

Organization of the Southwestern Virginia Super Region Regional Water Supply Plan (Plan) generally follows the State Water Control Board's regulation 9 VAC 25-780, Local and Regional Water Supply Planning. The major sections in the Plan include information on water sources, water use, and natural resources in the region; water demand management information including population and demand projections, water conservation practices, and drought response and contingency planning; and a statement of need and alternatives analysis. This executive summary provides a summary of the regional approach for each of the planning districts.

The conclusions presented in the Plan are based upon information provided by the participating jurisdictions and public water authorities, the Virginia Department of Health (VDH), and/or the Virginia Department of Environmental Quality (VDEQ). The projected water demands presented in the Plan are based on water source and water use information provided during the study and as described in the Plan. Future water needs for the region are based on the demand projections, which become more hypothetical as the demands are projected through the planning period. A projected potential water surplus or deficit in the future does not imply that such a surplus or deficit will actually occur but based on current information plans should be made for addressing this situation. This Plan will be reviewed every five years and resubmitted to VDEQ every 10 years; therefore, the projected water demands and future water needs presented in Plan will be revised as updated information becomes available to refine those projections and more accurately characterize future needs.

The Plan complies with the State Water Control Board's regulation 9 VAC 25-780, Local and Regional Water Supply Planning, and is a functional plan supporting sustainable growth and economic development. The purpose of the regulation is to establish a comprehensive water supply planning process for the development of local, regional, and state water supply plans. This process is designed to:

- Ensure that adequate and safe drinking water is available to all citizens within the region;
- Encourage, promote, and protect all other beneficial uses of the region's water resources;
- Encourage, promote, and develop incentives for alternative water sources; and
- Promote conservation.

Local governments participating in the regional plan notified VDEQ of their intent to participate in the Plan before the November 2, 2008 deadline. The Plan will be submitted to the VDEQ prior to the November 2, 2011 deadline. A public hearing will be held by each participating jurisdiction and the local governments passed resolutions approving the Plan as well as adopting other policies or ordinances that were developed during the planning process.

The Southwestern Virginia Super Region Regional Water Supply Plan is made up of 55 local governments from the Cumberland Plateau Planning District Commission (Cumberland Plateau PDC), LENOWISCO Planning District Commission (LENOWISCO PDC), and Mount Rogers Planning District Commission (MRPDC). The Cumberland Plateau PDC is made up of 16 participating local governments and includes the counties of Buchanan, Dickenson, Russell, and Tazewell and the towns of Bluefield, Cedar Bluff, Cleveland, Clinchco, Clintwood, Grundy, Haysi, Honaker, Lebanon, Pocahontas, Richlands, and Tazewell. The LENOWISCO PDC is made up of 19 participating local governments and includes the counties of Lee, Scott, and Wise; the City of Norton; and the towns of Appalachia, Big Stone Gap, Clinchport, Coeburn, Duffield, Dungannon, Gate City, Jonesville, Nickelsville, Pennington Gap, Pound, St. Charles, St. Paul, Weber City, and Wise. The MRPDC is made up of 20 participating local governments and includes the counties of Bland, Carroll, Grayson, Smyth, Washington, and Wythe; the cities of Bristol and Galax; and the towns of Abingdon, Chilhowie, Damascus, Fries, Glade Spring, Hillsville, Independence, Marion, Rural Retreat, Saltville, Troutdale, and Wytheville.

### **Cumberland Plateau PDC**

The Cumberland Plateau region is located in the southwestern portion of Virginia in the Appalachian Plateau and Valley and Ridge Physiographic Provinces. The region is served by both surface water and groundwater sources. The major streams utilized in the region as water sources include the Clinch River, Little River, Big Cedar Creek, and Bluestone River. The major reservoirs in the region utilized as water sources include John Flannagan Reservoir, Lower Banner Seam (abandoned mine), Cox Branch Reservoir, and Lake Witten (Cavitts Creek). The region is also dependent upon groundwater wells as well as springs.

Based on projected demands and the total existing public water system capacities, the total water demand in the planning area was projected to increase approximately nineteen percent (19%)

between 2010 and 2040. A key component in determining demand projections was the assumption that all systems in the planning area will complete necessary system improvements during the planning period to achieve a minimum water accountability of seventy percent (70%) in every system. For several systems, significant funding will be required to accomplish the necessary improvement in water accountability.

Evaluation indicated that existing water supplies appear adequate to meet the projected demands of the region, except for the Castlewood Water and Sewer Authority (CWSA) in Russell County and in the Belfast/Rosedale water system and proposed waterline extensions operated the Russell County Public Service Authority (PSA) which are supplied by the Claypool Hill Water Treatment Plant (WTP). To meet demand in 2020, an additional source capacity of 0.25 MGD is required for the CWSA. Alternatives considered with the highest ranking to address the water deficit include development of additional groundwater sources near the Seven Springs WTP (Hart/Dickenson Spring and Trig Moore Spring) as well as an interconnection with Russell County PSA or the Town of Honaker. The interconnection with the Russell County PSA is dependent upon construction of the Big A Mountain to Back Valley Interconnection project, which has been funded.

Increasing available potable water to the Russell County PSA through an interconnection with the Claypool Hill WTP was considered the most viable alternative. However, the Russell County PSA is also investigating a potential interconnection on U.S. Route 19/58 with the Washington County Service Authority (WCSA) and funding has been requested for a preliminary engineering study.

Water systems operated by the Buchanan County PSA, the Dickenson County PSA, and the Town of Clintwood are supplied potable water by the John Flannagan Water Authority through transmission lines that convey water to the respective systems. The transmission lines will require rehabilitation during the planning period, and alternative delivery of potable water to portions of these systems may have greater viability from an economic standpoint. The cost of a replacement/rehabilitation project is estimated to be \$36 million.