Widefield Water & Sanitation District

Water Conservation Plan
August 2009

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Section 1 – District History and Background

Background

The Widefield Water & Sanitation District (District) is located in El Paso County, Colorado. The District is a political subdivision of the State of Colorado and a body corporate with all the powers of a public or quasi-municipal entity.

History

Widefield Homes Water Company, organized as a Colorado corporation on June 14, 1979, provided water and wastewater services to the area until being converted to a District. The District was formed on May 17, 1996 to provide water and wastewater service to the public within the service area.

At the time of the District's creation in May 1996, the water service area consisted of about 2,250 acres and served approximately 4,800 accounts. The wastewater service area consisted of about 2,400 acres and served approximately 5,400 accounts.

Service Area

Water and wastewater service is provided to unincorporated areas of El Paso County (Widefield and Security communities) and the City of Fountain. The District provides service to accounts with both water & wastewater, water only, and wastewater only.

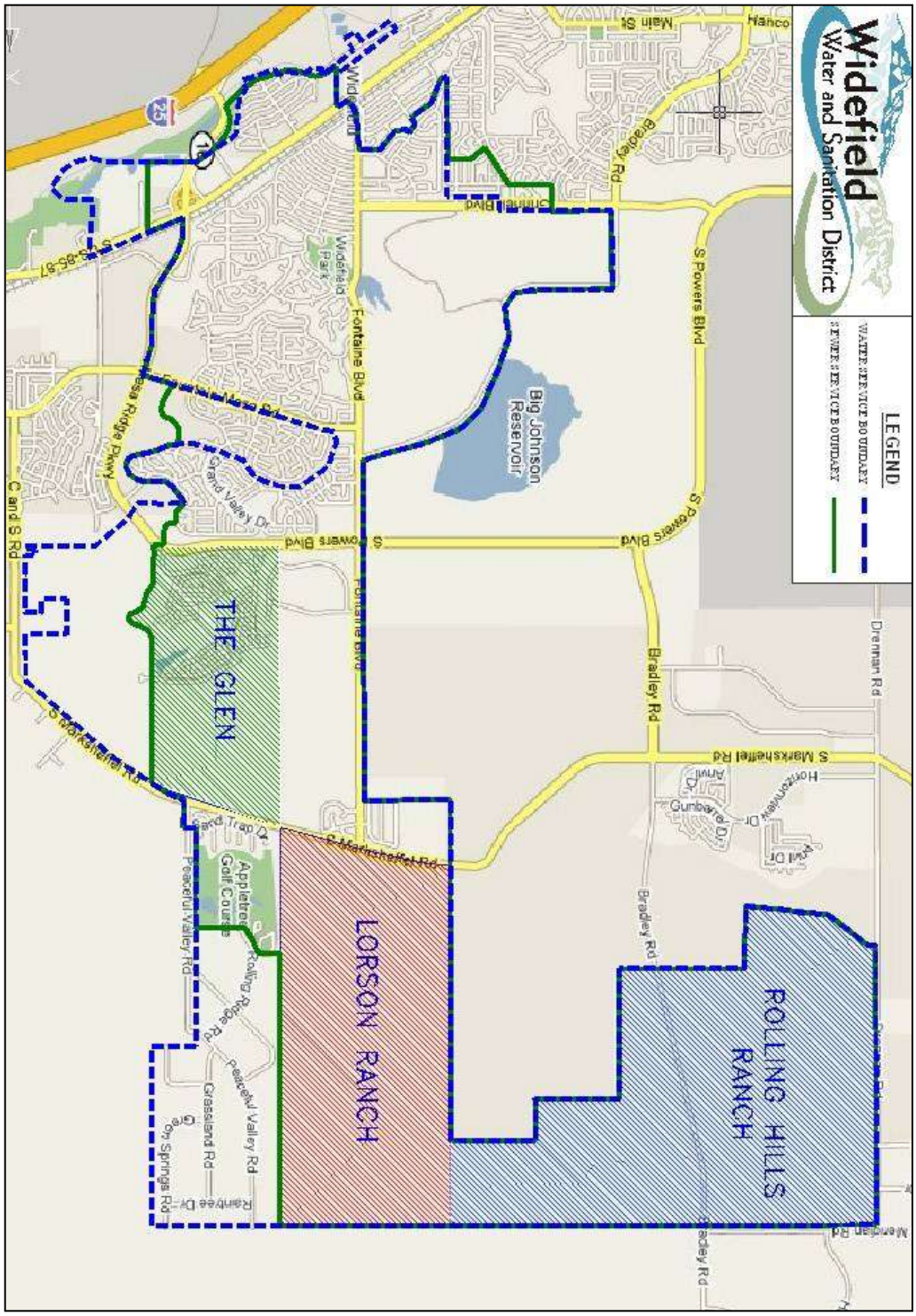
The District's customer base is primarily residential, representing 98% of all accounts. The remaining 2% of accounts are commercial. There are no industrial accounts within the District. Occasionally, wholesale water is provided to a neighboring agency. A population of about 16,000 is served within the water boundaries. For wastewater, a population of about 21,700 is served. At the end of 2008, the District served about 5,900 water accounts and about 6,650 wastewater accounts.

Since formation of the District, the service areas of water and wastewater have each increased. The increased acreage resulted from the development areas of Cradlan Property (water & wastewater), Lorson Ranch (water & wastewater), Southpark Tech Center (wastewater), Mesa Ridge (water), and Rolling Hills (water & wastewater) being added to the District. The District anticipates 19,000 new homes will be built in these areas.

With the development additions, the water service area increased by 4,366 acres, bringing the total water service area acreage to about 6,616 acres. The wastewater service area has increased by 4,042 acres, bringing the total wastewater service area to about 6,442 acres.

Section 1 – District History and Background

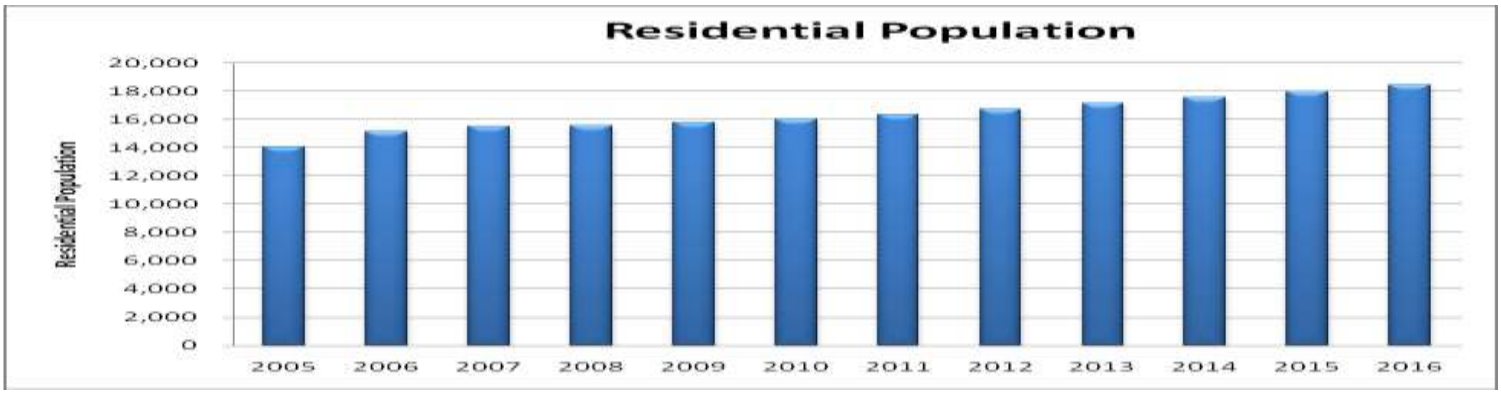
The water and wastewater service areas are shown on the below boundary map.

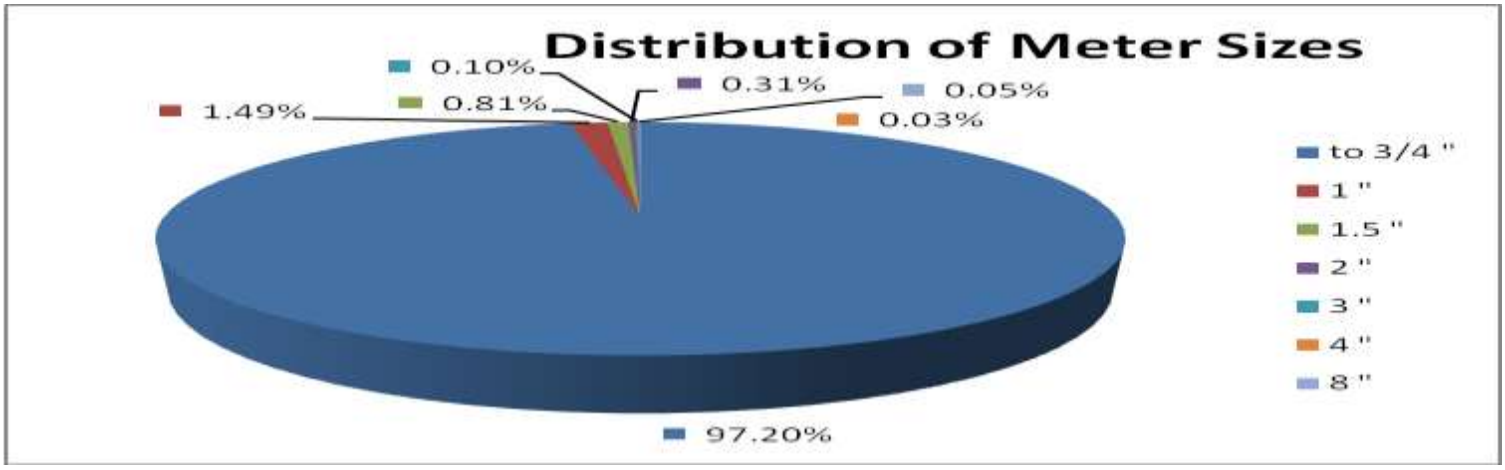


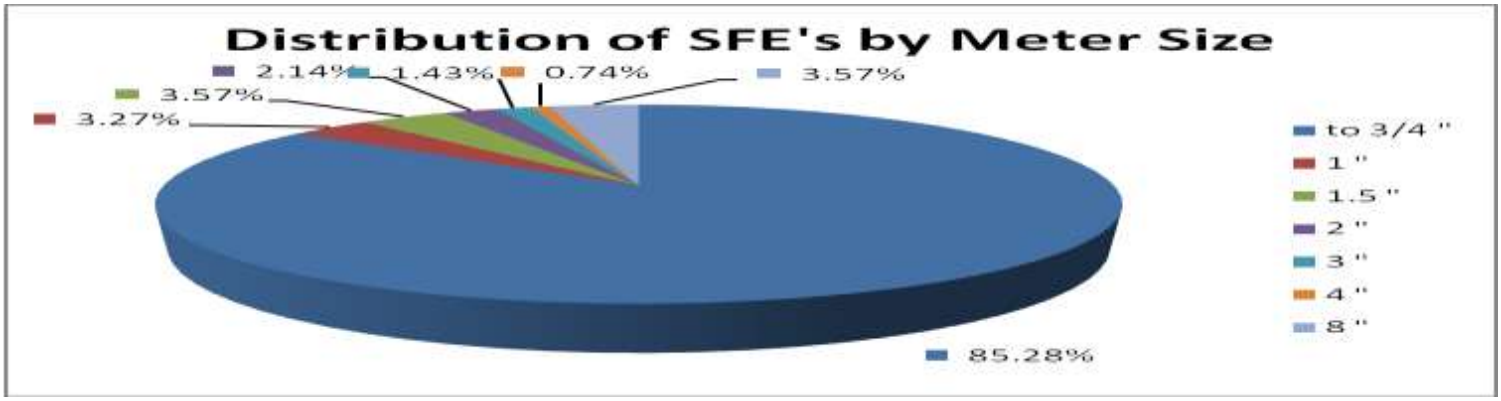
Section 1 – District History and Background

District Accounts

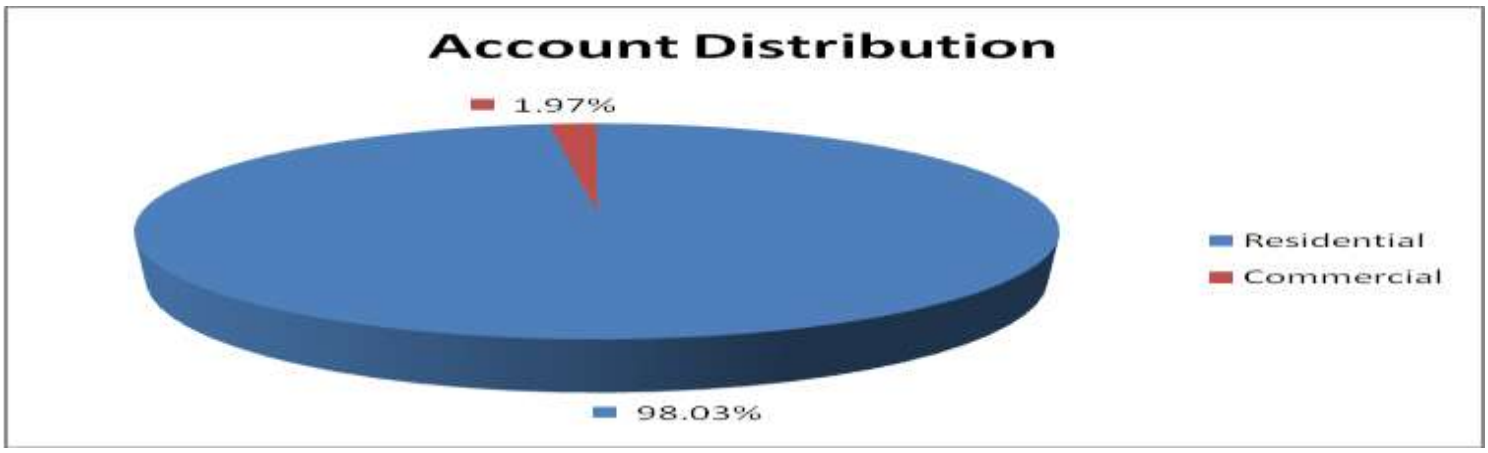
A snapshot of current accounts is shown in the following graphs of population, user classifications, detail of commercial classes, distribution of meter sizes, and meter Single Family Equivalents (SFE's).

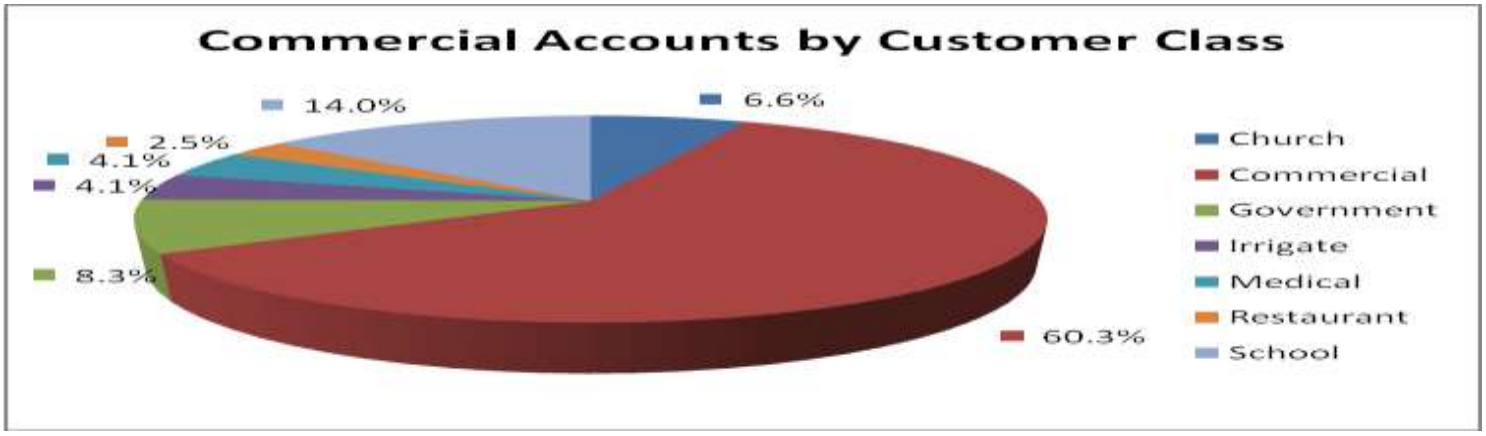


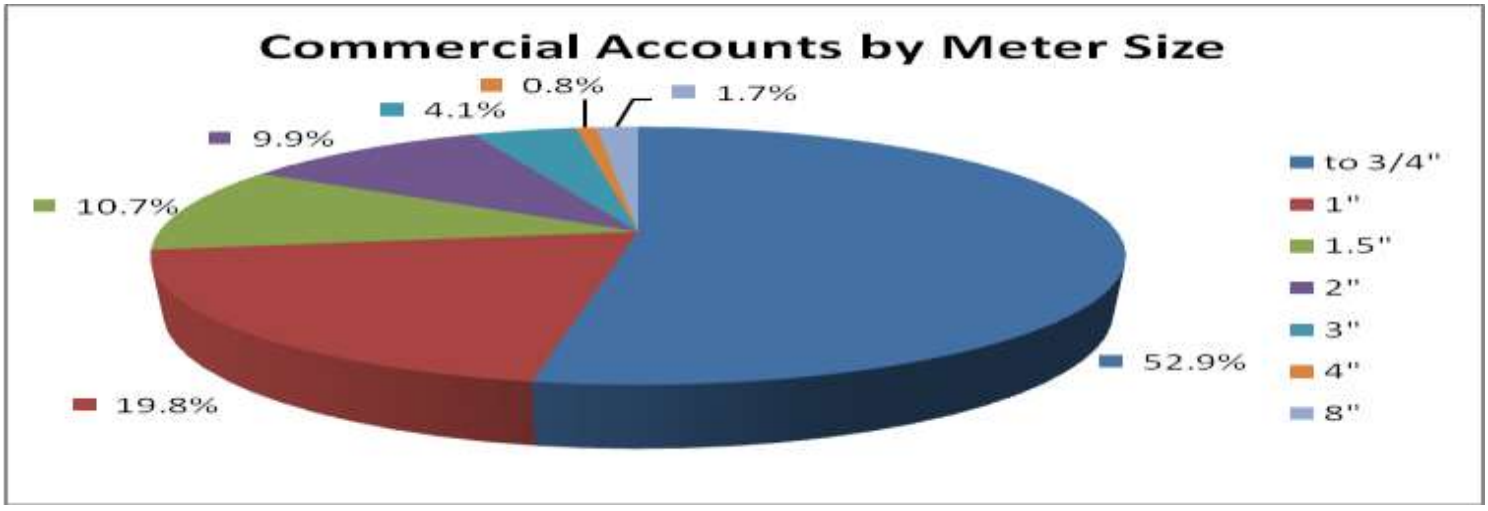




Section 1 – District History and Background







Section 1 – District History and Background

The District contracted with a consultant in 2007 to complete an analysis of cost of service for water and wastewater, establish a ten year financial plan, and design current & future cost of service rates. The rate model was designed to promote water conservation by establishing an inclined water rate structure and a winter determination wastewater charge. The rate structures established allow charges to be established according to the volume of water used by the account holder. A 5% +/- demand elasticity was incorporated into the rate design to allow for a reduction in revenue due to rates designed to promote water conservation. Previously rates and fees were a flat monthly rate with an allocation of water, based on the meter size.

The rate model is scheduled to be updated every other year to validate rates are sufficient to provide coverage of operating expenses, meet debt payments, maintain operating reserves, and allow for the replacement/purchase of routine operation of capital outlay items. Infrastructure expansion/maintenance and water supply expenses are provided by fees to connect to the water and wastewater infrastructure. A water acquisition fee is also collected to provide for future water supply as the District approaches full build out.

The revenue received for water and wastewater services, infrastructure connection fees, and water acquisition fees are the only revenue sources for the District. The District does not receive any revenue from a mill tax assessed against property owners. Water and wastewater rates are updated annually. Connection fees and water acquisition fees are updated every other year.

During development of the rate model, inconsistencies were identified with information being reported by the existing billing software. Replacement of the billing software was recognized as a priority for the District. In the summer of 2009, a conversion from the existing billing software to a new billing software system was completed. The new software will support conservation efforts by providing accurate reporting of sales, size of meters, and information required to complete water loss accounting.

The District's rate and fee schedule for 2009 is shown below;

Section 1 – District History and Background

Water Rates & Base $'s Wastewater Rates & Base $'s Tap & Water Acquisition Fee

1 Base Charge

Meter Size	$ Per Month
5/8 "	$13.38
3/4 "	19.56
1 "	31.95
1 1/5 "	62.93
2 "	100.10
3 "	199.23
4 "	310.75
6 "	620.53
8 "	992.25

2 Volume Charge

	$ per 1,000 Gal
Residential;	
1st 5,000 Gallons	$3.04
Over 5,000 Gallons	$3.65
Commercial;	
Uniform Rate	$3.37

3 Base Charge

Meter Size	$ Per Month
5/8 "	$8.05
3/4 "	11.38
1 "	18.05
1 1/5 "	34.74
2 "	54.75
3 "	108.12
4 "	168.16
6 "	334.94
8 "	535.08

4 Volume Charge

	$ Per 1,000 Gal
Residential;	
Volume Charge	$4.35
Average of Winter Use (December, January, & February)	
If no Winter Use History, then charge is based on District Average of 5,500 gallons during Winter months	
Commercial:	
Volume Charge	$4.35
Actual Monthly Usage	

5 Tap Fees

Meter Size	Water Tap Fee $	Wastewater Tap Fee $
5/8 "	$4,500	$4,500
3/4 "	$4,500	$4,500
1 "	$11,250	$11,250
1 1/5 "	$22,500	$22,500
2 "	$36,000	$36,000
3 "	$72,000	$72,000
4 "	$112,500	$112,500
6 "	$225,000	$225,000
8 "	$360,000	$360,000

6 Water Acquisition Fee

Acquisition	$6,500	per SFE

*****No property mill levy is collected by Widefield Water and Sanitation District.**

Section 2 – Water System and Supply

Water System

The water system consists of three (3) booster pump stations, seven (7) treated water storage tanks, seventeen (17) groundwater wells, two (2) air stripper plants (one in operation and the second is under construction), and about 63 miles of distribution system.

There are six (6) employees dedicated to the operation of the water system. Each employee is State certified as a water operator. Annual maintenance programs include exercising the 1,500 + valves in the system, leak detection audits of waterline segments, maintaining 500 + hydrants, maintenance of booster stations & water storage tanks, sampling at 42 sites, and maintenance of large meters.

Water Supply

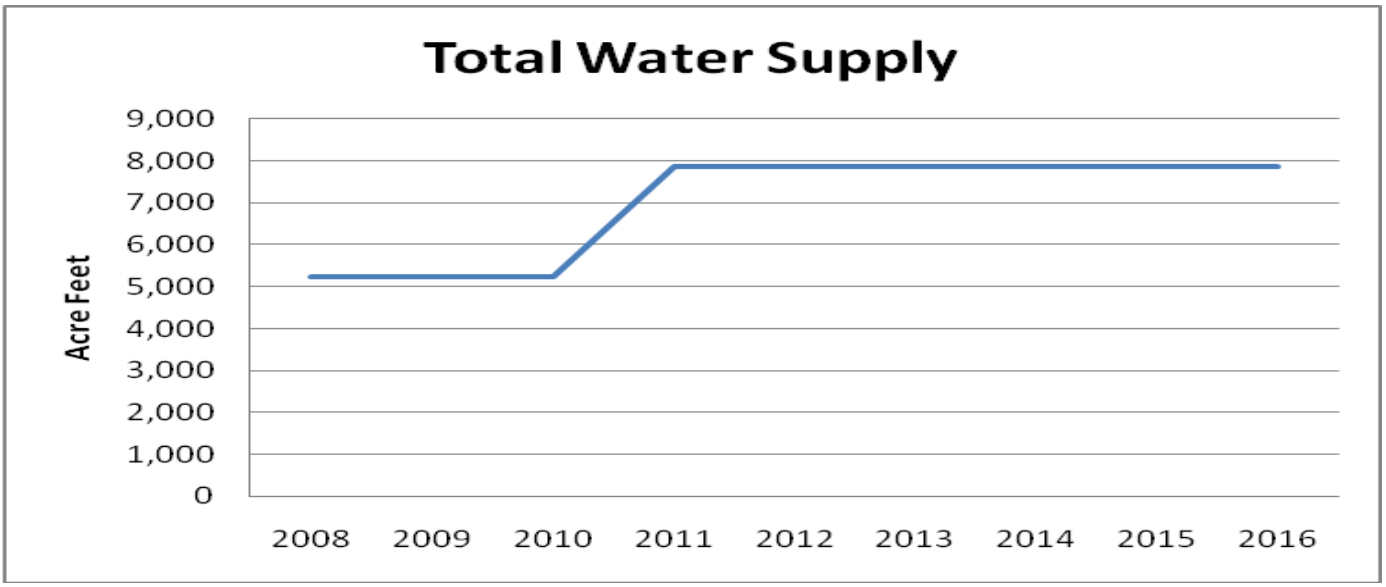
The District has a current physical (5,246 AF) and additional legal (950 AF) supply of water for a total of 6,196 AF. The District's water production is about 51% of current physical supply. As taps are generated, some pipeline upgrades and re-drilling of wells will be required, but no new sources of supply will be needed through 2018. In 2009, the District will finalize contractual arrangements that secure an additional 1,650 AF of consumptive use water to its legal water supply inventory. The additional physical supply is expected to be available for delivery by 2011.

The **current physical** water sources available to the District include;

Fountain Valley Authority	1,400	AF
Master Water Lease;		
Widefield Aquifer Wells	2,650	
Jimmy Camp Creek Aquifer Wells	600	
Venetucci Water	596	
Sub Total, current physical supply	5,246	AF
Existing Excess Water Holdings	950	AF
Pending 2009 / 2011 Water Decree, Cody	1,300	
Pending 2009 / 2011 Water Decree, Westcliffe	350	
Grand Total, Current & 2009/2011 Pending	7,846	AF

The District anticipates physical water resources of 9,300 AF will be required for full development of the District by 2040. Planning, water rights acquisitions, and water conservation efforts are underway to prepare for the next expansion to the District's physical supply. The District's engineer monitors, updates, and adjusts supply data on an annual basis to assist water supply planning.

Section 2 – Water System and Supply



In 2003, the District established an association, Widefield Aquifer Recharge Association (WARA), to prepare a regional long term plan for water reuse. Participants in WARA now include Security Water & Sanitation District and the City of Fountain. Each member contributes $25,000 per year to research and plan the WARA project. About $250,000 has been expended on research, sampling, analysis, engineering, and legal costs to focus on the planning aspects of (1) raw water storage, (2) types of treatment technology, (3) groundwater injection, and (4) obtaining property and easements for the project. The project will take Fountain Creek flows of 8,350 AF (Widefield = 5,000 AF, Security = 850 AF, and Fountain = 2,500 AF), treat water to potable water standards, and inject it in the Widefield aquifer. The water will then blend with aquifer water, be extracted from the aquifer, receive treatment to potable water standards, and then be available to the respective distribution systems. The first phase of the project is planned to begin in 2016 and include diverting wastewater return flows from Fountain Creek, treating it to potable water standards, and injecting it back into the aquifer. The second phase of the project, planned for 2022, will extract water from the aquifer, treat it to potable water standards, and then be available to the distribution system of each partner.

When fully developed, the current, near term acquisitions, conservation savings, and long range planning will provide sufficient supply to meet the anticipated full District build out. The District will continue to monitor, and / or pursue other legal sources of supply over the next 20 years as demand continues to increase.

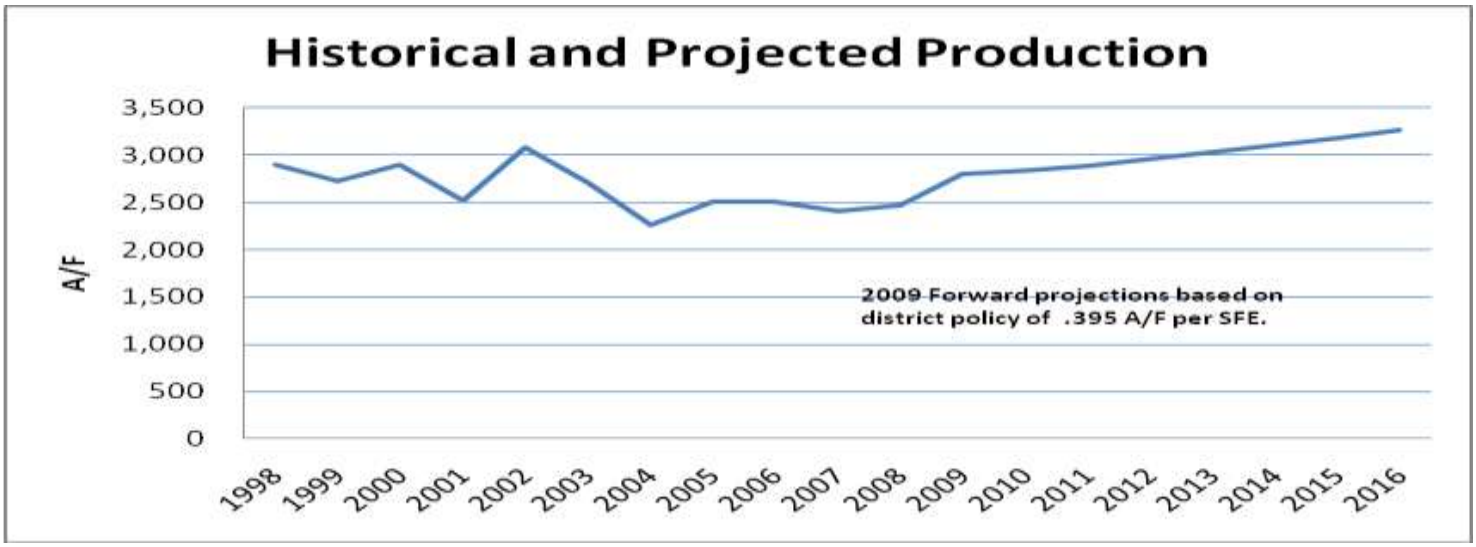
Section 3 - Water Demand

The population served by the District includes unincorporated areas of El Paso County and areas within the City of Fountain. Population estimates were established by identifying the number and size of meters, (all accounts within the District are metered), isolating residential accounts, and calculating the Single Family Equivalents (SFEs) of residential accounts with 2.6 residents per SFE. In 2008, the SFR per capita water use was 111 gallons per day and the system wide per capita was 121 gallons per day.

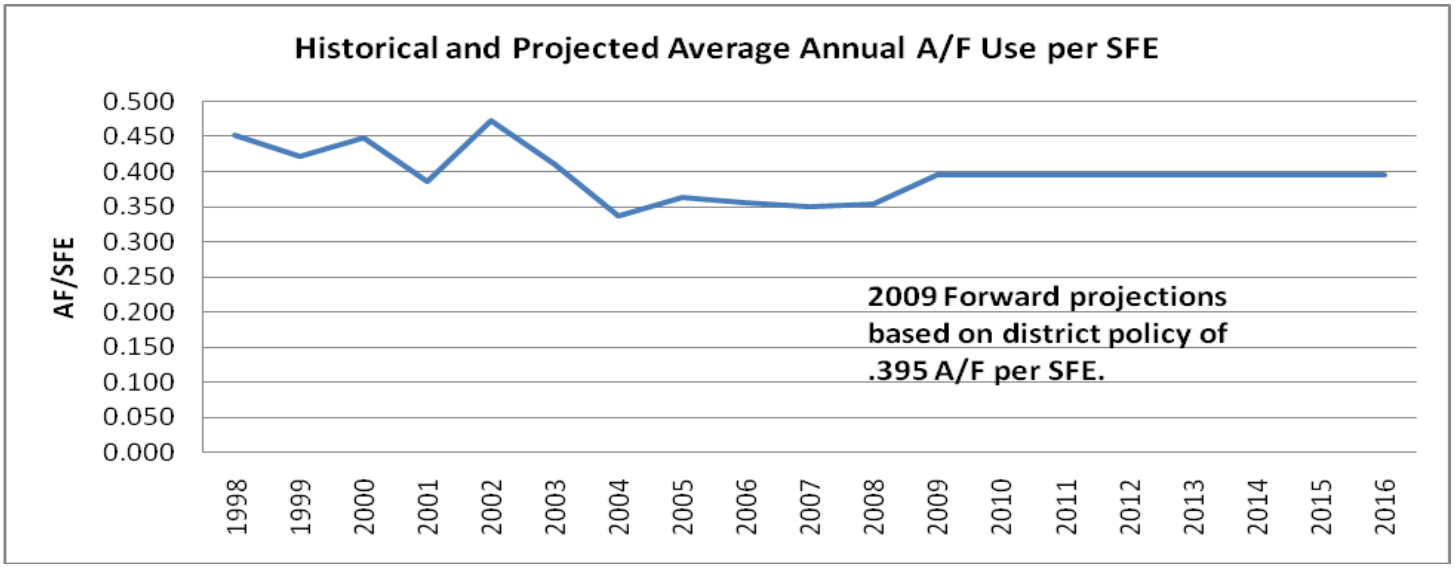
The District currently has water rights and water leases in place to meet current customer demand and growth during the review period of this plan. Expansion of the water system will be required and scheduled as part of the District's long term capital planning. Recognition of the need to expand the water system's capacity will occur in the scheduled future updates to the Water Conservation Plan.

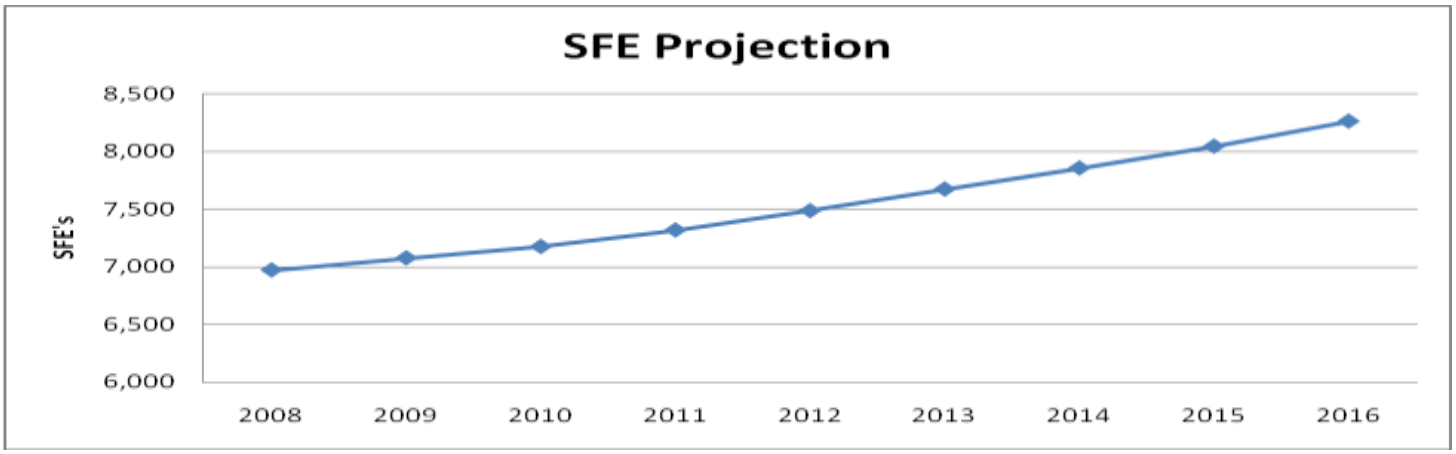
The District's Engineer continually monitors overall water use and updates projected needs on an annual basis. This provides a cross check for the District's supply and demand monitoring. Additionally, the user characteristics within the District area are carefully tracked to better update projections. This tracking also provides a measure of the effectiveness of water conservation efforts and the impact of these efforts to customer attitudes over time. In 2009, new billing software was purchased to improve the tracking of account characteristics and establish consistent reporting of usage data.

Below is a graph of the most recent ten years of annual water user characteristics for the District. The downward trend in user characteristic is a function of increased water rates, changes in plumbing codes, and water conservation awareness. This trend is expected to continue and additional reductions in demand be realized by the conservation measures established by the District.



Section 3 - Water Demand





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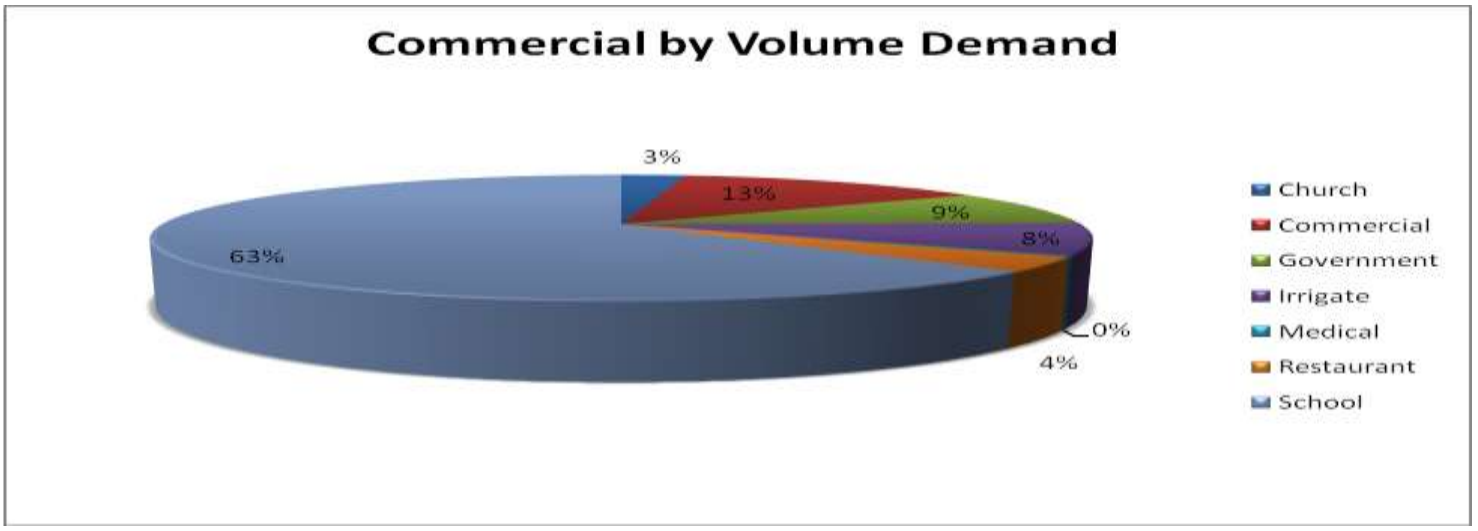

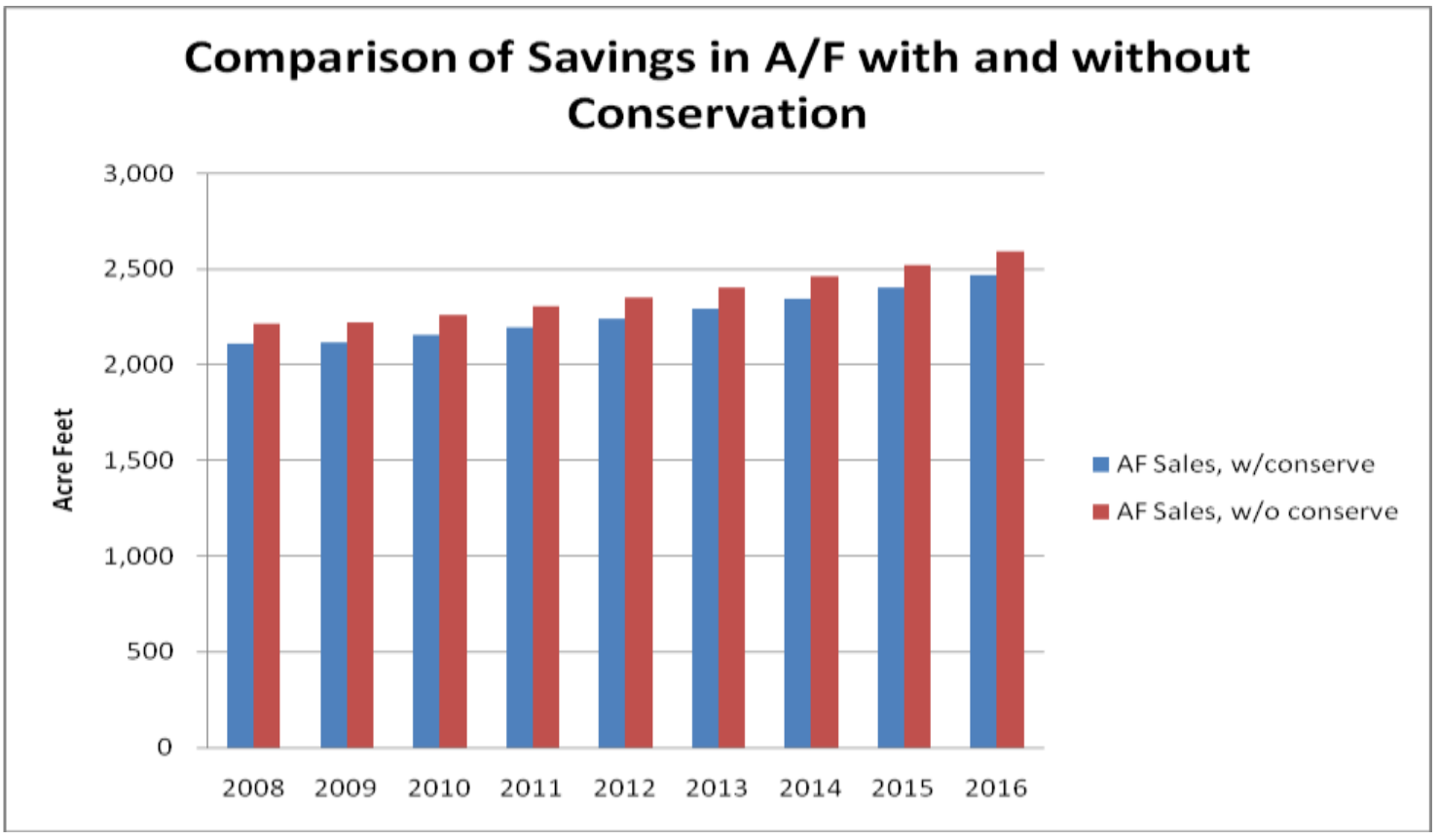

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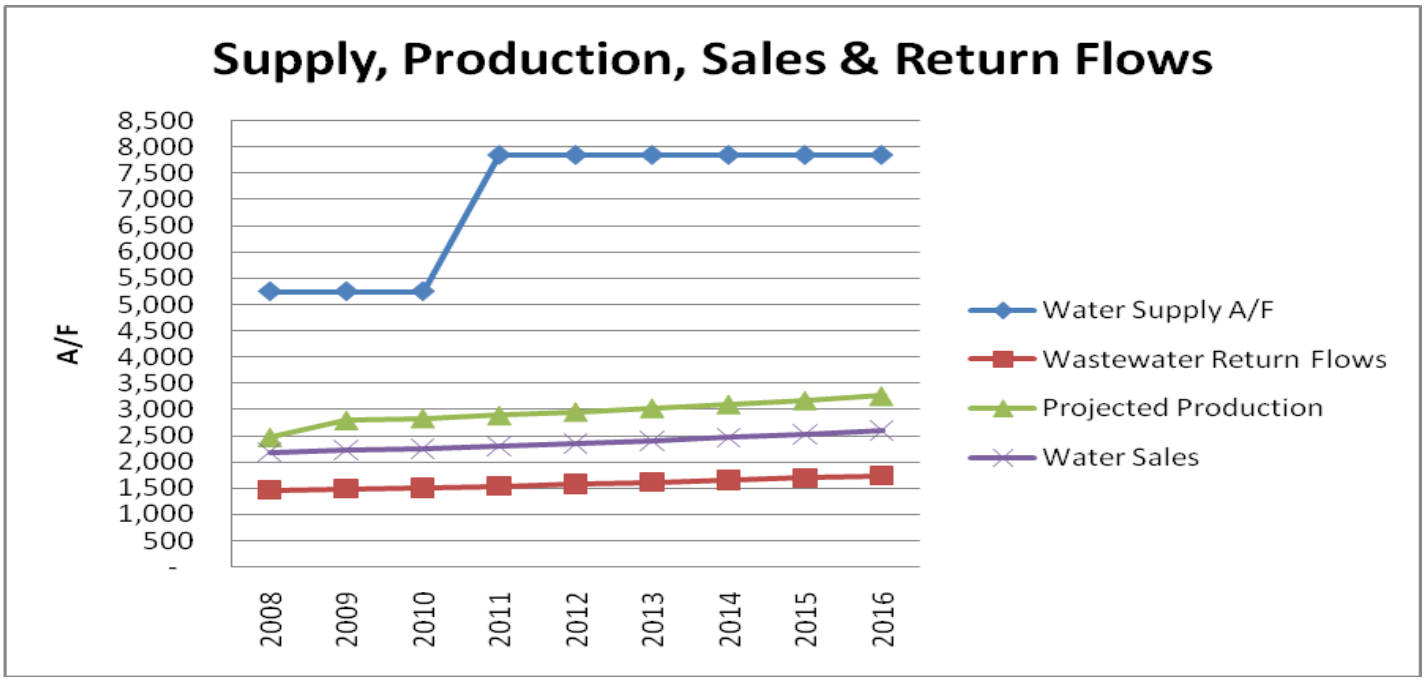


Section 4 - Water Conservation

Water and wastewater services were provided to the area by the Widefield Homes Water & Wastewater Company prior to the formation of the District in May 1996. This Water Conservation Plan represents the first comprehensive plan of the District since meeting the criteria of having water sales which exceed 2,000 AF. The Conservation Plan shall serve as a reference document in annual updates of budgets, supply planning, and capital improvement project scheduling. After the 2009 Water Conservation Plan adoption, the District will follow a schedule to update this planning tool in 2016 and every seven (7) years thereafter.

When the District's long term financial plan was established in 2007, for implementation in 2008, a commitment was made for water conservation to become part of the District's operating culture. Key components of the financial model were to replace flat rate pricing with increasing block rates for water and wastewater charges established according to water volume used. The financial commitment of increased rates was established to demonstrate our responsibility to serve as good stewards of the environment's natural resources. Support of a commitment to conservation is also demonstrated by modifying operating policies to support efforts which focus on identifying apparent leaks, advising property owners of high usage, and responding to customer requests for auditing of their usage.

The District's financial incentives and commitment of staff to support conservation were made to improve water use efficiency and decrease demand. The conservation methods in place at the District are intended to insure water is used wisely and to delay, defer, or eliminate the need for new water sources and expansion of the water system's capacity. In the next two decades, the District must be prepared for their existing customer base to triple. New construction is regulated by Federal standards to utilize low flow water efficient toilets and interior fixtures.

A key element of the water conservation plan is to maintain water meters and collect accurate consumption data. The District has an established meter replacement plan to schedule when meters are replaced. All meters within the District are replaced according to the manufacturer's recommended age, and occasionally according to the number of gallons passing through the meter. Each year appropriations of about $75,000 are provided for meters to be replaced. Increasing the funds available for meter replacement will be targeted as the District's finances improve. About 1/3 (2,000 meters) of the District's meters remain to be converted from manual/touch pad reads to radio frequency (RF). All production meters are currently calibrated and certified in accordance with State calibration requirements (minimum of every three years). The District will be increasing the calibration frequency of production meters to every two years.

The District's Finance Manager is designated as coordinator of water conservation activities. Designation as the Water Conservation Coordinator is tied to the position's responsibilities for meter maintenance, meter reading, and customer service activities. The coordinator is responsible to continue gathering training in conservation practices, training of field staff to complete water audits, monitoring the Conservation Plan for compliance, and completing future updates to the plan.

Section 4 - Water Conservation

Different methods are utilized by the District to encourage water be used wisely. The approaches of the District include;

(A) Increasing block water rates:

(B) Sewer charges based on water usage during a winter determination period (December through February):

(C) Education / Outreach; messages are printed on monthly utility bills, graphed historical water consumption on utility bills, and conservation and landscaping information posted on the web page:

(D) Plumbing and fixture standards are established by the District which complies with federally mandated efficiency standards adopted by the Pikes Peak Regional Building Code (PPRBC) and the City of Fountain:

(E) Water Loss Accounting:

(F) Customer contact when water usage exceeds high limits:

(G) Complete water audits requested by the residential and commercial customers:

(H) Utilize data profiling to identify usage patterns of accounts:

A discussion of how the District specifically uses each of these tools is as follows:

(A) Increasing Block Water Rates:

The use of water rates as a conservation tool has been demonstrated to be the most effective mechanism to control water use and promote conservation. The organization Western Resource Advocates (WRA), led by lawyers, scientists, and economists, mission is to protect the West's land, air, and water. In WRA's web page, WesternResources.Org, it cites, "WRA's Smart Water study of regional water use found a correlation between cities with dramatically increasing block rates and those with the lowest per capita consumption levels".

In 2008, the District established a water rate structure to encourage conservation. Tiered rates were established so customers using the least amount of water pay the least and customers using the most water pay the most. Prior to this rate change methodology, a single water rate existed with no regard to the volume of water used. Over time, these rates will maintain pace with inflation and allow analytical review to monitor the effectiveness of water & sewer rates as a conservation incentive.

Section 4 - Water Conservation

(A) Increasing Block Water Rates (cont):

Pricing structures adopted by the District encourage water conservation during peak water usage periods due to tiered pricing and a domestic water reduction occurs during the winter months when water use is primarily domestic. With tiered water pricing in place for the first time in 2008, usage trends are still evolving as customers become aware of opportunities to reduce their water bill by lowering water usage. As customers become aware of opportunities to reduce their water bill by lowering water usage to avoid higher tier prices, per capita water saving will occur.

Early results are shown on the table below and demonstrate the pricing structure which encourages water conservation has been effective.

Range of Consumption / Water Accounts	Calendar Year / % of Accounts 2007	2008
Up to 6,000 gallons	71%	78%
Between 6,000 and 12,000 gallons	26%	19%
Above 12,000 gallons	3%	3%

(B) Use Based Sewer Charges; December through February:

While this mechanism isn't as broad based as inverted block rates, it does allow usage charges to be an incentive, just as inverted block rates are, to create motivation for conservation during the winter months, a time period not typically focused on to reduce water usage. This savings opportunity is carried throughout the year by the customer's awareness of the importance to conserve and save money. The basis for Widefield wastewater charges were modified from a flat rate approach in 2007 to a Winter Determination charge (the average consumption of December, January, and February) for residential customers in 2008.

For commercial accounts, sewer charges were a flat rate with an allocation of water (based on meter size). The new rate structure now charges commercial accounts according to the actual volume of water used.

Section 4 - Water Conservation

(B) Use Based Sewer Charges; December through February (cont):

In wastewater, the existing flat rate structure, with an allocation of water based on meter size, was modified to provide residential customers an opportunity to impact their sewer bill by reducing their water consumption during the winter determination period. By using a winter determination period to establish a monthly sewer charge for the year, residential customers are reducing their winter domestic water use and many are seeing lower sewer charges because of their efforts to conserve. The residential charge established during the Sewer Determination period remains in place for a year. Water consumption during the winter is typically domestic usage. By establishing a customer's sewer charge based on consumption, an incentive is provided for customers to save money by saving water. There was no incentive for residential properties to conserve water when the charge was a flat rate.

The charge methodology change for commercial accounts has provided an incentive to be conservative with water use because their sewer charge is calculated according to the volume of water used. In recognition of how sewer charges are calculated, commercial accounts have modified their internal plumbing to separate domestic usage from irrigation usage. The District now has our largest water users able to isolate irrigation water. This will allow irrigation accounts to be targeted during times of reduced water availability. Because the pricing structure is relatively new, trending data is limited. In the graph at the end of this section, it is noteworthy that there was a decline in flows to the wastewater plant in 2007 and 2008.

(C) Education / Outreach:

The District produces a quarterly newsletter. Each newsletter contains updates about completed and forthcoming events within the District.

A section of the newsletter is dedicated to promoting water conservation by offering watering tips, conservation trivia questions, and specific conservation activities to practice. When visiting the District's website, additional water conservation information is provided for customers of the District. In the summer of 2009, historical water usage information will be provided to customers on their monthly utility bill. The data will be presented in a graph format.

By changing how the District provides information to customers, the opportunity to focus on water usage by our customers is enhanced with historical information being available to compare against current usage.

Training of District staff in conservation practices is an important part of our conservation efforts. Each staff member having direct contact with the public concerning water conservation will be scheduled for at least one training session each year.

Section 4 - Water Conservation

(D) Building Standards:

All new construction within the District boundaries is required to comply with federally mandated standards adopted by the Pikes Peak Regional Building Code (PPRBC). The PPRBC regularly updates building standards to improve efficiencies in target areas, such as sink faucets, shower heads, and water closets (toilets). Low flow toilets and water fixtures are now being installed in all new development within the District. As the District grows from about 6,000 accounts to 20,000 accounts, a significant impact will result from the efforts to reduce per capita consumption. For the District's service area within the City of Fountain, both PPRBC and construction standards established by the City of Fountain guide the construction of new development. A description of plumbing codes in place for the region is included as an Appendage of this Conservation Plan.

(E) Water Loss Accounting:

The District has committed to establishing a Water Loss Accounting System, utilizing the AWWA model, to minimize unaccounted for water. Record keeping of water produced and water sales have provided challenges to the District. The previous billing software system is challenged to provide the basis for an in depth analysis to readily identify areas with possible water loss problems. Water production tracking is made difficult due to water wheeled through our distribution system to neighboring agencies. The tasks identified to support this program include converting to new billing software, increased calibration of production meters, conducting system leak audits, improved coordination of water production data & financial sales records, and then monitor the results of water loss accounting.

In 2008, leak detection equipment was purchased for auditing of water distribution lines. Each year 25% of lines will be scheduled for leak audits. To augment this, the District will receive proposals in 2009 for correlation services to audit water loss in the Distribution system. Budget permitting, appropriations will be provided for this service, or more sophisticated leak detection equipment, in the 2010 Budget and our ability to identify water loss will be enhanced.

In 2009, new billing software was purchased and conversion to the new system was completed. The new billing software system will improve the record keeping of water sales. Water production and water sales comparisons will target the areas of (a) Billed Authorized Consumption, (b) Unbilled Authorized Consumption, (c) Apparent Losses, and (d) Real Losses.

Section 4 - Water Conservation

(F) Customer contact when water usage exceeds high limits:

The District is proactive in our efforts to identify accounts, residential and commercial, with excessive water usage. When customer invoices are prepared, high usage accounts are identified. District staff visit, or contact, the property where high usage has been recorded. This approach has allowed internal plumbing leaks, typically not readily visible to the homeowner, to be identified and ultimately repaired. At a commercial account, problems with an ice maker were identified and resulted in repairs being made. In some cases, the District will allow a one-time adjustment to the utility bill when extensive repairs were completed in a timely manner (within one billing cycle).

(G) Performance of Customer water audits:

The District conducts water audits when requested by an account holder. Water audits are completed free of charge for residential and commercial customers. Typical areas checked include flow being recorded by the leak detector, leaks in toilets and/or plumbing fixtures, identification of areas utilizing water (water softeners, ice makers, sprinkler systems, and heating / cooling systems). In 2010, the District shall offer customers free showerheads and aerators as part of the water audit. As the District improves our financial stability, older areas of the District will be targeted, starting in 2011, to offer a toilet rebate for those accounts with toilets rated 5 gallons, or greater, per flush.

(H) Data Profiling:

A new area of working with customers to improve their using water wisely has been utilizing the data profiling feature of water meters being read by RF (radio frequency) technology. This feature, which can provide detailed data on when and how much water passed through the meter, has allowed us to provide data not previously available to our customers. The new technology has allowed us to identify when leaks exist (no time periods without water being used), peak periods of usage, and when usage occurs without being initiated by the homeowner. While this is our most recent tool to encourage conservation, this technology has the potential to realize conservation benefits which rivals water conservation pricing.

Section 4 - Water Conservation

Proposed and Future Water Conservation Programs

In the past two years, the District has committed staff and resources to support the water conservation programs established for all customers. Conservation incentives of tiered water pricing, winter based sewer pricing, customer contact, and public outreach programs have each contributed to a permanent on-going annual water savings. Of the Districts current physical water supply, about 42% is required to meet customer demand.

The implementation of conservation programs had an immediate impact on water rates paid by customers and water sales. The District's conservation planning has sought to balance programs which reduce water use with the financial impacts of reduced water sales and correspondingly higher rates. During the course of the Conservation Plan's life cycle, improved data collection from new billing software will allow better analysis of the results of our conservation efforts. Data from distribution line auditing, water loss accounting, and benefits from reduced demand of new development due to plumbing and fixture efficiency standards will continue to improve water conservation within the District.

Landscaping recommendations have been established for the District's new customers and developers. Handouts will encourage the use of landscaping which requires low water using turf and shrubbery will be provided. A list of recommended plant materials is included with this Plan in the Appendage section. This action is supplemented by establishing a link on the District's web page to provide landscaping alternatives for customers and by planning to dedicate an area within the public office to display, and make available, conservation material.

The majority of existing residential homes within the District were constructed prior to 1980, when the importance of water conservation was less of a priority. This residential area will be targeted for conservation efforts of the future. Interior usage identified by Amy Vickers' "Handbook of Water Use and Conservation; 1st edition 2nd printing" will guide the conservation target areas of the district. Conservation measures will be focused on residential hardware replacement; toilets, faucets, and shower fixtures. Internal leaks at residential and commercial properties will be readily identified as water meters are standardized to provide data profiles. After these programs have been established, other conservation program considerations could include clothes washers and dishwashers.

A benefit realized from pricing incentives has been for commercial accounts to isolate outside landscaping water from domestic water. Separating the water usage allows outside watering to avoid usage based wastewater charges. With outside watering isolated, landscape audits will be viable due to water usage being directly associated with quantifiable areas. Pricing incentives for outside water can also be established according to an allocated need.

Section 4 - Water Conservation

The current conservation measures and incentives of the District currently provide an annual 5% to 6% water savings for the District. Over the next decade, annual water savings are targeted to provide savings of 8% to 10%.

The financial condition of the District will influence the support, and future expansion, of conservation programs. Our water sales provide the primary revenue source for conservation programs. This revenue source is subject to weather and financial conditions of account holders within the District. Some appropriations may become available for conservation as development occurs in the future.

Estimated Water Conservation Savings

Conservation Practice	Class Usage K / Gallons (1,000 gal)	Class Usage AF	Accounts Impacted	K Gallons per Acct	Estimated Water Savings (AF)	Estimated Water Savings (%)
Existing Incentives						
Water Rate Structure	633,046	1,942.75	5,780	109.52	77.71	4.00%
Residential accounts reduce overall usage by 4%; based on rate model factors. Financial incentives to reduce water usage provide an on-going change in usage patterns.						
Sewer Rate Structure	91,792	281.70	5,780	15.88	5.63	2.00%
Residential accounts reduce usage during sewer determination period by 2%; based on initial reductions realized during first year of new rate structure. It is anticipated the reduction made by customers will increase once experience with the new rate structure is gained.						
Public Outreach; Quarterly Newsletter, Water Wise Landscaping, Messages on Invoices, Usage Graphed on Invoices, Web Page, Area for Conservation Material	687,901	2,111.10	2,065	2.00	21.11	1.00%
Anticipates 35% of account holders will be conscientious of conservation information and seek to modify usage patterns which result in an estimated 1% reduction in overall usage.						
Water Audits / High Usage; Water audits, Aerators, Shower Heads, Conservation Kit, Customer Contact, High Usage	687,901	2,111.10	450	2.00	2.76	0.15%
Reduce 450 accounts by 2,000 gallons with conservation hardware and direct contact with account holders registering usage indicative of leaks.						
Rules & Regulations Responsibilities of Customers, Water Conservation, Regional Building Codes	687,901	2,111.10	5,900	58.30	1.06	0.05%
Regional building codes provide updates to the efficiencies of plumbing fixtures and assure water is used efficiently. Reductions in per capita usage is anticipated as new development occurs within the District and improve the efficiency of water usage. Regulations adopted by the District will provide a mechanism for expedient measures to be implemented should supply, or delivery problems be experienced within the District. Additional regulations could assure water isn't going to waste, is being used effectively, or in extreme cases when the availability is reduced.						
Savings of Existing Incentives		2,111.10			108.27	5%
Scheduled Measures						
Leak Detection - Distribution	834,828	2,562.00	5,900	141.50	25.62	1.00%
Conduct leak detection on 25% of distribution system to identify system loss						
Water Loss Accounting	834,828	2,562.00	5,900	141.50	12.81	0.50%
New billing software purchased. Conversion completed summer of 2009. Improved recording of sales will allow accurate reporting of system loss.						
Proposed Measures						
Toilet Rebate Program	633,046	1,942.75	1,000	16.71	51.28	2.64%
Provide 1,000 rebates of $100 to account holders with 5 gpf toilets; 16,709 gallons a year saved per toilet replaced (Amy Vickers Handbook of Water Use and Conservation). This program will be proposed and Conservation). This program will be proposed in 2011 as a phased project providing between 100 and 150 rebates per year.						

Usage & Projections	Actual 2008	Project 2009	Project 2010	Project 2011	Project 2012	Project 2013	Project 2014	Project 2015	Project 2016
Population	15,575	15,804	16,030	16,349	16,721	17,139	17,550	17,974	18,459
AF Sales, w/conservation	2,111	2,118	2,153	2,195	2,242	2,291	2,346	2,403	2,466
Existing Savings (from above)	5%								
AF Sales, w/o conservation	2,217	2,223	2,261	2,304	2,354	2,405	2,463	2,523	2,590

Section 5 – Water Recycling & Reuse

The Widefield Water and Sanitation District's Wastewater Treatment Facility is located near Fountain Creek and Highway 16. The plant has a current hydraulic capacity of 2.5 Million Gallons per Day (MGD). Construction of headworks facilities and other plant elements, including major yard piping, have been constructed to accommodate a 5.0 MGD capacity. The facility is master planned and the site is capable of supporting additional future expansions of up to 10 MGD capacity. The plant is currently operating at 56% capacity.

There are six (6) full time employees dedicated to the operation of the wastewater system. Each employee is State certified. Annual maintenance programs include videotaping of the system's sewer mains, root cutting, and hydro jetting of all sewer lines annually. As part of our customer outreach, tours of the plant are conducted.

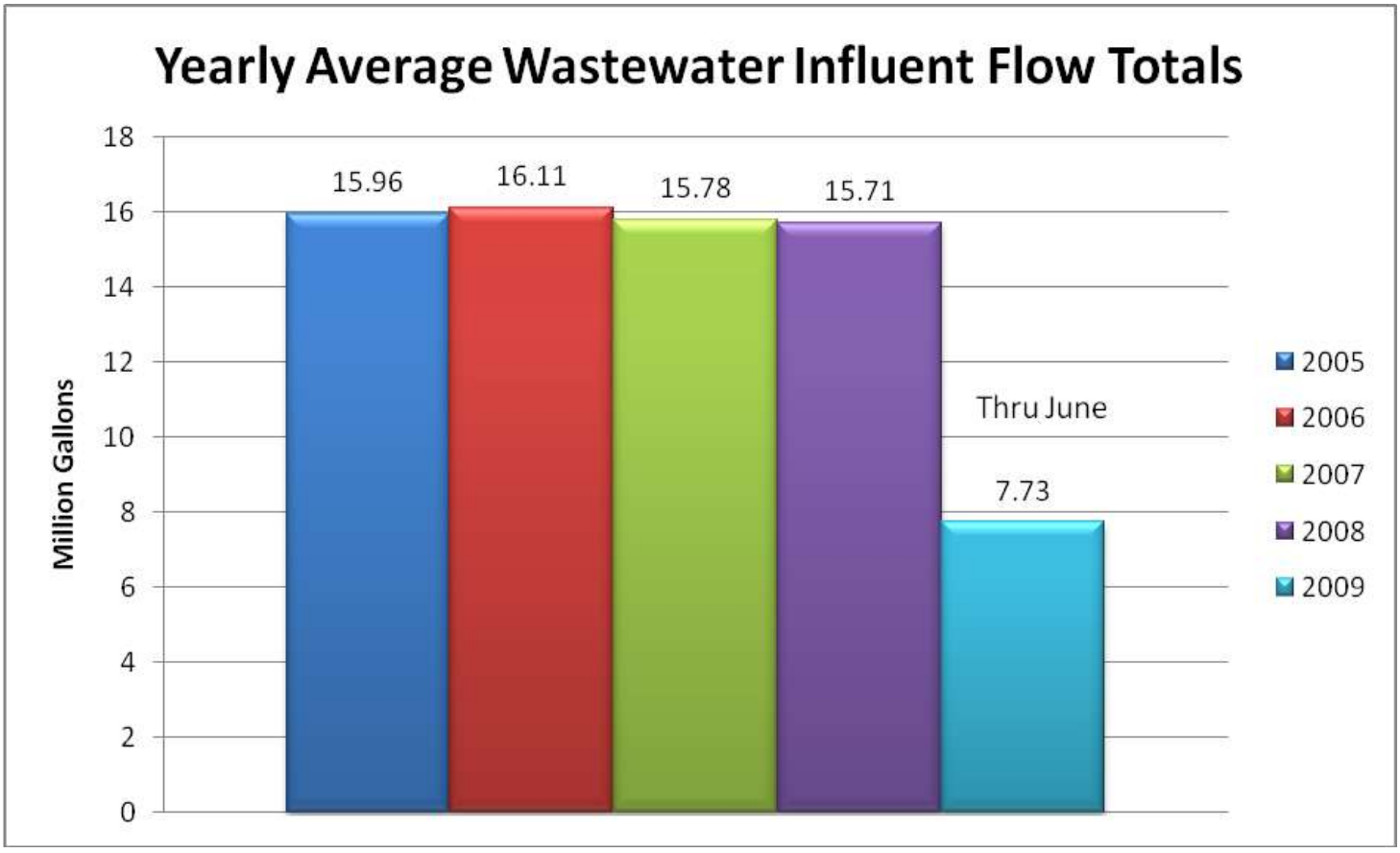
The District's wastewater system includes six (6) lift stations and roughly 72 miles of collection lines. The treatment facility operates with headworks, two primary clarifiers, operating parallel, two parallel rectangular aeration basins, two circular final clarifiers, each with 2.5 MGD capacity, gas chlorination disinfection, aerobic digestion, and sludge blending/thickening. Aerobic digestion occurs in two tanks with coarse bubble diffusers and a third tank acts as sludge storage.

The water which remains after treatment of solids is returned to Fountain Valley Creek, adjacent to the treatment plant. Return flows are credited to the District and exchanged as part of the District's water augmentation plan. The influent flows to the wastewater treatment plant demonstrate a consistent volume of wastewater being returned to the treatment plant, indicative of a collection system which is not subject to water infiltration.

In 2007, the District's Engineer evaluated the logistics and cost to provide 25 to 40 AF of non-potable and / or reuse water to a park located about 2.5 miles from the wastewater treatment plant (the District does not have a water treatment plant). Cost estimates of $708,000 for non-potable water and $5,000,000 for reuse water were calculated to consider the expense required to provide water for the park. Based on the capital cost, low water demand, and cost to maintain and operate a distribution system, the project was recognized as being cost prohibitive. Future capital planning will provide an opportunity for reclaimed water to be used within the plant and eliminate/reduce domestic water utilized in plant processes.

Return flows to the wastewater plant are trending down from 2006. The reduced flows realized in 2007 and 2008 have continued into 2009. This downward trend is an indication that interior water usage of account holders served by the District has been reduced.

Section 5 – Water Recycling & Reuse



Section 6 – Public Process & Implementation

Public Process

A water conservation plan will be available for comment by the public at the District's office, 37 Widefield Blvd., Colorado Springs, CO, or by calling 719-390-7111 to obtain a copy. The conservation plan will be presented to the Board of Directors for comment and adoption at the July 14th board meeting. The plan will be available for review and comment by the public from April 23, 2009 to June 22, 2009.

A public notice was posted in the El Paso County and Fountain Valley News. The posting of this notice is scheduled for April 22, 2009, April 29, 2009, May 6, 2009, and May 13, 2009. The announcement notice will be posted in the District's office and the Operations office, located at 450 Willow Springs Rd, Fountain, CO. Additionally, the District's website will include a copy for the public to download.

Measure	**Implementation**
Water Rate Structures	Established 2008; review increasing block water rate ranges in 2011
Sewer Rate Structure	Established 2008; in 2011, review water usage periods ranges, new customer entry usage, and pricing based on a water usage range
Education/Dissemination of Information	Currently include conservation information with quarterly newsletter, provide a conservation message on monthly utility bills, and have conservation message / links on the District's web page. Consumption data presented as a graph on monthly invoice with comparison of prior usage; summer of 2009 Schedule District staff for training in conservation programs and public outreach to promote conservation An area in the District's Administration building will be established to provide conservation information and brochures in 2010.

Section 6 – Public Process & Implementation

Water Wise Landscaping	In 2009, provide all new customers and developers copies of reference list to assist in the selection of appropriate plants, shrubs, and trees. A link from District's web page to www.coloradonga.org will be established to provide information about water conserving plant materials.
Low Water Use Fixtures	In 2010, appropriations will be budgeted to provide aerators and showerheads. These water saving fixtures will be offered to accounts receiving a water audit. The ability to establish a toilet rebate plan is restricted by the District's financial condition. The Financial Plan and Rate Study completed for Budget 2008 did not recognize a toilet rebate program being established. In 2009, the District will update the Financial Plan and Rate Study to determine (A) if minimum operating fund levels are being maintained in bank accounts, and (B) if Bond payments obligations are provided for by operating funds and are no longer dependent on tap fees being received. As part of the 2009 Financial Plan and Rate Model update, a financing component for a toilet rebate program will be evaluated. Potential sources to fund the rebate program include water rates and / or a contribution from new development fees. In the 2011 budget submittal, a toilet rebate plan will be submitted for consideration by the Board of Directors.
Leak Detection, Distribution System	Sonic leak detection equipment was purchased in 2008; 25% of the distribution system is targeted for auditing each budget year. Additional leak detection equipment will be required to enhance our ability to identify problems. Purchases of this equipment will be staged over the next three years, starting in 2010.

Section 6 – Public Process & Implementation

Leak Detection, Distribution System (cont)	In 2009, outside proposals for system loss correlation will be obtained. The proposal(s) received by the District will assist the District in determining the balance of performing work in house and by outside contract.
Water Loss Accounting	Ongoing; reduce reported water loss of 13.6% (2 year average) to below 10% by better recordkeeping and eliminating leaks in the distribution system.
Customer water audits	Ongoing; all new and replacement water meter installation include the feature of data profiling; the data profiling feature will be used to assist customers in understanding their water usage. In 2010 and thereafter, aerators and showerheads will be offered to those accounts having a water audit completed.
High Readings	Ongoing; inspect properties where usage exceeds established parameters and contact property owner to identify potential plumbing problem.

LANDSCAPING REFERENCE LIST

Widefield Water and Sanitation recommends the Colorado Nursery and Greenhouse Association for Water Wise Landscaping (follow the web page link to www.coloradonga.org) A list of regionally appropriate plants is provided below:

'BOTANIC NAME' COMMON NAME

Low Water Use Deciduous Trees

Celtis occidentalis Hackberry
Crataegus ambigua Russian Hawthorn
Crataegus arnoldiana Arnold's Hawthorn
Crataegus crus-galli Cockspur Hawthorn
Crataegus crus-galli var. inermis Thornless Cockspur Hawthorn
Crataegus crus-galli var. inermis 'Crusader' Crusader Thornless Hawthorn
Crataegus douglasii River Hawthorn
Crataegus mollis Downy Hawthorn
Crataegus succulenta Fleshy Hawthorn
Gymnocladus dioica Kentucky Coffeetree
Juglans nigra Black Walnut
Prunus americana American Plum
Ptelea trifoliata Hoptree
Pyrus calleryana 'Aristocrat' Aristocrat Pear
Pyrus calleryana 'Chanticleer' Chanticleer Pear
Pyrus calleryana 'Stone Hill' Stone Hill Pear
Pyrus fauriei Fauriei Pear
Pyrus fauriei 'Korean Sun' Korean Sun Pear
Pyrus ussuriensis Ussurian Pear
Pyrus ussuriensis 'Prairie Gem' Prairie Gem Pear
Quercus gambelii Gambel Oak
Quercus macrocarpa Bur Oak
Quercus undulata Wavy Leaf Oak
Robinia pseudoacacia 'Globe' Globe Locust
Robinia pseudoacacia 'Purple Robe' Purple Robe Locust
Xanthoceras sorbifolium Yellowhorn

Low Water Use Evergreen Trees and Shrubs

Pinus aristata Bristlecone Pine
Pinus cembroides var. edulis Pinyon Pine
Pinus flexilis Limber Pine
Pinus ponderosa Ponderosa Pine
Juniperus sp. (all upright and spreading cultivars) Upright & Spreading Junipers

LANDSCAPING REFERENCE LIST

Low Water Use Deciduous Shrubs

Amorpha canescens Great Plains Leadplant
Amorpha fruticosa var. angustifolia Indigobush Leadplant
Amorpha nana Dwarf Leadplant
Artemisia cana Silver Sagebush
Artemisia tridentata Tall Western Sagebush
Atriplex canescens Four-Wing Saltbush
Buddleia alternifolia 'Argentea' Alternate-Leaf Butterfly Bush
Caragana arborescens Siberian Peashrub
Caragana arborescens 'Lobergii' Fern-Leaf Siberian Peashrub
Caragana frutex 'Globosa' Globe Peashrub
Caragana maximowicziana Maximowicz Peashrub
Caryopteris clandonensis (all cultivars) Blue Mist Spirea
Ceanothus fendleri Mountain-Lilac
Ceratoides lanata Winterfat
Cercocarpus brevifolius Little Flowered Mountain-Mahogany
Cercocarpus intricatus Littleleaf Mountain-Mahogany
Cercocarpus ledifolius Curl-leaf Mountain-Mahogany
Cercocarpus montanus Common Mountain-Mahogany
Chamaebatiaria millefolium Fernbush
Chrysothamnus (all varieties) Rabbitbrush
Cowania mexicana Cliffrose
Cytisus 'Moonlight' Moonlight Broom
Cytisus purgans 'Spanish Gold' Andorra Broom
Elaeagnus commutata Silverberry
Elaeagnus umbellata Autumn-Olive
Fallugia paradoxa Apache Plume
Forestiera neomexicana New Mexican Privet
Genista tinctoria 'Royal Gold' Royal Gold Woadwaxen
Hypericum frondosum 'Sunburst' Sunburst St. Johnswort
Hypericum 'Hidcote' Hidcote St. Johnswort
Jamesia americana Waxflower
Kolkwitzia amabilis Beautybush
Ligustrum obtusifolium var. regelianum Regal Privet

LANDSCAPING REFERENCE LIST

Moderately Low Water Use Deciduous Trees

Acer ginnala Amur Maple
Acer ginnala 'Flame' Flame Amur Maple
Acer grandidentatum Wasatch Maple
Acer tataricum Tatarian Maple
Aesculus glabra Ohio Buckeye
Aesculus pavia Red Buckeye
Aesculus hippocastanum Horsechestnut
Amelanchier 'Autumn Brilliance' Autumn Brilliance Serviceberry
Amelanchier canadensis Shadblow Serviceberry
Catalpa ovata Chinese Catalpa
Catalpa speciosa Western Catalpa
Cornus racemosa Gray Dogwood
Crataegus phaenopyrum Washington Hawthorn
Crataegus virdis 'Winter King' Winter King Hawthorn
Fraxinus americana 'Empire' Empire Ash
Fraxinus mandschurica 'Mancana' Mancana Ash
Fraxinus nigra 'Fall Gold' Fall Gold Ash
Fraxinus pennsylvanica All Green Ash Cultivars
Gleditsia triacanthos 'Imperial' Imperial Honeylocust
Gleditsia triacanthos 'Shademaster' Shademaster Honeylocust
Gleditsia triacanthos 'Skyline' Skyline Honeylocust
Gleditsia triacanthos 'Sunburst' Sunburst Honeylocust
Koelreuteria paniculata Golden Raintree
Malus spp. (including all Crabapples and Apples) Apples & Crabapples (all types)
Phellodendron amurense Amur Corktree
Prunus virginiana Native Chokecherry
Prunus virginiana 'Schubert' Canada Red Chokecherry
Prunus padus Mayday Tree
Quercus alba White Oak
Quercus bicolor Swamp White Oak
Quercus imbricaria Shingle/Laurel Oak
Quercus prinus Chestnut Oak
Quercus robur English Oak
Quercus robur 'Fastigiata' Columnar English Oak
Robinia pseudoacacia 'Frisia' Frisia Black Locust
Sophora japonica Japanese Pagoda Tree
Syringa pekinensis Peking Lilac
Syringa reticulata Japanese Tree Lilac

Moderately Low Water Use Evergreen Trees

Pinus nigra Austrian Pine
Pinus strobiformis Southwestern White Pine
Pinus sylvestris Scotch Pine

LANDSCAPING REFERENCE LIST

Moderately Low Water Use Deciduous Shrubs

Acer ginnala Amur Maple
Acer ginnala 'Bailey Compact' Bailey Compact Amur Maple
Acer ginnala 'Compactum' Compact Amur Maple
Acer ginnala 'Emerald Elf' Emerald Elf Amur Maple
Acer ginnala 'Flame' Flame Amur Maple
Acer tataricum Tatarian Maple
Amelanchier alnifolia Saskatoon Serviceberry
Amelanchier alnifolia 'Regent' Regent Serviceberry
Amelanchier 'Autumn Brilliance' Autumn Brilliance Serviceberry
Amelanchier canadensis Shadblow Serviceberry
Berberis mentorensis Mentor Barberry
Berberis thunbergii 'Atropurpurea' Red Leaf Barberry
Berberis thunbergii 'Bagatelle' Bagatelle Barberry
Berberis thunbergii 'Crimson Pygmy' Crimson Pygmy Barberry
Berberis thunbergii 'Rose Glow' Rose Glow Barberry
Buddleia davidii cultivars Butterfly Bush
Chaenomeles spp. Flowering Quince
Cotoneaster apiculatus Cranberry Cotoneaster
Cotoneaster apiculatus 'Tom Thumb' Tom Thumb Cotoneaster
Cotoneaster dammeri 'Coral Beauty' Coral Beauty Cotoneaster
Cotoneaster divaricatus Spreading Cotoneaster
Cotoneaster horizontalis Rock Cotoneaster
Cotoneaster horizontalis perpusillus Ground Cotoneaster
Cotoneaster lucidus Hedge Cotoneaster
Cotoneaster acutifolia Peking Cotoneaster
Holodiscus dumosus Rock Spirea
Lonicera involucrata Twinberry Honeysuckle
Philadelphus lewisii Lewis Mockorange
Physocarpus monogynus Mountain Ninebark
Physocarpus opulifolius and cultivars Ninebark
Potentilla fruticosa cultivars Potentilla
Prunus fruticosa Ground Cherry
Prunus tomentosa Nanking Cherry
Prunus virginiana Native Chokecherry
Prunus virginiana 'Schubert' Canada Red Chokecherry
Rhamnus frangula 'Asplenifolia' Fern-Leaf Buckthorn
Rhamnus frangula 'Columnaris' Columnar Buckthorn
Ribes alpinum Alpine Currant
Ribes alpinum 'Green Mound' Green Mound Currant
Ribes 'Red Lake' Red Lake Currant
Ribes 'Pixwell' Pixwell Gooseberry
Ribes uva crispa 'Red Jacket' Red Jacket Gooseberry
Rosa (All Shrub Roses) Shrub Rose
Sibiraea laevigata Siberian Spirea
Sorbaria sorbifolia Ash-Leaf False Spirea
Symphoricarpos albus White Snowberry
Symphoricarpos chenaultii 'Hancock' Hancock Coralberry
Symphoricarpos doorenbosii 'Magic Berry' Magic Berry Coralberry
Symphoricarpos doorenbosii 'White Hedge' White Hedge Snowberry
Symphoricarpos occidentalis Western Snowberry
Symphoricarpos orbiculatus Red Coralberry
Symphoricarpos oreophilus Mountain Snowberry
Syringa chinensis Chinese Lilac
Syringa patula 'Miss Kim' Miss Kim Lilac
Syringa villosa Late Lilac
Viburnum lantana Wayfaringtree Viburnum
Viburnum lantana 'Mohican' Mohican Viburnum
Viburnum lentago Nannyberry Viburnum
Viburnum rhytidophylloides 'Alleghany' Alleghany Leatherleaf Viburnum

District Rules & Regulations

Below are excerpts from the District's Rules & Regulations which apply to, encourage, or require responsible and conservative use of our water supply.

SECTION 2
USE OF PUBLIC WATER SYSTEM

2.3 Responsibilities of the Customer.

2.3.1 Each Customer shall be responsible for maintaining that portion of his water Service Line which extends from the Customer's structure to the point at which the Service Line ends at the property line. Leaks or breaks in the Service Lines shall be repaired by the Customer within 72 hours from the time of notification of such condition by the District. If satisfactory progress toward repairing the said leak has not been accomplished within said time period, the service may be shut off until the leak or break has been repaired.

SECTION 7
WATER CONSERVATION

7.1 General. The District requires the conservation of water within its Service Area. No Person shall use any water provided by the District other than for uses permitted by the District.

7.2 Determination of Available Water Supply. The District shall, from time to time, determine the amount of available potable water supply for use and shall determine the expected demands for said water by all Customers of the District's water system for any given period of time. In the event the Board shall determine at any given time that there are insufficient potable water supplies to meet all of the present and anticipated needs, the Board may order restrictions, curtailments or prohibitions upon the use of water.

7.2.1 Any restrictions, curtailments or prohibitions contemplated will be uniformly applied to all similarly situated water Users within the District's Service Area. Nothing herein shall be construed to prevent the District from treating different categories of water Users and/or Customers in different geographical areas of the District in a different fashion.

SECTION 7
WATER CONSERVATION (Continued)

7.2.2 Except in cases of emergency, the Board shall cause written notice by publication in a paper of general circulation within the District prior to imposing any curtailments, restrictions or prohibitions upon the use of water as herein provided. The notice shall include a statement as to said restrictions, curtailments or prohibitions, together with a statement of the penalties for violation thereof and the time period for which they shall be in effect.

7.2.3 Any Person, Customer or User of the District violating any provision of this section shall be subject to penalties as may be hereafter set by the Board.

7.3 Required Water Conservation Devices. Water service shall not be furnished to any Customer unless the Customer has fully complied with the water conservation standards set forth by the District.

Pikes Peak Regional Building Department – Plumbing Code

The Pikes Peak Regional Building Department (PPRBD), www.pprbd.org, provides building inspections in Widefield, Colorado. In 2008 the PPRBD adopted the 2003 International Plumbing Code. This code states that:

- Water closets (toilets) shall have a flow rate of not more than 1.6 gallons per flushing cycle. Blowout design water closets shall not deliver more than 3.5 gallons per flushing.
- Urinals shall not have a flow rate exceeding 1.0 gallons per flushing cycle.
- Private lavatory faucets shall be designed and manufactured so that they will not exceed a water flow rate of 2.2 gallons per minute
- Metering public lavatory faucets shall deliver no more than 0.25 gallons of water per use. Other (non-metering) public lavatory faucets shall not exceed a water flow rate of 0.5 gallons per minute.
- Sink faucets shall be designed and manufactured so that they will not exceed a water flow rate of 2.2 gallons per minute. Vegetable sprays, clinical sinks, and service sinks may exceed this rate.
- Shower heads shall be designed and manufactured so that they will not exceed a flow rate of 2.5 gallons per minute. Emergency safety showers may exceed this rate.