HYDRAULIC INFORMATION AVAILABLE FROM WSSC

The following information is provided for those who design fire sprinkler systems. This sheet describes hydraulic information that may help the designer obtain a starting point for hydraulic calculations. Use of the sheet will help reduce the possibility of incorrectly interpreting hydraulic data received from WSSC. It is intended only for the professional.

WHAT INFORMATION IS AVAILABLE? - The information available depends on the type of water service requested by the applicant. A description of each available type of hydraulic information is given in following sections. The information available for the various types of service is listed below:

	Hydraulic Information From WSSC		
Type of Service	**Hydraulic Grade**	**Fire Flow Test**	**Hydraulic Information Sheet**
Connection (<4" diameter)	Available	Available	Not available
On-site (≥4" diameter)	Available	Available	Available*
Other	Available	Available	Not available

* *For waived on-site systems with total flows less than 200 gallons per minute (gpm) connecting to 8-inch diameter water mains, or with total flows less than 300 gpm connecting to 10-inch diameter and larger water mains, Hydraulic Information Sheets are not required or provided. Sprinkler designers should use the low hydraulic grade as a starting point.*

HYDRAULIC GRADE INFORMATION -- Hydraulic grade information is in units of feet of water above mean sea level. The high hydraulic grade is used to determine the expected high pressure under normal operating conditions. The low hydraulic grade is used to determine the expected low pressure under normal operating conditions.

WSSC's **Development Services Center**, 301-206-8650, provides high and low hydraulic grade information over the phone at no charge. When calling, knowing the WSSC 200' sheet number and the nearest cross streets speeds the response time.

The high and low grades are available over the internet in two forms:

- As a PDF file: http://www.wsscwater.com/DSG-Permits/documentforms/HydraulicGrades.pdf. The grades are listed by 200' sheet and water pressure zone.

- From WSSC's Engineering Records/Information (WERI) application: http://www.wsscwater.com/service/GISdefault.cfm. By double-clicking on a pipe, then selecting the pipe report which will appear as a link on the top, right side of the screen and, finally, clicking on the link at the words "Pressure Zone" on the pipe report itself, the high and low grades will appear in a popup box. Obtaining internet access to the WERI application requires users to visit the Permit Services counter in Laurel, Maryland, with a valid drivers license. Instructions for registering for access to WERI is provided at the site listed above.

FIRE HYDRANT FLOW TESTS -- Fire hydrant flow test results can be obtained by sending the Customer Care Team's **Support Services Group** either

- a written request to Mail Stop 02, 14501 Sweitzer Lane, Laurel, MD 20707 **or**
- a faxed request to 301-206-4240

labeled "Attention: Fire Flow." The Support Services Group will review the request to determine if there has been a test within the past year near the location and within the same water pressure zone of the request.

Written or verbal information from recent tests will be given for a **$75.00** fee. If there are no recent tests, or if the requesting party does not feel that the existing test is close enough to their site, then a new test can be conducted. The new test will not be conducted until the **$500.00** test fee is received by Support Services staff. A written record of the ***unadjusted*** fire hydrant test will be sent to the requester. To find out what information needs to be included with the written request call 301-206-4258.

Unadjusted fire hydrant flow tests usually do not reflect the appropriate low-grade conditions. The flow test results should be adjusted to these conditions using the elevation of the tested fire hydrant and the low hydraulic grade (see Hydraulic Grade Information above). Fire hydrant elevations are available on the WERI application by viewing the scanned images of as-built drawings (see page 1). Contour lines are also available on WERI and can be used to estimate the fire hydrant elevations.

HYDRAULIC INFORMATION SHEETS (H.I.S.) -- A completed H.I.S. is available from WSSC as a *part* an on-site or waived on-site review where the water service connection is at least 4 inches in diameter. The applicant fills out Part 1. The name and phone number of the person responsible for estimating the domestic, fire sprinkler and hydrant demands should appear in the block on the top, right-hand corner. The information provided in Part 2 of the H.I.S. by the WSSC is calculated for the specific connection point to the WSSC water main, not at the property line. Once the completed H.I.S. is returned to the applicant, it is the applicant's responsibility to distribute the information. WSSC does not provide copies of the H.I.S. Submission requirements for on-site reviews can be found at http://www.wsscwater.com/DSG-Permits/documentforms/On-site_Checklist.pdf .

CAUTION -- Applicants should be aware that HIS data received from WSSC is a theoretical estimate for a specific point in the water system. Also, it will often be necessary to transfer the results from the HIS or fire flow test from the reference point onto the applicant's property taking into account all pipes (WSSC mains, service connections and on-site piping) between the two points. The greater the distance between the two points, the less likely the information will represent the actual hydraulic conditions on the property.

Also, in older areas of the water system, the information from either the fire hydrant flow test or the H.I.S. could be misleading if water mains or existing service connections have excessive tuberculation. The information could suggest a higher flow or pressure than is available. Thus, the plumbing and sprinkler systems could be inadequately designed and constructed. The sprinkler system might then fail the county's test resulting in the denial of obtain an occupancy permit.

Do you have any other questions? -- Contact the Development Services Group by telephone (301-206-8650), email (DSG@wsscwater.com) or visit its website (http://www.wsscwater.com/DSG-Permits/dsg_home.cfm)