WATER AND WASTEWATER SERVICES IN STEAMBOAT SPRINGS

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Raw water sources, facilities, and infrastructure

1. The Fish Creek watershed (22 sq miles) is the primary source of the community's raw water supply. Average annual precipitation on Buffalo Pass is 58 inches providing ample run-off to fill the two reservoirs, Fish Creek Reservoir (4,167 AF) and Long Lake (396 AF). Annual precipitation in the valley is only 24 inches, less than half of that which falls on the Divide.

   In the Fish Creek watershed, water is stored in two phases, solid snow and liquid water. The water content in snow is expressed as snow water equivalent (SWE). The average water content of the snowpack at the head of the watershed on Buffalo Pass on April 1st is 45.8 inches SWE. According to the hydrological studies for the reservoir, it would take 25.4 inches SWE to fill a completely empty Fish Creek Reservoir from bottom to top. Since 1965, there have been only two years when the snowpack was less than 26 inches SWE on April 1st: 1977 (25.4"), 1981 (23.8"). Since the 1996 expansion, the reservoir has not been drawn down below 50%.

   "If there is so much water up there, why not build more storage?" Expanding Fish Creek Reservoir would be very costly financially and environmentally. Raising the dam would flood an extensive area on the Divide and destroy substantial wetlands. Alternative reservoir sites are inaccessible and would also cause substantial wetlands damage. In today's regulatory climate, it is doubtful that the federal government agencies involved would approve permits for such projects.

2. The City owns Fish Creek Reservoir and Long Lake; the City and the District share storage rights in Fish Creek Reservoir.(City 2,518 AF & District 1,649 AF). The District operates the reservoirs.

3. The City and the District own the most senior in-stream water rights in Fish Creek. (City 2.5 cfs & District 5.8 cfs of the Hoyle & Knight Ditch -1892). These in-stream water rights form the basis of our community's raw water supply. Releases from the reservoirs supplement in-stream flows when our in-stream flows drop below 9 cfs below the filtration plant. These releases continue until in-stream flows increase again in the Spring.

4. The City's most senior in-stream right in Fish Creek (currently a 2.0 cfs municipal diversion right in the Hoyle & Knight Ditch, 1892) is the equivalent of 1,445 acre-feet per year. In addition, the City also holds 13 cfs in more junior in-stream water rights in Fish Creek which may be diverted during the 3 month high water season typically May-July.

5. The District's most senior in-stream right in Fish Creek (currently a 5.3 cfs municipal diversion right in the Hoyle & Knight Ditch, 1892) is the equivalent of 3,830 acre-feet per year. In addition, the District also holds 6.9 cfs in more junior in-stream water rights in Fish Creek which may be diverted during the 3 month high water season typically May-July.

6. Until 1996, the District did not have water storage in the Fish Creek watershed, but relied entirely on the in-stream flows of Fish Creek. As the local economy slowly recovered from the long-term economic slump of the 1980's, the District recognized that it would need a stored water resource to meet the long-term needs of the District. In early 1990, the District proposed to the City a plan to more than double the storage capacity of Fish Creek Reservoir from 1,842 AF to 4,167 AF. Originally, the District proposed to split the cost 60% District and 40% City; however, the City did not foresee an immediate need for this water, but proposed to buy into a 27.6% share of the expansion over the period 2001-2011.

In July, 1994, the City and the District reached agreement and construction began in the Fall of 1994 and continued during the Summer and Fall of 1995. The initial fill of the expanded reservoir occurred in the Spring of 1996. The project was co-managed by District and City representatives; however, the District bore responsibility for the cost of the expansion - $7.5 million – partially funded through a low-interest loan of $4.6 million from the Colorado Water Resource and Power Development Authority, a note that was paid off in 2012. The City has earned a 27.6% share of the expanded storage through annual payments of $175,000 to the District between 2001 and 2011.

7. In a drought year, the firm yield of the City and District's in-stream and stored water rights in the Fish Creek watershed is estimated to be 7,000 AF (acre-feet); currently, the City and the District each use approximately 1,500 AF for a total of 3,000AF.

8. In 1972, the District constructed the original Fish Creek Filtration Plant; in 1983, the District agreed to let the City construct its treatment facilities in the same plant; plant capacity was expanded again in 2000. The current capacity of the filtration plant is 7.5 million gallons per day with 10 filtration bays with the City owning six bays, the District four. This capacity is shared equally by both entities as the City leases to the District the capacity of one of the City filtration bays. The filtration plant capacity can be expanded from 7.5 to 12 million gallons per day (mgd) by the addition of six filtration bays. Currently, the District plans to expand its capacity in the 2019-2021 timeframe. The District operates the plant under the 1983 agreement; the District and the City share ownership of the plant through a condominium declaration unsigned since 1983.

9. The City and the District own wellfields near the Yampa River with capacity of 1.8 mgd and operated by the District and used to augment water supplies in the summer months. The firm yield of the wellfields is an additional 2,000AF in addition to the 7,000AF from the Fish Creek Basin. This water is treated with chlorine per regulations, stripped of iron and manganese, and pumped into the distribution system.

   In 1974, the District constructed four vertical wells (A-D), an infiltration gallery (G), and a small pump house. In 1990, the District constructed a second larger infiltration gallery (H), and, in 1992, the City constructed an infiltration gallery (A) west of the Yampa River. The vertical wells were taken off line. The pump house was expanded in 1991 to increase pumping and disinfection capacity, and modified in 1998 to provide iron-manganese removal.

10. The District's net annual operating budget is about $1.3M. The District and the City split operating costs for the filtration plant and wellfields based upon quarterly usage by each entity (approximately 50/50). The City's share of annual plant and wellfield operating costs is approximately $0.3M. Plant capital costs are shared on the basis of a five-year average annual usage.

11. The City and the District water distribution and sewer collection systems are approximately the same size – each having about 60 miles of water mains and 60 miles of sewer mains.

12. The City and District water distribution systems serve all residents of the City of Steamboat Springs as well as county residents of the former Fish Creek District north of Fish Creek Falls Road. The City of Steamboat Springs also provides water to the Steamboat II Metropolitan District under an intergovernmental agreement. The systems do not serve the Tree Haus Metropolitan District.

13. The Rollingstone Ranch Golf Course diverts raw water from Fish Creek under a lease agreement with the District. In 2008, the golf course installed more efficient irrigation components and reduced its consumption 25% to approximately 110 AF. The golf course may use potable water from the District in case of failure of its diversion pumps. The golf course last used this back-up system in 2006.

14. The most likely threat to our raw water supply is a wildfire in the Fish Creek watershed; other threats include a call on the upper Yampa River by the more senior Maybell Ditch or state administration to make up a deficit on deliveries to the Lower Colorado River Basin States under the 1922 Colorado River Compact.

15. As an alternative to capacity additions at the Fish Creek Filtration Plant, the District and the City are examining the feasibility of expanding and upgrading production capacity from the wellfields to provide redundancy in the water supply. The City also has a direct flow water right on the Elk River that could provide additional water supplies as the City expands to the West.

Water use and conservation in our community

1. Average annual precipitation on Buffalo Pass is 58 inches. Annual precipitation in the valley is only 24 inches, less than half of that which falls on the Divide.

2. All residents in the Mount Werner District and the City Water District consume water treated at the Fish Creek Filtration Plant operated by the Mount Werner District.

3. Total annual water usage by City and District customers is just under a billion gallons split approximately 45% City / 55% District.

4. Summer temps & precipitation drive water use in our valley. Usage was higher during the hotter, drier summers of 2001-2003 versus the cooler, wetter summers of 1999 & 2004.

5. Water usage triples from winter high season to summer high season. Every summer, irrigation for landscaping pushes our capacity to provide filtered water for all users. Peak-day demand can exceed average daily demand by more than 40%.

6. If residents in the District and the City could shave peak day usage by 10%, that is the equivalent of the output of one filtration bay, which costs District and City customers $750,000 to construct. For every gallon not used on a hot summer day, we can postpone investing a dollar toward a new filtration bay.

7. In 2009-2011, the City and the District developed and adopted a community water conservation plan to achieve long-term conservation goals and prescribe water management measures in a water emergency.

Wastewater Collection and Treatment

1. The City is the owner of the Regional Wastewater Treatment Plant.

2. Along with the Tree Haus Metro District and Steamboat II Metro District, the Mount Werner District is a “Special Connector” to the wastewater treatment plant. The Mount Werner District collects its wastewater through a system of sewer mains and delivers its wastewater to the City Interceptor at the meter vault at Fetcher Pond. As a Special Connector, Tree Haus Metro pays wastewater treatment fees directly to the City.

3. The District collects from its customers the City wastewater treatment fee and remits fees monthly to the City totaling $750,000 each year.

4. The District collects and remits monthly to the City the City’s wastewater treatment tap fees on all building permits.

About the Mount Werner Water & Sanitation District

The Mount Werner Water & Sanitation District collects, filters, and distributes water for the mountain resort area of Steamboat Springs and, under agreement with the City of Steamboat Springs, provides water to the City Water District for distribution to its customers. The District also provides the infrastructure for the collection of wastewater within the District that is treated at the City's regional wastewater treatment plant west of Steamboat Springs. The Mount Werner Water District, formed in 1965, is a Special District pursuant to Colorado statute and is a political subdivision of the State of Colorado. An elected five-member board of directors governs the District.

The District service area is the mountain resort area of Steamboat Springs generally south of Fish Creek and Angler's Drive and east of the Yampa River – area of approximately 4 sq. miles. The District does not supply water to the Tree Haus Metro District, but does convey Tree Haus wastewater approximately 800 feet from the Tree Haus Interceptor through Fetcher Park to the City Interceptor at West Pine Grove Road.

The District has ten employees; District operating costs are approximately $1.4 million including the cost of administration, water distribution, wastewater collection, raw water supply, and its share of filtration plant and wellfield operating costs. Annual debt service of $380,000 is solely to pay down the CWRPDA loan to finance the 1996 reservoir expansion; this loan will be paid off in 2012.

Like the City, the District collects tap fees on building permits; the District collects and remits monthly to the City the City's wastewater treatment tap fee. Water and wastewater collection tap fees contribute to District reserves to finance the on-going capital improvements program.

The District collects quarterly from its customers a water service fee, a wastewater collection fee, and the City's wastewater treatment fee for Special Connectors.

A word on water service rate differentials….

Water rates must cover water service operating costs and as well as the costs of repair and replacement and debt service. District and City water service rates differ because the systems have very different needs. The City has an aging system with water mains up to 100 years old. 74% of capital improvement costs are related to renewal and replacement of older mains and must be funded from service charges (Water and Wastewater Rate Study, Red Oak Consulting, 2010). The District's system is less than 45 years old, with 65% of water mains being less than 35 years old. Only 18% of District capital improvement costs are related to renewal and replacement of older mains and must be funded from service charges (THC Rate Study, 2011).

In August, 2010, the City completed a rate study. City service charges include not only operating costs, but also a significant component for an aggressive repair and replacement program for its aging water system, a debt service component, and a significant capital component for re-building capital reserves for new facilities in the absence of significant water tap fees.

In May, 2011, the District completed a new rate study which recommended a modest increase in water volume charges for residential and commercial. The District cannot justify raising its water rates in excess of its needs.

A word on consolidation efforts….

The City and the District recognize the potential benefits of consolidation and, through the years, have held serious discussions from time to time regarding this subject; yet, consolidation efforts have failed for a variety of reasons:

In 1995-1996, during the co-managed reservoir expansion project, the City and the District revived consolidation discussions. In March, 1996, the City contracted water and wastewater services to the District which operated as Steamboat Springs Water; staff of both entities worked together for several years at the filtration plant. In May, 1999, however, the District Board terminated the services agreement effective December 31, 1999 citing a disagreement with the City regarding terms of participation in the wastewater treatment plant expansion.

In 2002, an electoral referendum initiative to establish an independent water authority failed primarily because of concerns regarding loss of control of assets and water rate equalization.