City of Steamboat Springs

Mount Werner Water

Steamboat II Metropolitan District

Community Water Conservation Plan

April, 2009

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EXECUTIVE SUMMARY

Why Water Conservation?

Water conservation is a key strategy in developing a sustainable community; it demonstrates responsible stewardship of our water resources and responsible management of our infrastructure and financial resources. By raising citizen awareness, a conservation program can also prepare the community to respond effectively to drought conditions or other water emergencies and to accept and adapt to progressively more stringent conservation measures.

Water is a precious and finite resource and Steamboat Springs is not immune to the need to seriously and comprehensively embrace a water conservation ethic. The overarching goals of this Water Conservation Plan are:

- To raise awareness of the need for and benefits of water conservation and help create a "conservation culture" in the Steamboat Springs that protects our limited and essential water supply
- To foster the understanding that making wise choices relative to water use will have a direct correlation to future investment of public funds – saving water means saving money
- To convey how every user and each water supplier can benefit from implementing a conservation ethic
- To prescribe an effective response plan should a drought or other water emergency be declared.

Targets

Measuring the success of a water conservation culture in the Steamboat Springs community requires that targets be set and progress be benchmarked.

Current targets for reducing Gallons per Capita per Day during Peak Demand (gpcd) for 5, 10 and 20 year intervals are established as follows:

5 –year target: **REDUCE PEAK DAY GPCD DEMAND BY 10% BY YEAR 2015**

Water conservation component	Savings/Metrics
Interior water savings through adoption of water saving devices & behavioral best practices	2%
Irrigation Efficiency	6%
Xeriscape & Landscaping Best Management Practices	1%
Industrial/Commercial/Institutional (ICI)	1%
Total	10%

10 –year target: **REDUCE PEAK DAY GPCD DEMAND BY 15% by 2020**

Water conservation component	Savings/Metrics
Interior water savings through adoption of water saving devices & behavioral best practices	1.5%
Irrigation Efficiency	2%
Xeriscape & Landscaping Best Management Practices	.75%
Industrial/Commercial/Institutional (ICI)	.75%
Total	5%

20 –year target: **REDUCE PEAK DAY GPCD DEMAND BY 20% BY 2030**

Water conservation component	Savings/Metrics
Interior water savings through adoption of water saving devices & behavioral best practices	1.5%
Irrigation Efficiency	1.5%
Xeriscape & Landscaping Best Management Practices	1%
Industrial/Commercial/Institutional (ICI)	1%
Total	5%

Water Supply and Use

Firm yield is an estimate of the amount of water available from our community's collection system. The firm yield of the Fish Creek Basin is estimated to be 7000 acre-feet (AF) of water (325,828.8 gallons per AF). The wellfields provide an additional 2000 – 3000 AF.

The current average annual water use in the Steamboat Springs service area is approximately 3000 AF. In 2007 our community consumed over 1 billion gallons of potable water. Weather is usually the single biggest factor affecting daily use. Factors affecting long term use include resident population growth, resort development, and long-term water conservation efforts.

The Steamboat Water Supply Master Plan (WSMP), completed in November 2008, demonstrated that indoor demands account for roughly two-thirds of the total demand and outdoor irrigation water requirements account for roughly one-third of the total system demand. However, during the summer, outdoor irrigation use is double indoor use. In Table 2-16 of the WSMP, the average Maximum Day Demand for 2004-2007 was 550 gallons per person per day (gpcd) overall. This number factors in usage by all sectors including tourism-based population, commercial uses, and fire hydrant flushing.

To get an idea of average per person per day indoor water usage, City Service Area data for residential consumption only was used from April and May of 2006 and 2007. The result was 87 gpcd. Peak day demand per person, which occurs in the summer months, would need to factor in outdoor water use (e.g. irrigation).

Suggested Conservation Measures

Estimating that two-thirds of water use in the summer (May-September) is irrigation demand, reducing the gpcd through education and technology enhancements of irrigation systems would have a significant impact. Additionally, reducing gpcd through behavioral changes relative to indoor use as well as fixture and appliance retrofits (water efficient toilets, showerheads, dishwashing and clothes washing machines, etc.) could further reduce the gpcd by as much as 20%. A full itemization of recommended best practices and programs is provided in the water conservation plan.

State Mandates for Water Conservation

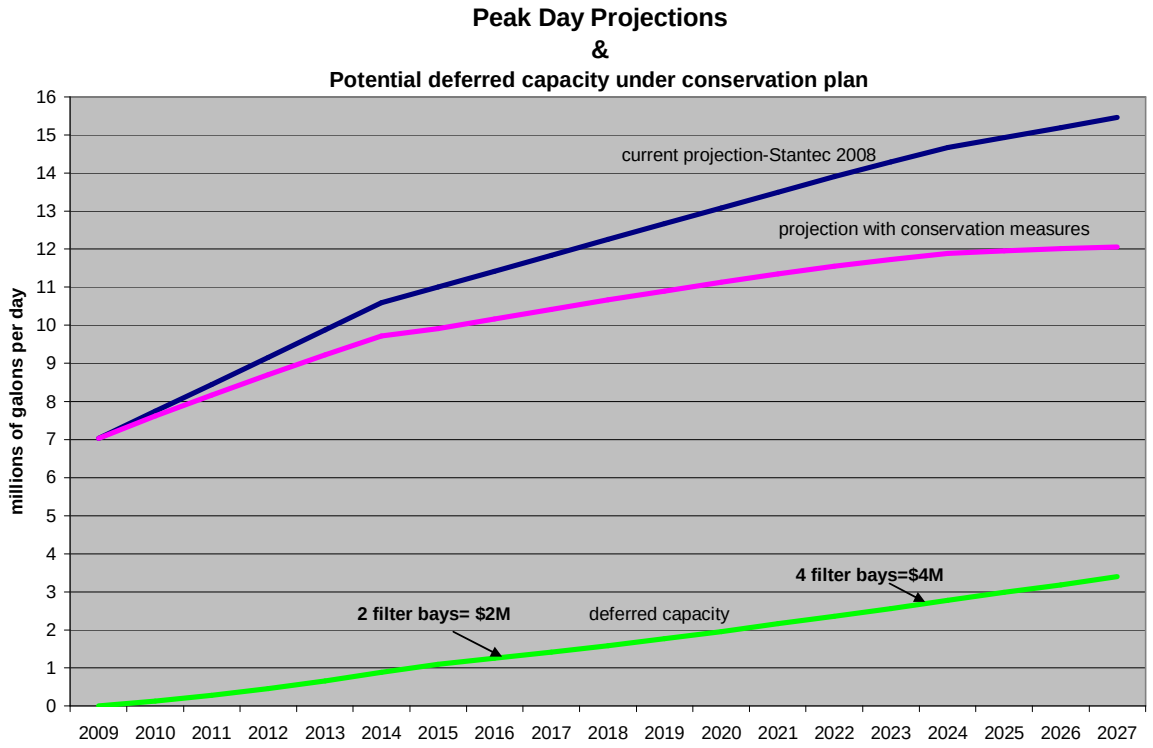
This community water conservation plan has been developed using a portion of the guidelines set forth in the Colorado Water Conservation Act of 1991 amended in 2004 (C.R.S.§37-60-126). This plan is not intended to fully meet the mandate of C.R.S.§37-60-126 at this time. Under the Act, entities that supply 2000 acre-feet or more of water each year are required to develop, adopt, make publicly available, and implement a water conservation plan. Plans must be submitted for approval to the Colorado Water Conservation Board (CWCB) which has developed guidelines for water conservation plans to promote the following:

1) Water-efficient fixtures and appliances, including toilets, urinals, showerheads, faucets, washing machines and dishwashers;
2) Low-water use landscapes and irrigation;
3) Water-efficient commercial and industrial water-using processes;
4) Water reuse systems, both potable and non-potable;
5) Distribution system leak repair;
6) Dissemination of information regarding water use efficiency measures, including public education, customer water use audits, and water saving demonstrations;
7) Water rate structures designed to encourage water use efficiency in a fiscally responsible manner;
8) Regulatory measures, including standards for the use of water efficiency fixtures and landscapes, and ordinances, codes, and other law designed to encourage water use efficiency;
9) Incentives to implement water use efficiency techniques, including rebates to customers or others to encourage the installation of water use efficiency measures.

While the Mount Werner Water District and the City Service Area, do not currently fall under this state statute, the two entities should begin to prepare to meet the requirements of C.R.S. §37-60-126 in the future.

Action Plan

An action plan is provided as part of this program as is a drought and water emergency preparedness component. By implementing the program with the objective of meeting the proposed water reduction targets, benefits will be realized as shown in the following graph. Deferred cost relative to meeting these goals has the potential to reach $4 million.



Drought and Water Emergency Preparedness

Colorado experiences a wide range of climatic conditions. Water supply systems are also at risk from uncertainties such as forest fires, failure of dams, mains, wells, and contamination of all or part of the raw water supply.

In emergency or drought situations, contingency plans should be designed for implementation of mandatory measures in stages that minimize impacts to the economy, life-styles, and environment of the community. Plans should also be flexible in response to worsening or improving conditions.

The City Council, MWW District Board, and Steamboat II Metropolitan District Board should adopt a three-stage water use plan that addresses drought preparedness as follows:

<u>Stage 1: The following recommended guidelines are in place at all times</u>

- Potable water shall be used for beneficial purposes and should not be wasted.
- No outdoor watering 10AM – 6PM.
- Hose irrigation with spring-loaded nozzle only; no free-running hoses.
- Discourage tree-planting and the seeding or sodding of new lawns June15th through August 31st.
- The use of native grasses and shrubs or drought-tolerant species on new or re-developing properties is encouraged.
- Water-intensive landscapes are discouraged.

- Swimming pools are limited to one filling per year, unless draining for repairs is necessary.

Stage 2: This stage will be triggered by a drought warning based upon:

- April 1st SWE at the Tower SNOTEL site below 80% of average;
- an early run-off (before July 1) resulting in low flows in the Fish Creek Watershed;
- persistent higher than average temperatures April through August;
- below average precipitation April through August.

The following Stage 2 restrictions are recommended in addition to the year-round recommendations in Stage 1:

- Watering schedule based on the last number of customer street address:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Even	Odd	Even	No Watering	Odd	Even	Odd

- Permits may be secured for newly-sodded lawns and newly-planted trees for up to 14 consecutive days and for newly-seeded lawns for up to 25 consecutive days with the exception of Wednesdays.
- No vehicle washing at residences.
- No washing hard surfaces (i.e., driveways, sidewalks, parking lots, outdoor eating areas).
- No running outdoor water features (including those meeting Mount Werner Water District specifications).
- No use of domestic water for dust control.

Stage 3: This stage will be triggered by a drought declaration or a water supply emergency caused by forest fire or failed infrastructure

The following restrictions include year round recommended guidelines in Stage 1, Stage 2 restrictions, plus:

- No lawn irrigation.
- Suspension of special watering permits including those for newly seeded or sodded lawns.
- Hand watering of trees, shrubs, and flowers, and drip irrigation of trees and shrubs is allowed.
- All businesses including hotels, restaurants and property management companies, will be required to implement Stage 3 water conservation measures including education of owners, tenants and guests.

The entities may impose a total ban on all outside water use in the event of an extreme water system emergency. Any instance of flagrant runoff or waste is subject to penalties. (The City and Mount Werner Water District already have regulations in place.)

Public Outreach

Effective development and implementation of this community conservation program and associated Action Plan requires the effort of everyone associated with water suppliers and local governments. Water suppliers and local governments must engage residents, business owners and other users in an exchange of views and ideas as well as raise awareness on the need to conserve and preserve our precious resource.

Conclusion

This plan is intended to be a living document which will be revisited every five years at a minimum and modified periodically. The Mount Werner Water District, City Public Works Department, and Steamboat II Metro District propose that this plan be considered and adopted by the Steamboat Springs City Council, the Board of Directors of the Mount Werner Water District, and other water suppliers in the Yampa Valley, and include solicitation of public input.

This document was prepared by:

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Philo Shelton, Joe Zimmerman and staff from the City of Steamboat Springs Public Works Department,
Bob Keenan, City Planning Department,
Lyn Halliday, President, Environmental Solutions Unltd, LLC.

1.0 INTRODUCTION

1.1 Why Water Conservation?

Water is a precious and finite resource and Steamboat Springs is not immune to the need to seriously and comprehensively embrace a water conservation ethic. The City of Steamboat Springs is located in the Yampa Valley on the western slope of Colorado which is a semi-arid climate, averaging 24 inches of moisture per year. Just as a person with limited financial resources must live within his or her means, similarly, limited raw water resources and treatment facilities dictate the need to live within certain limits related to both natural resource carrying capacity and the built infrastructure.

The overarching goals of this Plan are:

- To raise awareness of the need for and benefits of water conservation and help create a "conservation culture" in the Steamboat Springs that protects our limited and essential water supply
- To foster the understanding that making wise choices relative to water use will have a direct correlation to future investment of public funds – saving water means saving money
- To convey how every user and each water supplier can benefit from implementing a conservation ethic
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Metrics

Measuring the success of a water conservation culture in the Steamboat Springs community requires that targets be set and progress be monitored.

Currently, Mount Werner Water District (MWW) is in the process of installing water meters that incorporate radio transponders to relay water usage twice daily to a data base. These meters are being phased-in on a four-year plan. Information derived from this technology, in combination with available software that allows query, tracking and reporting, will become the basis of a more accurate monitoring of usage.

Ideally, by interpolating a more detailed set of single family household usage data and/or per capita usage data by season, more specific goals can be set and progress communicated. The Steamboat Water Supply Master Plan (WSMP), completed in November 2008, demonstrated that indoor demands account for roughly two-thirds of the total demand and outdoor irrigation water requirements account for roughly one-third of the total system demand. However, during the summer, outdoor irrigation use is double indoor use. In Table 2-16 of the WSMP, Maximum Day Demand for 2004-2007 was 550 gallons per person per day (gpcd) overall. This number factors in usage by all sectors including tourism-based population, commercial uses, and fire hydrant flushing.

To get an idea of average per person per day indoor water usage, City Service Area data for residential consumption only was used from April and May of 2006 and 2007. The result was

87 gpcd. Peak day demand per person, which occurs in the summer months, would need to factor in outdoor water use (e.g. irrigation).

Recommended Approach for Establishing Targets and Metrics

This Plan recommends using summer Peak Day Demand by person per day (gpcd) as the best way to relate water conservation targets to the general public. This number is currently calculated at 550 gpcd when you factor in all users including full time residents, commercial users, tourism-related demands, and fire hydrant flushing.

Estimating that two-thirds of this number in the summer (May-September) is irrigation demand, reducing the gpcd through education and technology enhancements of irrigation systems would have a significant impact. Additionally, reducing gpcd through behavioral changes relative to indoor use as well as fixture and appliance retrofits (water efficient toilets, showerheads, dishwashing and clothes washing machines, etc.) could further reduce the gpcd by as much as 20%.

Water loss through infrastructural system leaks will also be addressed more aggressively by MWW District, the City and Steamboat II Metro through improved monitoring.

1.2 Goals and Targets

Current targets for reducing Gallons per Capita per Day during Peak Demand (gpcd) for 5, 10 and 20 year intervals are established as follows:

Figure 1.1 5, 10 and 20 Year Water Conservation Targets

5 –year target: **REDUCE PEAK DAY GPCD DEMAND BY 10% BY YEAR 2015**

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Interior water savings through adoption of water saving devices & behavioral best practices	2%
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Figure 1.2 Projected Water Savings with Water Conservation

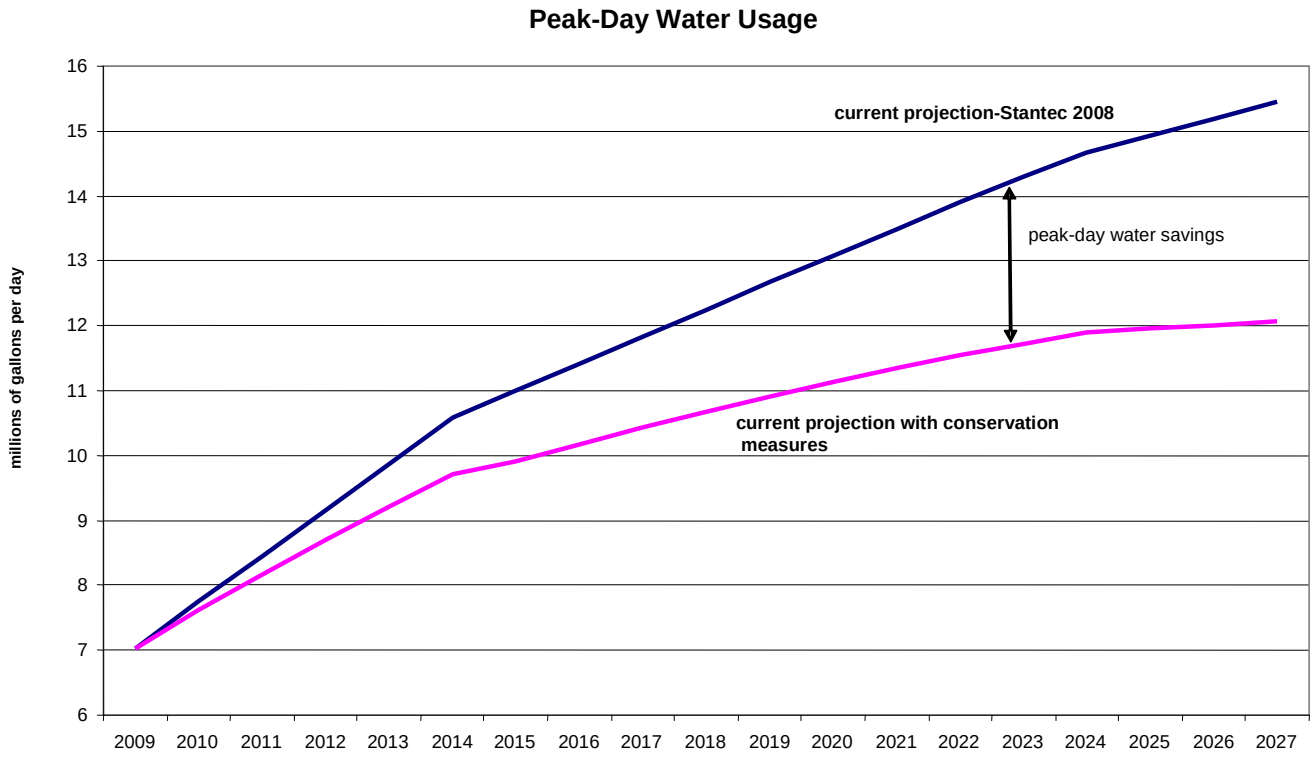


Figure 1.2 shows projected peak demand residential water use in million gallons per day by year without water conservation (blue line) compared to water use with water conservation (lavender line) at targets outlined above.

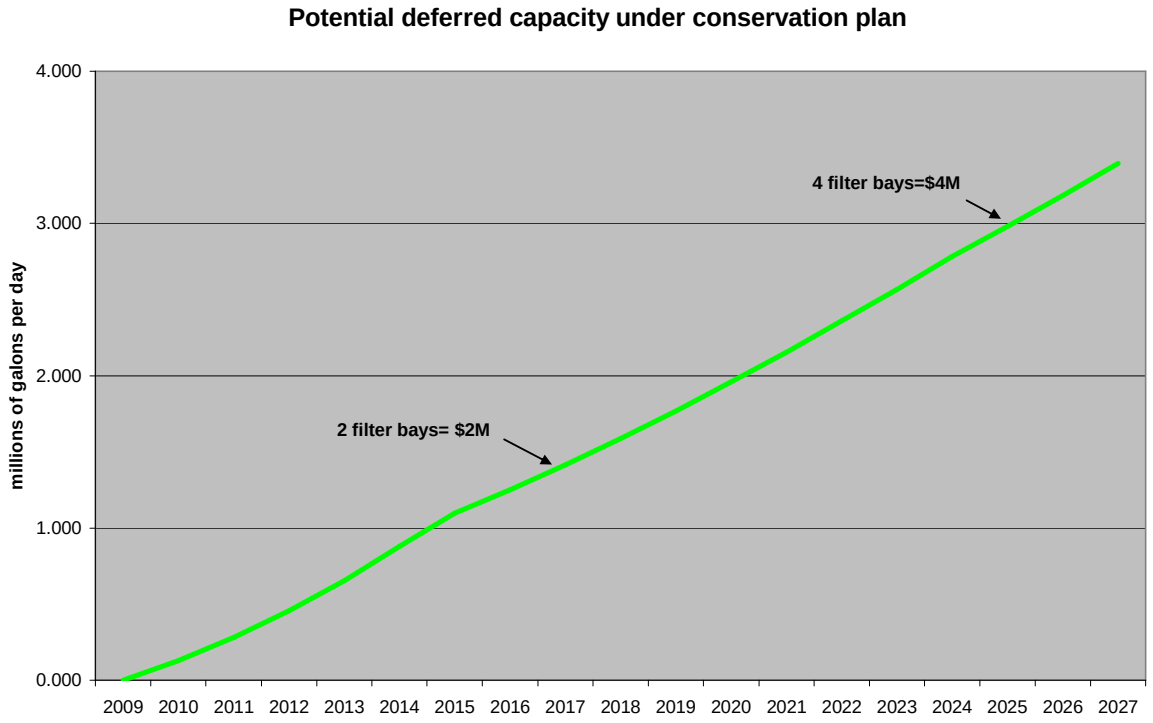
1.3 Benefits of Water Conservation

Residents of Steamboat Springs use domestic water which has been filtered to EPA drinking water specifications for indoor domestic uses year-round as well as for discretionary outdoor uses in the summer months such as lawn irrigation and car washing. In the summer, use of

potable water triples due to outdoor discretionary uses, predominantly lawn watering. It is principally for these discretionary uses that raw water must be shepherded and infrastructure such as additional filtering capacity must be constructed and maintained to meet peak-day water demands. Constructing and maintaining additional capacity costs public dollars. Conservation, therefore, can slow the rate at which additional public dollars must be invested in new water supply and treatment facilities.

For example, if the residents and commercial users in Steamboat Springs could shave peak-day demand by 10%, this reduction would be the equivalent of the daily capacity of one filtration bay, which costs District and City customers $750,000 - $1 million in current dollars to construct. Therefore, for every gallon not used on a hot summer day, we could postpone investing a dollar toward a new filtration bay.

Figure 1.3 Potential Deferred Treatment Additions Through Water Conservation Plan



Water conservation is a key strategy in developing a sustainable community; it demonstrates responsible stewardship of our water resources and responsible management of our infrastructure and financial resources. By raising citizen awareness, a conservation program can also prepare the community to respond effectively to drought conditions or other water emergencies and to accept and adapt to progressively more stringent conservation measures.

1.4 Benefits

The primary focus of an ongoing water conservation program and plan is to reduce or eliminate waste and increase efficiency in how water is used community-wide. This program does not propose measures designed to eliminate beneficial uses of water or to cause deprivation.

Rather, this program is intended to provide the framework for efficient management of a valuable and limited resource in order to insure the long-term adequacy and reliability of our water supply.

Water conservation is an important component of overall water supply master planning. Actions to reduce water demand, reduce system losses, and increase operating efficiencies will result in benefits to our community.

Conservation planners generally believe that a long-term conservation program can reduce water consumption by 10 to 20 percent over a 10 to 20 year period.[1] Conservation in this range can be economically justified by delaying capital investment in facilities which would otherwise be required without such a program.

1.3.1 Cost Benefits

Proven water conservation benefits are provided below.

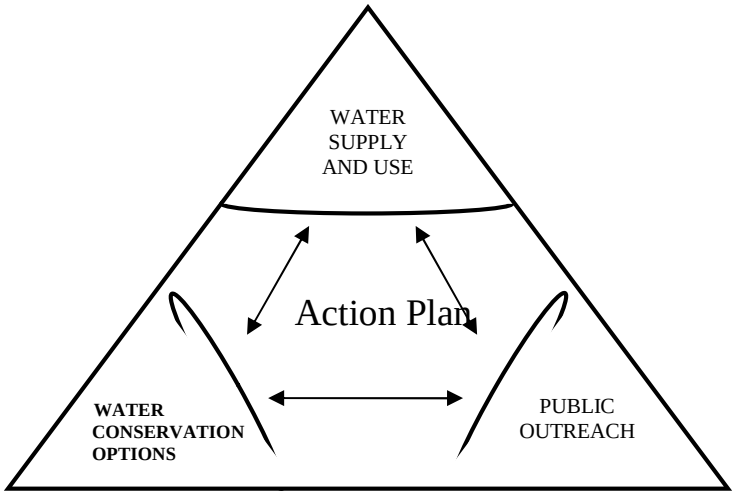
1. Direct operating and maintenance costs of water treatment and distribution, such as pumping (electrical) and chemical costs, are directly proportional to water demand. Reductions in water use, particularly on peak-demand days of summer, can reduce electric power and chemical feed costs.
2. Conservation measures can decrease the growth rate of long-term water needs and push out the timetable for investment in new water supply and treatment facilities.
3. Reductions in peak-day water demands and a decrease in the long-term growth rate of water demand would also relieve the loading of our wastewater treatment plant, reduce the rate of growth of operating and maintenance costs, and push out the timetable for investment in the expansion of the wastewater facility.
4. Customers will see direct cost savings by reducing their water use and their water bills.

1.3.2 Environmental Benefits

1. A lower rate of growth in long-term water demand means that more water remains in the reservoirs, the Fish Creek tributaries, and the Yampa River in addition to the decreed minimum CWCB flows to support a healthy aquatic environment. More water will also remain in groundwater aquifers.
2. Water conservation provides benefits related to future needs and upgrades for the wastewater treatment facility.
3. Using less water results in less energy consumption thereby reducing the carbon footprint of the community.
4. Conservation and efficiency in the use of a limited natural resource reflects our community's commitment to environmental awareness and responsibility.

1. Maddaus, W.O., *Realizing the Benefits from Water Conservation*, Maddaus Water Management, Alamo, CA

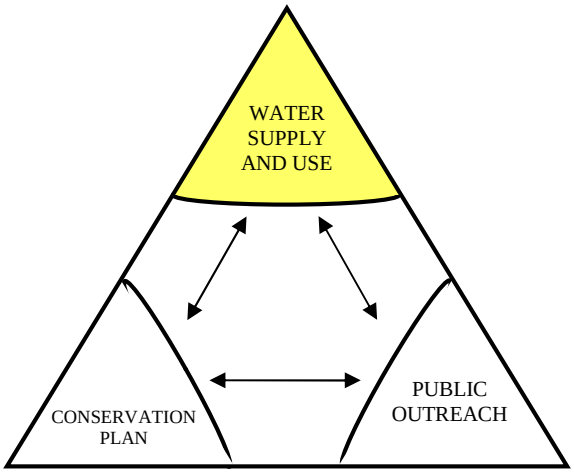
1.5 Developing a Comprehensive Plan



A good water conservation program focuses on four key activities: developing and sharing knowledge about our community's water supply and use history and trends; developing a complete inventory of water conservation options; preparing a well-thought-out action plan that addresses needs during normal and drought conditions; and listening and communicating this information to residents, businesses and other users. These components are interrelated.

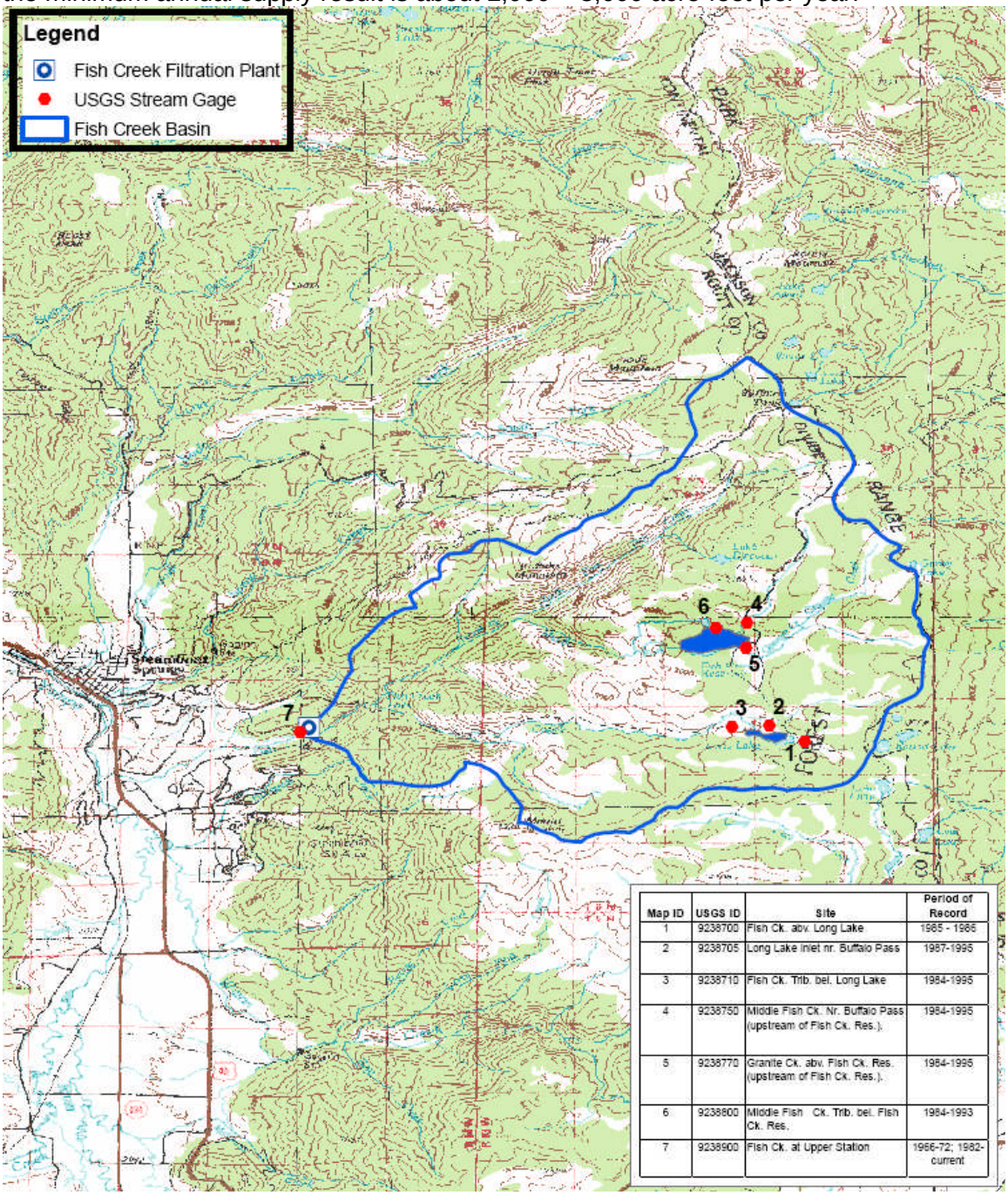
2.0 WATER SYSTEM PROFILE – UNDERSTANDING THE RESOURCE

2.1 Water Sources and Influences



The primary source of raw water in Steamboat Springs is the 22 square mile Fish Creek Basin, located east of the city. Supplies are in the form of in-stream flows and storage impoundments

at Fish Creek Reservoir and Long Lake. The firm yield of Fish Creek Basin is 7000 acre feet (AF). The Fish Creek Filtration Plant filters this raw water to EPA drinking standards before it is distributed to the community. Infiltration galleries-wells, constructed in the alluvium of the Yampa River, provide additional (25%) potable water during the summer. According to the Steamboat Water Supply Master Plan, the combined reliable yield of the well system based on the minimum annual supply result is about 2,000 – 3,000 acre-feet per year.



Map ID	USGS ID	Site	Period of Record
1	9238700	Fish Ck. abv. Long Lake	1985 - 1986
2	9238705	Long Lake Inlet nr. Buffalo Pass	1987-1995
3	9238710	Fish Ck. Trib. bel. Long Lake	1984-1995
4	9238750	Middle Fish Ck. Nr. Buffalo Pass (upstream of Fish Ck. Res.).	1984-1995
5	9238770	Granite Ck. abv. Fish Ck. Res. (upstream of Fish Ck. Res.).	1984-1995
6	9238800	Middle Fish Ck. Trib. bel. Fish Ck. Res.	1984-1993
7	9238900	Fish Ck. at Upper Station	1966-72; 1982-current

Figure 2.1 Fish Creek Drainage Basin Map from Steamboat Water Supply Master Plan Nov. 2008

The City and MWW District service areas are shown in the map below:

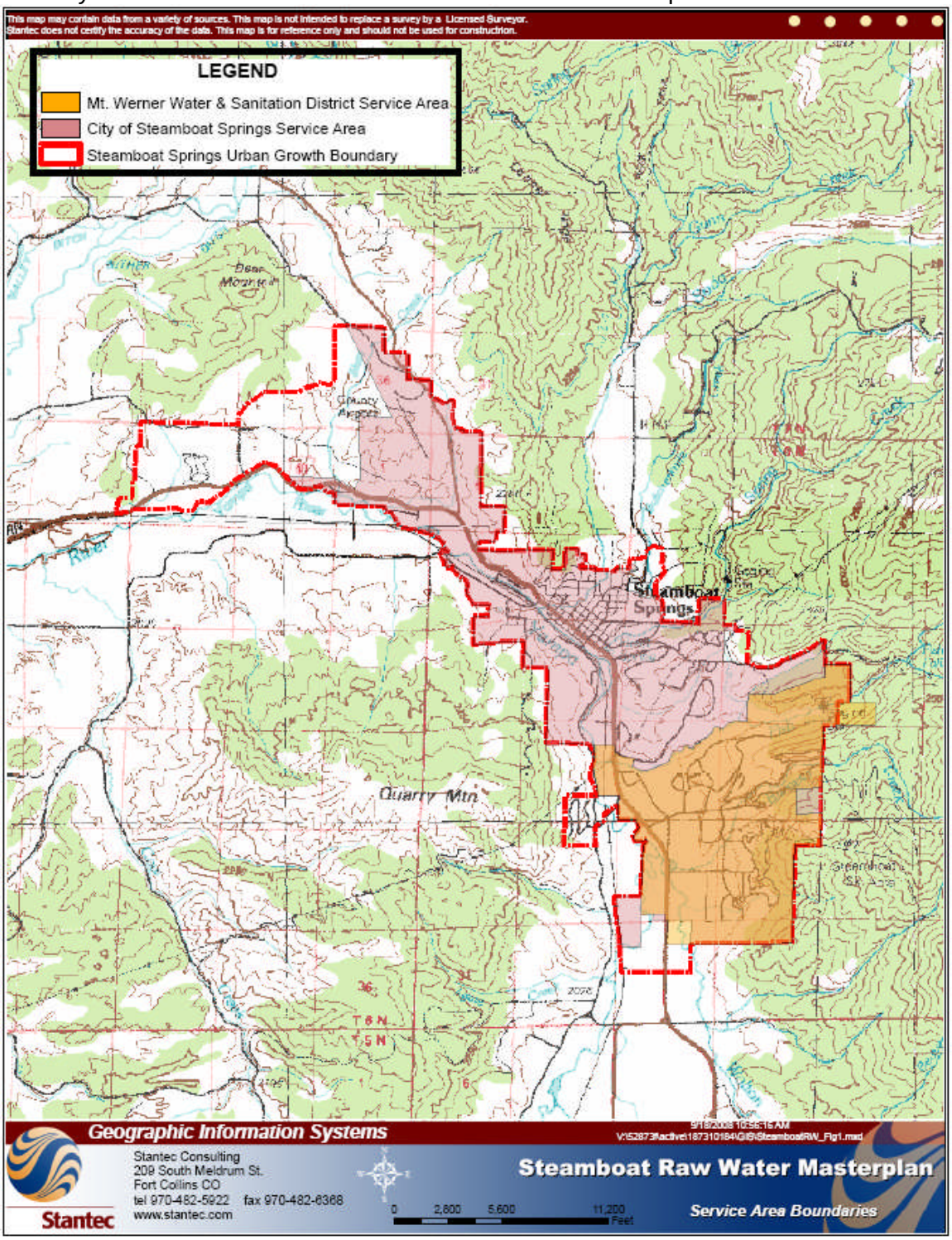


Figure 2.2 Water Supply Service Area Map from Steamboat Water Supply Master Plan, Nov. 2008

The service area is approximately 10 sq. mi., with 6 sq. mi. serviced by the City and 4 sq.mi. serviced by the MWW District.

Climate

Annual precipitation in the Steamboat Springs area ranges from 47 inches on Rabbit Ears Pass to 58 inches on Buffalo Pass, but it is the climate and weather of the valley floor that drives our personal water use decisions. This semi-arid climate averages 24 inches of moisture per year. Precipitation varies greatly in the valley month-to-month and year-to-year as shown in the figure below.

Figure 2.3 Cumulative Precipitation

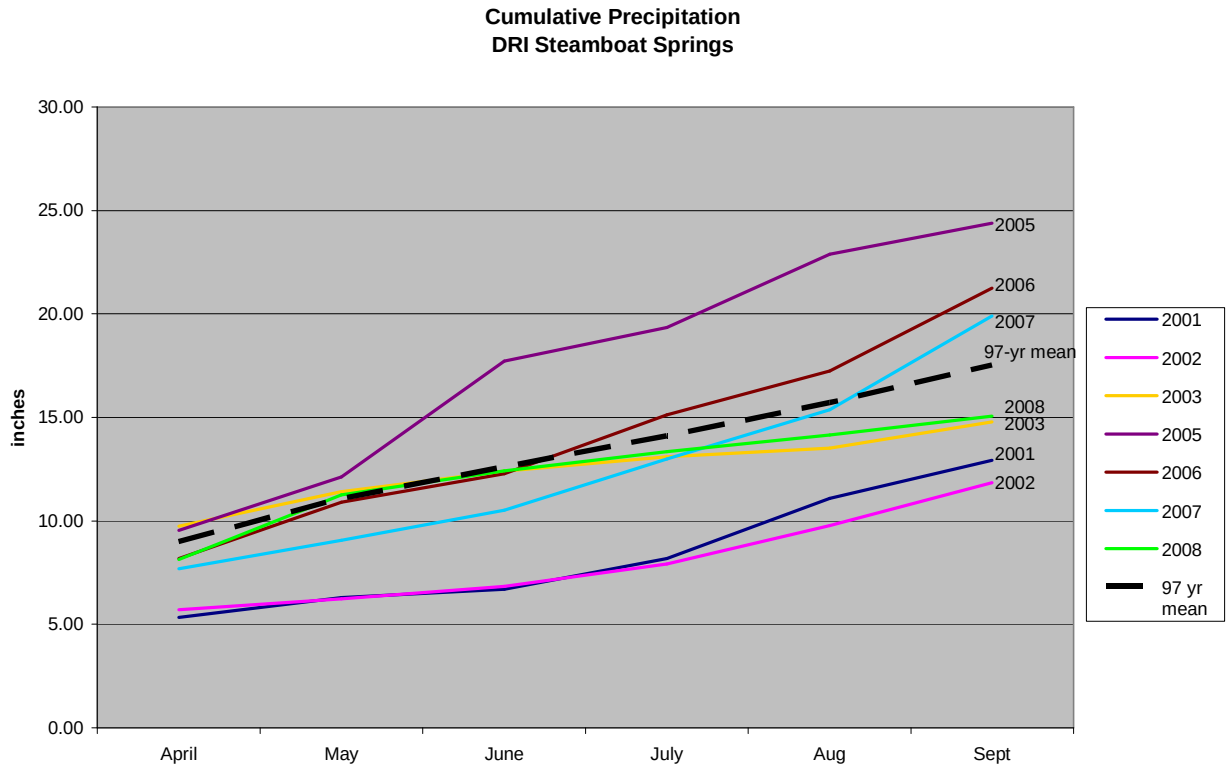
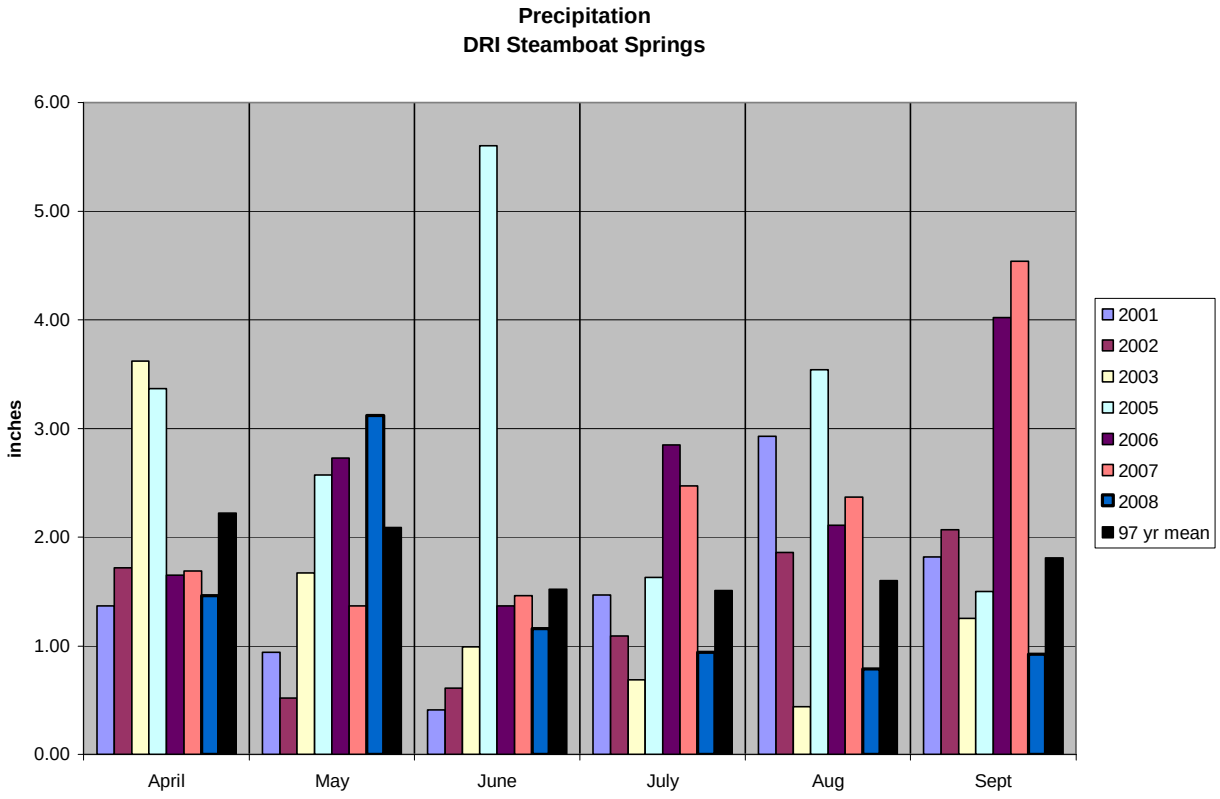


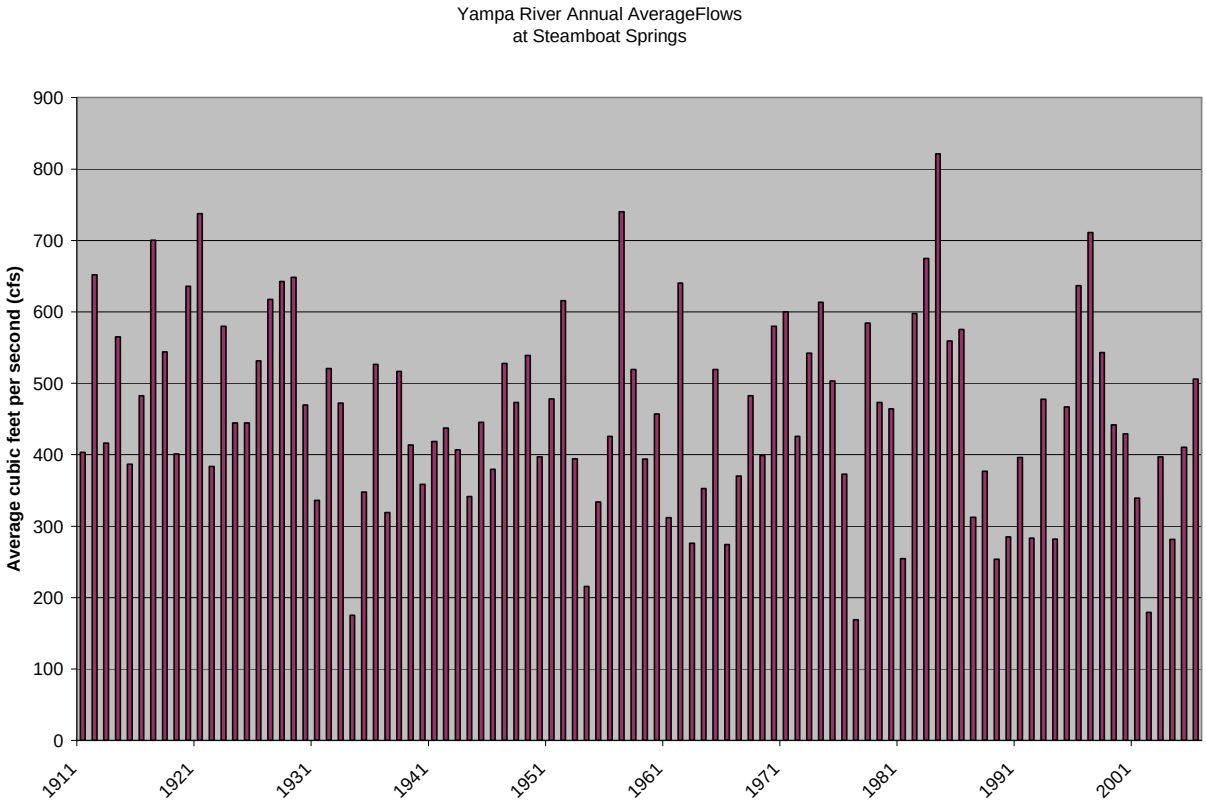
Figure 2.4 Steamboat Springs Precipitation



2.2 Raw Water Supply & Storage

Flow statistics for Fish Creek are only available for the period 1967-2007. However, we have almost 100 years of flow records for the Yampa River. This bar chart can serve to illustrate the annual variability of riparian flows in the Yampa Valley over the past century. Since 1911, Yampa River annual flows have averaged 458 cfs. During that time, there have been four years when river flows fell below 50% of average: 1934, 1954, 1981, and 2002. Upriver dam construction has also caused some fluctuations.

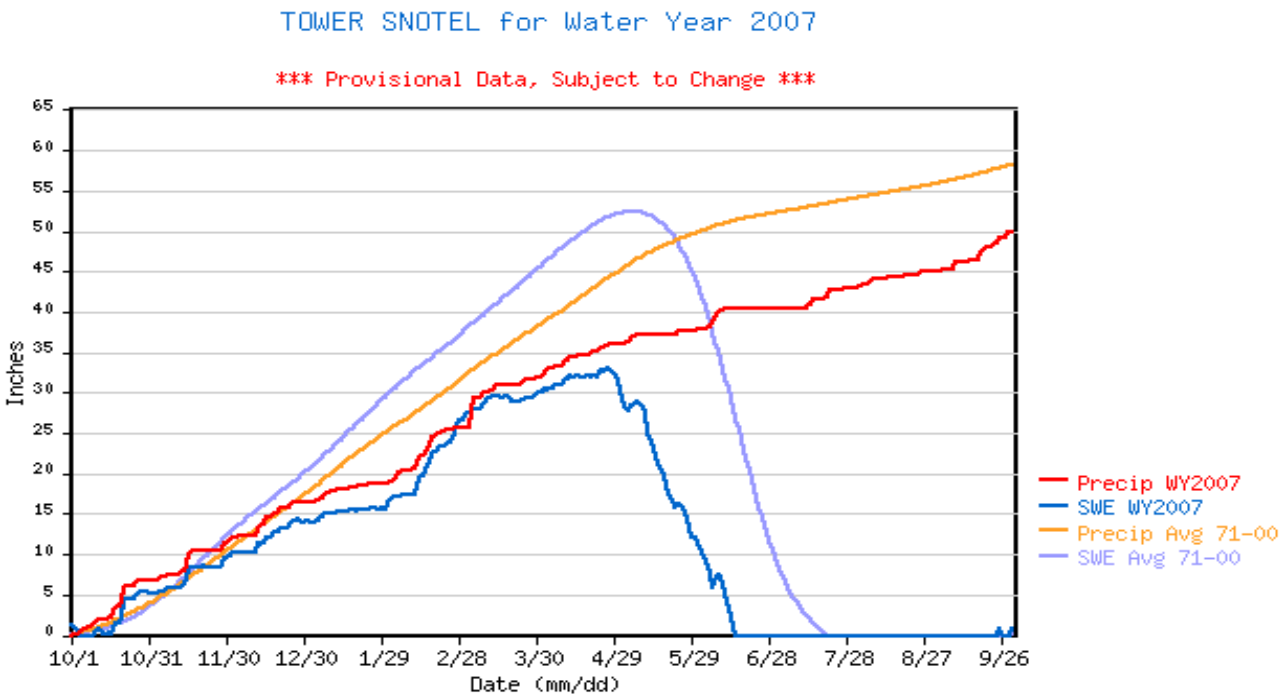
Figure 2.5 Yampa River Flow



Water is stored in two physical phases: solid snow and liquid water. The snowpack on Buffalo Pass at the headwaters of Fish Creek constitutes our seasonal reserve which, melting slowly, supplies water for our in-stream flows and for storage in our two reservoirs, Fish Creek Reservoir and Long Lake. Cool temperatures at altitude typically conserve the snowpack into late-June allowing run-off to continue into mid-July and well into our irrigation season in the valley below.

The NRCS Tower SNOTEL site records for WY2007 show below average precipitation and SWE (the water content of the winter snowpack) through the winter of 2006-2007. The WY2007 patterns followed those of the WY2002 drought year very closely. A below average April 1 SWE of 30.8 inches, followed by below-average precipitation and above normal temperatures in April, May, and June ensured an early disappearance of the snowpack and an early runoff in the Fish Creek drainage basin.

Figure 2.6 2007 Snotel Data

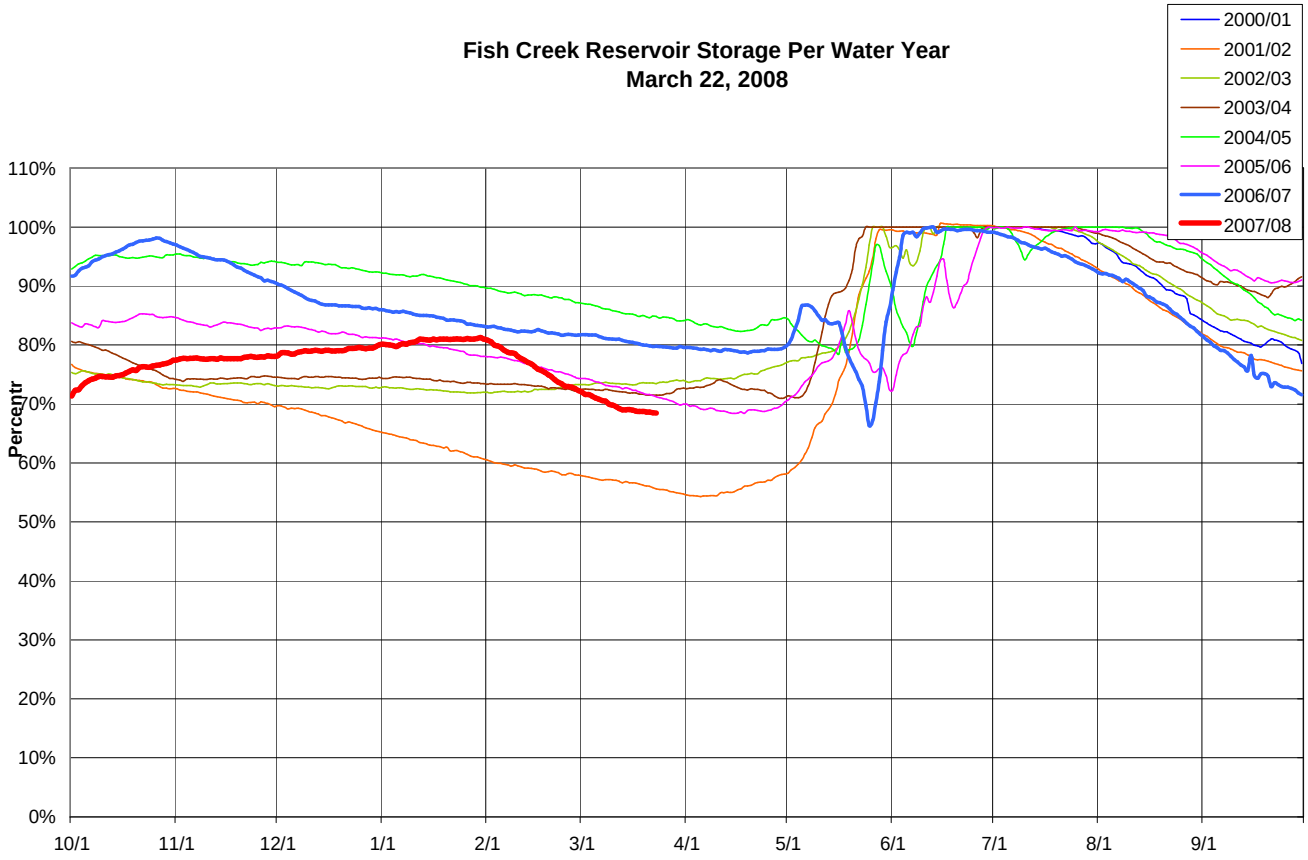


The City owns Fish Creek Reservoir (4167 AF) and Long Lake Reservoir (396 AF). The Mount Werner Water District operates the reservoirs. The City, the District, the Colorado Conservation Board, and Department of Wildlife each have water storage rights in Fish Creek Reservoir as follows:

City of Steamboat Springs	2116 AF
Mount Werner Water District	821 AF
DOW	1030 AF
CWCB	200 AF

Under a drought declaration the City and the District may use water stored in the Department of Wildlife fisheries pool.

Figure 2.7 Fish Creek Reservoir Storage

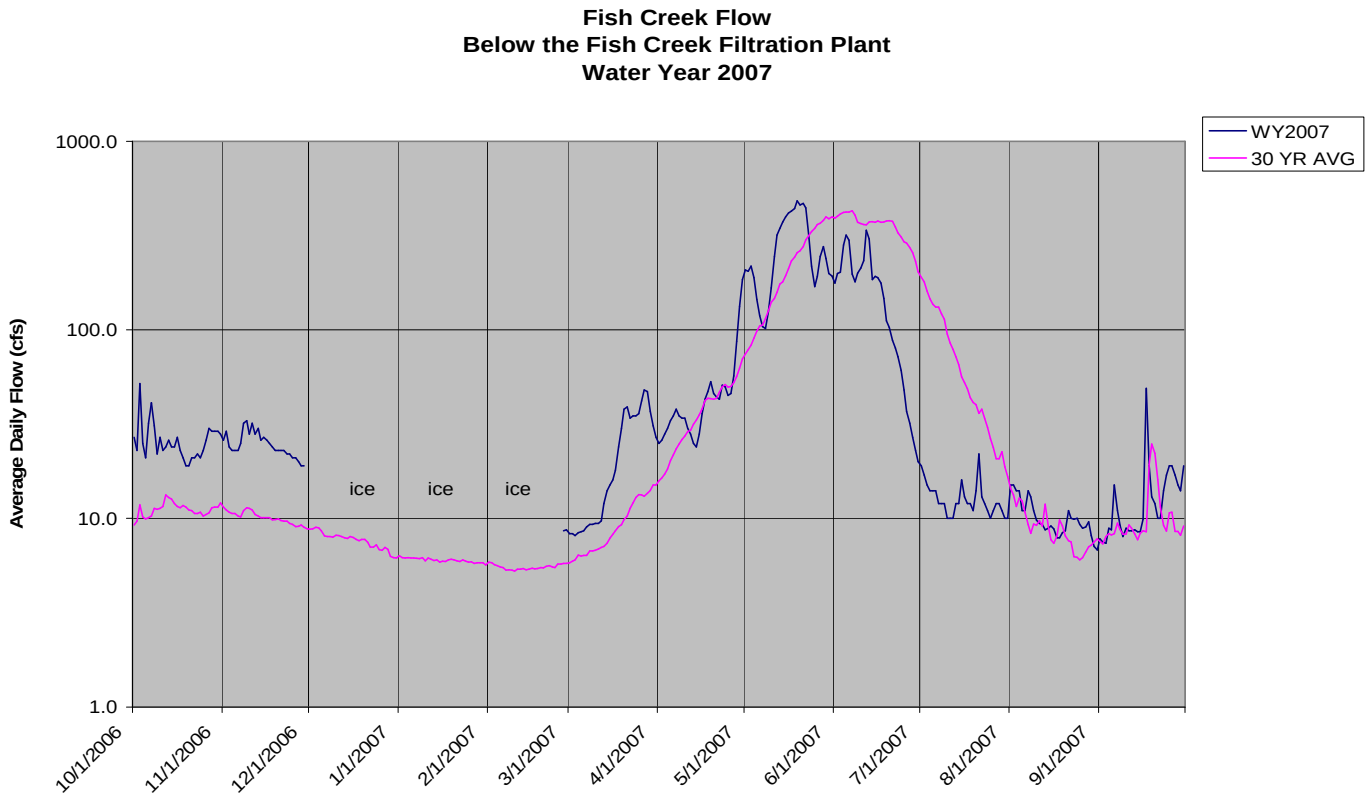


2.3 In-stream Water Rights

The City and the District own the most senior in-stream water right on Fish Creek, the Hoyle & Knight Ditch 8.3 cfs (1889). The District holds 5.8 cfs and the City 2.5 cfs of this water right.

The graph below illustrates the variability of flow through the year for Fish Creek. This graph shows how the 2007 Spring runoff occurred a month earlier than the 30-year average due to below normal precipitation in April, May, and June and above average temperatures. Flows at the Fish Creek Gaging Station, located immediately downstream of the Fish Creek Filtration Plant, are affected by reservoir releases, by diversions to the Fish Creek Filtration Plant, and by minor transit losses from evapo-transpiration.

Figure 2.8 Fish Creek Flow



3.0 SITUATIONAL ANALYSIS

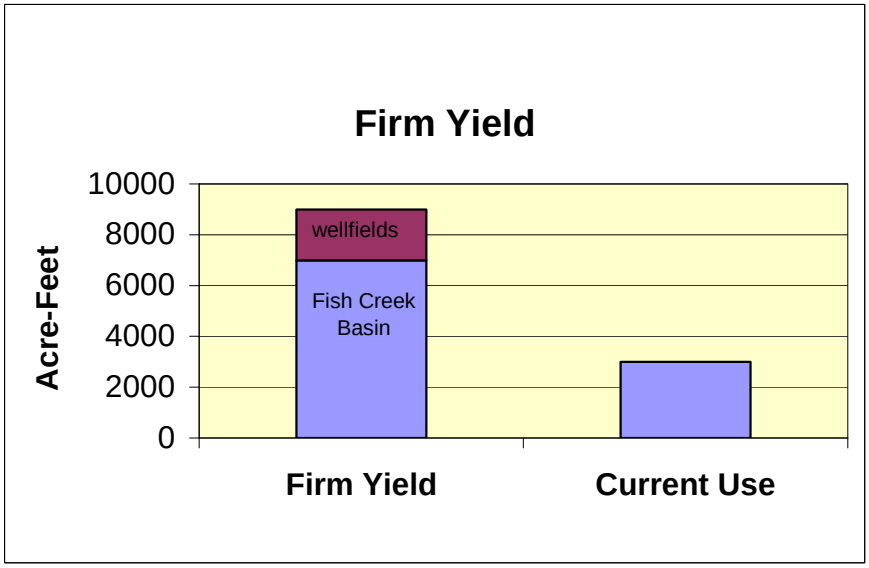
3.1 Firm Yield

FIRM YIELD

A water utility often expresses available supply as "firm yield." Firm yield is the dependable amount of water from our raw water collection system. Estimates of firm yield focus particularly on historic periods of low precipitation and stream flow to predict how much water, or yield, can be expected from the system year in and year out.

Firm yield is an estimate rather than an exact calculation. Of the many factors, weather is perhaps the most inexact aspect of firm yield estimates. However, it is possible that the Steamboat area could experience a drought more severe than has ever been recorded, and it could stress the water supply system even more than was accounted for in the firm yield estimates. However, for what can be reasonably foreseen based on climate records and usage data, the firm yield estimate appears to be a relatively safe, prudent way to view our water supply.

Figure 3.1 Firm Yield and Current Water Use



The firm yield of Steamboat's water system is estimated at 9000 AF per year including 7,000 for Fish Creek Basin and 2,000 AF for the Yampa wellfields. While it appears that this is ample water to meet our current and future needs, most of the water available in the Fish Creek Basin runs off by mid-July and, for the following ten months, the community must live on the most senior in-stream flow rights and the storage available in the two reservoirs.

An AF is approximately 326,000 gallons of water - an amount that would cover one acre of land to a depth of one foot, or a soccer field to a depth of 10 inches. This amount of water serves the needs of about four people in a year at their homes (or 1.7 homes with 2.35 people per household) and their offices, parks recreation centers, shopping centers, etc.

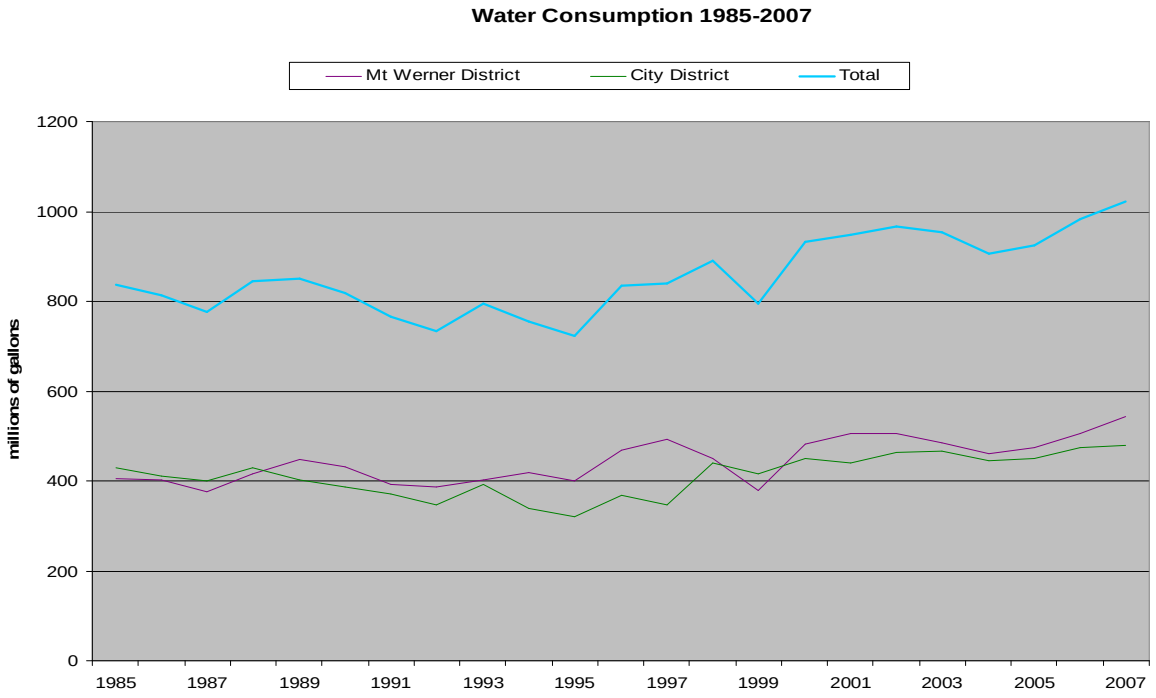
3.2 Current Demand

Water use is the amount of water customers consume; it is subtly different from water demand. Water demand is the amount customers would use without any restrictions placed on that use. Demand can be different than use because demand reflects an unrestricted use of water. Everyday conservation of water is not considered a restriction of water use.

In 2007 our community consumed more than a billion gallons of potable water. During the course of an average year, the District accounts for approximately 52% of total water usage; the

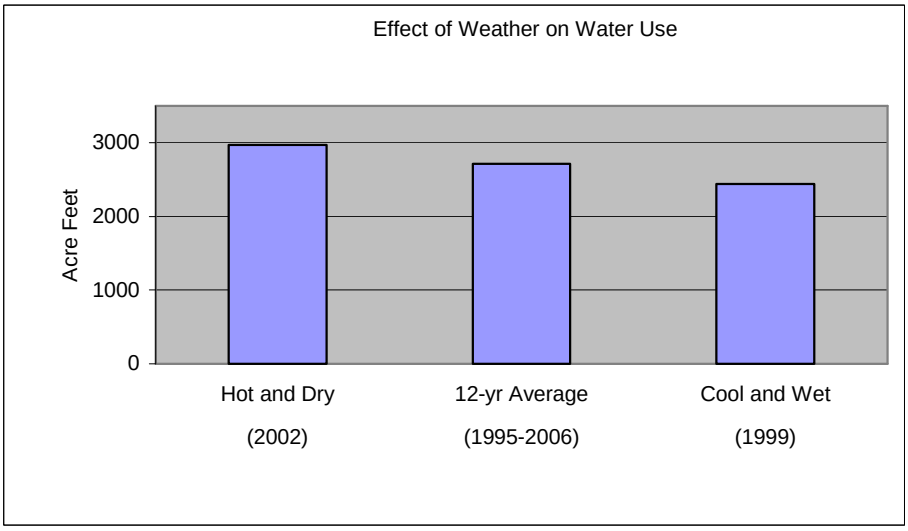
City accounts for approximately 48% of total usage, with the District consuming more than the City District in the high tourist seasons and less in the shoulder seasons.

Figure 3.2 Historic Water Consumption



Summer water usage correlates with summer temperatures and precipitation.

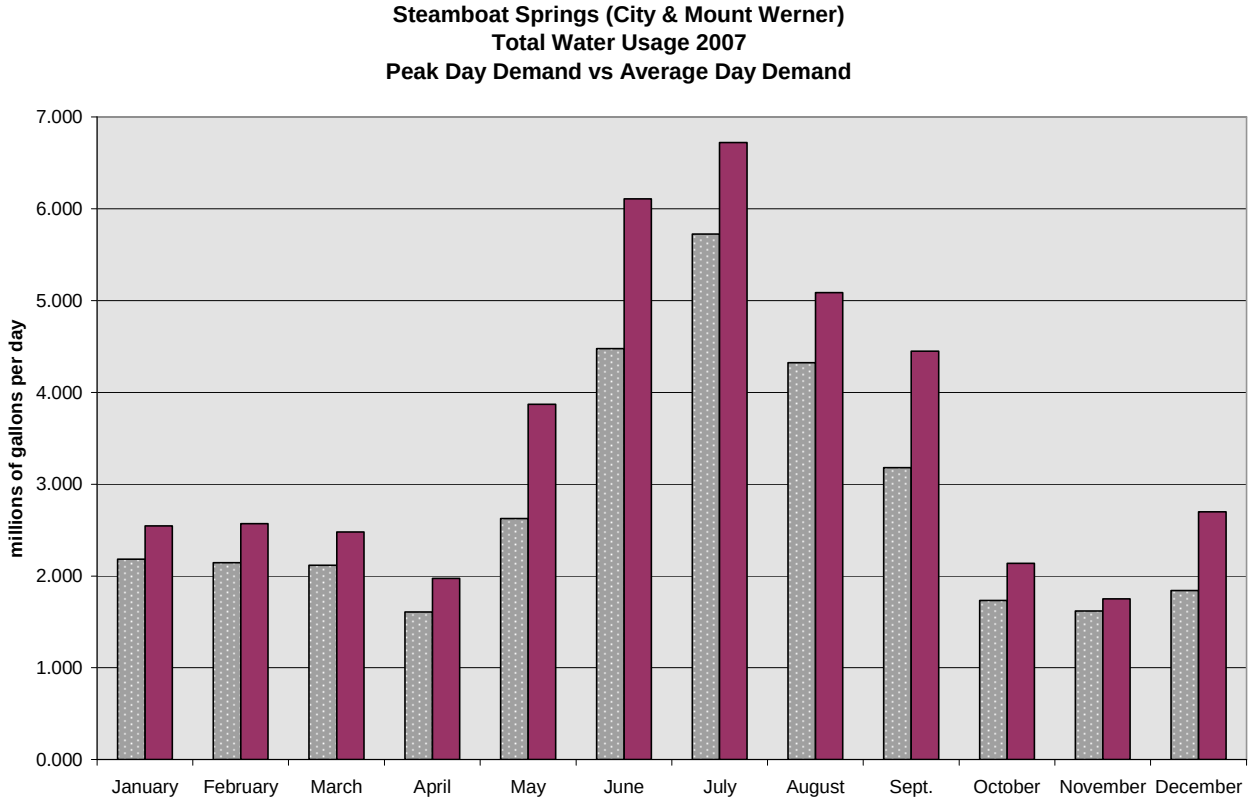
Figure 3.3 Weather and Water Use



Water usage triples from winter high season to summer high season. Every summer, irrigation for landscaping strains our ability to provide filtered water for all users. Demand on peak days can exceed average daily demand by more than 40%. The City and the District must maintain

filtration capacity at the filtration plant that is sufficient to meet the 7 to 10 peak-demand days each summer.

Figure 3.4 2007 Water Usage

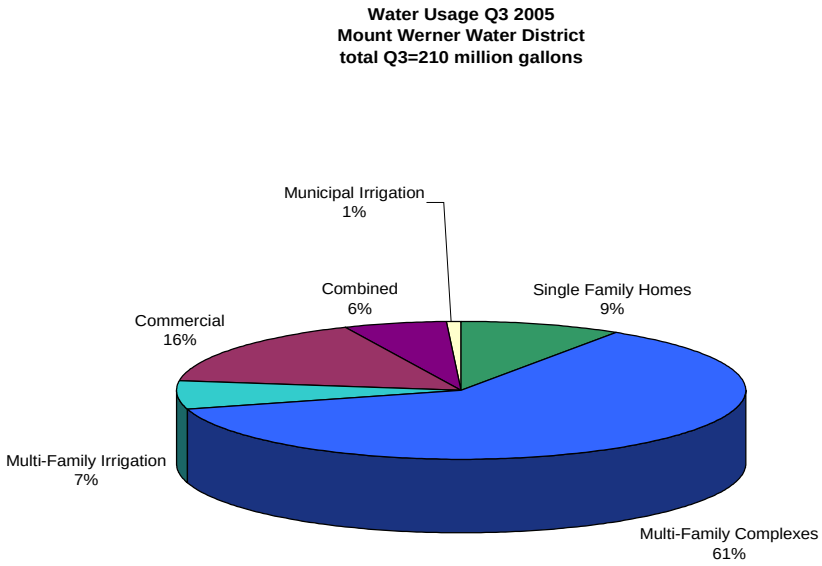


Current Annual Water Use

The current (2008) average annual water use of the Steamboat Springs community is approximately 3,000 AF per year in a service area roughly 10 square miles. The served population in our community is different than that of traditional rural communities in that the resort area served by Mount Werner Water District includes a transient population of part-time residents with second homes and an even larger population of destination resort visitors and seasonal tourists.

Reflecting its resort character, managed multi-unit properties account for 68% of usage in the Mount Werner Water District followed by commercial properties (22%) and single-family homes (9%).

Figure 3.5 Water Usage Breakdown



The City Service Area follows more traditional usage patterns: Single-family homes account for most of the water used followed by commercial, then multi-unit properties.

Growth in the Mount Werner Water District is limited to build-out and redevelopment with its roughly 4 square mile area; The City, however, has significant growth potential in the West Area between Old Town and Steamboat II.

The End of the Line

It is important to note that water use and the capacity of the wastewater (sewage) treatment plant are interrelated. The current capacity of the Steamboat Springs Wastewater Treatment Plant (WWTP) is 12 MGD. In 2008 the WWTP treated over a billion gallons of wastewater, costing over a million dollars. A portion of treated effluent is put to beneficial use to irrigate a hay meadow. Water conservation efforts, especially indoor usage reductions, will help reduce operating costs associated with wastewater treatment, as well as add years to the life of the plant.

4.0 MEETING FUTURE DEMAND: PROPOSED WATER SUPPLY FACILITIES

4.1 Projected Demand

The City of Steamboat Springs Planning Department currently utilizes a 2.2% per year population growth estimate. Current (2008) city population is estimated at 12,130.

Extrapolating current population with the growth rate and utilizing gallon per capita per day peak demand water conservation targets in Section 1.2, peak demand residential water use with and without conservation can be estimated (see figure below).

Table 4.1 Projected Population and Water Use

Year	Projected Population	Projected Peak Demand Water Use w/out Conservation MGD*	Projected Peak Demand Water Use With Water Conservation at Specified Targets in MGD*
2008	12,130	6.8	
2015	14,126	11.0	9.9
2020	15,750	13.1	11.1
2025	17,560	14.9	12.0

*This number is for residential demand only. It is difficult to project tourism-related demand due to major fluctuations.

4.2 Ability to Meet Future Demand

The Steamboat Water Supply Master Plan recommends that a Water Conservation Plan and a Drought Response Plan be developed and adopted. The plan indicates there is future water supply source expansion potential via modest expansion of the wells (2,000 AF), and access to Elk River sources (1,000 - 3,000 AF). The City and the Mount Werner Water District have tentative plans to increase the number of infiltration bays at the Fish Creek Filtration Plant beginning in the year 2012.

Uncertainties for long range water supply planning include the possibility of a 1922 Water Compact call on the river, a large scale fire in the Fish Creek basin, annexation of land and related development west of Steamboat Springs, climate change, and extended drought. These uncertainties make an even stronger case for water conservation.

The Steamboat Water Supply Master Plan (Nov. 2008) section 5.1.3 estimates the ability to meet future demand as follows:

Table 4.2 Meeting Future Demand

	City	District	Combined	
	Average Day (mgd)	Average Day (mgd)	Average Day (mgd)	Annual (AF/yr.)
Current (2007) Demand	1.32	1.49	2.80	**3,141**
2027 Projected Demand:	3.81	2.62	6.43	**7,206**
Firm Yield/Supply:				
Fish Creek Basin				**7,000**
Yampa River Wells				**2,000 – 3,500**
Elk River Right (conditional)				**769 (w/o storage)** **1,000 – 3,000 (depending upon amount of storage Developed)**

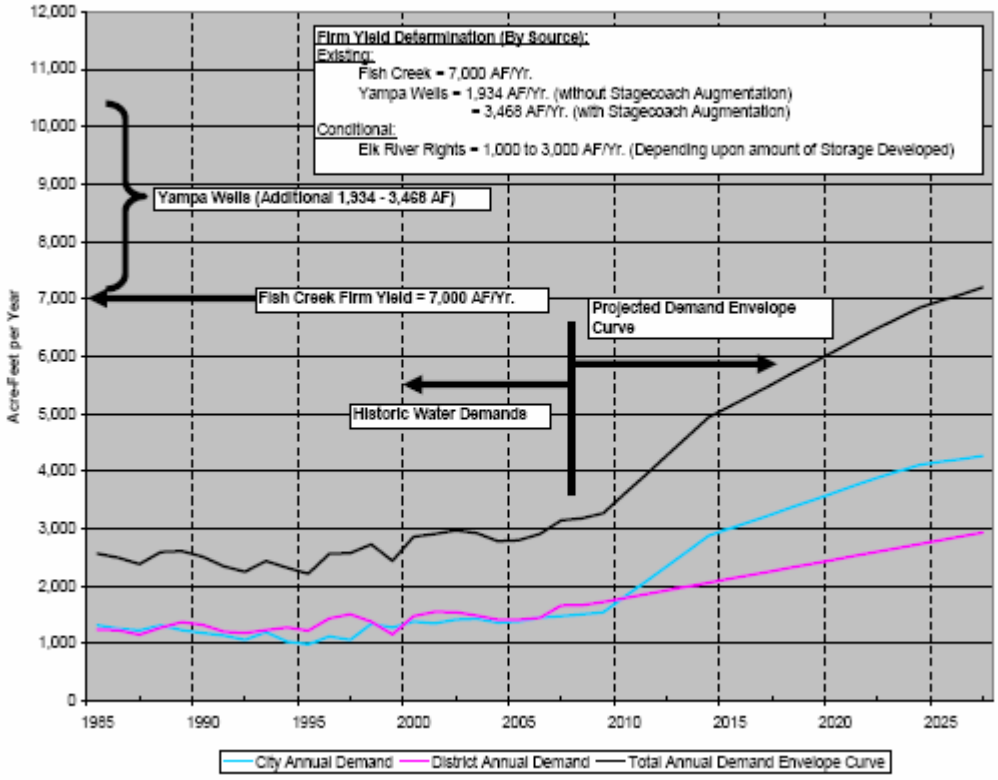


Figure 4.1 Water Demand and Available Supply

5.0 WATER CONSERVATION MEASURES

According to the U.S. Environmental Protection Agency, Americans use 126% more water today than we did in 1950 . Water conservation measures are both behavioral and mechanical in nature. Implementing both can result in significant reductions of water consumption. Small changes in behavior can result in significant changes in water conservation. A partial list of water conservation measures is provided below.

5.1 Best Management Practices – Indoor

- Leak detection and repair
  - Leaks can add up to significant water loss - one drip per second = up to 2,700 gal/yr
- Replace or retrofit appliances and fixtures
  - Toilets
    - 25% of water going into the home is flushed down the toilet
    - installing low flow, dual flush or even toilet dams can reduce this amount significantly
  - Install Water Saving Shower Heads – an effective and inexpensive way to save water
  - Faucet Aerators – cost effective and easy to install
  - Dish washers

        - Older models use up to 13 gal/wash vs. new models ave. 4 gal.
    - Clothes washers
        - Older models use up to 40 gal/wash vs. new model ave. 27 gal.
    - Install on-demand hot water heaters or hot water circulating pumps

- Behavior changes
    - Shorter showers
        - A 5 minute shower uses about 10 gal. - a bath uses about 40 gal.
    - Don't leave water running needlessly
        - Running water while brushing teeth can use up to 4 gal. or 2 gal./minute. Brushing with tap off uses about .25 gal.
    - Wash only full loads (clothes, dishwasher)
    - Use bucket to wash car instead of hose
        - A hose uses about 140 gal/hour
- Re-use water whenever possible
    - Example – reused dishwater can be used to water plants
- Water audits & tracking
    - Audits help users better understand areas for improvement
    - Learning to interpret a water bill and compare to historic usage is a useful way to manage water use

5.2 Best Management Practices – Outdoor

- No outdoor watering 10AM – 6PM.
- Hose irrigation with spring-loaded nozzle only; no free-running hoses.
- Refrain from tree-planting and the seeding or sodding of new lawns from June15th through August 31st .
- Use native grasses and shrubs or drought-tolerant species on new or re-developing properties.
- Refrain from water-intensive landscapes.
- Limit filling of swimming pools to one filling per year, unless draining for repairs is necessary.
- Potable water should be used for beneficial purposes and waste is discouraged.
- Additional recommended Irrigation practices:
    - Consider xeriscape practices
    - Mulch plants, trees and shrubs
    - Plan landscaping based on sun, moisture, etc.
    - Use drip irrigation instead of spray
    - Install rain shut off or moisture sensors on irrigation systems.
- Sweep impervious surfaces such as driveways, parking areas, walkways instead of power washing or hosing down
- Pools and spas:
    - Cover pools and spas with insulated covers when not in use to reduce evaporation
    - Detect and repair leaks
- Refrain from installation of outdoor water features such as fountains.

5.3 ICI Best Management Practices

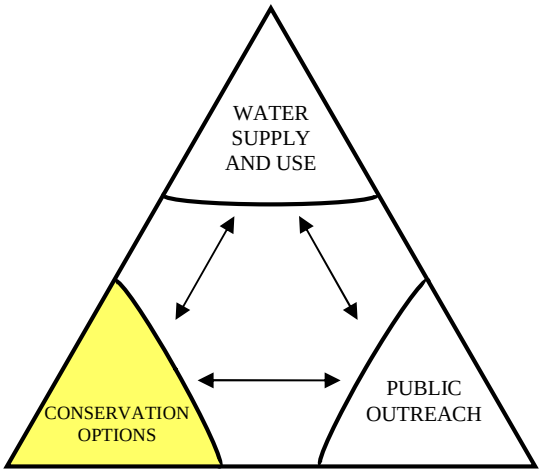
Best Management Practices for industrial, commercial and institutional users should be developed for communication to these users.

- Restaurants
- Lodging properties & hotels
- Ski areas
- Carwashes
- Golf courses
- Laundromats
- Gravel pits
- Public pool facilities
- Institutions
    - Hospitals
    - Schools/college
    - City Parks

5.4 Water District Measures

- Set and communicate goals, targets
- System inspections – loss reduction
- Improve metering accuracy and efficiency
    - Accelerate meter replacement to radio transponders
- Reduce un-metered use
- Adopt a conservation-based rate structure
- User education
    - General user information on a frequent and ongoing basis
    - Targeted education
        - Focus on large users such as lodging properties, restaurants
        - Provide workshops and other materials for irrigators, landscapers
- User data tracking, data management, communication
    - Web-based software for live reporting
- Encourage building code changes
    - Work with architects, plumbers, planners
- Implement rebate and other incentive programs
- Allocate ongoing funds for water conservation programs

6.0 MEETING STATE-MANDATED CONSERVATION MEASURES



State of Colorado Mandate

The Colorado Water Conservation Act of 1991 and amended in 2004, C.R.S.§37-60-126, created the Office of Water Conservation and Drought Planning (OWCDP) and requires entities that supply 2000 acre-feet or more of water annually to develop, adopt, make publicly available, and implement a water conservation plan. Plans must be submitted to the Colorado Water Conservation Board (CWCB) which has developed guidelines that are required to be met prior to their approval.

The City Service Area and the Mt. Werner District each fall below the 2000 acre-foot threshold mandated by C.R.S.§37-60-126. However, together they supply 3000 acre-feet to their combined constituencies through the identical water supply system. While the City and MWW technically do not fall under the state mandate, the two entities should begin to prepare to meet the requirements of this statute in the future.

This community water conservation plan has been developed using guidance provided by the CWCB. However, this document is not intended to fully meet all of their requirements at this time. By addressing the majority of the criteria, much of the ground work for meeting the guidelines can be laid. The CWCB criteria include the promotion of the following:

1) Water-efficient fixtures and appliances, including toilets, urinals, showerheads, faucets, washing machines and dishwashers;
2) Low-water use landscapes and irrigation;
3) Water-efficient commercial and industrial water-using processes;
4) Water reuse systems, both potable and non-potable;
5) Distribution system leak repair;
6) Dissemination of information regarding water use efficiency measures, including public education, customer water use audits, and water saving demonstrations;
7) Water rate structures designed to encourage water use efficiency in a fiscally responsible manner;

8) Regulatory measures, including standards for the use of water efficiency fixtures and landscapes, and ordinances, codes, and other law designed to encourage water use efficiency;
9) Incentives to implement water use efficiency techniques, including rebates to customers or others to encourage the installation of water use efficiency measures.

6.1 Water-efficient fixtures and appliances, including toilets, showerheads, and faucets

Purpose
Use of water saving appliances and plumbing fixtures including toilets, kitchen and lavatory faucets, and showerheads will reduce the rate of water consumption for residential and commercial customers. The Federal Energy Policy Act of 1992 requires that toilets manufactured in the United States after January 1, 1994 be ultra low-volume (1.6 gallon per flush). As growth within the service area continues and natural replacement of old plumbing fixtures occurs through repairs and remodeling, increased efficiency will be achieved through the installation of modern fixtures. The number of residences in the service area will grow significantly over the next 20 years, therefore the water conservation associated with water efficient fixtures and appliances could also be significant.

Current Program
The City has adopted the International Plumbing Code which requires that maximum flow rates and consumption for plumbing fixtures and fixture fittings be met for new construction as follows:

Product	Maximum Water Use
Showerheads	2.5 gallons per minute at 80 psi
Lavatory faucets	2.2 gallons per minute at 60 psi
Urinals	1.0 gallons per flush
Toilets	1.6 gallons per flush

Additionally, the City offered rebates in the mid-1990's to incentivize homeowners to retrofit their plumbing fixtures to more water efficient ones.

Suggested Additions to the Program
The City Service Area and MWW should continue to encourage retrofits.

To demonstrate leadership, the City Service Area and MWW should encourage the installation of retrofit devices in public facilities including ultra low-volume toilets, flow reduction devices, and self-canceling faucets (timed, infrared, or motion-controlled).

For educational purposes, MWW and the City Service Area could assemble and display sample retrofit kits including state of the art fixtures as well as insulation for hot water pipes, dye tablets to detect leaks, etc. The entities should investigate possibilities for working with local plumbing and hardware vendors to educate the public.

6.2 Low water-use landscapes and efficient irrigation

Purpose
An estimated 200 acre-feet of water could be conserved each year if residents and business owners simply cut their use by 10%. This goal could be easily achieved by more careful attention to several fundamental irrigation tips to improve efficiency. Additional water

conservation could be realized by transforming traditional water-intensive landscapes to utilize xeriscape concepts. It is important to remember that, while water used indoors is largely returned to the river through the wastewater treatment plant, irrigation water is consumed and largely removed from the watershed through evaporative processes.

Domestic irrigation accounts for a significant portion of the total current and projected water needs in our community. The need for irrigation water occurs during the months of May through September with peak demands in June, July, and August. Because irrigation is a significant component of the total water usage, increases in efficiency could be beneficial to in-stream flows during the late summer and early fall, and reductions in irrigation return flows could have a positive impact on water quality.

Current Program
Each year, the City Service Area and MWW distribute a doorhanger brochure of irrigation facts and tips. This brochure is targeted at the single-family homeowners who make irrigation decisions every day. For the Mount Werner District, this brochure targets only 9% of water usage in the District. The largest users of water in the District are managed properties representing nearly 70% of water usage. Therefore, in 2007 Mount Werner Water launched a conservation certification program for lodging properties to encourage basic conservation practices and policies.

There is a xeriscape demonstration garden located at the Botanic Park in Steamboat Springs.

The Steamboat Springs Chamber has partnered with Environmental Solutions Unltd, a local environmental consultancy, to implement a Sustainable Business Program, launched in early 2007. Among other initiatives, this program focuses on educating local businesses about water conservation including landscape and irrigation best practices.

Suggested Additions to the Program
Develop a brochure and website links listing low-water demand landscape plants that are suitable for and/or indigenous to our service area. Distribution of the brochure will especially target property managers, single-family homeowners, local nurseries, landscaping firms, and developers.

Hold workshops for professional irrigators and landscapers on best practices and new technology. Consider recognizing publicly installers who complete the workshop. Workshops could potentially be coordinated by the private sector.

Seminars or demonstrations on low water-use landscaping could be encouraged in cooperation with the Yampa River Botanic Garden.

The City Service Area and MWW District should promote irrigation audits to residential and commercial customers and landscape managers. These audits could be performed by the private sector and would evaluate the efficiency of irrigation systems, practices and timing. Providing product information, for example encouraging a trade-show-type community event, or providing links on the website, would help consumers find water efficient appliances and equipment.

The City could join MWW efforts in encouraging lodging properties to implement more efficient landscape and irrigation practices. Working with the Chamber/ESU program could provide added benefits and outreach.

6.3 Water-efficient industrial water-using processes and commercial use

Purpose
For large volume commercial and industrial users, incremental water savings through the use of water efficient fixtures and guest messaging could amount to significant savings in water use and reduced water, sewer, and energy bills.

The service area includes over 17,200 pillows (available rental beds), more than 100 restaurants, and a number of other large volume users such as the Yampa Valley Medical Center, City of Steamboat Springs parks, and schools. It should be noted that the Rolling Stone Ranch Golf Course leases raw water from Mount Werner Water District for irrigation, and the Steamboat Ski Resort leases raw water for snowmaking.

Current Program
The Mount Werner Water District encourages lodging properties and homeowners associations to place conservation messages in guest rooms encouraging towel and bedsheet reuse. In 2006, the District sourced tent cards and placards from Project Planet and placed them in six area motels and provided the managers with information about how to source additional messaging materials. Several large resort properties in the base area already employ this guest messaging. Many motels do not employ guest messaging because of the high turnover rate in their guest rooms.

Suggested Additions to the Program
The MWW District and City Service Area should continue to encourage the guest-messaging program with hotels and motels.

The MWW District and City Service Area could provide information for restaurants and other commercial establishments to increase awareness about the potential benefits of water-use efficiency measures. The entities could investigate the feasibility and cost effectiveness of a program to encourage the installation of retrofit devices by commercial customers. The entities could also consider working alongside the Steamboat Sustainable Business Program (the Chamber and Lyn Halliday) to support current and on-going efforts already in place regarding educating businesses on water conservation practices and technology.

6.4 Water reuse systems, both potable and non-potable

Purpose
Reuse systems can have a significant positive impact on water use, especially during peak periods.

Current Program
There are no known water reuse systems employed in the service area, however it is believed that some of the car washes recycle water.

Suggested Additions to the Program

The MWW District and City Service Area should encourage the use of treated effluent for landscape irrigation, and industrial purposes that do not require the level of treatment necessary for potable uses. It will help to conserve in-stream flows below municipal diversions, reduce capital costs for treatment and distribution facilities, and reducing operating costs. The City should also consider water reuse systems for proposed developments in the West Area of Steamboat Springs if allowed by the Routt County Environmental Health Department.

6.5 Distribution system leak repair

Purpose
In our community's water system, water distribution losses occur in three forms:
1) metering inaccuracy;
2) unmetered usage;
3) distribution system leakage.

One of the primary effects of distribution system losses is reduced revenue to the districts. This is obvious in the case of metering inaccuracy and unmetered use. However, in the case of distribution system leakage, not only do the MWW District and City Service Area experience higher pumping and treatment costs, but higher volume diversions cause lower flows in Fish Creek and the Yampa River, even though subsurface leakage eventually finds its way back to the stream. Therefore, it is in the best interest of the MWW District and City Service Area to reduce overall distribution system losses to an acceptable level. During the last few years, the MWW District and City Service Area have established programs to improve metering of its customers and reduce losses to the distribution system.

Current Program
The following programs are currently in place and are directed at reducing system losses and achieving the distribution system improvements described above.

Improve Metering Accuracy and Maintenance:
Water meters tend to wear out and slow down with age, failing to register all of the water passing through. Irrigation meters are particularly vulnerable to ice damage. Presently, the MWW District and City Service Area replace failing meters on an as-needed basis.

The MWW District and City Service Area regularly compare customer usage with previous year records. Significant discrepancies trigger a service call to check for possible in-house leaks and the accuracy of the meter. Mount Werner Water is currently retrofitting its meters with radio transponders that can automatically read and report from meters twice a day.

Reduce Unmetered Use:
Fire hydrant water used for fire department training and system maintenance is estimated and reported. The MWW District and City Service Area are alert to unauthorized uses of fire hydrants. The Mount Werner Water District provides building contractors with metered water from their shop at Fetcher Pond.

Detect and Repair Distribution System Leaks:
The MWW District and City Service Area currently identify and repair leaks which are evident in obvious surface flows. Water is tested for fluoride content to determine if it is treated water or groundwater. Booster pump stations and pressure reducing valve (PRV) vaults are routinely checked.

Suggested Additions to the Program
Improve Metering Accuracy and Maintenance:
The entities could adopt a more aggressive policy of systematically changing out water meters on a scheduled basis, according to size, to maintain accuracy. In addition, the City could consider retrofitting meters to include automatic radio transponders that provide daily readings to identify anomalies and possible leaks.

Reduce Unmetered Use:
Fire hydrant water used for fire department training and system maintenance should be estimated and reported.

Detect and Repair Distribution System Leaks:
MWW District and the City Service Area could enhance the program to check water mains and fire hydrants for leakage by pursuing best available technology for leak detection.

6.6 Dissemination of information regarding water use efficiency measures, including public education, customer water use audits, and water-saving demonstrations

Purpose
The ultimate success of water conservation programs depends upon the actions of the people who use the water. Development of a conservation ethic through public awareness and education is therefore necessary to the overall success of this conservation program. Making information available to the public regarding the reasons for water conservation and the available methods of conservation will help to foster such a conservation culture.

Current Program
The MWW District and City Service Area periodically disseminate conservation information through customer newsletters and press releases.

Each spring and fall, the Mount Werner Water District hosts Middle School children at the Fish Creek Filtration Plant where they learn about where our community water comes from and how to use it responsibly.

The City provides tours of the Wastewater Treatment Plant to elementary school students annually.

Suggested Additions to the Program
During National Drinking Water Week in early May, the City and MWW could conduct a water conservation education program in the local elementary and middle schools.

With the assistance of the City and MWW, the Bud Werner Library could establish a water conservation shelf in the resource section of the library. The entities would maintain and update this information on a regular basis.

Consider hosting an annual community event supporting the water conservation education theme. The event could include a “trade show” type exhibit of plumbing fixtures, appliances, landscaping/xeriscaping information, irrigation practices and control devices, etc.

Encourage continued retrofits of old appliances, fixtures and equipment.

Work with property managers and homeowners associations on improvements to units.

6.7 Water rate structures designed to encourage water use efficiency in fiscally responsible manner

Purpose
By reducing water, wastewater, and energy bills customers can be incentivized to implement measures to use water more efficiently and reduce demands. It may also be possible to modify rate structures in a manner that increases financial incentives for residential and commercial conservation.

Current Program
The City and MWW have implemented inclined block rate structures in which the rate per thousand gallons of usage increases for higher levels of use. The City has long used this type of rate structure. In 2007, the Mount Werner Water District introduced its inclined block rate structure: this eliminated the base volume, reduced the base charge accordingly, and introduced a three-tiered rate structure which used Q1 water use statistics to differentiate between indoor base use and discretionary outdoor use. Revenues from the highest-use tier 3 are used to fund conservation programs.

Suggested Additions to the Program
Continue to monitor usage and service revenues to adjust rate structure accordingly. The City might consider a future commercial tiered rate structure and is currently embarking on a water rate study to evaluate alternatives.

6.8 Regulatory measures, including standards for the use of efficient fixtures and landscapes, and ordinances, codes, or other law designed to encourage water use efficiency

Purpose
Regulations to require the use of certain water conservation measures, such as water efficiency standards for plumbing fixtures and use of water efficient landscaping, should be employed to facilitate and enforce implementation of reasonable conservation measures. Districts should encourage local governments to implement these requirements in building codes or as ordinances.

Local governments may need to adopt mandatory measures to protect public health and safety in response to emergency or drought situations:

Colorado experiences a wide range of climatic conditions from year-to-year as well as from season to season. Climatological records and research conducted by the National Center for Atmospheric Research, indicated a pattern of major droughts in Colorado occurring every 20 to 22 years. Water suppliers in the West accommodate this uncertainty through reservoir storage, consideration of "firm yields" in estimates of water availability, raw water supply development, and "demand side" strategies such as voluntary or mandatory restrictions on outdoor water usage. Plans to reduce usage are necessary to stretch the available water supply through periods of drought.

Water supply systems are also at risk from possible forest fire, floods, failure of dams, mains, wells, and contamination of all or part of the raw water supply. In emergency or drought situations, contingency plans should be designed for implementation of mandatory measures in stages that minimize impacts to the economy, life-styles, and environment of the community. Plans should also be flexible in response to worsening or improving conditions.

Current Program
Both the City and Mount Werner Water discourage casual use of potable water. The City adopted an ordinance to discourage waste. In 2007, the District Board of Directors amended the District's Rules and Regulations:
1) to limit the size and consumption of water features in landscape design;
2) to eliminate the 3000SF allowance for irrigated areas in the calculation of tap fees;
3) to raise the tap fee charged for irrigated areas.

The City and the Mount Werner Water District have the authority to levy fines for violations of these regulations.

Suggested Additions to the Program
The City and District will continue to encourage methods for water efficient landscaping and irrigation and to reduce waste.
The City is exploring methods to require future development to address water supply needs.
This Plan provides a recommended three tier preparedness plan for drought and other water emergencies.

6.9 Incentives to implement water use efficiency techniques including rebates to customers or others to encourage the installation of water use efficiency measures

Purpose
In addition to the financial incentives to conserve water, other incentives are possible. However, conservation programs, water audits, education, monitoring and verification of efficiency over time, and incentives for private sector efficiency projects all cost money.

Current Program
The Mount Werner Water District Budget includes a line item (2008 Budget $4,000) to support its conservation initiatives. The revenue collected from Tier 3 users is directed to this purpose.

Suggested Additions to the Program
The City and District should explore partnering with the private sector to provide other forms of customer-targeted education and audit programs for the purpose of broadening the basis of water conservation efforts in the community. Any funding for this purpose from the City would require a new budget line item.

7.0 DROUGHT and WATER EMERGENCY PREPAREDNESS

7.1 Statement of Need

As discussed previously in section 6.8, Colorado experiences a wide range of climatic conditions. Plans to reduce usage are necessary to stretch the available water supply through periods of drought. Water supply systems are also at risk from uncertainties such as forest fires, failure of dams, mains, wells, and contamination of all or part of the raw water supply. The

Steamboat Water Supply Plan identifies a forest fire as being a potential threat to the Fish Creek water supply that should be addressed. It further recommends that a Drought Response Plan be developed for the City and the District.

In emergency or drought situations, contingency plans should be designed for implementation of mandatory measures in stages that minimize impacts to the economy, life-styles, and environment of the community. Plans should also be flexible in response to worsening or improving conditions.

7.2 Proposed Staged Water Use Restrictions

The City Council and MWW Board should adopt a three-stage water use plan that addresses drought preparedness.
Violations of these water use restrictions can result in fines.

7.2.1 Stage 1: The following recommended guidelines are in place at all times

- Potable water shall be used for beneficial purposes and should not be wasted.
- No outdoor watering 10AM – 6PM.
- Hose irrigation with spring-loaded nozzle only; no free-running hoses.
- Discourage tree-planting and the seeding or sodding of new lawns June15th through August 31st.
- The use of native grasses and shrubs or drought-tolerant species on new or re-developing properties is encouraged.
- Water-intensive landscapes are discouraged.
- Swimming pools are limited to one filling per year, unless draining for repairs is necessary.

7.2.2 Stage 2: This stage will be triggered by a drought warning based upon:

- April 1st SWE at the Tower SNOTEL site below 80% of average;
- an early run-off (before July 1) resulting in low flows in the Fish Creek Watershed;
- persistent higher than average temperatures April through August;
- below average precipitation April through August.

The following Stage 2 restrictions are recommended in addition to the year-round recommendations in Stage 1:

- Watering schedule based on the last number of customer street address:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Even	Odd	Even	No Watering	Odd	Even	Odd

- Permits may be secured for newly-sodded lawns and newly-planted trees for up to 14 consecutive days and for newly-seeded lawns for up to 25 consecutive days with the exception of Wednesdays.
- No vehicle washing at residences.
- No washing hard surfaces (i.e., driveways, sidewalks, parking lots, outdoor eating areas).
- No running outdoor water features (including those meeting Mount Werner Water District specifications).

- No use of domestic water for dust control.

7.2.3 Stage 3: This stage will be triggered by a drought declaration or a water supply emergency caused by forest fire or failed infrastructure

The following restrictions include year round recommended guidelines in Stage 1, Stage 2 restrictions, plus:

- No lawn irrigation.
- Suspension of special watering permits including those for newly seeded or sodded lawns.
- Hand watering of trees, shrubs, and flowers, and drip irrigation of trees and shrubs is allowed.
- All businesses including hotels, restaurants and property management companies, will be required to implement Stage 3 water conservation measures including education of owners, tenants and guests.

The entities may impose a total ban on all outside water use in the event of an extreme water system emergency. Any instance of flagrant runoff or waste is subject to penalties. (The City and Mount Werner Water District already have regulations in place.)

8.0 WATER CONSERVATION ACTION PLAN

AREA OF FOCUS	CURRENT PROGRAMS	FUTURE PROGRAMS	PROPOSED ACTION ITEMS
Single family – Indoor	-Retrofitting of older fixtures to more efficient models is encouraged -City adopted International Plumbing Code that requires water conserving fixtures for new construction	-Accelerate retrofit rate through additional education, communication and incentive programs potentially funded through MWW Tier 3 user charges and a newly established City budget line item	-Provide education on water saving appliances such as dishwashers, washing machines, on-demand hot water heaters -Show leadership by retrofitting public facilities -Provide water efficient product list, specs, availability -Provide retrofit information -Host annual community events to showcase better alternatives and water conservation behavior modifications -Consider rebates and other incentives for retrofitting if funding becomes available -Initiate a conservation campaign using media, website and other

AREA OF FOCUS	CURRENT PROGRAMS	FUTURE PROGRAMS	PROPOSED ACTION ITEMS
			communication methods
		-Enhance leak detection & repair education	-Educate public on how much water is wasted through leaks
		-Influence behavioral changes – create a water conservation culture	-Wide dissemination of water conservation practices and tips brochure for households
			-Teach consumers how to read and interpret their bill using a bill insert
		-Reuse programs	-Encourage greywater reuse systems in west Steamboat development (work with County Health Department)
Single Family – Outdoor	-Educational door hanger, bill inserts & customer newsletters are distributed	-Encourage more efficient irrigation methods (e.g. xeriscaping, use of native plants, & new technology	-Implement voluntary watering guidelines
			-Hold water efficient landscape design workshops, potentially coordinated by the private sector
			-Promote irrigation and time clock sensors to reduce irrigation times and/or use drip irrigation
			-Create seminars around demonstration gardens
			-Provide a list of low water demand plants for our area on the website
		-Discourage waste	-Educate users on common sense practices and behavioral changes for lawn & plant watering, car washing, driveway washing, etc.
			-Encourage water audits to be provided by private sector
Multi-family &	-MWW has initiated a		-Work with Property Managers

AREA OF FOCUS	CURRENT PROGRAMS	FUTURE PROGRAMS	PROPOSED ACTION ITEMS
Managed Properties - Indoor	property management conservation certification program -MWW encourages multi-unit customers to place water conservation messages in rooms		& HOAs (possibly in conjunction with in-place efforts by Steamboat Sustainable Business Program) to get the message out and assist with implementation of indoor use conservation measures and education -Work with suppliers of appliances (dishwashers, commercial clothes washers, etc.) to promote availability, cost-competitiveness, etc.
Multi-family & Managed Properties – Outdoor	-MWW runs a water conservation certification program for property managers and their HOA clients -MWW restricts size and consumption of water features in landscape design -MWW raised the tap fee charged for irrigated areas -City is initiating a water rate study -Both the City & MWW use a tiered water rate structure which increases the rate for discretionary outdoor uses. MWW-irrigation meters are charged at the second tier discretionary rate. City – tiers based on gallons used.	Enhance existing programs and expand initiatives	-Continue to work with Property Managers & HOAs (possibly in conjunction with in-place efforts by Steamboat Sustainable Business Program) to get the message out and assist with implementation of outdoor uses and best practices including xeriscape, native plant use, new irrigation technology. City to consider becoming active in this program. -Implement voluntary watering schedule -MWW to consider incentives and/or rebates for complying with conservation guidelines -Look into establishing ET irrigation guidelines -Hold water conservation design workshops/seminars for architects, landscape design companies, plumbers, planners, developers – potentially through private sector

AREA OF FOCUS	CURRENT PROGRAMS	FUTURE PROGRAMS	PROPOSED ACTION ITEMS
	-The Steamboat Sustainable Business Program coaches property management companies on all aspects of water conservation		-Create seminars around water efficient landscape model at Botanic Garden -Provide list of low water demand plants indigenous to this area on MWW website -Consider professional irrigator education program, possibly administered by private sector
ICI: Institutional, Commercial, Industrial – Indoor		Raise water conservation awareness Provide cost benefit analysis information for retrofitting equipment and practices	-Initiate education program and materials regarding water wasting practices and equipment and alternatives (e.g. once through water cooling systems, reuse opportunities, etc.) -Encourage water audits for large scale users (provided by private sector) -Work with large volume users
ICI: Outdoor			See Multi-family and Managed Properties – Outdoor (above)
Agricultural			-Collaborate with agricultural organizations to assist in getting water conservation information to this sector
Districts	-City & MWW use 3-tiered water rate structure (inclining block rate); MWW: ongoing installation of radio transponders that relay meter information to a central location; recommended guidelines in place for certain large uses	Continually enhance existing efforts	-Investigate feasibility of forming a voluntary Water Suppliers Group comprised of representatives from all water supply entities. The water suppliers group should establish long-term goals and publicize a set of uniform conservation messages. -Implement more aggressive program to systematically change out water meters

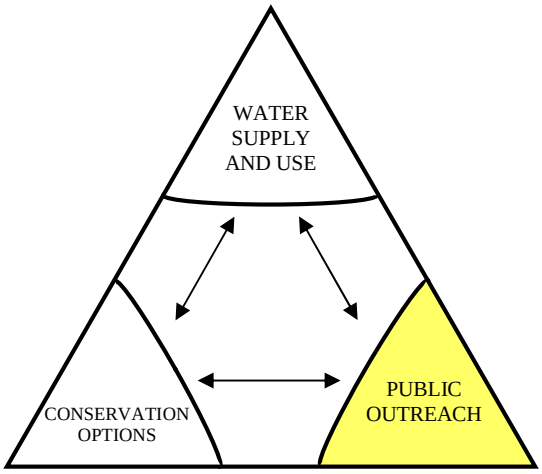
AREA OF FOCUS	CURRENT PROGRAMS	FUTURE PROGRAMS	PROPOSED ACTION ITEMS
	(pool filling, lawn watering); uses revenues from highest use tier 3 to fund water conservation programs; has GIS infrastructure mapping in place -Routine maintenance at facilities -MWW employees and field personnel help answer questions	Boost funding for water conservation projects	-City is evaluating retrofitting automatic radio transponders to meters to achieve daily reading and identify high use and possible leaks. -Further reduce overall distribution system losses by improved monitoring of system leaks/loss and repair. -Check water mains & fire hydrants on a more frequent basis -The City is pursuing GIS-based infrastructural mapping and development of associated data base. -Explore additional technology for data management – e.g. web-based tracking, query and reporting software -City and MWW should monitor fire hydrant water used for fire training and system maintenance -Publicly recognize wise water users. -The City is exploring methods of requiring new development to address water needs. -Solicit stimulus monies and/or other outside funding -City should look at a line item in the budget for water conservation
School& Youth Programs	-MWW hosts middle school students at the filtration plant to	-Enhance to include broader audience	-Add programs as funds allow – e.g. family event

AREA OF FOCUS	CURRENT PROGRAMS	FUTURE PROGRAMS	PROPOSED ACTION ITEMS
	introduce them to the water system and conservation -City provides WWTP tours to elementary school students -Boy Scouts assist MWW in distributing fliers		-Initiate an elementary and middle school program during National Water Conservation Week in May -Establish water conservation shelf in the Bud Werner Library -Enhance Boy Scout and Girl Scout involvement
Ongoing Public Education and Outreach	District and City distribute brochure to users irrigation tips to avoid water waste	Foster a conservation culture through continuous and expanded quality programs that focus on awareness, education, and communication	-Allocate funds for media messaging and other outreach efforts -Raise community awareness by publicizing conservation messages through a media campaign -Encourage public discussion on water use priorities and ways to conserve water -Publish a "water waste reduction" brochure for households and aggressively promote it. -Contact high-volume commercial and institutional water users to solicit their ideas and support. -Publicize efforts of individuals and business customers as examples. Work with the Steamboat Sustainable Business Program to support ongoing efforts. (e.g. workshops targeted to lodging properties and restaurants is currently planned) -Encourage government entities to demonstrate leadership by conducting

AREA OF FOCUS	CURRENT PROGRAMS	FUTURE PROGRAMS	PROPOSED ACTION ITEMS
			water audits on their facilities and large irrigated public areas and by implementing water conservation measures; publicize the results. -Hold workshops and "trade show" type events to showcase state of the art technology, appliances, fixtures, etc. Target special groups such as landscapers/professional irrigators, architects -Using metrics identified in this report, communicate to the public through the media, newsletters, etc. the progress being made
Drought & Water Emergency Preparedness	A tiered conservation plan is recommended in this document	Make recommended plan official	-Adopt tiered drought and water emergency preparedness plan – all water suppliers -Develop implementation strategy and communication plan

Timelines for the above components of the Action Plan will need to be developed and will address available funds and resources.

9.0 PUBLIC OUTREACH



9.1 Establishing a Dialogue

As mentioned in previous sections of this Plan, to be successful and effective, water suppliers must effectively communicate a water conservation culture to the public.

Effective communication requires the effort of all stakeholders including users, water suppliers and local governments. Further, this communication should not be one-way. Water suppliers and local governments must listen and learn and engage residents and business owners in an exchange of views and ideas.

Coordination of actions and conveying a consistent message among community water suppliers is also crucial to effective communication within the community to avoid confusing the public. An example is the "oasis effect" whereby the customers of one supplier are perceived to be using more water than the customers of a neighboring supplier. For this reason, community water suppliers should form a community water suppliers group. This would include the managers from the City of Steamboat Springs, Mount Werner Water, Steamboat II, and Tree Haus as well as smaller water purveyors such as Dakota Ridge and Alpine Meadows.

The community water suppliers group would

- develop and adopt a uniform set of conservation policies;
- implement these policies uniformly in their respective jurisdictions;
- coordinate media communication of these policies to their customers.
- develop a plan for enforcement in case of mandatory emergency measures are enacted.

Maintaining Credibility

It is essential that area residents and business owners understand the water conservation program. They need assurance that all service area customers are participating in this program.

Making the Rounds

- Customers. All customers will need to understand why water conservation is beneficial to the community. The media will be one of the best means to inform the public about the conservation program.
- Homeowners' associations and neighborhood organizations. Water supplier managers will meet with property managers to encourage HOA's and neighborhood associations to adopt responsible water use policies and practices, particularly with regard to landscaping.
- Architects, landscape designers, landscapers, plumbers, and developers. Water suppliers should actively communicate new policies regarding water fixtures, landscape design, irrigation systems, and water features.
- Local government. Elected government officials, City and County managers and staff, and Metropolitan Districts Directors and Managers need to know about possible impacts on residents. The City Council and respective boards of the Metropolitan Districts will be provided in-depth information to support their deliberations and decision-making process. Local governments and public agencies should lead the way and be the first to show a willingness to implement conservation measures, while maintaining public health and safety.
- Water supplier employees. Opportunities to train Water Supplier employees as "water ambassadors" may also be incorporated into the public outreach program.

Involving the Public in Developing Water Conservation Measures

Meetings of the water suppliers group, City Council and MWW District board meetings provide forums in which to present and exchange views and ideas regarding water conservation policies and measures. Often, however, targeted audiences are not in attendance. Additional outreach efforts are necessary to effectively get the message out.

Monitoring Drought Conditions

If drier than normal conditions exist, public interest in drought potential will develop quickly. It will be important to communicate to the community that water suppliers are monitoring conditions closely. The community should know that water suppliers are prepared to address the situation. Even if dry conditions do not eventually lead to a drought declaration for the community, water suppliers need to be prepared with consistent information to field queries from the media, customers, and area visitors. Water suppliers will also need to develop and adopt a uniform Drought Response Plan which outlines how to implement the more aggressive measures of a Stage 3 declaration.

9.2 Suggested Measures for Public Outreach

- Form a Water Suppliers Group comprised of representatives from all water supply entities.
- Adopt a set of uniform conservation messages.
- Allocate funds for media messaging and public outreach efforts.
- Raise community awareness by publicizing conservation messages through a media campaign.

- Encourage public discussion on water use priorities and ways to conserve water.
- Publish a "water waste reduction" brochure for households and aggressively promote it.

- Contact high-volume commercial and institutional water users to solicit their ideas and support.
- Publicize efforts of individuals and business customers as examples. Work with the Steamboat Sustainable Business Program to support ongoing efforts.
- Encourage government entities to demonstrate leadership by conducting water audits on their facilities and large irrigated public areas and by implementing water conservation measures; publicize the results.
- Report regularly to the public during the irrigation season and document results annually.

9.3 Metrics and Measurement

An important component of this program is providing feedback to the community on the effectiveness of water conservation measures and progress made toward targets.

The greatest conservation gains may be made in the area of irrigation practices because most customers practice some form of irrigation during the summer months. Small behavioral changes can also have a significant impact.

Other metrics to track might include rebate usage, implementation of code changes, tracking number of attendees at water conservation workshops, seminars, events, tracking radio transponder meter data, improved measurement of reduced loss and reduced demand.

10.0 CONCLUSION – DESIRED OUTCOME

This plan is intended to be a living document which will be revisited every five years at a minimum and modified periodically. The Mount Werner Water District, City Public Works Department and Steamboat II Metro propose that this plan be considered and adopted by the Steamboat Springs City Council, the Board of Directors of the Mount Werner Water District and Steamboat II Metro, and other water suppliers in the Yampa Valley.

It is also recommended that the public be involved as part of this water conservation plan development process. The OWCDP requires that Water Conservation Plans go through a public process prior to their approval including making the draft plan available, providing public notice, and soliciting comment for at least 60 days. Although, as discussed previously in this document, the City District and the Mt. Werner District each fall below the 2000 acre-foot threshold that triggers a mandated Water Conservation Plan, soliciting public input will be beneficial.

This document was prepared by:

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Philo Shelton, Joe Zimmerman and staff from the City of Steamboat Springs Public Works Department,
Bob Keenan, City Planning Department,
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APPENDIX A

The City and the Districts have recognized the importance of water conservation and see their responsibility as promoting changes in attitude towards the daily use of water by residents, businesses and visitors alike. Small changes in behavior over a long period of time can have large impacts.

Customer Outreach

In the Mount Werner District, managed residential properties are the largest users of water in the Districts(70%) followed by commercial (20%) and other residential (10%). All indications are that most of our customers are trying to conserve water.

Since 2002, Mount Werner Water has increased its efforts to work with customers to conserve water. Efforts have included:

- Instructing homeowners in efficient landscape irrigation.
- Visiting houses to conduct water audits and to instruct on water-saving practices.
- Hosting Middle-School children at the Filtration Plant to introduce them to the community's water system and conservation practices.

In 2006, the Mount Werner Water District launched the following conservation initiatives:
Managed Residential customers (70% of usage)
The MWW District launched a water conservation certification program with property managers to persuade their client homeowner associations to adopt landscaping policies and practices consistent with responsible water use. To date, the District has certified ResortQuest, Central Park Management, Commercial Property Management, Steamboat Grand Resort and Hotel, and Snowflower Condominiums for a total of 18 residential properties and 9 commercial properties.

Residential customers (10% of usage)
The MWW District has developed a doorhanger leaflet with irrigation tips which is distributed by the local Boy Scout Troop each June. The District also highlights conservation tips in its quarterly newsletter mailed in early July.

Commercial customers (20% of usage)
The MWW District encourages hotel and motel owners to place conservation messages in guest rooms. The large resort hotels in the base area already employ this guest messaging. In 2006, the District sourced tent cards and placards from Project Planet and placed them in six area motels and provided the managers with information about how to source additional messaging materials. Many motels do not employ in-room messaging because of the high turnover rate in guest rooms.

School Program
Each spring and fall, the MWW District hosts Middle School children at the Fish Creek Filtration Plant where they learn about where our community water comes from and how to use it responsibly.

Conservation Policy

In 2007, the Board of Directors amended the MWW District's Rules and Regulations
1) to regulate the size and consumption of water features in landscape design;
2) to raise the tap fee charged for irrigated areas.

Economic Incentives

In January, 2007, the MWW District introduced tiered water rates. It also re-balanced the cost of service between residential and commercial classes and eliminated the monthly volume allowance.
• For residential users, the District employs a tiered structure which increases the rate for discretionary outdoor uses. Irrigation meters are charged at the second tier discretionary rate.
• For commercial users, the new rates averaged a 28% increase.

APPENDIX B

References/Sources

Steamboat Water Supply Plan, Nov. 2008 (Stantec)

Colorado Water Conservation Board website

A Water Conservation Master Plan for the Eagle River Water & Sanitation District (Draft) developed by the Upper Eagle Regional Water Authority (Bauer, 2006)

Drought Response Plan - Denver Water

Realizing the Benefits from Water Conservation, Maddaus, W.O., Maddaus Water Management, Alamo, CA

WATER, Use Less, Save More by Jon Clift and Amanda Cuthbert

US Environmental Protection Agency - Water Sense Program website

Colorado State University website

APPENDIX C

Two sample handouts for public information were developed as part of this plan and are provided as Appendix C.

Steamboat II Metropolitan District

WATER: IT'S YOUR RESOURCE!

FACT SHEET

FACT 1: The City of Steamboat Springs, Mount Werner Water District (MWW) and Steamboat II Metropolitan District have embarked upon their FIRST EVER comprehensive **COMMUNITY WATER CONSERVATION PLAN and PROGRAM.**



FACT 2: Currently Steamboat Springs has ample raw water available to meet public demand; however peak demand days place high demand on our treatment infrastructure.

FACT 3: **THE BENEFITS**: The community as a whole, as well as every individual user, will benefit from conserving this finite and precious resource:

-Reducing peak day demand by 10% would be the equivalent of the daily capacity of one filtration bay, which costs District and City customers $750,000 - $1 million in current dollars to construct. Therefore, for every gallon not used on a hot summer day, we could postpone investing a dollar or more toward a new filtration bay.

-Customers will see direct cost savings by reducing their water use and their water bills.

-A lower rate of growth in long-term water demand means that more water remains in the reservoirs, the Fish Creek tributaries, and the Yampa River to support a healthy aquatic environment. More water will also remain in groundwater aquifers.

-Water conservation defers expensive capacity expansions and upgrades for the water filtration plant and the wastewater treatment facility.

-Conservation and efficiency in the use of a limited natural resource reflects our community's commitment to environmental awareness and responsibility and to developing a sustainable community; it demonstrates responsible stewardship of our water resources and responsible management of our infrastructure and financial resources.

-By raising citizen awareness, a conservation program can also prepare the community to respond effectively to drought conditions and to accept and adapt to progressively more stringent conservation measures.

-Direct operating and maintenance costs of water treatment and distribution, such as pumping (electrical) and chemical costs, are directly proportionate to water demand. Reductions in water use, particularly on peak-demand days of summer, can reduce energy and chemical feed costs.

-Using less water results in less energy consumption thereby reducing the carbon footprint of the community.

FACT 4: **THE CHALLENGE:** The following are recommended targets to ***voluntarily*** reduce ***discretionary*** use:

5 –year target: **REDUCE PEAK DAY GPCD DEMAND BY 10% BY YEAR 2015**

Water conservation component	Savings/Metrics
Interior water savings through adoption of water saving devices & behavioral best practices	2%
Irrigation Efficiency	6%
Xeriscape & Landscaping Best Management Practices	1%
Industrial/Commercial/Institutional (ICI)	1%
Total	10%

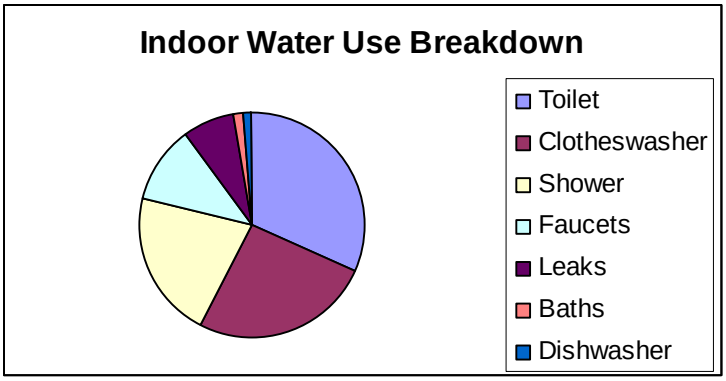
10 –year target: **REDUCE PEAK DAY GPCD DEMAND BY 15% by 2020**

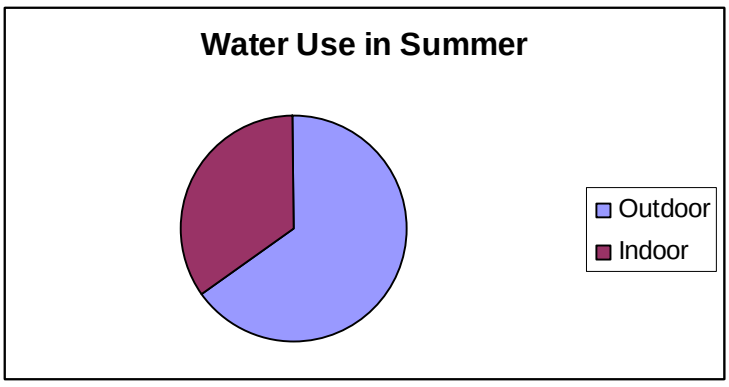
Water conservation component	Savings/Metrics
Interior water savings through adoption of water saving devices & behavioral best practices	1.5%
Irrigation Efficiency	2%
Xeriscape & Landscaping Best Management Practices	.75%
Industrial/Commercial/Institutional (ICI)	.75%
Total	5%

20 –year target: **REDUCE PEAK DAY GPCD DEMAND BY 20% BY 2030**

Water conservation component	Savings/Metrics
Interior water savings through adoption of water saving devices & behavioral best practices	1.5%
Irrigation Efficiency	1.5%
Xeriscape & Landscaping Best Management Practices	1%
Industrial/Commercial/Institutional (ICI)	1%
Total	5%

FACT 5: **THE APPROACH:** Relating personal usage via gallons per capita per day (gpcd) on a peak demand day provides an understandable basis for communicating water conservation targets, metrics and progress toward meeting goals. Below is gpcd for a typical single family home assuming no conservation practices are in place.

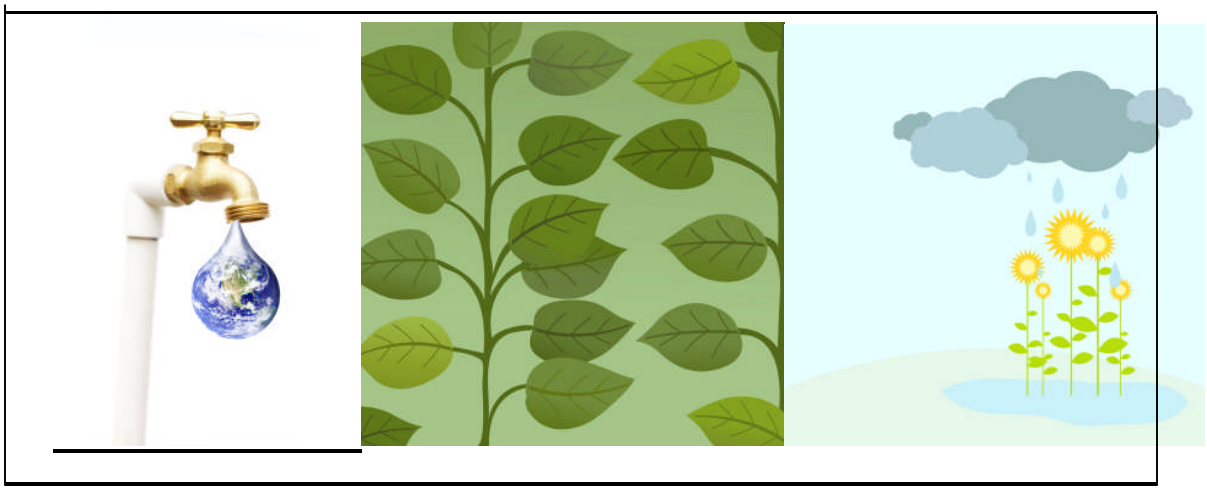




FACT 6: THE PLAN. An Action Plan has been developed as part of the Water Conservation Plan (separate document). Additionally, every user can begin to learn about daily practices as

well as equipment and appliance upgrades that will help our community reach its water conservation targets.

According to the USEPA, Americans use 126% more water today than we did in 1950. Water conservation measures are both behavioral and mechanical in nature. Implementing both can result in significant reductions of water consumption. Small changes in behavior can result in significant changes in water conservation. A partial list of water conservation measures is provided below.



Best Management Practices – Indoor

- Leak detection and repair
  - Leaks can add up to significant water loss - one drip per second = up to 2,700 gal/yr
- Replace or retrofit appliances and fixtures:
  - Toilets
    - 25% of water going into the home is flushed down the toilet
    - installing low flow, dual flush or even toilet dams can reduce this amount significantly
  - Install Water Saving Shower Heads – an effective and inexpensive way to save water
  - Faucet Aerators – cost effective and easy to install
  - Dish Washer Upgrade
    - Older models use up to 13 gal/wash vs. new models ave. 4 gal.
  - Clothes Washer Upgrade
    - Older models use up to 40 gal/wash vs. new model ave. 27 gal.
  - Install on-demand hot water heaters or hot water circulating pumps

- Behavior changes can result in significant savings:
  - Shorter showers
    - A 5 minute shower uses about 10 gal. vs. a bath uses about 40 gal.
  - Don't leave water running needlessly
    - Running water while brushing teeth can use up to 4 gal. or 2 gal./minute. Brushing with tap off uses about .25 gal.
  - Wash only full loads (clothes, dishwasher)

- Re-use water whenever possible
  - Example – reuse graywater from washing dishes to water plants

- Water audits & tracking
  - Audits help users better understand areas for improvement
  - Learning to interpret a water bill and compare to historic usage is a useful way to manage water use

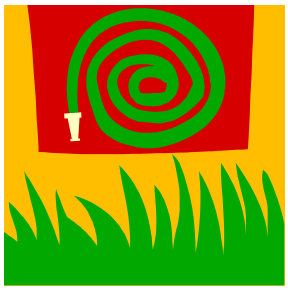
Best Management Practices – Outdoor

- No outdoor watering between 10AM – 6PM.
- Hose irrigation with spring-loaded nozzle only; no free-running hoses.
- Refrain from tree-planting and the seeding or sodding of new lawns from June15th through August 31st .
- Use native grasses and shrubs or drought-tolerant species on new or re-developing properties.
- Refrain from developing water-intensive landscapes.
- Additional recommended Irrigation practices:
  - Consider xeriscape practices
  - Mulch plants, trees and shrubs
  - Plan landscaping based on sun, moisture, etc.
  - Use drip irrigation instead of spray
  - Install rain shut off or moisture sensors on irrigation systems
- Limit filling of swimming pools to one filling per year, unless draining for repairs is necessary.
- Potable water should be used for beneficial purposes and should not be wasted.
- Sweep impervious surfaces such as driveways, parking areas, walkways instead of power washing or hosing down.
- Pools and spas:
  - Cover pools and spas with insulated covers when not in use to reduce evaporation
  - Detect and repair leaks
- Refrain from installing outdoor water features such as fountains.
- Use bucket to wash car instead of hose
  - A hose uses about 140 gal/hour

ARE YOU READY TO DO YOUR PART?
EVERYONE CAN MAKE A DIFFERENCE!

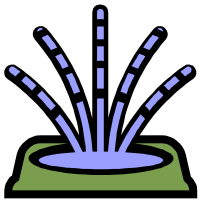
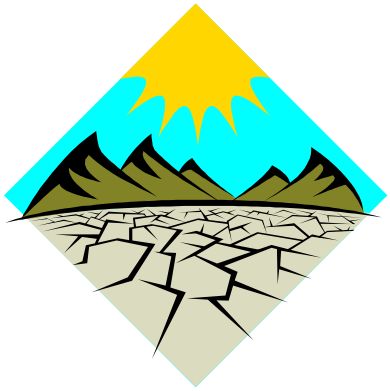
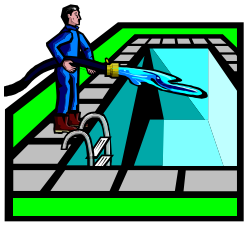
STEAMBOAT SPRINGS DROUGHT PLAN
April, 2009

The City of Steamboat Springs, Steamboat II Metropolitan District and the Mount Werner Water District have in place a three-stage water use plan that addresses drought preparedness. Violations of these water use restrictions can result in fines.


Stage 1: The following recommended guidelines are in place at all times

- Potable water shall be used for beneficial purposes and should not be wasted.
- No outdoor watering 10AM – 6PM.
- Hose irrigation with spring-loaded nozzle only; no free-running hoses.
- Discourage tree-planting and the seeding or sodding of new lawns June15th through August 31st.
- The use of native grasses and shrubs or drought-tolerant species on new or re-developing properties is encouraged.
- Water-intensive landscapes are discouraged.
- Swimming pools are limited to one filling per year, unless draining for repairs is necessary.

Stage 2: This stage will be triggered by a drought warning based upon:

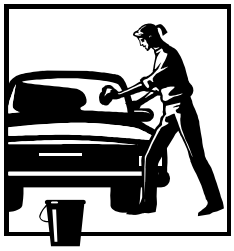
- April 1st SWE at the Tower SNOTEL site below 80% of average;
- an early run-off (before July 1) resulting in earlier than normal low flows in the Fish Creek Watershed;
- persistent higher than average temperatures April through August;
- below average precipitation April through August.

The following Stage 2 restrictions are recommended in addition to the year-round recommendations in Stage 1 :

- Watering schedule based on the last number of customer street address:

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Even	Odd	Even	No Watering	Odd	Even	Odd

- Permits may be secured for irrigating newly-sodded lawns and newly-planted trees for up to 14 consecutive days and for newly-seeded lawns for up to 25 consecutive days with the exception of Wednesdays.
- No vehicle washing at residences.
- No washing hard surfaces (i.e., driveways, sidewalks, parking lots, outdoor eating areas).
- No running outdoor water features (including those meeting Mount Werner Water District specifications).
- No use of domestic water for dust control.



Stage 3: This stage will be triggered by a drought declaration.

The following restrictions include year round recommended guidelines in Stage 1, Stage 2 restrictions, plus:

- No lawn irrigation.
- Suspension of special watering permits including those for newly seeded or sodded lawns.
- Hand watering of trees, shrubs, and flowers, and drip irrigation of trees and shrubs is allowed.
- All businesses including hotels, restaurants and property management companies, will be required to implement Stage 3 water conservation measures including education of owners, tenants and guests.
- Districts may impose a total ban on all outside water use in the event of an extreme water system emergency. Any instance of flagrant runoff or waste is subject to penalties. The City Service Area and Mount Werner Water District already have regulations in place.

MOUNT WERNER WATER AND SANITATION DISTRICT
SCHEDULE OF FEES AND CHARGES

Effective 1 January 2009

RESIDENTIAL CUSTOMERS

Quarterly charge/unit	Volume	Base
Water Service [1]	Tier I : 0 to 95 cubic meters = \$0.23 / m^3	\$21.84
	Tier II : 96-420 cubic meters = \$0.40 / m^3	
	Tier III : over 420 cubic meters = \$0.81 / m^3	
Residential Irrigation Meter [2]	(see note 2)	none
Wastewater Service [3]	(\$8.82 collection + \$31.77 treatment = \$40.59)	\$40.59

COMMERCIAL CUSTOMERS

Quarterly charge/unit	Volume	Base
Water Service [1]	Over 0 m^3 = \$0.32 / m^3	\$21.84
Commercial Irrigation Meter	Over 0 m^3 = \$0.40 / m^3	None
Wastewater Service [3]	1st and 4th quarters – \$0.90 per m^3 of actual water use (\$0.20/ m^3 collection + \$0.70/ m^3 treatment = \$0.90/ m^3) 2nd and 3rd quarters – \$0.90 per m^3 of average winter consumption (average of 1st and 4th quarter water use) (\$0.20/ m^3 collection + \$0.70/ m^3 treatment = \$0.90/ m^3)	None

NOTES:

1. Customers combining both residential and commercial units will be billed the water volume charges proportionately based upon square footage allocated to residential and commercial uses.
2. Residential irrigation meter flow for one single family dwelling shall be combined with the house meter flow and the Tier rates applied. Residential irrigation meter flow for all other residential units including irrigation meters for common areas appurtenant to a multiple housing common community development shall be charged at the Tier II rate.
3. Effective April 1, 2009, the City of Steamboat Springs raised wastewater treatment charges 50% for Special Connectors. Customers combining residential and commercial units will be billed the greater of the two methods for wastewater charges: by unit or by volume of water used.
4. All wastewater treatment charges collected by the District are passed through to the City of Steamboat Springs.
5. 1 cubic meter (1 m^3) equals 264.17 gallons

OTHER FEES AND CHARGES
Effective 1 January 2009

Bulk water fee: \$1.75 per 1000 gallons
Labor Rates:

- Regular work hours (8 am to 5 pm, Monday through Friday): \$41.83/hour
- All other hours: \$62.75/hour with a minimum 2 hour charge

Superintendent Rates:

- Regular work hours (8 am to 5 pm, Monday through Friday): \$52.05/hour
- All other hours: \$78.07/hour with a minimum 2 hour charge

City of Steamboat Springs
Water & Sewer Rates beginning January 1, 2009

RESIDENTIAL

Water Base Charge $15.00 per month
Sewer Base Charge $26.88 per month
Water Volume Rate

1,000-4,000	$1.58 per 1000 gal
5,000-12,000	$2.37 per 1000 gal
13,000-20,000	$3.63 per 1000 gal
21,000-28,000	$4.73 per 1000 gal
29,000	+ $7.10 per 1000 gal

Sewer Only Base Charge
$26.88 per month

COMMERCIAL

Water Base Charge $19.50 per month
Sewer Base Charge $23.61 per month
Water Volume Rate

$4.17 per 1000 gal

Sewer Volume Rate

$4.97 per 1000 gal of water used

An average volume from October-March is used to bill April-September sewer volume

Sewer Only Base Charge

$23.61 per month

COMBINED USAGE (Residential & Commercial Combined Properties)

Water
Base - $19.50 per month
Volume - $4.17 per 1000 gal

Sewer
$23.61 + the greater of $26.88 x # of res. units *OR* $4.97 x water volume.

Discounts for the Elderly or Indigent (with low income qualifying application)
50% of the regular monthly base charge
50% of the regular volume charge

Interest Charge 1% per month on all overdue accounts