

Introduction to Appendices

Appendix A is a list of the ten local and 38 regional water supply plans, including all participating localities.

The information found in Appendix B: Major Basin Summaries and Appendix D: Snapshots of Water Resources by Locality was obtained from the local and regional water supply plans and the DEQ analysis of the data provided in those plans. Water users have been divided into four categories: community water systems (CWS), agriculture (AG), large self-supplied users (SSU_LG), and small self-supplied users (SSU_SM). Water use information for SSU_LG excludes power plant cooling withdrawals, as this is largely a non-consumptive use.

A CWS is a private or public waterworks that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents and is regulated by the Virginia Department of Health Waterworks Regulation (12 VAC 5-590). Self-supplied users are defined as any person making a withdrawal of surface water or groundwater from a source (e.g. a river, stream, lake, aquifer, or reservoir fed by any such water body) for their own use. Self-supplied users do not receive water from a community water system. Large self-supplied users are defined as those users of more than 300,000 gallons per month of groundwater or surface water for nonagricultural uses, including but not limited to commercial, manufacturing, mining, and hydropower. Small self-supplied users are defined as those users supplied by individual wells withdrawing less than 300,000 gallons of water per month. Agricultural data is collected for those agricultural operations who utilize more than 300,000 gallons of water per month for crop irrigation and all other uses, such as livestock/poultry watering.

Through the water supply planning process, some planning units determined that water source and use information was not readily available for all users in a particular locality. Agriculture and golf course water use were two areas commonly lacking readily available data. When specific agricultural users were not known in a locality or region, the United States Department of Agriculture's National Agricultural Statistics Service's Census of Agriculture (NASS Census) data was often summarized in the plans. The NASS Census is confidential and required by law, collecting data from farm and ranch operations. NASS Census data is reported by County for total acres irrigated and total number of livestock. The plans using NASS Census took the data and used it to estimate water use associated with livestock and irrigation. The estimates that are based on the NASS Census are for the entire County and not just the users of greater than 300,000 gallons per month. A limiting factor of this data is that the amount of use derived from groundwater versus surface water is not specified. Although the data is not exactly what is required by the WSP Regulation, it does provide a basis for projections of future demand for the agricultural sector in a particular county and helps DEQ understand which counties reported the greatest amount of irrigated

acres. It should be noted that the NASS Census data does not provide information for towns and cities. This information is captured in the respective counties' data.

In assigning water source and water use to basins, it should be noted that at this time it is not possible to identify the specific location of most groundwater sources. Groundwater source and use information is assigned to the basin which contains the largest part of the county's area. For example, Caroline County is in both the York River Basin and the Rappahannock River Basin. The majority of the County's land mass is in the York River Basin; therefore, all groundwater data for Caroline County will be summarized in the York River Basin summary.

Population figures are included for the counties associated with each basin. Many counties in the Commonwealth straddle two or more basins. Population figures are repeated in each appropriate basin summary for those counties spanning more than one basin. Repeating the population figures does not affect water source, water use, or water demand projections. Water source, water use, and water demand projections come directly from the local and regional water supply plans.

Using Caroline County as an example again, the Virginia Employment Commission (VEC) population figures for Caroline County are counted in the population total for both the York River Basin and the Rappahannock River Basin. The population growth trends, illustrated in a table in each basin summary, are projected by DEQ from the VEC data. These population growth trends track very closely with the water demand projections, which are based solely on information provided in the water supply plans.

The following is a list of the localities, by water supply plan, that are wholly or partially located in each major basin and discussed in the major basin summaries.

Albemarle-Chowan River Basin

Information from the following localities, as represented in eight regional water supply plans, contributed to the development of the State Water Resources Plan and the Albemarle-Chowan River Basin Summary:

- Appomattox River Water Authority: City of Petersburg, Counties of Prince George and Dinwiddie
- Charlotte County Regional Water Supply Plan: Charlotte County
- Greensville County, Sussex County and the City of Emporia Regional Water Supply Plan: Counties of Greensville and Sussex; City of Emporia
- Hampton Roads Regional Water Supply Plan: Counties of Isle Of Wight, Southampton, and Surry; Cities Of Chesapeake, Franklin, Suffolk, Virginia Beach
- Lake Country Regional Water Supply Plan: Counties of Brunswick and Mecklenburg
- Lunenburg County and the Towns of Kenbridge and Victoria Regional Water Supply Plan: County of

Lunenburg

- Nottoway Water Supply Plan: County of Nottoway
- Prince Edward County and the Town of Farmville Regional Water Supply Plan: County of Prince Edward

Chesapeake Bay-Small Coastal Basin

Information from the following localities, as represented in five regional water supply plans and one local water supply plan contributed to the development of the State Water Resources Plan and the Chesapeake Bay-Small Coastal Basin Summary:

- Accomack County Regional Water Supply Plan: County of Accomack
- Chincoteague (Town of) Water Supply Plan: Town of Chincoteague
- Hampton Roads Regional Water Supply Plan: Counties of Gloucester and York; Cities of Hampton, Newport News, Norfolk, Poquoson, Virginia Beach, and Williamsburg
- Middle Peninsula Regional Water Supply Plan: Counties of Essex, King and Queen, Mathews, and Middlesex
- Northampton County Regional Water Supply Plan: County of Northampton
- Northern Neck Regional Water Supply Plan: Counties of Lancaster, Northumberland

James River Basin

Information from the following localities, as represented in eighteen regional water supply plans and four local water supply plans contributed to the development of the State Water Resources Plan and the James River Basin Summary:

- Albemarle County and the City of Charlottesville and the Town Of Scottsville Regional Water Supply Plan: County of Albemarle; City of Charlottesville
- Amelia County Water Supply Plan: Amelia County
- Appomattox River Water Authority Regional Water Supply Plan: Counties of Chesterfield, Prince George, and Dinwiddie; Cities of Colonial Heights, Hopewell, and Petersburg
- Buckingham County and the Town of Dillwyn Regional Water Supply Plan: County of Buckingham
- Charles City County Water Supply Management Plan: County of Charles City
- Craig County and the Town of New Castle Regional Water Supply Plan: County of Craig
- Cumberland County, Goochland County, Henrico County, and Powhatan County Regional Water Supply Plan: Counties of Cumberland, Goochland, Henrico, and Powhatan
- Fluvanna County and the Town of Columbia Regional Water Supply Plan: County of Fluvanna
- Greene County and the Town of Stanardsville Regional Water Supply Plan: County of Greene
- Hanover County and the Town of Ashland Long Range Water Resources Plan: County of Hanover

- Hampton Roads Regional Water Supply Plan: Counties of Isle Of Wight, James City, Surry, and York; Cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, Suffolk, Virginia Beach, and Williamsburg
- Louisa County Long Range Water Supply Plan: County of Louisa
- New Kent County Water Supply Plan: County of Kent
- New River Valley Regional Water Supply Plan: Counties of Montgomery and Giles
- Nottoway Water Supply Plan: County of Nottoway
- Orange County Water Supply Plan: County of Orange
- Prince Edward County and the Town of Farmville Regional Water Supply Plan: County of Prince Edward
- Region 2000 Local Government Council Regional Water Supply Plan: Counties of Amherst, Appomattox, Bedford, Campbell, and Nelson; City of Lynchburg
- Richmond (City of) Water Supply Plan: City of Richmond
- Roanoke Valley Alleghany Regional Commission Regional Water Supply Plan: Counties of Bedford, Botetourt, and Roanoke
- Upper James River Basin Regional Water Supply Plan for the Counties of Alleghany, Bath, Highland, and Rockbridge; Cities of Buena Vista, Covington, and Lexington
- Upper Shenandoah River Basin Regional Water Supply Plan: County of Augusta

New River Basin

Information from the following localities, as represented in four regional water supply plans, contributed to the development of the State Water Resources Plan and the New River Basin Summary:

- The Towns of Blacksburg and Christiansburg Regional Water Supply Plan: Towns of Blacksburg and Christiansburg
- Craig County and the Town of New Castle Regional Water Supply Plan: County of Craig
- New River Valley Regional Water Supply Plan: Counties of Montgomery, Floyd, Pulaski, Giles; City of Radford
- Southwest Virginia Regional Water Supply Plan: Counties of Bland, Carroll, Grayson, Smyth, Tazewell, and Wythe; City of Galax

Potomac-Shenandoah River Basin

Information from the following localities, as represented in six regional water supply plans and four local water supply plans, contributed to the development of the State Water Resources Plan and the Potomac- Shenandoah River Basin Summary:

- Fauquier County Regional Water Supply Plan: County of Fauquier
- Hillsboro (Town of) Water Supply Plan: Town of Hillsboro

- King George County Water Supply Plan: County of King George
- Northern Neck Regional Water Supply Plan: Counties of Northumberland and Westmoreland
- Northern Shenandoah Regional Water Supply Plan: Counties of Clarke, Frederick, Page, Shenandoah, and Warren; City of Winchester
- Northern Virginia Regional Water Supply Plan: Counties of Arlington, Fairfax, Loudoun, and Prince William; Cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park
- Stafford County Water Supply Plan
- Upper James River Basin Regional Water Supply Plan: County of Highland
- Upper Shenandoah River Basin Regional Water Supply Plan: Counties of Augusta and Rockingham; Cities of Harrisonburg, Staunton, and Waynesboro
- Warrenton (Town of) Water Supply Plan

Rappahannock River Basin

Information from the following localities, as represented in eleven regional water supply plans and three local water supply plans, contributed to the development of the State Water Resources Plan and the Rappahannock River Basin Summary:

- Albemarle County and the City of Charlottesville and the Town of Scottsville Regional Water Supply Plan: County of Albemarle
- Caroline County and the Town of Bowling Green Regional Water Supply Plan: County of Caroline
- Culpeper County and the Town of Culpeper Regional Water Supply Plan: County of Culpeper
- Fauquier County Regional Water Supply Plan: County of Fauquier
- Greene County and the Town of Stanardsville Regional Water Supply Plan: County of Greene
- King George County Water Supply Plan: County of King George
- Madison County and the Town of Madison Regional Water Supply Plan: County of Madison
- Middle Peninsula Regional Water Supply Plan: Counties of Essex and Middlesex
- Northern Neck Regional Water Supply Plan for the Counties of Lancaster, Northumberland, Richmond, and Westmoreland
- Orange County Water Supply Plan: County of Orange
- Town of Port Royal Water Supply Plan: Town of Port Royal
- Rappahannock County and the Town Of Washington Water Supply Plan: County of Rappahannock
- Spotsylvania County and the City Of Fredericksburg Regional Water Supply Plan: County of Spotsylvania; City of Fredericksburg
- Stafford County Water Supply Plan: County of Stafford

Roanoke River Basin

Information from the following localities, as represented in eight regional water supply plans, contributed to the development of the State Water Resources Plan and the Roanoke River Basin Summary:

- Charlotte County and the Towns of Charlotte Court House, Drakes Branch, Keysville, and Phenix Regional Water Supply Plan: County of Charlotte
- Halifax County Regional Water Supply Plan: County of Halifax
- Lake Country Regional Water Supply Plan: Counties of Brunswick and Mecklenburg
- New River Valley Regional Water Supply Plan: Counties of Montgomery and Floyd
- Roanoke Valley Alleghany Regional Commission Regional Water Supply Plan: Counties of Bedford, Botetourt, Franklin, And Roanoke; Cities of Roanoke and Salem
- Region 2000 Local Government Council Regional Water Supply Plan: Counties of Appomattox, Bedford, and Campbell
- West Piedmont Planning District Commission Regional Water Supply Plan: Counties of Henry, Patrick, and Pittsylvania; Cities of Danville and Martinsville
- Southwest Virginia Regional Water Supply Plan: Counties of Carroll and Grayson

Tennessee-Big Sandy River Basin

Information from the following localities as represented in the Southwest Virginia Regional Water Supply Plan contributed to the development of the State Water Resources Plan and the Tennessee-Big Sandy River Basin Summary:

- Southwest Virginia Regional Water Supply Plan: Counties Of Bland, Buchanan, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe; Cities of Bristol, and Norton

York River Basin

Information from the following localities, as represented in ten regional water supply plans and one local water supply plan, contributed to the development of the State Water Resources Plan and the York River Basin Summary:

- Albemarle County and the City Of Charlottesville and The Town Of Scottsville Regional Water Supply Plan: County of Albemarle
- Caroline County and the Town Of Bowling Green Regional Water Supply Plan: County of Caroline
- Cumberland County, Goochland County, Henrico County, and Powhatan County Regional Water Supply Plan: County of Goochland
- Fluvanna County and the Town Of Columbia Regional Water Supply Plan: County of Fluvanna

- Hanover County and the Town Of Ashland Long Range Water Resources Plan: County of Hanover
- Hampton Roads Regional Water Supply Plan: Counties Of Gloucester, James City, and York; City of Williamsburg
- Louisa County Long Range Water Supply Plan: County of Louisa
- Middle Peninsula Regional Water Supply Plan: Counties of King and Queen and King William
- New Kent County Water Supply Plan: County of New Kent
- Orange County Water Supply Plan: County of Orange
- Spotsylvania County and The City of Fredericksburg Regional Water Supply Plan: County of Spotsylvania

Appendix C lists the outstanding items needed for full compliance with the Local and Regional Water Supply Planning Regulation. The outstanding items are listed by local or regional water supply plan.

All of the water supply program compliance determinations included 'conditions' that must be addressed in time for the five-year review of all local and regional water supply plans. These conditions were outlined in a memorandum that accompanied a package including the notice of the compliance determination, a review of state agency comments (when appropriate), and a checklist document utilized by DEQ for the consistent review of programs.