

SECTION 400

WATER SUPPLY SYSTEMS

	<u>Page</u>
401.00 WATER SUPPLY SYSTEMS - GENERAL POLICY AND REQUIREMENTS	
401.01 General Policy	400-1
401.02 Reference Manuals	400-1
401.03 Fire Safety Systems	400-1
401.04 Easements	400-1
401.05 Private Water Service Connections	400-2
401.06 Water Supply Interconnections	400-2
402.00 WATER SUPPLY SYSTEMS - PLANNING AND DESIGN	
402.01 Commonwealth of Virginia Waterworks Regulations	400-2
402.02 Water Lines in Public Rights-of-way	400-2
402.03 Surface Water Crossings	400-3
403.00 WATER SUPPLY SYSTEMS - SUBMISSION REQUIREMENTS	
403.01 Plan Submission	400-4
403.02 Plan Elements	400-4
404.00 WATER SUPPLY SYSTEMS - CONSTRUCTION STANDARDS	
404.01 General Requirements	400-4
404.02 Acceptable Materials	400-4
450.00 ON-SITE PRIVATE WELLS	
450.01 Applicability	400-4
450.02 State Regulations	400-4
450.03 Review and Approval	400-4

SECTION 400

WATER SUPPLY SYSTEMS

The purpose of this section is to address the minimum requirements for design and construction of water systems. This section is supplemented by the Prince William County Service Authority Utility Standards Manual (PWCSA-USM) where detailed information on standards is provided.

The authority for discretionary provisions for design and construction of water systems within areas served by the Service Authority shall vest with the Service Authority general manager. For areas outside the purview of the Service Authority, the director of Public Works shall have the authority for discretionary provisions. He/she shall consult with the company providing the service before rendering a decision.

401.00 WATER SUPPLY SYSTEMS - GENERAL POLICY AND REQUIREMENTS

401.01 General Policy:

A. Generally, major water distribution systems shall be designed in accordance with the densities and intensities reflected in the Long Range Future Land Use Plan and Map of the adopted Comprehensive Plan.

B. New development located in the development area, as designated by the Comprehensive Plan, shall connect to a public water system, when available. New developments located in the rural area, as designated by the Comprehensive Plan, may connect to a public water system, or may be served by private wells, as requested by the applicant. Availability of public water is defined in the Zoning Ordinance.

C. The approximate location and character of the proposed water facilities shall correspond with the Existing and Proposed Water Systems Map, as amended.

401.02 Reference Manuals: All manuals and/or standards referenced in this section shall refer to the latest version of such manuals or standards.

401.03 Fire Safety Systems: Fire safety systems shall be designed and constructed in accordance with Section 300 of this manual and with the Prince William County Service Authority Utility Standards Manual (PWCSA-USM).

401.04 Easements: To provide for maximum utilization of public water systems, appropriate easements shall be required to adjacent properties for access to, or extension of, said utilities. Such easements shall be dedicated to the Prince William Board of County Supervisors or the Service Authority, depending on the location of the project.

401.05 Private Water Service Connections: All water service connections from the meter to the building, except when within a dedicated easement, are regulated by the Virginia Uniform Statewide Building Code and are to be privately maintained.

401.06 Water Supply Interconnections: There shall be no physical connections between a drinking water supply and a sanitary or storm sewer, or appurtenance thereof. All facilities furnished with a public drinking water supply will have no physical connection with private wells or other private water supply system, or any other source of contamination.

402.00 WATER SUPPLY SYSTEMS - PLANNING AND DESIGN

402.01 Commonwealth of Virginia Waterworks Regulations:

A. The design of water supply systems shall be governed by the Commonwealth of Virginia's waterworks regulations or the more stringent requirements of the PWCSA-USM. The Service Authority has state and local review authority for water mains up to eighteen (18) inches in diameter from the Virginia Department of Health (VDH). Accordingly, the Virginia waterworks regulations shall be augmented by the PWCSA-USM, unless such augmentation is specifically waived by the general manager or the director of Public Works, depending on the service area where the project is located.

B. Specific parameters of the proposed project's water system may involve both local review and additional review by the Virginia Department of Health.

402.02 Water Lines in Public Rights-of-way:

A. Water lines will be allowed within the right-of-way of any roadway, except within limited access right-of-way unless, as determined by VDOT, there are compelling design or safety issues which would demand consideration of an alternate location.

B. Water lines will be allowed under pavement five (5) feet from the outside edge of pavement or seven (7) feet from the face of curb of undivided roadways unless, as determined by VDOT, there are compelling design and safety issues which would demand consideration of an alternate location.

C. Water lines will not be allowed under the pavement of divided roadways, except under the following conditions:

1. When a roadway has more lanes than required for the projected traffic, such as when a divided roadway is used for aesthetic purposes.
2. In subdivision, commercial and industrial areas with adjacent development with direct access to a roadway and where sufficient road network exists such that noncircuitous alternate access is available within the development.

3. The extension of existing water lines already located under existing pavement.
4. The continuation of water lines under undivided roadways through widened intersections, only through the intersection, to a divided section.
5. When the location of other items such as storm sewer, signs, landscaping, mature trees or other utilities are such that sound engineering judgment would indicate the placement of water lines under the roadway pavement is appropriate.
6. In all situations cited above, VDOT may determine that there are compelling design or safety issues which would demand consideration of an alternate location.

D. When water lines are permitted under Paragraph C, they should be located five (5) feet from the outside edge of pavement or seven (7) feet from the face of curb.

E. Water lines greater than twenty-four (24) inches in diameter, while permitted in most instances to cross any roadway, except a "limited access" right-of-way, shall not be permitted under the pavement parallel with the roadway alignment, due to the necessity for structures, vaults, etc.

F. VDOT should be contacted at the preliminary plan stage to determine the acceptability of locating water lines under the pavement and/or within the right-of-way of proposed roadways, especially if, from preliminary review, it appears these guidelines will be difficult or impossible to meet.

G. Nothing within these guidelines is intended to preclude VDOT from working with the local governments and utility owners to address situations requiring special consideration and is not intended to preempt local government guidelines that may be more restrictive.

402.03 Surface Water Crossings:

A. Water lines crossing surface waters, both above and below the watercourse, present special problems, and should be discussed with the Department of Public Works and the Service Authority before final plans are prepared.

B. Crossing of surface waters above the watercourse shall only be made when other methods are impractical.

C. When crossings are permitted, they shall be as close to a right angle to the stream as possible. No more area shall be disturbed than is necessary to provide for the construction of the water line at that location.

403.00 WATER SUPPLY SYSTEMS - SUBMISSION REQUIREMENTS

403.01 Plan Submission:

A. All site development plans involving water systems shall be submitted to the Office of Planning. The Office of Planning shall coordinate the review and approval of all elements of the plan in accordance with Section 100.00 of this manual and the Administrative Procedures Manual.

B. All water systems involving pump stations or storage facilities or water mains twenty-four (24) inches and larger shall require a special review process by the PWCSA.

403.02 Plan Elements: The following information shall be provided on the site development plans:

A. All proposed water lines and the location and size of all valves, fittings, air relief valves, meters, discharge lines, blow-off chambers, and other appurtenances.

B. On industrial and commercial developments, the water meter and service line size and location.

404.00 WATER SUPPLY SYSTEMS - CONSTRUCTION STANDARDS

404.01 General Requirements: The construction of all public water supply systems shall conform to the Virginia Department of Health regulations, and the Prince William County Service Authority Utility Standards Manual, unless specifically waived by the general manager or the director of Public Works, depending on the location of the project.

404.02 Acceptable Materials: The materials listed in the Prince William County Service Authority Utility Standards Manual are for general information. Engineers and contractors working in Prince William County shall contact the Service Authority or the company providing service to determine what materials are acceptable for each specific project.

450.00 ON-SITE PRIVATE WELLS

450.01 Applicability: Private wells are allowed in developments located in the rural area, as designated by the Comprehensive Plan. Private wells are also allowed on individual lots in the development area, where a public water system is not available. Availability of public water is defined in the Zoning Ordinance.

450.02 State Regulations: Private wells shall be designed and tested in accordance with the Commonwealth of Virginia's waterworks regulations and private wells regulations.

450.03 Review and Approval: Information pertaining to private wells shall be submitted as part of the site/subdivision plans. The review and approval of this information shall be performed by the Health Department.