

SPANAWAY WATER COMPANY
WATER USE EFFICIENCY - CONSERVATION PROGRAM
&
WATER LOSS CONTROL ACTION PLAN
Adopted December 20, 2007

Historic Background

System Metering:

Spanaway Water Company initially provided service to customers at a fixed bi-monthly rate. Beginning in the late 1960's the Company began installing service meters for new construction and retrofitting existing service connections. Services were generally metered by the mid 1970's with the exceptions being the fire stations. The final service connection was completed in December 2005 with the addition of an 8" fire service meter to the Central Pierce Fire and Rescue training facility at 22nd Ave. E. and 176th St. E.

System Billing:

With the installation of meters in the late 1960's billing began to be based on a base rate that included 600 CF plus consumption. Additional consumption was billed at a flat fixed rate per 100 CF beyond the initial 600 CF included in the base. Billing was hand calculated and processed until November 1992 when the Company implemented its first computerized billing system. Rates in 1992 were still comprised of a base with 600 CF and excess consumption billed at a fixed rate. Prior to implementation of computerized billing, calculation of consumption rates, individually or system wide were at best very difficult and time consuming.

Conservation Measure Implementation and Impact on Water Use:

The historic conservation measures and current plan elements that follow will be presented in chronological order. In those areas where water use efficiency impacts of conservation measures are clearly quantifiable they will be identified and historic use patterns presented in graphic form.

Historic and Current Conservation Program Elements

Element 1. Public Education: (indoor and outdoor water use – residential and commercial)

Customer Newsletters:

The Company produced its first customer newsletter in the spring of 1992. A portion of this newsletter was devoted to water conservation in the form of "One inch per week" lawn watering information. Since 1992, the Company has produced at least two newsletters per year, generally in the spring/early summer and the fall. Nearly every letter has at least some water savings information including:

- "One inch per week" lawn watering information;
- Indoor water saving tips;
- Outdoor water saving tips;
- Winterization tips to save water and plumbing;
- Minimizing peak day water use;
- Checking for toilet tank leaks;
- Water rates, our change to increasing block rates, and their impact on your water bill
- Lawn maintenance, fertilization, and irrigation as recommended by WSU for western Washington;

- Efficient timing for lawn watering;
- Information on “Water Wise Landscaping” seminars;
- Information on “Water Smart Open House” seminars;
- How to use your water meter to check for leaks;
- Peak use impact on need for additional sources and water rates;
- Water conservation to aid in salmon recovery efforts;
- Home water conservation check lists;
- DOH conservation regulation development due to Municipal Water Law;
- DOH draft “Water Use Efficiency Rule” requirements.

The effect of public education on customer water use is difficult to determine. However, raising public awareness is of benefit and efforts have been made to inform customers of the impacts of their water use. These impacts include system demand, the need for additional source and storage capacity, potential effects on salmon and the natural environment, regulatory issues, water rates, and their individual water bills.

Governor/State/large Utility Initiated Water Messages:

Though not part of the Company’s conservation efforts actions taken by the Governor and/or state agencies and/or large regional utilities (Seattle, Tacoma, and Everett) do have an impact on water use. In both 2001 and 2005 the governor declared droughts for the state. In 2001 the larger utilities generated public awareness notices of possible water shortages. For 2001 our public education efforts also placed extra emphasis on the need to conserve both due to weather conditions and the growing implications of the listing of salmon under the Endangered Species Act. In both of those years we saw a marked reduction compared to 2000 and 2004 respectively in actual metered average day demand (2001 – 9.6%, 2005 – 16.5%), production peak day demand (2001 – 22.6%, 2005 – 26.4%), and total annual production (2001 – 22.2%, 2005 – 12.2%). The reduction in actual metered average day demand was likely due to these messages by the Governor, larger utilities, and the Company. Potentially of greater impact and demonstrated by the total annual production was the completion of leak detection survey and studies with related repairs in 1994/5, 2000 and 2004/5. These efforts will be discussed below.

Element 2. Billing Information (indoor and outdoor water use – residential and commercial)

When the Company began computerized billing in November 1992, the bills mailed to customers included a bar chart that indicated the water use for the current and prior five billing periods (one year). This chart showed individual customers how their use varied through the year. Because these charts had a fixed usage scale, those customers with consistent usage, very little, or high usage could not clearly see variations in usage. This issue has now been addressed.

Currently, bills have individualized consumption charts. Two major changes were made; the first is the utilization of usage for the past two years. The current year’s bi-monthly usage is shown as a solid bar located adjacent to the same period from the prior year shown in box form. Second, the usage scale now has a scale of “0” to the highest usage in the past two years rounded up to the nearest 100 cubic feet. This provides users a scale that reflects even minor changes should their use be relatively consistent.

Computerized bills also provide an efficient means to recognize unusual usage helping to identify possible customer leaks or “stuck” meters. Variance reports run by the staff now allow the bill to include a note “Usage appears high—check for leaks”. Alternatively if usage is unusually low, staff can be sent to check the proper operation of the meter.

Computerized billing information provides a means to effectively monitor and report metered water usage at a number of different levels such as system total, cycle total, customer class, meter size, etc. This ability allows analysis of water use that was not possible prior to the computerized billing system.

Like public education the impacts of presenting billing information on water use is difficult to determine. In those situations where unusual usage is noted the use of billing information is helpful in quickly identifying and providing notice to customers of the leak in their portion of the system. Ultimately this reduces overall water use.

Element 3. Leak Repair Incentive: (indoor & outdoor water use – residential and commercial)

Historically the Company did not provide incentives for customer repair of leaks other than lower billings due to the return to normal water usage. Often the cost of leak repair exceeded the increase in water bills. This was partially addressed in 1994 when the Company adopted the increasing block rate structure. To further encourage a customer to repair identified leaks the Company adopted a leak repair policy.

Beginning in May 1997 when a customer leak was identified and repaired by the customer in a timely manner, the customer could receive a leak adjustment equal to one half of the increase in water use that was measured as a result of the leak. Thus the Company was willing to absorb one half of the excess water use in exchange for the prompt leak repair of the customer's water system. This policy has resulted in the active repair of leaks within the customers' plumbing systems. It is difficult to determine the total effect of this program due in part to the fact that most leaks will eventually be repaired when the water bills increase to the level where repair is mandatory from the customer's economic perspective. The Company believes that this policy does provide a positive incentive for leak repair especially when coupled with the incentive created by the increasing block rate structure.

Element 4. Increasing Block Water Rates: (indoor & outdoor use–residential & commercial)

Beginning on July 1, 1994 the Company began using an increasing block rate structure for all consumption (the first 600 CF was no longer included in the base). The Figure on the next page presents the evolution of this rate structure over the years including increases in individual block rates, additional blocks, and other fees.

When the increasing block rates were initially started the Company experienced some very strong objections and protests, including inquiries from federal congressional representatives. These protests were based both on the utilization of increasing block rates and the actual size of the resulting rate increase. Analysis of the existing rate structure clearly identified that fees charged for new growth was subsidizing existing customers. Correction of this situation required the rate increase. Implementation of the increasing block rate was designed with two goals in mind. First to encourage conservation; and second, to minimize the impact on lower water users while insuring that larger water users contributed at a higher rate to maintain and operate the additional source and storage required to meet their higher water demands.

The impact of the increasing block rates appears to be a major contributor to overall reduction in metered water use. The most specifically identifiable drop in consumption occurred between 1994 and 1995, the first year the new rate structure was in place. For that year, metered average day demand (ADD) water use dropped from 312 to 279 GPD – over a ten percent reduction. Since that time the decline in metered ADD has generally continued but at a much slower rate, and is influenced by both annual weather patterns and regional/statewide drought alerts. [View Spanaway Water Company Rate History Spreadsheet.](#)

Element 5. Meter Change-Outs and Testing: (indoor and outdoor water use – residential and commercial)

Water meters began to be used by the Company in the late 1960's without consideration of the need for periodic replacement or testing of the meters. While the water provided by the Company has minimal "grit", water meters over time wear and generally accepted practices

include replacement every ten to twenty years. Beginning in 1991 an active meter replacement program was implemented. Since 1994 over 5,000 meters have been replaced. Currently all active residential and meters up to 1 ½” are no more than sixteen years old (installed in 1991). The intent of this program is to insure that low flows are registered by these water meters.

Similarly, the Company is reviewing 2” to 8” meter installations. In those situations where low flow usage may be common, i.e. schools, consideration is being given to replacement of turbine meters with compound meters to improve low flow registration. This process will include a meter testing program for all larger meters as part of the determining factor in replacement or repair. Currently the Company has the following larger meters:

Size:	Number of installations:
2”	47
3”	5
4”	6
6”	2
8”	1

Finally, since 2004, all new installations and replacement meters are radio read meters. These meters not only allow much quicker meter reading but also provide leak indication when the meter registers continuous use for a 24 hour period. Ultimately the Company’s goal is to provide for automated meter reading from fixed locations for multiple purposes including normal billing, peak hour consumption patterns and volumes, and routine monitoring for meter recorded leaks. Though the technology is not currently available or financially feasible to accomplish these tasks, their implementation will be considered when available.

Element 6. Regional Conservation Organizations: (indoor and outdoor water use – residential and commercial)

The Company has been a participating member in the Water Conservation Coalition of Puget Sound – Partnership for Water Conservation through its membership in the Pierce County Regional Water Association. The Coalition and its successor Partnership actively work to provide public education and conservation programs and services on a regional scale.

The Pierce County Health Department has established an annual “Water Festival” for school age children with emphasis on water quality, aquatic habitat, and water conservation. The Company has and will continue to participate in this program by providing volunteer services of Company employees, displays, and equipment for demonstration purposes. This program has been very successful and is enjoyed by our employee participants.

Possible Future Additional Conservation Measures to be Considered:

VII. Water Audits for Larger Water Users:

VIII. Rain Sensors for Lawn Irrigation Systems:

Water Loss Control Action Plan and Impact on Water Production

Leak Detection Program: While water system leak detection programs are not considered part of water demand management under draft Department of Health implementation planning for the Municipal Water Law, these programs can have major impact on the water required to maintain service through a water system. Details of Spanaway Water Company’s leak detection and repair efforts are provided below.

The effect on water use through the combination of conservation and leak detection efforts is presented below.

1994/5 Leak Detection Survey:

The Company completed its first leak detection effort in late 1994. This survey was completed on the entire system with monitoring for leaks completed at all valves/valve clusters and fire hydrants. Identified leaks ranged in size from less than one GPM to over 100 GPM, none of which were apparent on the ground surface. Total cost for the survey and repairs was approximately \$50,000 resulting in a 20% reduction in system wide ADD (in conjunction with reduction due to the increasing block rates) of 529,000 GPD or 367 GPM. This is the equivalent to a small to medium sized well. The Board of Directors and Company staff were very pleased with this effort and found it to be very cost effective.

In the spring of 1995, the area was struck by a 5+ earthquake. Though no immediate impacts were seen at the time this certainly led to additional leaks that required an extended period to develop to noticeable levels.

1999/2000 Leak Detection Study:

In response to increasing un-metered water demand, the Company completed a second more detailed leak study in the winter/spring of 1999/2000. The work again included monitoring all valves/valve clusters and fire hydrants, but now also included all water service meter setters. This second study resulted in a 1999 to 2001 system wide pumped ADD reduction of 702,600 GPD or 487 GPM. Of this amount, approximately 400 GPM was the result of the leak detection program, the balance being reduced water usage by customers as noted below. Though the cost of this work rose to \$80,000 the Company again found the effort to be very cost effective.

The results of the 1999/2000 leak detection and repair program was magnified in 2001 by the Governor's drought declaration and intense public education efforts by the Company and large utilities. This public education impact is shown by the reduction in metered ADD from 253 GPD/Unit in 1999 to 236 GPD/Unit in 2001. The resulting system wide metered ADD reduction of 123,488 GPD or 85.76 GPM contributed significantly to the 1999 – 2001 water use decrease.

Unfortunately, in the spring of 2001 the area experienced the 6.8 Nisqually earthquake. As with the 1995 earthquake, we noted no immediate impacts, however, unaccounted for water continued to be monitored.

2004/5 Leak Detection Study:

By 2004 un-metered water use had again begun to increase to a degree justifying a third leak detection study. This study and related repairs were completed in early 2005 with a resulting 2004 to 2005 decrease in system wide pumped ADD of 348,058 GPD or 242 GPM. In 2005, like 2001, a drought had again been declared by the Governor. Metered water use as a result of the declared drought and ultimately cool damp summer dropped to 234 GPD/Unit the lowest ever recorded by the Company and contributed substantially to the reduction in total water pumped.

2007 and Future Leak Detection Efforts:

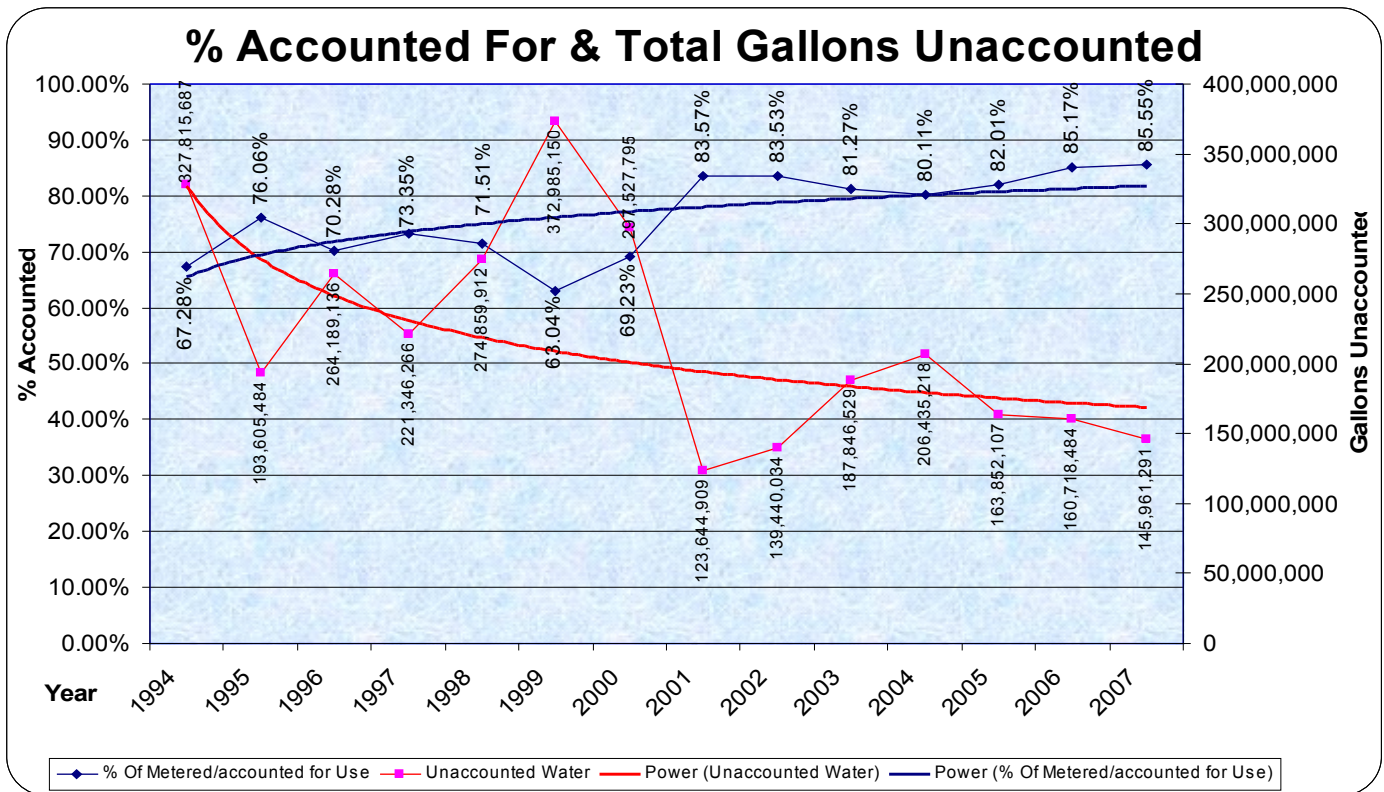
The Company's leak detection program history detailed above indicates that continued leak detection efforts are beneficial as a cost effective method for achieving water savings. The Company, in conjunction with several Water Cooperative of Pierce County (Co-op) members, has entered into agreements with Utility Services Association, for ongoing annual leak detection services. The intent of these efforts is on-going leak detection with entire system examination each four year period. Beginning in 2007 the Company began an annual leak detection survey process with the completion of a leak detection survey of twenty-five percent of the water system. This process will be aided in the future through the use of technological advances in leak detection equipment.

In April 2007 several members of the Co-op purchased 75 leak detection units with radio transmitters that may be temporarily installed on valves and services within the water system.

Under this effort each utility will have use of all these shared units for a period each year proportional to the number of units purchased. It is anticipated that annually a minimum of 25 percent of a system can be monitored for leaks using these devices. Several of the utilities, including Spanaway Water, are also purchasing non-shared units. The intent of these “private” units is to allow each company to monitor suspected leaks independently at any time of year. In both these cases, when potential leaks are noted, Utility Services Association will further investigate and correlate leaks for repair. Using this process we anticipate that we can maintain an on-going cost effective leak detection program.

Additionally we are currently reviewing procedures to insure that all possible authorized use of water is metered or calculable. As noted under element V. the Company is beginning preparation of an agreement for testing meters two inch or larger with Utility Services Association. This work will be funded from the routine maintenance budget.

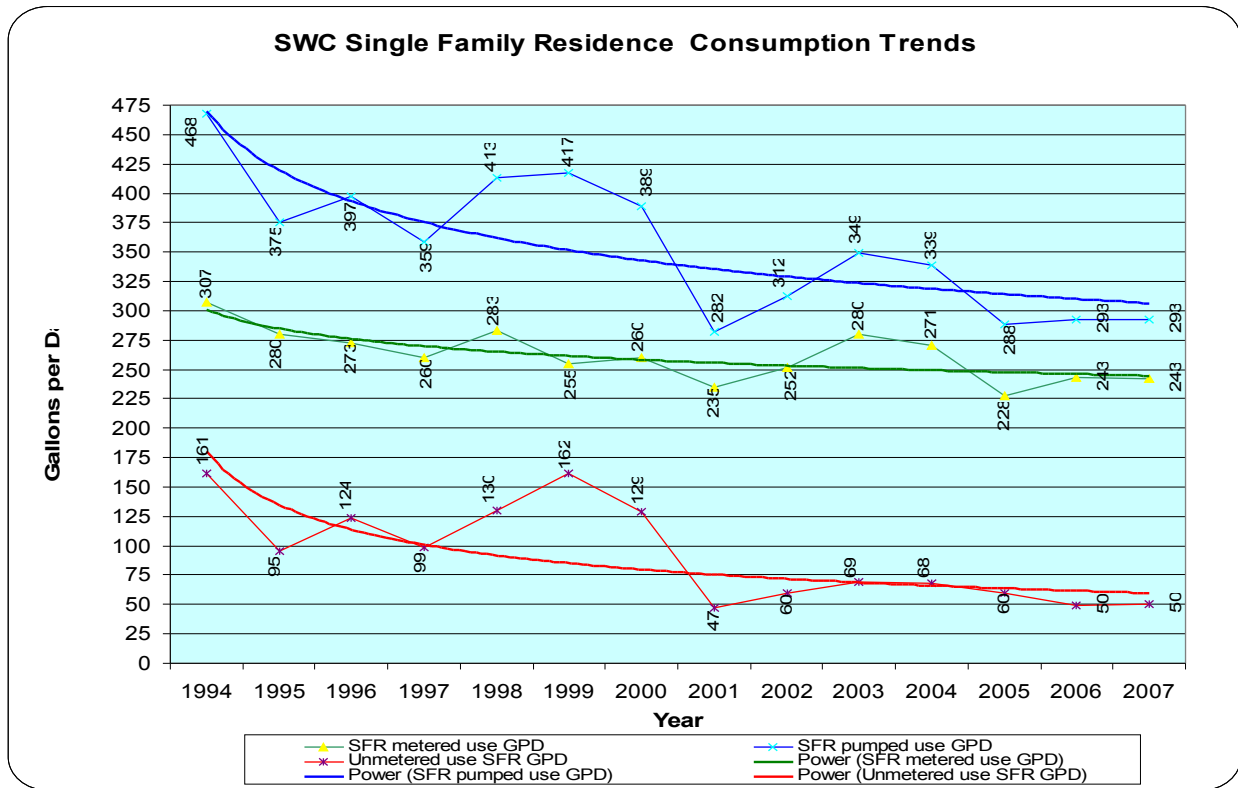
Presented below is a graphical representation of the percent of accounted for water and the total volume in gallons lost by year.



Historical Impact of Conservation and Leak Detection Programs

Leak detection and the increasing block rates have historically proven to be the most effective means to reduce water demand. The Company will continue its leak detection program and monitor its influence on total water demand.

The impacts of many conservation measures are generally difficult to quantify due to conditions that effect water use, the greatest being variability in annual weather patterns. However, trends are identifiable with distinct reductions notable for some conservation measures. Please refer to the following charts for reference.



In 1994/5 two major conservation efforts combined for a substantial reduction in all types of water use. These conservation efforts included: 1) the Company's first leak detection survey; and 2) the implementation of increasing block rates. The impact of the leak detection study resulted in a reduction of 63 GPD/unit (41%) in un-metered water use. The impact of the rate increase and the public education related to the individual customer's water bill is seen in the metered ADD reduction of 33 GPD/unit (10.6%). The net effect of both these efforts was a 252 GPD/unit (23.8%) reduction in peak day use.

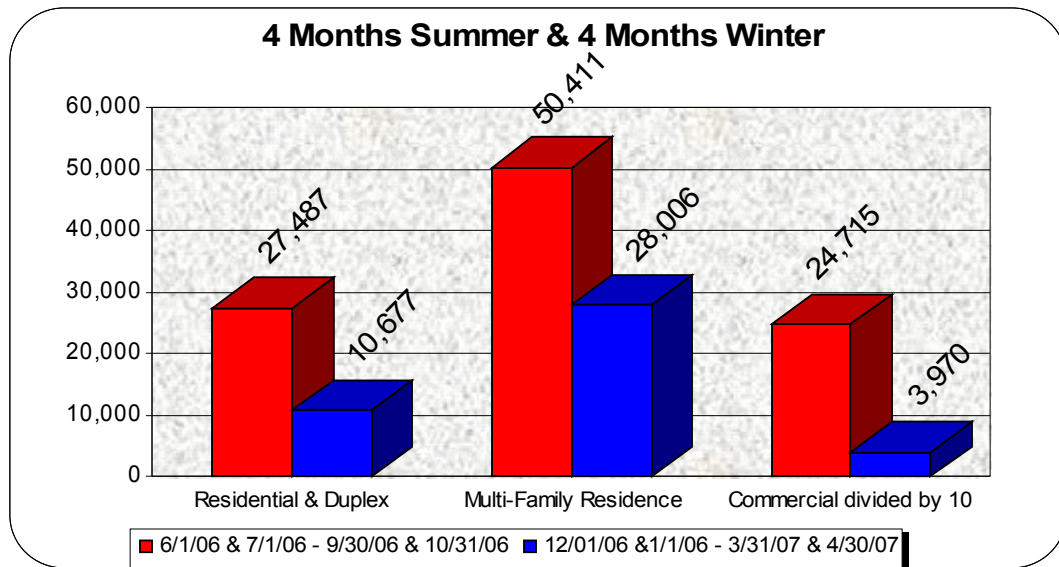
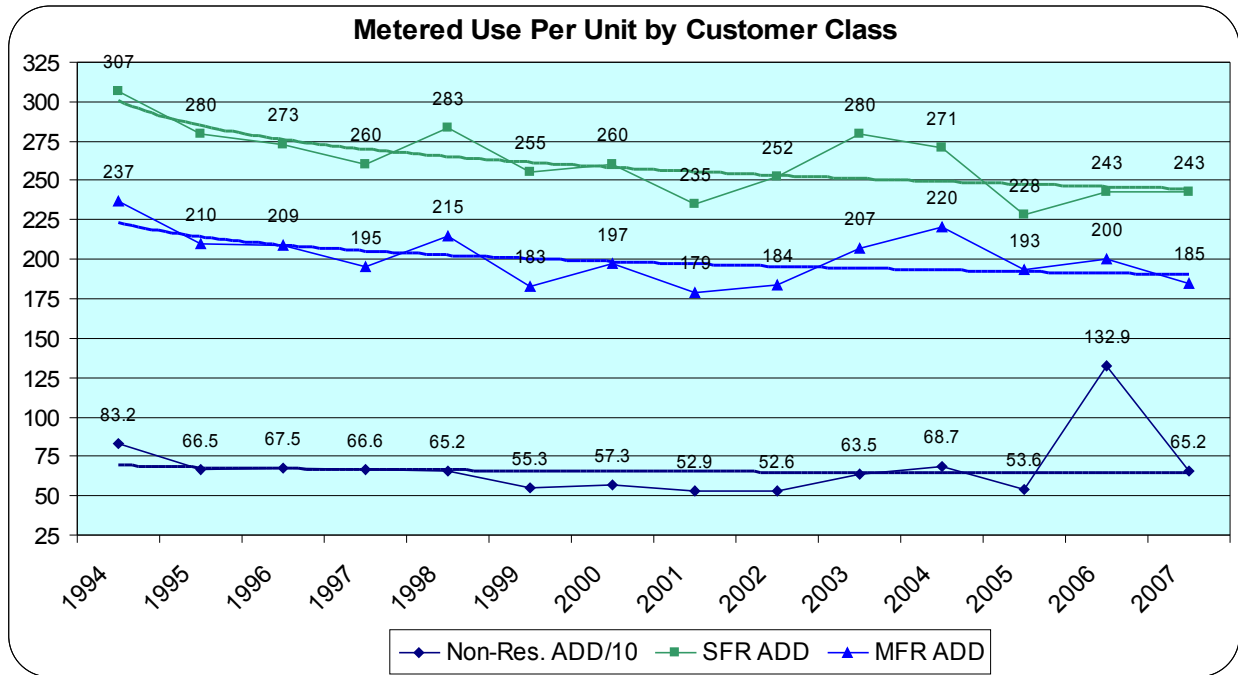
The response seen in the 1999/2000 - 2001 period was similar to that seen in 1994/5. In these years the major factors in the reductions were: 1) the Company's leak detection study, and 2) the 2001 governor's drought declaration and multiple public education efforts. Again the leak detection efforts over the two year period resulted in a reduction of 106 GPD/unit (68.8%) in un-metered water use. The Governor's drought declaration and public education resulted in a 15 GPD/unit (6%) reduction in metered water use. Like 1995, the combine effect of these efforts reduced peak day demand by 206 GPD/unit (25.6%).

The most recent leak detection effort in 2004/5 continued to reduce un-metered water use by 8 GPD/unit (11.6%). This lower level of reduction reflects the continued tightening of the water system. As in 2001, the Governor declared a drought in 2005. Unlike 2001, the weather proved to be relatively moist through the 2005 summer, this combined with the drought declaration led to a reduction in metered ADD of 56 GPD/unit (19.3%) with a peak day reduction of 214 GPD/unit (27.1%).

Consumption trends have continued to decline since 1994. Variations are seen year to year dependent on weather conditions including temperature and rainfall. During this twelve year period peak day demand has been reduced 320 GPD/unit (34.2%) 935 to 615 GPD/unit, ADD demand reduced 22 GPD/unit (7.9%) 280 to 258 GPD/unit, and un-metered water by 77 GPD/unit (58.3%) 132 to 55 GPD/unit.

Presented below are the historic effects of conservation efforts on metered average day demand for the three customer classes used by the Company: Single family and Duplex

Residences, Multi-Family Residences, and Non- Residential Units. Also presented are the summer / winter variations in water use by those customer classes based on four month water usage for the periods winter-Dec/Jan through Mar/Apr and summer-Jun/July through Sept/Oct.



Water Conservation Goals for Six Year Planning Period

Adopted Goal and Public Meeting Process:

The following conservation goal was adopted by the Spanaway Water Company Board of Directors at the December 20, 2007 meeting. The information contained herein was presented for discussion and comment at the Company's annual meeting held November 12, 2007. Notice of this meeting was given customers and non-occupant property owners in two newsletters mailed on October 18th and 25th. The meeting was also advertised to the general public in the announcement section of the Tacoma News Tribune on October 30, 2007 including time, place, and purpose of the meeting. The meeting included a presentation of the information presented herein including past conservation and leak detection efforts and a discussion of the proposed goals. No comments, pro or con, were received from the public when public comments were requested.

The overall goal of the Company's conservation program is to continue the reductions in water use on a per unit basis in the following areas: metered water, un-metered water, and total pumped water. The specific goal of the company for this planning period is to maintain an ongoing minimum reduction in the rolling six-year pumped average day demand per unit of at least 0.5% per unit per year. This should reflect general reductions of usage at a rate of 0.25% per year in both the metered ADD/Unit and un-metered water ADD/Unit per year over the next six years. The usage of the rolling six-year pumped average day demand trend line is to dampen the impacts of any given year being particularly warm and dry or cool and wet. Due to the inordinate levels of conservation in years for which the governor declares a drought, these years are excluded from the calculation of the rolling six-year pumped average day demand. The trend line as used in this conservation planning period is presented graphically on the following page with maximum target values on the following spreadsheet.

No specific goals are set related to reducing peak day demand. This decision was made due to the volatility of peak day demand as a result of rainfall and temperature conditions. However, efforts directed at larger summer water users should assist in the Company's efforts to reduce both peak day and average day demand.

Specific Goal Values:

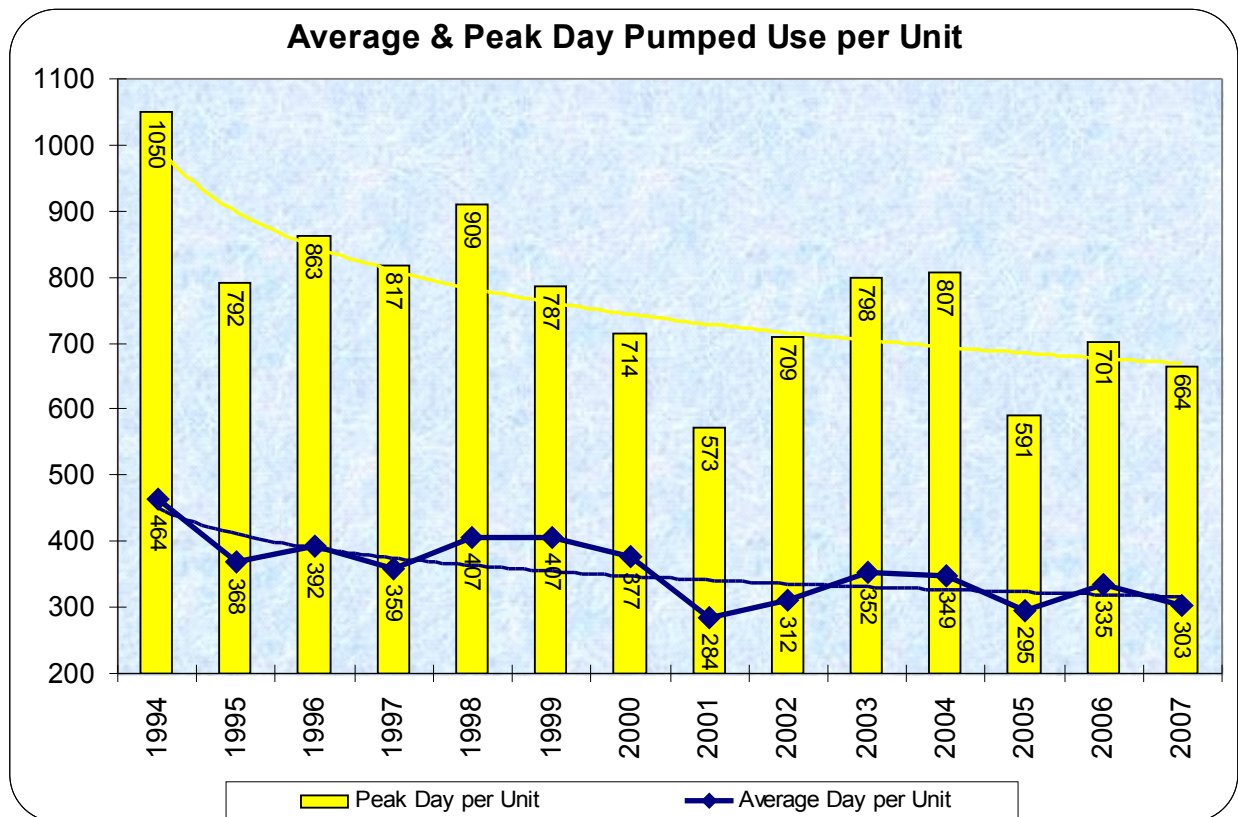
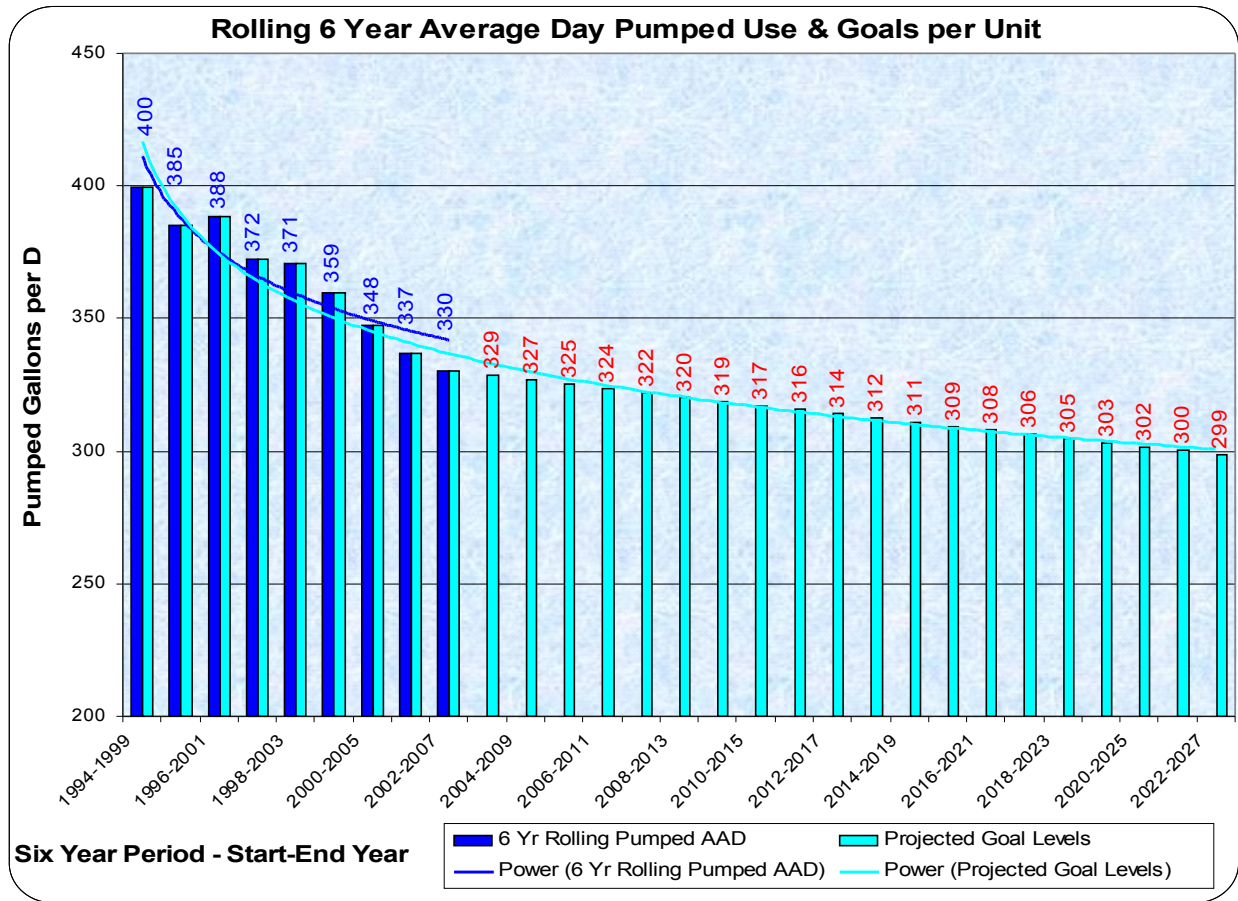
The chart below presents the historic changes in the rolling six-year average day demand per unit for the periods beginning in 1994 through 2007. Goals are then calculated and presented through both 2013, the six year planning period, and 2027, the twenty year planning period. The 2027 values are the base case and high case units served under build-out for the Company’s service area per the 2000 Update of the Pierce County Coordinated Water System Plan. These 2027 values therefore may be higher than those actually seen in 2027 prior to full build-out within the Company’s service area.

Chart of Historic and Goal Use Based on a Rolling Six Year Pumped ADD

% Change	Rolling 6 yr Ave.	Period	Rolling 6 yr Goals	Base Case Units Served end Yr*	High Case Units Served end Yr*
	400	1994-1999	400	6,791	6,791
-3.63%	385	1995-2000	385	7,021	7,021
0.88%	388	1996-2001	388	7,264	7,264
-4.12%	372	1997-2002	372	7,446	7,446
-0.38%	371	1998-2003	371	7,806	7,806
-3.13%	359	1999-2004	359	8,147	8,147
-3.31%	348	2000-2005	348	8,462	8,462
-3.02%	337	2001-2006	337	8,855	8,855
-2.02%	330	2002-2007	330	9,028	9,028
-0.50%	329	2003-2008	329	9,627	10,354
-0.50%	327	2004-2009	327	10,226	11,681
-0.50%	325	2005-2010	325	10,825	13,007
-0.50%	324	2006-2011	324	11,024	13,251
-0.50%	322	2007-2012	322	11,222	13,495
-0.50%	320	2008-2013	320	11,421	13,739
-0.50%	319	2009-2014	319	11,619	13,983
-0.50%	317	2010-2015	317	11,818	14,228
-0.50%	316	2011-2016	316	12,016	14,472
-0.50%	314	2012-2017	314	12,215	14,716
-0.50%	312	2013-2018	312	12,413	14,960
-0.50%	311	2014-2019	311	12,612	15,204
-0.50%	309	2015-2020	309	12,810	15,448
-0.50%	308	2016-2021	308	12,866	16,437
-0.50%	306	2017-2022	306	12,923	17,426
-0.50%	305	2018-2023	305	12,979	18,415
-0.50%	303	2019-2024	303	13,035	19,404
-0.50%	302	2020-2025	302	13,091	20,393
-0.50%	300	2021-2026	300	13,148	21,382
-0.50%	299	2022-2027	299	13,204	22,371

*Projections used based on 2000 CWSP Update - base and high case projections for 2010, 2020, and 2027 (build-out) used.

This rolling six-year average based on actual historic yearly information and future goals is presented graphically on the following page. A graphic representation of historical pumped ADD and PDD is also presented.



Charts of the calculated volume of water conserved under the adopted minimum goal are presented below for both the base and high case growth projections. Under the base case scenario for the six year planning period a total savings of 133,061,480 gallons is anticipated, with a savings of over 1.5 billion gallons over twenty year planning period. Under the high case scenario the volume of water saved increases by 158,881,775 and 2.1 billion gallons respectively.

Base Case Projections:

YEAR	Number of units served*	Use per Unit**	Calculated Pumped Volume	Use per Unit W/O Measures	Calculated Pumped W/O Measures	Reductions Due to Measures
1994	5,918	464.00	1,002,272,480	464.00	1,002,272,480	0
1995	6,028	416.00	915,291,520	416.00	915,291,520	0
1996	6,215	408.00	925,537,800	408.00	925,537,800	0
1997	6,337	395.75	915,371,729	395.75	915,371,729	0
1998	6,498	398.00	943,964,460	398.00	943,964,460	0
1999	6,791	400.00	991,486,000	400.00	991,486,000	0
2000	7,021	385.00	986,626,025	385.00	986,626,025	0
2001	7,264	388.00	1,028,727,680	388.00	1,028,727,680	0
2002	7,446	372.00	1,011,017,880	372.00	1,011,017,880	0
2003	7,806	371.00	1,057,049,490	371.00	1,057,049,490	0
2004	8,147	359.00	1,067,542,145	359.00	1,067,542,145	0
2005	8,462	348.00	1,074,843,240	348.00	1,074,843,240	0
2006	8,855	337.00	1,089,209,275	337.00	1,089,209,275	0
2007	9,028	330.00	1,087,422,600	330.00	1,087,422,600	0
2008	9,627	329.00	1,156,058,295	330.00	1,159,572,150	-3,513,855
2009	10,226	327.00	1,220,524,230	330.00	1,231,721,700	-11,197,470
2010	10,825	325.00	1,284,115,625	330.00	1,303,871,250	-19,755,625
2011	11,024	324.00	1,303,639,110	330.00	1,327,780,575	-24,141,465
2012	11,222	322.00	1,318,921,660	330.00	1,351,689,900	-32,768,240
2013	11,421	320.00	1,333,914,400	330.00	1,375,599,225	-41,684,825
2014	11,619	319.00	1,352,858,265	330.00	1,399,508,550	-46,650,285
2015	11,818	317.00	1,367,343,838	330.00	1,423,417,875	-56,074,038
2016	12,016	316.00	1,385,925,440	330.00	1,447,327,200	-61,401,760
2017	12,215	314.00	1,399,903,845	330.00	1,471,236,525	-71,332,680
2018	12,413	312.00	1,413,592,440	330.00	1,495,145,850	-81,553,410
2019	12,612	311.00	1,431,594,423	330.00	1,519,055,175	-87,460,753
2020	12,810	309.00	1,444,775,850	330.00	1,542,964,500	-98,188,650
2021	12,866	308.00	1,446,427,840	330.00	1,549,744,114	-103,316,274
2022	12,923	306.00	1,443,322,003	330.00	1,556,523,729	-113,201,726
2023	12,979	305.00	1,444,871,271	330.00	1,563,303,343	-118,432,071
2024	13,035	303.00	1,441,621,624	330.00	1,570,082,957	-128,461,333
2025	13,091	302.00	1,443,068,171	330.00	1,576,862,571	-133,794,400
2026	13,148	300.00	1,439,674,714	330.00	1,583,642,186	-143,967,471
2027	13,204	299.00	1,441,018,540	330.00	1,590,421,800	-149,403,260

* Projections used based on 2000 CWSP Update - base and high case projections for 2010, 2020, and 2027 (build-out numbers used here)

** Use per Unit based on WUE Rule goals of 0.5% per year over period

High Case Projections:

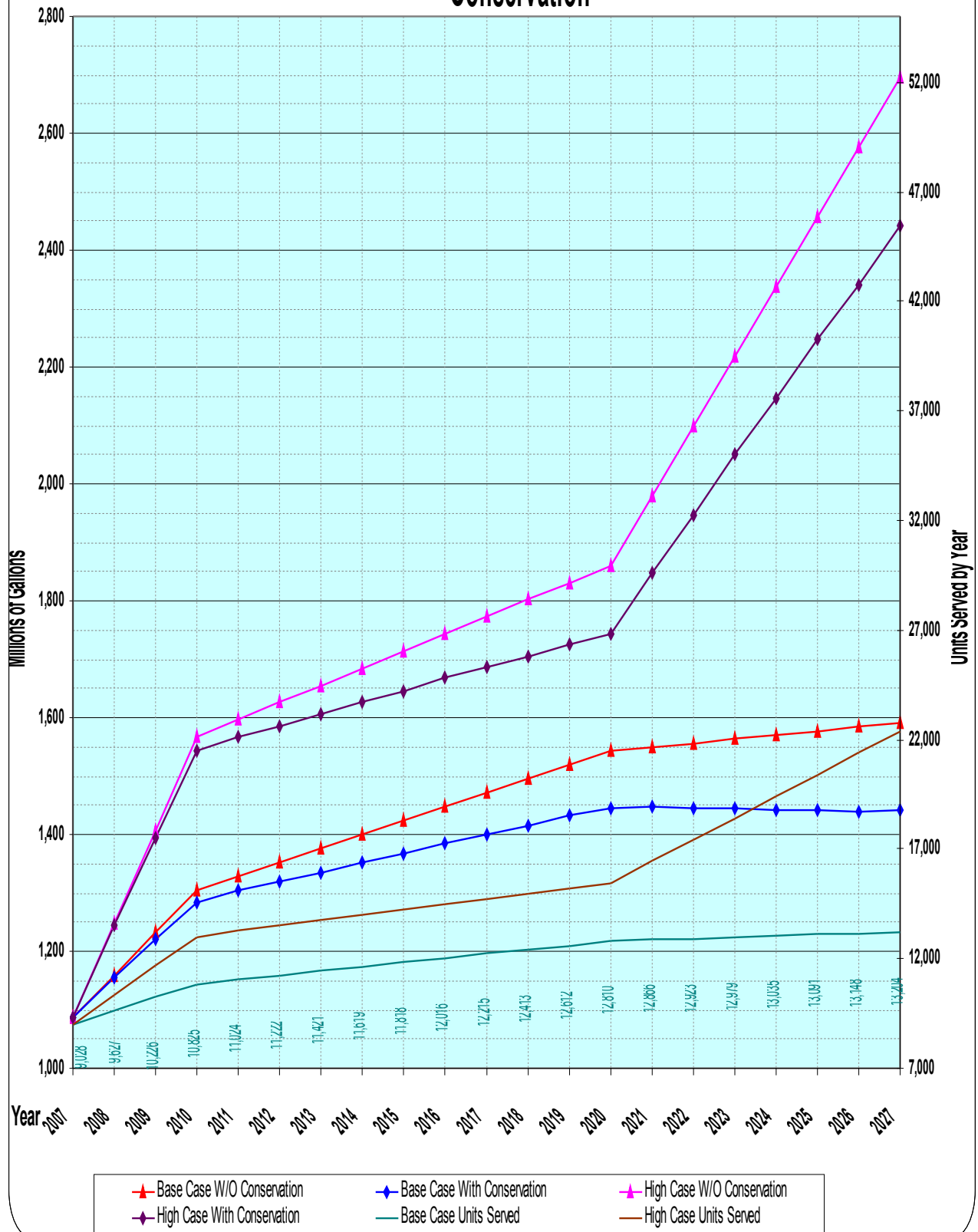
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2000	7,021	385.00	986,626,025	385.00	986,626,025	0
2001	7,264	388.00	1,028,727,680	388.00	1,028,727,680	0
2002	7,446	372.00	1,011,017,880	372.00	1,011,017,880	0
2003	7,806	371.00	1,057,049,490	371.00	1,057,049,490	0
2004	8,147	359.00	1,067,542,145	359.00	1,067,542,145	0
2005	8,462	348.00	1,074,843,240	348.00	1,074,843,240	0
2006	8,855	337.00	1,089,209,275	337.00	1,089,209,275	0
2007	9,028	330.00	1,087,422,600	330.00	1,087,422,600	0
2008	10,354	329.00	1,243,400,118	330.00	1,247,179,450	-3,779,332
2009	11,681	327.00	1,394,145,970	330.00	1,406,936,300	-12,790,330
2010	13,007	325.00	1,542,955,375	330.00	1,566,693,150	-23,737,775
2011	13,251	324.00	1,567,075,086	330.00	1,596,094,995	-29,019,909
2012	13,495	322.00	1,586,090,856	330.00	1,625,496,840	-39,405,984
2013	13,739	320.00	1,604,750,240	330.00	1,654,898,685	-50,148,445
2014	13,983	319.00	1,628,157,179	330.00	1,684,300,530	-56,143,351
2015	14,228	317.00	1,646,192,888	330.00	1,713,702,375	-67,509,488
2016	14,472	316.00	1,669,154,344	330.00	1,743,104,220	-73,949,876
2017	14,716	314.00	1,686,566,377	330.00	1,772,506,065	-85,939,688
2018	14,960	312.00	1,703,622,024	330.00	1,801,907,910	-98,285,886
2019	15,204	311.00	1,725,870,709	330.00	1,831,309,755	-105,439,047
2020	15,448	309.00	1,742,302,680	330.00	1,860,711,600	-118,408,920
2021	16,437	308.00	1,847,847,540	330.00	1,979,836,650	-131,989,110
2022	17,426	306.00	1,946,309,940	330.00	2,098,961,700	-152,651,760
2023	18,415	305.00	2,050,049,875	330.00	2,218,086,750	-168,036,875
2024	19,404	303.00	2,145,985,380	330.00	2,337,211,800	-191,226,420
2025	20,393	302.00	2,247,920,390	330.00	2,456,336,850	-208,416,460
2026	21,382	300.00	2,341,329,000	330.00	2,575,461,900	-234,132,900
2027	22,371	299.00	2,441,459,085	330.00	2,694,586,950	-253,127,865

* Projections used based on 2000 CWSP Update - base and high case projections for 2010, 2020, and 2027 (build-out numbers used here)

** Use per Unit based on WUE Rule goals of 0.5% per year over period

The above information is presented graphically on the following page including the number of units served under both the base and high case projections.

Base & High Case Water Use each With & With-Out Conservation



Conclusion:

Spanaway Water Company has long considered both water conservation and efficiency of use as key components in the Company's demand management and water supply options. The Company has an established record of reductions in pumping required on a per unit basis for well over ten years. It is the intent of this plan to continue those water use efficiency efforts and elements that have historically resulted in reductions in metered demand. Similarly, it is the intent of the Water Loss Control Plan to continue the reductions in unaccounted for water. The Company believes that continuing these efforts will allow the established goal to be met on an on-going annual basis. The results of these efforts will be presented annually in the consumer confidence report.