

Spearfish growth demands construction of \$2.75 million water tank

By Heather Murschel Black Hills Pioneer | Posted: Monday, October 10, 2011 9:47 am

SPEARFISH — In order to keep up with the demands of a growing community, the city of Spearfish is in the process of improving its water storage capacity.

Ted Schultz, with CETEC Engineering Services, Inc., out of Rapid City, presented an overview of the overall water system analysis in progress Monday during the regular Spearfish City Council meeting.

Based on growth estimates for the next 20 years, he reported that a new 2 million gallon storage tank will be necessary to meet future demands, and recommends the city increase usage fees to pay for it.

The total project cost, which includes the water main, the tank and site development, is estimated at \$2.75 million.

Not only will the storage tank allow the city to make up for projected storage deficiencies, it will meet the demands of any future developments, including the incorporation of Spearfish Valley.

In order to fund the project, the city plans to secure a 20-year fixed rate loan at 3 percent interest through the South Dakota Department of Environment and Natural Resources' Clean Water State Revolving Loan (SRF) Fund.

In order to pay back the \$15,250 per month loan, an increase in water rates may be necessary. Using numbers based only on the proposed storage project, in the next two years average rates would increase about \$3.80 per month for a residential user, and about \$12.49 for a commercial user. Based on 5,000 gallons of use, an average resident pays \$19.45 per month. By January 2012, their rates would increase to \$21.35 and by 2013 rates will be set at \$23.25. Based on 21,000 gallons, commercial users pay an average \$56.45. By January 2012, their rates would increase to \$62.70 and by 2013 rates would increase to \$68.94.

If the city submits an application to the state this year, Schultz said that by June 2012, they should have everything set in place to begin the process of survey and design.

According to the preliminary schedule, the final plans should be in place by November 2012 and the project should be complete by October 2013.

As of right now, city officials are working with a handful of landowners on the west edge of Spearfish, in hopes to find a location that meets elevation requirements, and purchase the land to construct a concrete storage tank.

Schultz said the preliminary design shows it will require a little more than one acre to construct the tank.

As of right now, the city owns and operates five water tanks that have a combined storage capacity of 6.35 million gallons. Because of the recent development of two subdivisions on the west edge of Spearfish and continued growth and development throughout the community, Schultz said there is already an existing storage deficiency of 215,000 gallons on the west edge of town, and 180,000 gallons on the east edge of town. Based on this growth pattern, in 20 years the city may be looking at a deficiency of 475,000 gallons. If the annexation of Spearfish Valley occurs, that will increase deficiency numbers to almost 1.3 million gallons.

Schultz said there is also the issue of a storage tank located near Rosehill Cemetery that is in need of repair, and could be out of service by the time this project comes to life. The tank, which is 58 years old, has a capacity of 555,000 gallons. Schultz said city officials took it offline Tuesday, and so far the results aren't favoring.

"It is in poor condition and in need of immediate service," he said.

As of Wednesday, he said the water level was diminishing quickly, which means there is a significant leak.

"One of the concerns with this tank is that saturation will have caused the foundation area to be compromised, especially if the tank has leaked as much as we think it has over the years," Schultz said.

The tank, he said, has already been repaired once and noted the average lifespan of a water tank is between 60 and 70 years.

The analysis began in early February in order to evaluate the existing water supply storage systems and the condition of the infrastructure, including the underground water mains and the actual water tanks.

Already serving the west side is a concrete tank located at Tinton Road that has a storage capacity of 750,000 and is 37 years old. There are also two tanks at Rosehill Cemetery, the first was referenced above, and the second has a capacity of 1 million gallons, and is 22 years old. Serving the eastern corridor are two tanks in Green Acres. The first has a capacity of 750,000 gallons and is 36 years old, and the second has a capacity of 1 million gallons and is 17 years old.