



City of Salem

Water Source Overview

Major water sources include groundwater wells and the Roanoke River.

***Table 1:** Reported (2010) and projected (2040) water use by system type for Salem in MGD

Type	Reported Use 2010 MGD	Projected Use 2040 MGD
Large Self-Supplied Users (over 300,000 gal/month)	0.057	0.123
Community Water System	5.604	5.604

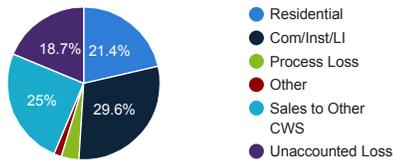
Water Use by System Type

There are no reported users of private groundwater wells for residential water supply. All tables and graphs represent reported water use including Sales to other localities, if applicable.

***Figure 1:** Percentage of reported water use by system type in 2010 (No use data shown on graph if less than .01 MGD: Refer to Table 1)



***Figure 2:** Disaggregated water use percentages for Community Water Systems in 2010 (No graph shown if no disaggregated use data reported)



***Table 2:** Reported (2010) and projected (2040) groundwater and surface water use for Salem in MGD

Reported 2010 Groundwater Use (MGD)	Reported 2010 Surface Water Use (MGD)	Projected 2040 Groundwater Use (MGD)	Projected 2040 Surface Water Use (MGD)
0.14	5.52	0.21	5.52

***Figure 3:** Salem highlighted in the Commonwealth of Virginia



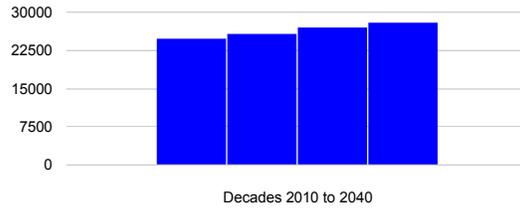
Projected Water Demand

Population and demand are projected to increase through the planning period of 2040. Although current water supply sources are expected to meet projected demand, the water supply plan identified some alternatives should a deficit be realized. Alternatives identified include the development of additional groundwater wells and regional water sources, such as the development of a new intake at Smith Mountain Lake to supplement the Western Virginia Water Authority's Carvin's Cove reservoir system and the expansion of the Smith Mountain Lake Regional Water Treatment Plant.

***Table 3:** Salem population projections by decade from 2010 to 2040 (data gathered from VEC projections - 05/20/13)

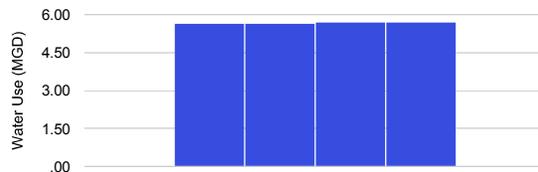
2010	2020	2030	2040	% Change (2010-2040)
24,802	25,889	27,075	28,116	16.7%

***Figure 4:** Salem population projections by decade for 2010, 2020, 2030 & 2040



***Table 4 & Figure 5:** Salem water demand trends by decade for 2010, 2020, 2030 & 2040 in MGD

Reported Use 2010 MGD	Projected Use 2020 MGD	Projected Use 2030 MGD	Projected Use 2040 MGD	Percent Change (2010-2040)
5.66	5.68	5.71	5.73	1.2%



Drought Management Practices

The City adopted an ordinance for the implementation and enforcement of the Drought Response and Contingency Plan. (Roanoke Valley Alleghany Regional Commission Regional WSP)