

Complex Decision-Making: A Century of Water Supply Planning

Sue G. Schneider, General Manager, Spartanburg Water

P.O. Box 251, Spartanburg, SC (864) 580-5647

This paper summarizes a case study of the water supply conducted by the Spartanburg Water System over the past 100 years and its forecast into the next one hundred years. Spartanburg Water provides water to over 200,000 people in Spartanburg, Cherokee and Union Counties. Over the past 100 years strong decisions regarding water supply planning have resulted in the development of 3 reservoirs, a groundwater well and key interconnections to ensure that broad geographic area has sufficient water supply. Spartanburg Water has also built or acquired 3 water treat plants and has over 1300 miles of distribution piping throughout the county.

Over the past 100 years Spartanburg County has transformed from an urban hub supporting a strong textile industry to a diverse community of industries and a number of cities around the county. The water demands of the community have been monitored closely to project demands in a 30 – 70 year window. As the community has grown in population and changed in its industrial demand it has resulted in changes in water supply demand. The textile industry is a strong water user and facilities were built to accommodate both the burgeoning population and textiles.

As textiles waned in the late part of the first century, other industries took its place in Spartanburg County. The area is a hub for distribution, logistics, automotive and advanced materials. Water demands are very different for each of those industries in comparison to the textile industry. A different balance between industrial demands and water supply has been struck as we head into the next century. As a result the water supply planning will involve more conservation practices integrated into the management of existing resources than in the past.

Natural impacts, such as droughts, have impacted the water supply planning process. Spartanburg has experienced droughts of record during the 1950's, 1980's and the last was a ten-year period of less than normal rainfall pattern from 1998-2008. Those natural impacts have created a conservation culture and education process that has been integrated into the planning process.

Manmade impacts, such as foreign and domestic terrorist threats, have also been added to the complex decision-making process with water management. Spartanburg Water made changes in the number of facilities and their features as a result of changes that have occurred in the past 10 years.

Water supply planning and management requires a review of economic, meteorological, population and technical factors on a regular basis. Spartanburg Water has been regularly pulsing and making complex decisions from those factors for the past 100 years and is looking forward to continuing to do the same into the next century.