

8.0 STATEMENT OF NEED

As required by the Regulation¹⁸³, this section of the Plan addresses the adequacy of existing water sources to meet the current and projected demands.

8.1 Eastern Goochland

The Eastern Goochland Water System, which includes the Tuckahoe Creek Service District, will continue to be supplied by water purchased from Henrico County. According to the demand projections, the Eastern Goochland area will require approximately 16.68 mgd at build-out. However, this is not expected to occur until beyond 2060. Based on the population demand projections, the 4001 Census Tract, which incorporates the Eastern Goochland Water System, will require a demand of approximately 4.6 mgd¹⁸⁴ by 2060. This demand can be met by the current contract with Henrico County, which allows Goochland to purchase up to 11.54 mgd.

Goochland will be allocated 25 mgd when the Henrico Water Treatment Plant operates at 120 mgd or a pro rata amount between 11.54 mgd and 25 mgd if Henrico is not permitted for a full 120 mgd.¹⁸⁵ In order for Henrico County to be capable of supplying Goochland with the projected build-out demand of 16.30 mgd, the Henrico Water Treatment Plant must have a capacity of at least 94 mgd. According to the contract, “Henrico will do its best to meet the needed demand.”

In order for Henrico to meet future water demands, the Cobbs Creek Reservoir has been identified as the most viable long-term water source for Henrico County. The Cobbs Creek Reservoir will collect water from the James River during periods of high flow and release water into the James River during periods of low flow. This allows for less fluctuation of flow in the James River and increases the reliability of the James River as a water source during periods of drought. The details of the Cobbs Creek Reservoir are discussed in **Section 9** of this Plan.

¹⁸³ 9 VAC 25-780-130.

¹⁸⁴ Mid-range projections.

¹⁸⁵ Contractual Water Agreement between County of Henrico and the County of Goochland. See **Appendix D**.

Currently, the Eastern Goochland System is permitted to purchase only 3.2 mgd from Henrico because of the limiting storage capacities of the system. In order for Goochland to begin purchasing more water from Henrico County to meet increased demands, Goochland must increase storage capacity.

8.2 Courthouse Village and Correctional Center

The James River Correctional Center distributes water to the Courthouse Village system. In 2011, the Courthouse demands were approximately 144,000 gpd. In addition, the demands at the Correctional Center facilities in Goochland were approximately 190,730 gpd and 559,260 gpd in Powhatan. in 2011. According to the population-based demand projections, Courthouse Village will require approximately 411,936 – 877,736 gallons per day in 2040 – 2060 (see Table 77).

The current capacity for the James River Correctional Center Treatment Plant is 2.0 mgd. Due to the closure of the James River Correctional Center (in April 2011), the existing water treatment facility would be adequate to meet the 30 – 50 year demands for the Courthouse Village and the Correctional Center. However, the existing contract between Goochland County and the Department of Corrections is limited to 300,000 gpd. Additionally, the future needs of the Department of Corrections in both Powhatan and Goochland counties could be very different from the projections outlined in this Plan, depending on the future use of Department of Corrections properties in both counties.

8.3 Other Village Areas

Villages in Goochland County, with the exclusion of Eastern Goochland and the Courthouse Village, are projected to have a combined demand of approximately 3.62 mgd. Currently, the water demands within these villages are met by self-supplied wells. Some community well systems exist within these villages, but they provide water only to small communities such as neighborhoods and trailer parks. With future commercial and industrial development, many of the villages may begin to consider centralized water systems to meet their increasing demands. In addition, the villages of Oilville and Manakin could be served by the Eastern Goochland Water System.

8.4 Rural Residential Development

Currently, residents in the rural areas of Goochland County, primarily the western region of the county, are self-supplied by individual wells. These individual wells are expected to be adequate for future rural residential development. Goochland County intends to preserve the county's rural characteristic and has discouraged growth outside of the village boundaries. Any residential development outside of the village boundaries will be required to follow the County Zoning Ordinance and will not be densely populated. The groundwater hydrology should be adequate to support this type of scattered, low-demand development in the future.