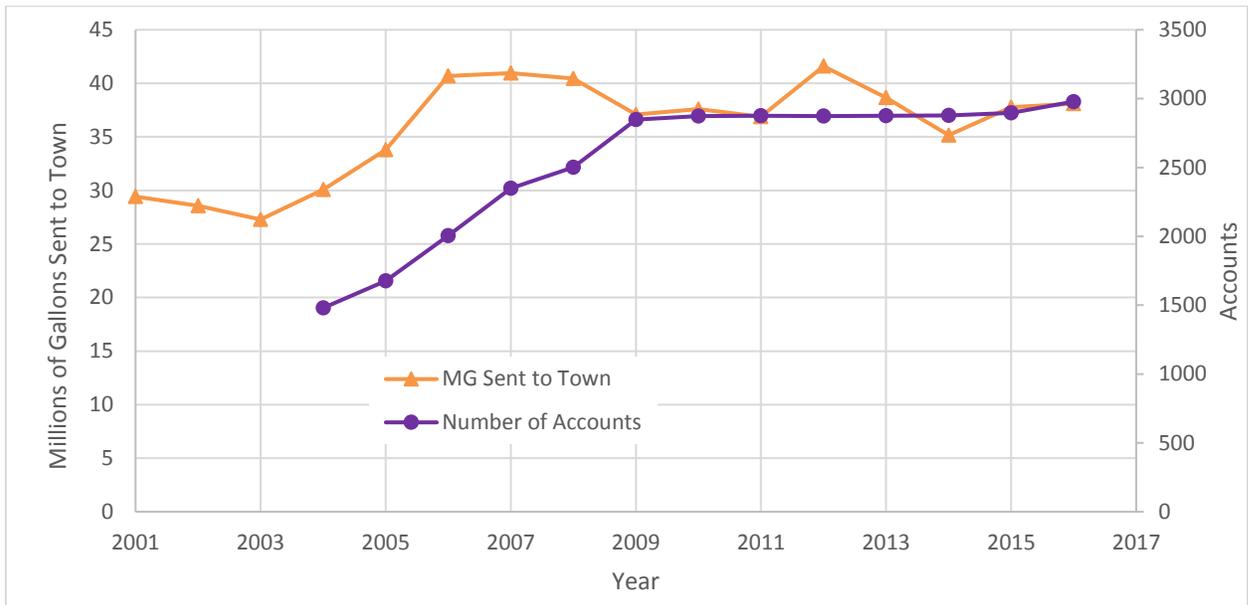
This figure also depicts that the Town’s efficiency increased during the period of highest growth (2004 – 2009). This is mainly due to the Town’s aggressive water main replacement program during that time. As growth of accounts slowed post-2009 (likely because of the economic recession), however, GPD/account did not continue the same decreasing trend. **Figure 1** shows that there was a spike in water usage in 2012 and 2013 even though the number of accounts remained relatively steady; this is likely related to higher outdoor water usage during the 2012 – 2013 drought.

Figure 1: Number of Accounts and GPD/Account since 2004



**Figure 2** shows the number of accounts compared to the total amount of water leaving the water treatment plant (after water use for filter backwash at the plant, but before system losses in the distribution system). Of interest is the observed trend where the total volume of water leaving the plant remained constant or decreased, despite the growing population during the period from 2006 to 2009. This correlates with the time that the Town implemented its aggressive water main replacement program.

Figure 2: Treated Water Leaving Plant and GPD/Account Annually



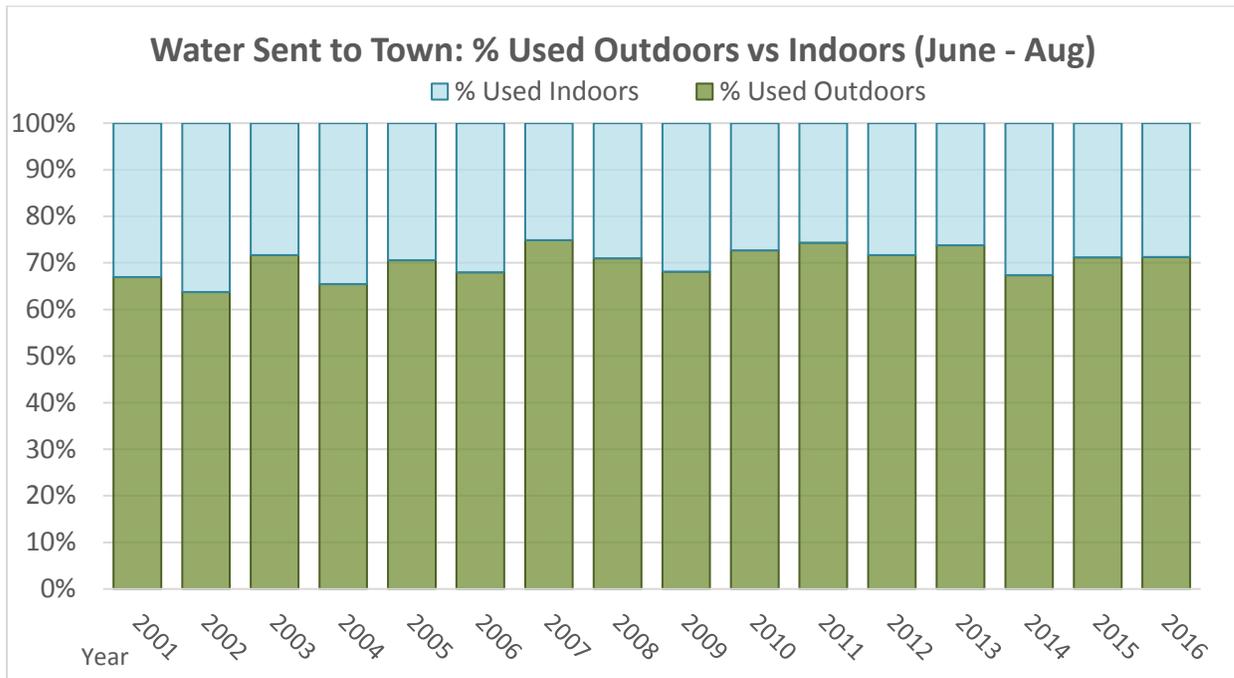
The Town aims to continue its past trend of decreasing per capita use even as it continues to grow. An effective way to achieve this is by decreasing irrigation use.

A statistic that can be used to track trends in irrigation use (regardless of population growth) is the percent of produced water which is used outside during summer months. If the Town shows a reduction in the percent of produced water used during summer months, this will indicate that the Town is using less water for irrigation.

**Figure 3** shows the percentage of total water leaving the water treatment plant which goes to outdoor use vs indoor use, during the months of June, July and August. **Figure 3** shows that since 2001, the percentage of outdoor water use during peak months has not drastically changed, but the average has slightly increased over time. The average percent used outdoors from 2001 to 2016 is 70%.

The Town aims to show a trend of decreasing summer irrigation water use by showing a reduction in the percentage of outdoor water use during peak months from 70% to 60%.

Figure 3: Water Sent to Town: % Used Outdoors vs Indoors (June - Aug)



### 3.2 Water Use by Customer Category and Season

Figure 4 and Figure 5 show the average monthly water use for residential accounts and nonresidential accounts (commercial, government, schools, and churches), respectively, based on the Town’s 2015 billing and meter data.

For both graphs, the dark blue line represents the monthly average use for all customers in that category (residential or nonresidential). The flat light blue line represents the average indoor use (determined by averaging the monthly use for all customers in that category from November – February).

The dashed red line represents the highest 90th percentile of use for each month (representative of the customers in that category with the top 10% highest use). The pink line represents the 90th percentile of indoor use (determined by averaging the 90th percentile use from the months November – February).

The dashed green line represents the median monthly water use. While the average use is swayed by unusually high users, the median is not. This line helps to show that if the 90<sup>th</sup> percentile use can decrease (if the top highest water users can reduce their use), the average would be reduced to closer to the median water use.

Figure 4: Average Monthly Water Use: Residential Accounts

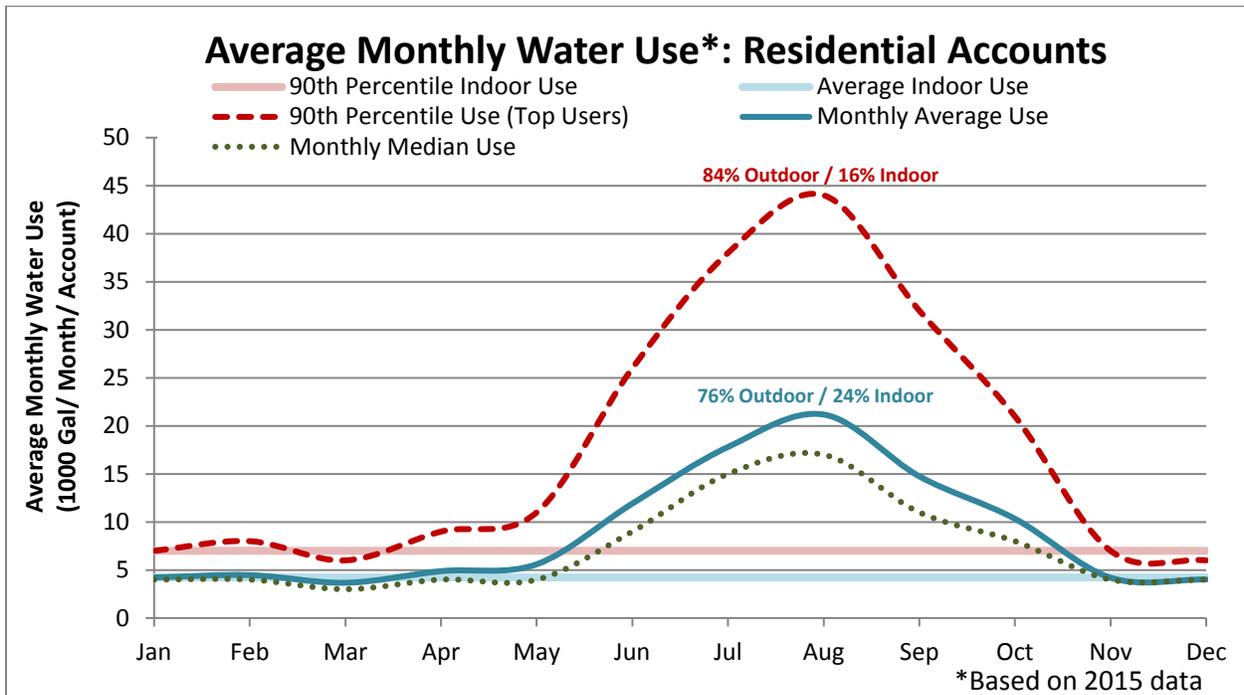
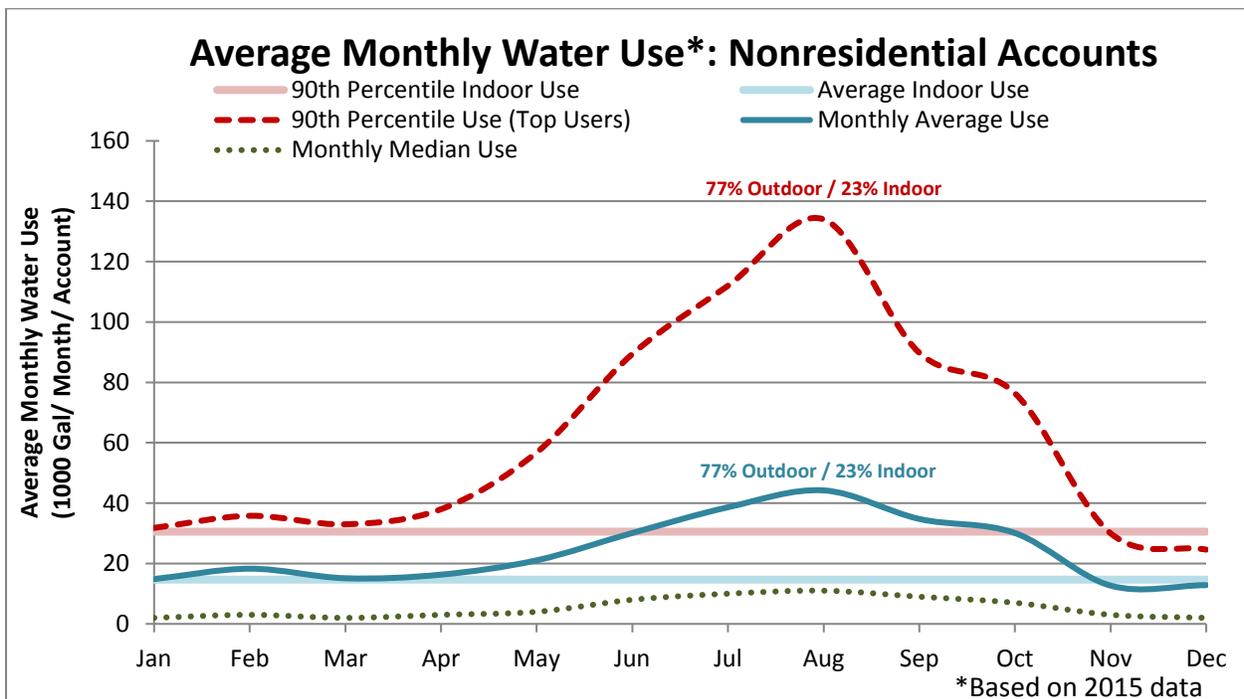


Figure 5: Average Monthly Water Use: Nonresidential Accounts



Attachment A includes further analysis and statistics of water usage by customer category and by season for 2015.

### 3.2.1 Takeaways for 2015 Residential Water Usage

- Average residential use in August was 21,200 gallons per month per account, compared to average winter season use (approximation of indoor use) of 4,200 gallons per month per account. This means that the average residential customer uses 5 times as much water in the summer months than in the winter.
- The 90<sup>th</sup> percentile residential use in August was 44,000 gallons per month per account, compared to 90<sup>th</sup> percentile winter season use (approximation of indoor use) was 7,000 gallons per month per account. This means that the 90<sup>th</sup> percentile highest use residential customers used over six times as much water in the summer than in the winter, and that they used over twice as much water in the summer than the average customer.

This means that targeting summer outdoor water use for residential customers may have the largest impact. Potential means of communicating the need to implement better outdoor water use includes, but is not limited to: fliers, water bills, and the other educational tools for residential audiences identified in **Attachment B**. The water rate increases in the highest use tier discussed above also aim to reduce summer outdoor water use.

### 3.2.2 Takeaways for 2015 Nonresidential Water Usage

- Average nonresidential use in August was 44,200 gallons per month per account, compared to average winter season use (approximation of indoor use) was 14,700 gallons per month per account. This means that the average nonresidential customer uses three times as much water in the summer than in the winter.
- The 90<sup>th</sup> percentile nonresidential use in August was 134,000 gallons per month per account, compared to 90<sup>th</sup> percentile winter season use (approximation of indoor use) was 30,600 gallons per month per account. This means that the 90<sup>th</sup> percentile highest use nonresidential customers used over four times as much water in the summer than in the winter, and that they used over three times as much water in the summer than the average nonresidential customer.

This data indicates that the Town can have an even larger impact from each nonresidential customer reached, because the monthly usage is higher than residential. Hence, the Town should also target summer outdoor use for nonresidential customers which can be achieved by targeting developers, landscape contractors, and/or HOAs. It is important that the messages emphasize efficient or low water use irrigation on Town managed lawns, right of ways, and open spaces, to set an example. The water rate increases in the highest use tier discussed above also aim to reduce summer outdoor water use.

The Town staff have expressed the desire to maintain the trend of decreasing per capita water use and improve it with more education and outreach among the water community it serves. The water usage analyses above show that targeting outdoor use can have a large impact on the Town's overall efficiency. The following sections document the Town's near-term and long-term goals to achieve improved water efficiencies in the future based upon input received from Town staff during a May 4, 2017 meeting.

## 4.0 Near-Term Water Efficiency Goals

The recommended near-term water efficiency goals focus on community outreach and education and a new branding program that emphasizes reducing outdoor water use by both the Town's staff (internal) and external water customers. The near-term water efficiency goals include:

- Develop a Community Outreach and Education Program
- Establish and Support a Branding Process

### 4.1 Develop Community Outreach and Education Program

The Town will establish a broad range of community outreach and educational programs for the various audiences that can impact water efficiency in the Town. These programs will focus on two main audiences: internal and external.

Internal audiences include:

- Town staff;
- Board of Trustees; and
- employees in various Town departments that have the largest impact and influence on water use.

External audiences include:

- water customers – both residential and commercial;
- students;
- landscape contractors; and
- homeowners' associations (HOAs).

These outreach and educational programs will highlight steps that the Town has already taken to increase water efficiency, such as implementing a leak detection program, preventative maintenance, and improving meter efficiencies. Additionally, the programs will educate audiences about steps that can be taken to further increase water efficiency, and specifically how each audience can contribute to this goal.

The Town would like to identify water efficiency practices that can influence its internal operations and set an example for other residents. These practices can include:

- installing xeriscape demonstration gardens in locations such as Town facilities, buildings, and parks;
- encouraging new development to install xeriscape demonstration gardens;
- installing rain gauges in parks and other public Town facilities; and
- installing smart meters (though this step will be a long-term goal for the Town due to current budget restrictions).

Town residents as well as decision-makers will be informed on how they can contribute to increasing water efficiency, and the many benefits that these programs can bring.

## 4.2 Establish and Support a Branding Process

The second near-term goal for improving water efficiency is to establish a branding process for improving water efficiency. This process will seek to create a reputation for the Town as a leader in water efficiency. It will represent a commitment to use the Town's water resources in a responsible way and continually work to improve its water use trends. A key component of the branding process will be communicating the steps the Town has taken already to improve water efficiency and how its operations will be improved in the future. Additionally, it is important that this process assist in establishing an understanding within the community of why the Town needs the Lower Basin Water Treatment Plant and why the Town is increasing water rates.

## 4.3 Tools for Achieving Near-Term Goals

The primary tools needed to support attainment of the near-term goals include the development of community outreach and education programs and evaluation of the Town's water policies and codes.

The layout of the Town's water bill can also be modified to inform customers about their water usage and provide useful metrics, such as historic data or comparisons with each billing. The Town can also use existing fliers or brochures to communicate water efficiency information and include recommendations on best practices, such as how much water is needed for specific landscaping and the application timing and schedule recommendations. The Town's accounting software, Caselle, can also be used to send out email notifications of when a customer reaches a defined threshold of water use. Finally, the Town can host a booth or informational board at the annual Flight Days or other community events to communicate the branding and water efficiency messages. **Attachment B** includes a matrix of the internal and external audiences and tools that can be used to reach each audience type.

## 4.4 Measurements for Achievement

The effects of education, outreach, and branding are qualitative and therefore hard to measure. The Town can measure its progress in the development of the education, outreach, and branding programs by tracking completion of the action items described in **Section 6.0** and **Attachment C**. One possible measure of the effect of education and outreach is the number of calls received from customers asking questions about or providing complaints about a water bill. The Town can also measure the visibility achieved from its education and outreach program by gauging attendance at events and tracking the number of views and likes on social media.

The Town can also measure quantitatively the effectiveness of its water efficiency measures by tracking the average water consumption per account.

## 5.0 Long-Term Water Efficiency Goals

The Town's long-term goals include and build upon its near-term goals, incorporate a broader scope, and are focused on a 5-year planning horizon. Over the 5-year planning period, the Town will focus on reducing water use associated with outdoor irrigation, update its policies and rules, and educate staff on the importance of water efficiency implementation as long-term goals. The long-term water efficiency goals include:

- Decrease Outdoor Irrigation and Reduce Peak Month Use
- Upgrade Town Policies to Reflect Water Efficiency Goals
- Educate Town Staff

### 5.1 Decrease Outdoor Irrigation and Reduce Peak Month Use

The Town aims to reduce its total annual water use and peak use during the summer by decreasing water use associated with outdoor irrigation. Reducing peak month water use also benefits the Town by reducing the peak flow at the water treatment facility.

Two tangible metrics include:

1. Reduce the percentage of produced water which is used outside (rather than inside) during peak summer months (June, July, and August) from 70% to 60% (the average percent used outdoors from 2001 to 2016 was 70%).
2. Reduce the per capita water use (measured as GPD/account) by 10% between 2017 and 2023. For comparison, the Town achieved a 35% reduction in GPD/account between 2005 and 2010, though this was due to the aggressive water main replacement program.

#### 5.1.1 Measurements for Achievement

Water use associated with outdoor irrigation can be measured by comparing the average monthly total water use during winter months (November through February), representing indoor water use, to the monthly total water use during the summer months (June, July, and August), as was done in **Figure 3**. The total water use is measured by total gallons of water sent from the treatment plant to the Town (not include backwash water produced at the plant).

Increased efficiency can be quantified through water treatment plant records by evaluating the per capita water usage (GPD per account). The highest efficiency increases could be achieved by decreasing GPD per account in the summer months.

It is important that any progress the Town makes in water efficiency be shown to customers in fliers, water bills, and/or at education and outreach events.

### 5.2 Update Town Policies to Reflect Changes

The Town would like to update its policies to reflect and the importance of water efficiency regardless of the ability to quantitatively document the impacts. Potential policies that should be evaluated to communicate water efficiency requirements include those addressing land use, development processes, landscaping, and water usage requirements. The Town will also work with HOAs to encourage them to adopt water efficiency oriented policies and consider retaining landscaping contractors that have

qualifications to demonstrate education of its employees in best water efficiency practices.

#### **5.2.1 Measurements for Achievement**

The primary measure of success will be whether the Town code includes new enforceable efficiency oriented policies. A secondary measure of success will be whether the HOAs have adopted new efficiency oriented measures and policies (such as efficient landscaping techniques and watering restrictions).

### **5.3 Educate Town Staff**

The Town will continue to educate its internal audiences about the importance of water efficiency practices. The Town would like to transition from “a business that sells water” to one that values the importance of “providing high quality water service.” This will more closely align with the branding process to promote the improvement of water efficiency as a beneficial goal for all audiences.

As community leaders, it is the responsibility of Town staff and Board of Trustees members to set the example for this shift in policies and attitudes towards improving water efficiency. Through this leadership, the Town can demonstrate that water is a precious commodity, and efforts towards water efficiency and subsequent conservation will permeate throughout the Town.

#### **5.3.1 Measurements for Achievement**

This goal will be qualitatively assessed by observing the attitudes of Town staff and of the Board of Trustees, or by assessing the takeaways from any trainings attended by staff. If this goal is being achieved, policy decisions made by Town staff and Trustees will reflect the Town’s other efficiency oriented goals.

## 6.0 Five Year Plan Action Items

The Five-Year Efficiency Plan Action Items Table, included as **Attachment C**, outlines a five-year plan for achieving its near-term and long-term goals, specifically outlining action items, target completion dates, targeted audience, and priority.

The action items identified in this section are based on the CWCB Municipal Water Efficiency Plan Guidance Document, practices adopted by similar small utilities, SGM's experience, and other best management practices suggested by the AWWA, the Environmental Protection Agency (EPA), and other resources identified in **Attachment B**. SGM evaluated many possible action items, and chose the practices listed in this section based on cost and feasibility for a small utility.

The main tools identified include:

- Training
- Marketing
- Outreach
- Education
- Policy
- Town Pledges of Efficiency

The main target audiences identified include:

- Town staff
- Board of Trustees
- Fire Department
- Open Space Department
- Planning Department
- Public Works Department
- Utilities Department
- Residential Customers
- Commercial Customers
- HOAs
- Landscape Contractors
- Students

This section describes the action items outlined in **Attachment C**, which should be referenced alongside this section to gain a better understanding of the target completion date and audiences.

### 6.1 Training

Landscape training for the Open Space and Utilities Departments provides a useful educational experience on water efficiency in irrigation, and access to water efficiency tools and resources for the Town's continued use in the future. Internal education (such as training on landscaping best management practices and how to identify deficiencies in irrigation systems) can help the Town continue to meet their pledges of efficiency, and disseminate useful knowledge to the community.

One example of landscaping oriented training is identified below. The Town may identify other trainings that are relevant for staff as needed.

### 6.1.1 Landscape Training

The Irrigation Association offers online courses and seminars for professionals with any level of experience to learn more about water efficiency and management in irrigation systems.

- If individuals are already licensed with any Landscape Certifications listed on the Irrigation Association website, these seminars count towards the required 20 Continuing Education Credits per 2 years.
- [http://www.irrigation.org/IA/Education/Online-Learning/Irrigation-Seminars/IA/Education/Irrigation\\_Seminars.aspx?hkey=3e92d4e6-5854-4dfc-997b-467ff27750b7](http://www.irrigation.org/IA/Education/Online-Learning/Irrigation-Seminars/IA/Education/Irrigation_Seminars.aspx?hkey=3e92d4e6-5854-4dfc-997b-467ff27750b7)
- Seminars cost \$38 for non-members and \$28 for members, and are each worth 1 C Education Credits.

## 6.2 Marketing

It is important to market the Town's water efficiency goals to the community (including residential and commercial customers), and to engage the community to share their own water efficiency efforts. Creating and distributing a standard monthly flier provides the Town a consistent and meaningful platform to disseminate information to the community. Furthermore, engaging the community on social media using the ad campaign creates an open channel of dialogue on water efficiency progress in the Town.

### 6.2.1 Brochures and Fliers

#### 6.2.1.1 Re-format Water Bill

The current Town water bill should be re-formatted to display relevant water usage data and trends of the individual or household. Good metrics to promote water efficiency include:

- Water usage comparisons from month to month.
- Which tier they fall under when the rate structure is re-formatted.
- Comparisons for same month, in previous years.
- Comparison to neighbors and/or average usage, and where they fall along those metrics.
- If water rates are abnormally high the user should be notified to ensure they don't have an unknown leak or are being wasteful.
- If a big water decrease is seen from conservation efforts, that should be recognized and applauded.

A good resource for reformatting the water bill are the example bills from other water providers that SGM sent to the Town. The Snowmass Water and Sanitation District bill provides a useful example of showing customers their water use and charge in each water usage tier. The Roaring Fork Water and Sanitation District Bill has a

useful table showing customers the increasing cost per gallon for each water usage tier.

#### **6.2.1.2 Create List of Irrigation Tips for Residential Customers**

A list of tips for residential customers on water efficiency for irrigation should be included with the water bill leading up to and during the Spring and Summer months. Here are a few good references for making a master list of tips that can be distributed throughout the year:

- <https://www.epa.gov/watersense/watering-tips>
- <https://www.epa.gov/watersense/landscaping-tips>
- <http://www.allianceforwaterefficiency.org/residential-tips.aspx>

#### **6.2.1.3 Identify Town's Current and Past Efficiency Efforts**

Keep a log of the Town's past and current efficiency efforts. Include this information in brochures and fliers. Work to pair what the Town has done or is doing with the tips suggested for residents.

- For example, if the Town replaces sprinkler heads with water efficient sprinklers, choose a related tip for the residents to receive that month. This can help bring a sense of community to conserving water, and showcase the Town's dedication.

#### **6.2.1.4 Include Links to Town Website With Fliers**

The Town website should have a dedicated tab or section for water efficiency efforts. Include resources for all residential and commercial residents such as gardening tips, plant examples that are drought resistant, EPA websites, and Colorado Water Conservation Board websites. Also add a calendar of water conservation related events, including chosen items listed in Section 6.3.1.3.

Fliers and water bills can have the website address or QR code to direct customers to the website. The Town can measure effectiveness of the website by tracking the number of visits. The Town could also offer a hotline number or feedback form on the website, and track responses and questions.

#### **6.2.1.5 Create Flier Template and Send Flier with Monthly Water Bill**

Create a flier template so new text and images can be easily dropped in each month. Have a master list of tips, photos, and any other information (references, websites, etc.) that can be used to fill the template. Send fliers out with monthly water bills, especially during the summer.

### **6.2.2 Ad Campaign**

#### **6.2.2.1 Develop Slogan and Logo**

Develop a slogan to promote water efficiency, for example something simple like 'Conserve Together'. This slogan can be used in social media hashtags (#ConserveTogether) and branding documents. Create a logo to go on all water conservation documents, advertisements, and other ad materials.

### 6.2.3 Social Media

#### 6.2.3.1 Create Content for Facebook and Twitter

Use the chosen slogan and brand icon to promote water efficiency in the community. Post to the Town of Eagle's Facebook page, or create tweets. Share photos of steps the Town is taking to conserve water along with the chosen hashtag. Promote water efficiency events. Share tips on outdoor irrigation practices, or educational resources for adults such as those discussed in Section 6.4.2.

#### 6.2.3.2 Promote Customer Involvement with Hashtags

Promote use of the hashtag. Encourage customers to share efforts they are taking to conserve water in the summer months. Competitions can be a good way to get people involved (ex. Share a photo of how you conserve water with the hashtag #ConserveTogether for a chance to win a prize). The prize could be water efficient indoor and outdoor appliances (See Section 6.6.2 for ideas on giveaways).

### 6.3 Outreach

It is important to include both internal and external audiences in water efficiency efforts in order to meet Town's efficiency goals. Hosting events within the community helps to inform both commercial and residential users that water efficiency is a goal that the Town values. These events can help spur conversations and relationships for future efficiency efforts.

#### 6.3.1 Community Events

##### 6.3.1.1 Water Efficiency Booth at Flight Days

Create materials and a display that can be used to promote water efficiency at community events such as Flight Days. This booth can be manned by community volunteers, Town Trustees, and commercial entities to promote water efficiency. Also, if possible have xeriscape landscaping representatives attend so they can give advice to residents on how to get started transforming their gardens (section 6.3.2.2).

##### 6.3.1.2 Throw a Kick-off Water Efficiency Event

Host a festival-like event with music, food, water efficiency presentations, and information for residents on how they can conserve water. Some ideas for activities:

- Unveil a new garden in the Town that has xeriscaping. At this garden have plaques that communicate the type of xeriscaping and suggestions on how people can replicate for their own use. A good website to reference is:
  - (<https://energy.gov/energysaver/landscaping-water-conservation> )
- Host a trivia game on water usage with prizes (i.e., water efficient indoor/outdoor fixtures, rain gauge, etc.). A good website to reference is:
  - (<http://waterfootprint.org/en/resources/interactive-tools/product-gallery/>)
- Give-away freebies for attendees, such as magnets with tips, water bottles, shower timers, low water faucet aerators, and other fun items with the chosen branding words and pictures on them (See Section 6.6.2.3).
- Offer a grand prize for a raffle (sell tickets to generate some revenue). Prizes should be efficiency related, such as a person to get free xeriscaping consulting on their yard (see Section 6.3.2.4).

- Host a booth/workshop on how to conduct a self-auditing of indoor and outdoor water usage for residential customers.
  - (<https://www.denverwater.org/residential/rebates-and-conservation-tips/self-audit>)

#### **6.3.1.3 Create a Calendar of Water Efficiency Events and Seminars**

Create a calendar of water efficiency events on the Town website water efficiency tab. Add to the Town calendar on the website, with all water efficiency events scheduled for at least two months. Include these dates on fliers and other locations in the Town, including the water bill fliers (Section 6.2.1).

#### **6.3.1.4 Plan a Community Xeriscape Workshop**

Plan a Town event for residents and businesses to attend and learn more about xeriscape gardens from a landscaping professional. Offer incentives and small prizes to get people to attend the event (food, freebies, etc.).

#### **6.3.1.5 Create and Plan Grand Opening of Water Efficient Park in Town**

This could be part of the Kick-off Water Efficiency Event (Section 6.3.1.2). Work to make a large public garden xeriscaped and add education tools for residents to read about at the garden. This could be in conjunction with the community xeriscape workshop.

### **6.3.2 Establish Relationships**

This section provides suggestions for how the Town staff and Trustees can begin to develop relationships with other key players for changing water use practices.

#### **6.3.2.1 HOAs**

The Town Trustees should schedule visits and meetings with HOAs to educate and promote water efficiency. Encourage HOA representation on the Trustee Board and identify them as the representative for all HOAs.

- Offering rebate incentives to get HOAs involved may be helpful as well. Centennial Water and Sanitation District is suggesting similar incentives and is a good reference for ideas.

#### **6.3.2.2 Local Landscape Contractors**

Establish a conversation with the local contractors in the area. Work to get them on board and help promote water efficiency within the Town. This could be especially important as they work on other non-Town projects to promote and lead water efficiency efforts.

Find local xeriscape landscapers and establish relationships with them for future gardening events and changes to the community. Applicable to community events (See Section 6.3.1) if the events will offer residents information on local xeriscape landscapers in the area.

#### **6.3.2.3 Top 10% Water Users**

The Town should analyze the water meter data annually and identify the top 10% of water users. These users should be notified in their water bill that they are in the top 10% (as described in Section 6.3.2.3), establishing that open relationship will allow feedback to flow between the utility and customer.

## 6.4 Education

Providing educational resources to water customers and classrooms helps to build a strong foundation of water efficiency understanding and thus commitment to reduce water usage in the Town. Providing educational tools and resources for all audiences is needed to teach and learn the fundamental importance of water efficiency. This educational foundation is vital for promoting long-time commitment and community action to reduce water consumption.

### 6.4.1 Classroom Exercises

Classroom education especially can help to teach individuals the importance of water efficiency from an early age, which helps to cultivate these values and attitudes within the community.

#### 6.4.1.1 K-12 Xeriscape Gardens

Schools should work together to create xeriscape gardens on school grounds, dividing different phases (planting, weeding, watering, photo documentation, water log, etc.) among the different grades.

- Work with the athletic department of the school to establish watering schedule on fields.

#### 6.4.1.2 Teacher Resources

Provide water efficiency information, tools and resources to educators for use in developing lesson programs either online or to support an in-classroom activity. These resources can be posted on the website or shared directly with schools. Encourage teachers to tie in water efficiency whenever possible [ex. history, science (where does our water come from?)]. Hang up informational messages near the bathroom sinks about water efficiency.

- Hands-on Activities: <https://www.swfwmd.state.fl.us/education/activities/>
- Online games and tips for kids: <http://wateruseitwisely.com/kids/>
- Teacher Resources:
  - <http://www.projectwet.org/resources>
  - <http://www.savingh2o.org/resources.html>
  - <http://ecosystems.psu.edu/youth/sftrc/lesson-plans/water/k-5/conservation-2>
- **Attachment B** has more resources and tools for teachers.

### 6.4.2 Home Tools for Adults

#### 6.4.2.1 H2O Tracker App

Use social media and/or fliers to encourage customers to download H2O tracker app. Potentially include a demonstration during a public meeting or a water efficiency event to walk customers through how to use the app. Customers can track their water use for a week, then they can evaluate where they use the most water and how they can cut back their usage. Also, this app can be promoted in the classroom exercises with kids.

#### 6.4.2.2 Online Tracking and Self-Audit Tools

The Town should promote the use of other online water use tracking tools and self-audit tools. **Attachment B** identifies some of these tools.

- <http://www.home-water-works.org/calculator>
- <https://www.denverwater.org/residential/rebates-and-conservation-tips/self-audit>

#### 6.4.2.3 Home Irrigation Systems Instructional You Tube Videos

Many customers do not know how to set up or modify their home irrigation systems, such as changing their sprinkler system timer to water during the evening or early morning, or to water only three times per week. The Town should include resources on their website to teach customers how to use the tools they already have, such as links to You Tube instructional videos on how to operate a home irrigation system.

### 6.5 Policy

Policies help to promote changes in the community that show a dedication to becoming more water efficient. Policy changes signal to the community and water users that water efficient actions are highly valued, and are a part of how the Town wishes to operate now and into the future. Policies can also be a cost-effective method of changing the practices of water users.

#### 6.5.1 Review and Revise Town Policy(ies)

##### 6.5.1.1 Nominate a Water Efficiency Coordinator

Hire a Water Efficiency Coordinator to support implementation of this plan, or nominate one of the Trustees to serve in this role.

- See page 23 in the Colorado Water Wise Best Practice Guide.
  - <http://coloradowaterwise.org/Resources/Documents/BP%20Project/CWW%20Best%20Practices%20Guide%20-%20FINAL.pdf>

##### 6.5.1.2 Conduct Residential and Commercial Audits

Conduct audits of large irrigation systems and any residential properties that are willing. The basic steps to conduct an audit include:

- Check each component for uniform distribution, leaks, or malfunction,
- Conduct a performance test on the components,
- Program the controller to irrigate only during low-light times, and
- Conduct audits for new developments to determine amount and type of grass allowed by planning review stipulations (if any).
- Resources:
  - <http://www.extension.umn.edu/garden/turfgrass/watering/water-saving/index.html>
  - <https://ag.umass.edu/landscape/fact-sheets/role-of-irrigation-audit-in-water-conservation>

#### **6.5.1.3 Adopt Water Efficiency-Oriented Rate Structure**

Adopt the proposed water service rate structure recommended in the Town of Eagle Water Rate and Tap Fee Study, dated November 2016 and revised July 2017. Below are additional resources on water rates and efficiency planning:

- <https://www.colorado.gov/pacific/cowaterplan/conservation>
- <http://www.allianceforwaterefficiency.org/1Column.aspx?id=712>

#### **6.5.1.4 Promote and Encourage Xeriscaping for New Developments/Projects**

Any new Town projects, landscaping activities, new developments, etc. should incorporate water efficiency practices. Development of policy(ies) to support consideration and implementation of water efficiency practices supports the Town's commitment.

#### **6.5.1.5 Enact Water Efficiency Policies for all New Construction**

New construction projects within the Town limits should consider the use of water efficient appliances, fixtures, and outdoor irrigation fixtures if applicable. EPA approved WaterSense products are a great place to start looking at water efficiency items.

- <http://www.denverwater.org/Conservation/WaterSense/>

#### **6.5.1.6 Install Rain Sensors**

Install Rain Sensors on all Town grounds that will monitor precipitation and operate based upon a set amount/time.

#### **6.5.1.7 Adopt Policies Listed in Section 6.5.2 on HOA Engagement**

The Town should also consider adopting policies listed below for consideration by HOAs, such as a water waste ordinance, a weekly watering schedule, and a timing schedule for watering lawns.

### **6.5.2 HOA Engagement in Policy Review**

The Town hopes to encourage HOAs to adopt water efficiency oriented policies in their covenants, conditions, and restrictions, through the process of engaging with HOAs.

#### **6.5.2.1 Review and Revise HOA Rules**

The Town should work with the HOAs to review existing covenants, conditions, and restrictions that do not promote water efficiency practices. The Town should support the HOAs with the revision of the HOA rules and consider recognition of them in Town Policies.

#### **6.5.2.2 Enact Water Waste Ordinance**

The Town's Water Conservation Ordinance specifies that wasting water is prohibited. The Town should also consider making this more specific by limiting the length of outdoor irrigation (ex. outdoor irrigation is limited to two hours).

The Town should develop an escalation ordinance and/or policy which allows for enforcement of water waste/overuse. For example, Nevada charges people for the wasted water if two notice of violations are received at the same premise in 30 days.

- See Section 9-18-17 from:  
[http://www.sterlingcodifiers.com/codebook/getBookData.php?id=&section\\_id=138132&keywords=](http://www.sterlingcodifiers.com/codebook/getBookData.php?id=&section_id=138132&keywords=)
- <http://www.denverwater.org/OperatingRules/OperRules14/>

#### **6.5.2.3 Promote and Educate Customers on the Water Conservation Ordinance**

The Town has a Water Conservation Ordinance, which has restrictions on days of the week and times of day when customers can water. Odd numbered and even numbered addresses are assigned alternating days. Residents are also prohibited from watering during high sun times, which leads to high water loss and burnt vegetation.

The Town could increase participation in this program by promoting this Ordinance and educating customers about it, through other elements of the Town's outreach and education program. For example, the Town could post reminders about the Ordinance on social media, or in the fliers sent out with the water bills.

#### **6.5.2.4 Install Sub-meters on Apartment Buildings**

The Town should consider supporting HOAs with installation of water meters to encourage accountability for water usage. Water meters can also support HOAs in identifying abnormally high water usages and allow them to work with residents to decrease water usage. This also more fairly bills residents based on their water usage as a unit, rather than having to accommodate for high water users.

### **6.6 Town Pledges of Efficiency**

Town Pledges of Efficiency are action items with direct physical outcome, or practices that the Town can engage in to use water more efficiently on Town managed properties. Pledges of efficiency can also spur conversation in the community. Many of these items are connected to other sections in some capacity, but here are listed as the direct action that can be taken or explored. These pledges all have a physical outcome in which the community can observe the Town's dedication to water efficiency and ideally become more involved.

#### **6.6.1 Low Water Landscaping**

##### **6.6.1.1 Install Rain Sensors on all Public Properties**

See Section 6.5.1.6.

##### **6.6.1.2 Plant Existing Town Gardens with Water Efficient Plants and Materials**

The Town should inventory their existing landscaping and select an area to plant with water efficient plants and materials for showcasing at a future Water Efficiency Kickoff Event (See Section 6.3.1.2). This could include converting gardens and parks to xeriscape landscapes. This effort can be combined with educational tools, such as tours of gardens with landscapers, as well as educational signs posted in parks and gardens about the plants used and their impact on water efficiency.

The Town should monitor and track the success of each project and plan how to transform all open spaces or gardens fully or partially over time.

Obtaining support through volunteers from schools and other organizations may be a good tool for promoting the water efficiency education process and for reducing labor costs. Working with local gardens and landscaping contractors to provide in-kind materials and labor can also provide some free advertisement for those businesses.

Tips on planting water efficient gardens are included in the following links:

- <http://www.water.denver.co.gov/Conservation/Xeriscape/>
- <https://www.gardeningknowhow.com/special/xeriscape/xeriscape-principles-water-wise-gardening-tips.htm>
- <https://www.landscapingnetwork.com/Xeriscape-landscaping/>
- <http://extension.colostate.edu/topic-areas/yard-garden/colorado-gardening-challenge-to-newcomers-7-220/>

#### 6.6.1.3 Remove Phreatophytes

Phreatophytes include vegetation along water ditches (or areas with shallow groundwater) which uptake large water quantities and prohibit other plants from growing. The removal of these plants can reduce ditch losses while also conserving water downstream. This would most applicable in areas where the Town supplies raw water for irrigation through ditches.

- <https://pubs.usgs.gov/pp/0655m/report.pdf>
- <https://pubs.usgs.gov/wsp/1423/report.pdf>

#### 6.6.1.4 Conduct Audits on Irrigated Town Properties

The Town should conduct audits on irrigation equipment and identify any pieces that may need to be replaced in the near or long-term future. This can help with budget planning for purchasing water efficient fixtures. Also, like with residential and commercial audits (Section 6.5.1.2), these audits on Town properties can identify any leaking or broken sprinkler heads or water distribution lines.

#### 6.6.1.5 Replace Outdated Irrigation Equipment

Going along with Section 6.6.1.4, after the audit immediately replace any leaking equipment as this can be a huge loss of water in irrigation systems. Use WaterSense approved products or other water conserving products. Update irrigation systems with watering timers and clocks wherever possible.

- <https://www.epa.gov/watersense/watersense-products>

#### 6.6.1.6 Provide Resources to Top 10% Water Users

Once the Town has identified and initiated a relationship with the top 10% of water users (as described in Section 6.3.2.3), the Town can provide resources to those users. Do not place blame on them, rather notify them that their usage falls within the top 10% and provide resources on how to reduce usage, or how water can be used more efficiently.

- Set goals for them to achieve within a given time frame so they are held “accountable”.
- Offer audit advice or audits if applicable.

### 6.6.2 Incentive Programs

#### 6.6.2.1 Indoor Fixture Rebates

The Town should establish a rebate system to encourage customers to purchase and install water efficient indoor fixtures. Examples include showerheads, faucet

aerators, and indoor pipe insulation. To qualify for a rebate, the Town should require that the purchase and installation of these fixtures be verified by the Town or a qualified installer.

- <http://www.denverwater.org/Conservation/Rebates/ResidentialRebates/>

#### **6.6.2.2 Outdoor Fixture Rebates**

The Town should establish a rebate system to encourage customers to purchase and install water efficient outdoor fixtures. Examples include sprinklers, timers / clocks, and rain sensors. To qualify for a rebate, the Town should require that the purchase and installation of these fixtures be verified by the Town or a qualified installer.

- <http://www.denverwater.org/Conservation/Rebates/ResidentialRebates/>

#### **6.6.2.3 Giveaways of Water Efficient Fixtures**

The Town should consider purchasing indoor and outdoor water efficient fixtures for planned education and outreach events. See Section 6.3.1 for example of events to consider.

### **6.6.3 Install Smart Meters**

Install smart meters so residents can be held accountable for water usage, especially in drought. Enacting new guidelines for water usage can allow the Town to monitor big water users and see why they are using so much water and how they can reduce their consumption. This is a long-term goal as these meters are costly.

- <http://www.allianceforwaterefficiency.org/smart-meter-introduction.aspx>

### **6.6.4 Accounting and Billing System Audit**

The Town is planning an intensive self-audit on its accounting and billing system, within Caselle's billing software and Neptune's meter reading software. This audit will help the Town identify unusual patterns of use that may indicate incorrect billing (such as irrigation water customers which are not billed during the winter months, but may be using water during the winter).

## 7.0 Conclusions

The Town has shown an overall trend of decreasing per capita use, despite its growth. The Town aims to quantitatively demonstrate a trend in water efficiency through the implementation of its near-term and long-term goals, attaining specifically these two measurable goals in the next five years:

1. Reduce the percentage of produced water which is used outside (rather than inside) during peak summer months (June, July, and August) from 70% to 60% (the average percent used outdoors from 2001 to 2016 was 70%).
2. Reduce the per capita water use (measured as GPD/account) by 10% between 2017 and 2023. For comparison, the Town achieved a 35% reduction in GPD/account between 2005 and 2010, though this was due to the aggressive water main replacement program.

The Town also aims to have its policies, staff, and Trustees, reflect the view of water as a valuable resource.

The specific goals, tools, and action items outlined in this memo support the Town with the identification of areas where it can focus its efforts to increase efficiency, while at the same time maintain its delivery of high quality water service as it continues to grow.

## Town of Eagle Monthly Water Usage Statistics - Water Used Per Customer

*Based on Billing Records and Billed Metered Usage 2015*

**Summer**

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**All Residential**  
*Monthly Usage (1000 Gallons) - Summer Season*

	June	July	Aug (peak)	Seasonal Average
90th Percentile Use	26.0	38.0	44.0	36.0
80th Percentile Use	18.0	28.0	33.0	26.3
Monthly Average Use	11.9	17.8	21.2	17.0
Monthly Median Use	9.0	15.0	17.0	13.7

**Commercial, Government, Schools, Churches**  
*Monthly Usage (1000 Gallons) - Summer Season*

	June	July	Aug (peak)	Seasonal Average
90th Percentile Use	89.4	112.0	134.0	111.8
80th Percentile Use	38.8	48.8	60.0	49.2
Monthly Average Use	30.1	38.6	44.2	37.7
Monthly Median Use	8.0	10.0	11.0	9.7

**Multi-Family**  
*Monthly Usage (1000 Gallons) - Summer Season*

	June	July	Aug (peak)	Seasonal Average
90th Percentile Use	26.7	32.7	35.7	31.7
80th Percentile Use	14.0	15.0	15.4	14.8
Monthly Average Use	11.4	13.5	16.5	13.8
Monthly Median Use	4.0	4.0	5.0	4.3

**In Town Single Family with ADU**  
*Monthly Usage (1000 Gallons) - Summer Season*

	June	July	Aug (peak)	Seasonal Average
90th Percentile Use	34.6	43.0	52.8	43.5
80th Percentile Use	26.6	32.0	40.0	32.9
Monthly Average Use	15.9	21.8	27.5	21.7
Monthly Median Use	12.0	20.0	26.0	19.3

**Winter**

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**All Residential**  
*Monthly Usage (1000 Gallons) - Winter Season*

	Seasonal Avg (Nov-Feb)
90th Percentile Use	7.0
80th Percentile Use	5.8
Monthly Average Use	4.2
Monthly Median Use	4.0

**Commercial, Government, Schools, Churches**  
*Monthly Usage (1000 Gallons) - Winter Season*

	Seasonal Avg (Nov-Feb)
90th Percentile Use	30.6
80th Percentile Use	15.7
Monthly Average Use	14.7
Monthly Median Use	2.5

**Multi-Family**  
*Monthly Usage (1000 Gallons) - Winter Season*

	Seasonal Avg (Nov-Feb)
90th Percentile Use	14.9
80th Percentile Use	10.5
Monthly Average Use	8.2
Monthly Median Use	3.8

**In Town Single Family with ADU**  
*Monthly Usage (1000 Gallons) - Winter Season*

	Seasonal Avg (Nov-Feb)
90th Percentile Use	10.0
80th Percentile Use	7.9
Monthly Average Use	5.9
Monthly Median Use	5.3

**Annual**

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**All Residential**  
*Monthly Usage (1000 Gallons)*

Annual Average
8.9

**Commercial, Government, Schools, Churches**  
*Monthly Usage (1000 Gallons)*

Annual Average
24.3

**Multi-Family**  
*Monthly Usage (1000 Gallons)*

Annual Average
10.2

**In Town Single Family with ADU**  
*Monthly Usage (1000 Gallons)*

Annual Average
11.8



**Community Outreach and Education Tools and Audiences**

			Audiences													
			Internal						External							
			Town Staff	Board of Trustees	Fire Dept.	Open Space Dept.	Planning Dept.	Public Works Dept. (includes Town Parks)	Utilities Dept.	Residential Customers	Students	HOAs	Commercial Customers	Landscape Contractors		
Tools	Training	Landscape Training	<a href="#">Municipal Water Conservation Best Practices<sup>1</sup></a>	X	X	X	X	X	X	X		X		X		
			<a href="#">WaterSense Certification<sup>2</sup></a>	X			X	X	X						X	
		Low Impact Development	<a href="#">LID for Landscape Professionals<sup>3</sup></a>				X	X	X							X
			<a href="#">Integrating LID into Local Codes<sup>4</sup></a>	X	X		X	X	X							X
	Marketing	Brochures	<a href="#">EPA WaterSense Outdoor Irrigation Tips<sup>5</sup></a>		X	X	X			X		X	X	X		
			<a href="#">A.W.E. Water Saving Tips<sup>6</sup></a>		X	X	X			X		X	X	X	X	
			<a href="#">Examples of brochure formats - Portland OR<sup>7</sup></a>	X	X	X				X	X	X	X	X	X	
		Ad Campaigns	<a href="#">Water Conservation Advertising<sup>8</sup></a>	X	X			X	X	X	X	X	X	X	X	
	Education	Websites	<a href="#">Project Wet Discover Water<sup>9</sup></a>	X			X					X				
			<a href="#">Project Wet Resources for Teachers<sup>10</sup></a>									X				
		Classroom Exercises	<a href="#">Water Calcuclators<sup>11</sup></a>	X							X	X		X		
			<a href="#">Interactive Water Education Graphics<sup>12</sup></a>									X				

Notes

<sup>1</sup> [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwj9Ybk4K7UAhUBMGMKHUEfCUkQFggsMAE&url=http%3A%2F%2Fcoloradowaterwise.org%2FResources%2FDocuments%2FBP%2520Project%2FCWW%2520Best%2520Practices%2520Guide%2520-%2520FINAL.pdf&usg=AFQjCNG3dZMIGoAB6dbGhgXcfmqC\\_VGs\\_g](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&ved=0ahUKEwj9Ybk4K7UAhUBMGMKHUEfCUkQFggsMAE&url=http%3A%2F%2Fcoloradowaterwise.org%2FResources%2FDocuments%2FBP%2520Project%2FCWW%2520Best%2520Practices%2520Guide%2520-%2520FINAL.pdf&usg=AFQjCNG3dZMIGoAB6dbGhgXcfmqC_VGs_g)

<sup>2</sup> [https://www.epa.gov/watersense/professional-certification-0?trk=profile\\_certification\\_title](https://www.epa.gov/watersense/professional-certification-0?trk=profile_certification_title)

<sup>3</sup> <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/LID/TRAINING/index.html>

<sup>4</sup> [https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjy3Jc4a7UAhVE5mMKHSnGAUgQFggmMAA&url=http%3A%2F%2Fwww.psp.wa.gov%2Fdownloads%2FLID\\_Guidebook%2F20120731\\_LIDguidebook.pdf&usg=AFQjCNFjIRDaORAYGs](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjy3Jc4a7UAhVE5mMKHSnGAUgQFggmMAA&url=http%3A%2F%2Fwww.psp.wa.gov%2Fdownloads%2FLID_Guidebook%2F20120731_LIDguidebook.pdf&usg=AFQjCNFjIRDaORAYGs)

<sup>5</sup> <https://www.epa.gov/watersense/watering-tips>  
<https://www.epa.gov/watersense/landscaping-tips>

<sup>6</sup> <http://www.allianceforwaterefficiency.org/residential-tips.aspx>

<sup>7</sup> <https://www.portlandoregon.gov/rss.cfm?c=55162>

<sup>8</sup> <http://www.denverwater.org/Conservation/UseOnlyWhatYouNeed/>

<sup>9</sup> <http://www.discoverwater.org/>

<sup>10</sup> <http://www.projectwet.org/resources>

<sup>11</sup> <http://www.home-water-works.org/calculator>

<https://www.denverwater.org/residential/rebates-and-conservation-tips/self-audit>

<sup>12</sup> <http://www.denverwater.org/EducationOutreach/JourneyWater/>



Town of Eagle Water Efficiency Five Year Plan

### Table of Action Items

Tool	Topic	Action Item	Target Completion Date	Target Audience Code	Priority
6.1 Training	6.1.1 Landscape Training	6.1.1 Open Space Dpt. & Utilities Dpt., purchase/watch Irrigation Association Seminars	Fall 2017	1,6,7	High
6.2 Marketing	6.2.1 Brochures & Fliers	6.2.1.1 Re-format Water Bill	Fall 2017	2-4,6,8,10,11	High
		6.2.1.2 Create list of irrigation tips for residential customers	Fall 2017	1,2,5-12	High
		6.2.1.3 Identify Town's current and past efficiency efforts	Fall 2017	1,2,5-12	High
		6.2.1.4 Include links to Town website with fliers	Fall 2017	1,2,5-12	High
		6.2.1.5 Create flier template and send out with monthly water bill	Fall 2017	1,2,5-12	High
	6.2.2 Ad Campaign	6.2.2.1 Develop slogan with logo, ex. Conserve Together	Fall 2017	1,2,5-12	High
	6.2.3 Social Media	6.2.3.1 Create efficiency content for Facebook and Twitter	Fall 2017	1,2,5-12	High
		6.2.3.2 Promote customer involvement with hashtags	Fall 2017	1,2,6,8,9,12	High
	6.3 Outreach	6.3.1 Community Events	6.3.1.1 Organize water efficiency booth at Annual Flight Days event	June 22nd, 2018	1,8,9,12
6.3.1.2 Throw kick-off water efficiency event			Summer 2018	1,2,8,9,12	Med
6.3.1.3 Create calendar for water efficiency events			Summer 2018	1,8,9,12	High
6.3.1.4 Plan a community xeriscape garden workshop			Summer 2018	1,8,9,12	High
6.3.1.5 Create and plan grand opening of a water efficient park			Summer 2019	1,8,9,12	Med
6.3.2 Establish Relationships		6.3.2.1 Trustees reach out to HOAs for meeting	Fall 2017	1,10	High
		6.3.2.2 Town establish relationship with local landscape contractors	Fall 2017	2,11	High
		6.3.2.3 Town notify and establish relationship with top 10% water users	Fall 2017	7,9	High

Town of Eagle Water Efficiency Five Year Plan

### Table of Action Items

Tool	Topic	Action Item	Target Completion Date	Target Audience Code	Priority
6.4 <i>Education</i>	6.4.1 Classroom Exercises	6.4.1.1 K-12 work on xeriscape school gardens	Spring 2018	1,8,9,12	High
		6.4.1.2 Provide resources to teachers on water education	Summer 2018	1,8,9,12	High
	6.4.2 Home Online Tools	6.4.2.1 Promote use of H2O tracker app with fliers and social media	Fall 2017	1--12	Med
		6.4.2.2 Promote use of other online resources	Fall 2017	1--12	Med
	6.5 <i>Policy</i>	6.5.1 Review and Revise Town Policy(ies)	6.5.1.1 Nominate a Water Efficiency Coordinator	Fall 2017	1--9
6.5.1.2 Conduct residential and commercial audits			2019	1,2,4,6,7	Med
6.5.1.3 Adopt water efficiency-oriented rate structure			Summer 2017	1,2,4,6,7	High
6.5.1.4 Promote xeriscaping for new developments/projects			2018	1,2,4,6,7	Med
6.5.1.5 Enact water efficiency policies for all new construction			2018	1,2,4,6,7	Med
6.5.1.6 Install rain sensors			2018-2019	1,2	High
6.5.1.7 Adopt all HOA policies listed in 6.5.2 (below)			2018-2019	1,2,4,6,7	High
6.5.2 HOA Engagement in Policy Review		6.5.2.1 Review and revise HOA rules	2018-2019	1,5,8,10,11	High
		6.5.2.2 Enact water waste ordinance	2018-2019	1,5,8,10,11	High
		6.5.2.3 Promote and educate cutomers on water conservation ordinance	2018-2019	1,5,8,10,11	Med
		6.5.2.4 Install sub-meters on apartment buildings	2018-2019	1,5,8,10,11	Med

Town of Eagle Water Efficiency Five Year Plan

### Table of Action Items

Tool	Topic	Action Item	Target Completion Date	Target Audience Code	Priority
6.6 Town Pledges of Efficiency	6.6.1 Low Water Landscaping	6.6.1.1 Install Rain Sensors on all public properties	2020-2023	6,7	Med
		6.6.1.2 Plant existing Town gardens with water efficient plants and materials	2018-2023	1,5,11	Med
		6.6.1.3 Remove phreatophytes in ditches	2018-2023	4,5,6,8	Low
		6.6.1.4 Conduct audits on irrigated Town properties	2018-2023	1,2,4,5,6,7	Med
		6.6.1.5 Replace outdated irrigation equipment	2018-2023	4,5,6	Low
		6.6.1.6 Provide resources to the top 10% of water users.	2018-2023	6,7,8,9,10	Med
	6.6.2 Incentive Programs	6.6.2.1 Indoor fixture rebates	2020	1,2	Low
		6.6.2.2 Outdoor fixture rebates	2020	1,2	Low
		6.6.2.3 Giveaways of water efficient fixtures	2020	1,2	Med
	6.6.3 Install Smart meters	6.6.3.1 Slowly roll out smart meter replacement	Next 5 Years	2,7	Low
	6.6.4 Accounting and Billing System Audit	Plan a self-audit of accounting and billing system.	Next 5 Years	1,7	High

**Audience Legend**

Code	Audience
1	Town Staff
2	Board of Trustees
3	Fire Department
4	Open Space Department
5	Planning Department
6	Public Works Department
7	Utilities Department
8	Residential Customers
9	Commercial Customers
10	HOAs
11	Landscape Contractors
12	Students

