



**Chesterfield County**

**Water Source Overview**

Major water sources include the Lake Chesdin Reservoir, James River, Swift Creek Reservoir and purchased water.

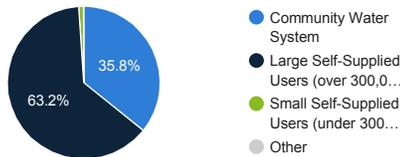
**\*Table 1:** Reported (2010) and projected (2040) water use by system type for Chesterfield County in MGD

Type	Reported Use 2010 MGD	Projected Use 2040 MGD
Community Water System	37.060	61.818
Large Self-Supplied Users (over 300,000 gal/month)	65.464	109.497
Small Self-Supplied Users (under 300,000 gal/month)	1.000	1.673
Agricultural Self-Supplied Users	0.082	0.137

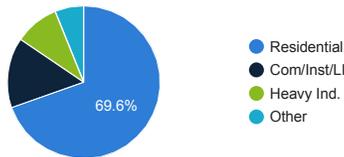
**Water Use by System Type**

Approximately 14,289 people use 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 Chesterfield County in MGD

Reported 2010 Groundwater Use (MGD)	Reported 2010 Surface Water Use (MGD)	Projected 2040 Groundwater Use (MGD)	Projected 2040 Surface Water Use (MGD)
15.72	87.89	26.29	146.83

**\*Figure 3:** Chesterfield County highlighted in the Commonwealth of Virginia



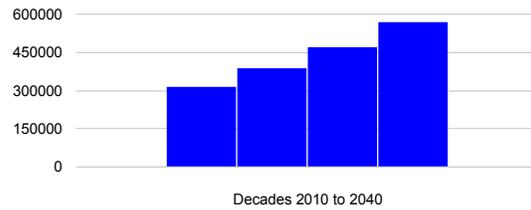
**Projected Water Demand**

Population and demand are projected to increase through the planning period. Chesterfield County anticipates a peak day deficit of 1.0 MGD by 2040 and the Appomattox River Water Authority (main supplier of water to Chesterfield County) anticipates a system wide deficit of 9.4 MGD by the year 2040. Possible alternatives recommended: increases in current water supply allocations and the development of additional supplies (groundwater sources, new intake on the Appomattox River, and a new surface water reservoir).

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

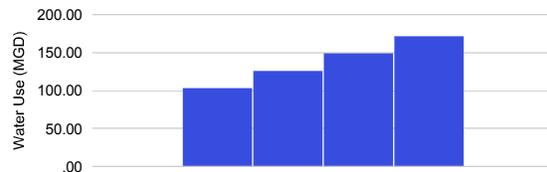
2010	2020	2030	2040	% Change (2010-2040)
316,236	388,894	473,841	572,693	81.0%

**\*Figure 4:** Chesterfield County population projections by decade for 2010, 2020, 2030 & 2040



**\*Table 4 & Figure 5:** Chesterfield County 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)
103.61	126.78	149.95	173.12	67.1%



**Drought Management Practices**

The County adopted an ordinance for the implementation and enforcement of drought response. (Appomattox River Water Authority Regional WSP)