



Date of Council Work Session: July 9, 2012

**TOWN OF LEESBURG
TOWN COUNCIL WORKSESSION**

Subject: Raspberry Falls Water System Update

Staff Contact: Amy Wyks, P.E., Director of Utilities

Recommendation: If Town Council authorizes extension of Town Water to Raspberry Falls and Selma Estates, staff recommends Loudoun Water (LW) become a wholesale purchaser of Town water for distribution to the Raspberry Falls and Selma Estates water systems owned and operated by LW.

Issue: Should Town Council consider a wholesale agreement with LW for extension of Town water to the Raspberry Falls and Selma Estates Communities?

Fiscal Impact: Unknown at the present time.

Background: Raspberry Falls, a community of approximately 140 homes, has a water system operated by LW with two communal wells as the water source. One of the two wells (PW-1) serving the community was shut down November 16, 2011 after the Virginia Department of Health (VDH) determined the well was groundwater under the direct influence of surface water or GUDI. The determination rendered the well unsafe as a drinking water source.

In June 2011, the U.S. Environmental Protection Agency (EPA) reported that after a review of monitoring data from the Raspberry Falls community system, the EPA found that the treated drinking water met all applicable Safe Drinking Water Act standards. The EPA decided not to proceed with a previously planned dye trace study.

A new well, known as Well F, was constructed and in operation on July 25, 2011 to service Raspberry Falls residents. An emergency interconnection between the communities of Raspberry Falls and Selma Estates has been approved and constructed.

Loudoun Water agreed in January 2012 to study the option of a pipeline extension from the Town of Leesburg. In addition to the pipeline option, LW would study water treatment options for the communities.

Loudoun Water contracted a task order with engineering firm, Hazen and Sawyer, P.C. (H&S), known as the "Raspberry Falls and Selma Estates – Leesburg Water Supply Study." The study included treatment and pipeline options.

Treatment Options included membrane filtration, adsorption clarification/media filtration and direct filtration with H&S's preference for membrane filtration. The membrane filtration cost estimate for both Raspberry Falls and Selma Estates water treatment plants is eight (8) million dollars for capital costs and an annual operating cost of \$219,000. The implementation timeline would take approximately two years from concept approval to system start up including one year for construction.

The pipeline option includes extension of water from the Town of Leesburg water system. Various pipe routes were considered for the extension and H&S's recommendation was a pumping scenario from the Town's Main Zone to Raspberry Falls' water treatment plant. The pipeline cost estimate is seven and one half (7.5) million dollars for capital costs and an annual estimated operating cost of \$418,000. The operating cost includes Town of Leesburg treatment cost, pumping and additional labor (2 personnel). The implementation timeline would take approximately two and one half years from concept approval to system start up including one year for construction. The pipeline option would require the Loudoun County Board of Supervisors (BOS) to amend the revised General Plan to authorize the pipeline extension and approve a Commission Permit for the pipeline extension.

Hazen and Sawyer provided a cost estimate per lot for the membrane filtration treatment option of \$1,570 per year for 20 years if combined for both Raspberry Falls and Selma Estates communities. The pipeline option yields a cost of \$4,260 per year per lot as the annualized capital, operation and maintenance costs for 20 years. Loudoun Water policy would require the cost of improvements to the Raspberry Falls Community Water System to be recovered from Raspberry Falls customers. Loudoun Water would support the BOS's consideration of establishing a special tax district.

The Town's current water availability fee for a single family home is \$4,683 based on 350 gallons per day. Assuming 140 homes within the Raspberry Falls community, the total availability fee would be \$655,620. It is our understanding the average household uses more than 350 gallons per day and staff recommends the availability fee be calculated based on the current average for lots at the rate of \$13.33 per gallon. The in town water rate is the recommended usage rate if a wholesale agreement between the Town and LW is pursued. The revenue generated from a wholesale agreement is approximately \$190,000. However, the operational expenses and debt service would offset the generated revenue. As a result, a wholesale agreement between the Town and LW for actual water usage would not be a significant revenue source for the Utilities Fund.

Town Staff has participated in many meetings and discussions regarding extension of Town water to Raspberry Falls. During the meeting on March 16, 2012 at the Loudoun County Government building, Supervisor Higgins assembled a "Task Force". The task force includes Loudoun County Supervisors, Loudoun Water Board members, Town Council members, staff from Loudoun County, Town of Leesburg, Loudoun Water, and Raspberry Falls residents. The conclusion of the task force meeting was that Loudoun Water would consider extension of Town water if:

- Town would guarantee a consistent water quality limits acceptable to LW at the point of connection;
- Town would guarantee water quantity;
- Town would guarantee water pressure;
- Town would guarantee a wholesale/bulk purchase rate.

Loudoun Water and Town Staff met on April 13, 2012 to discuss the scope of services for the new task order with Hazen and Sawyer. It was discussed that a base water quality value would need to be established and the Town agreed to collect water samples and forward test results to Loudoun Water. To date, two water samples (4/17/12 and 6/6/12) have been collected, analyzed and results provided to Loudoun Water. Town staff is unaware of the status of the Hazen and Sawyer Task Order. Town staff did communicate concern to LW staff regarding the proposed scope of service referencing evaluation of Town of Leesburg water treatment options including:

- Switching to chloramines as a secondary disinfectant.
- Granular activated carbon (GAC) caps on the existing filters;
- Powder activated carbon (PAC) feed modifications
- Aeration of Town's Carr tanks.

Please refer to the attached PowerPoint slides regarding staff's evaluation and review of the pipeline options. Based on elevation and hydraulics, LW should consider connection of Raspberry Falls and Selma Estates communities for the pumped wholesale arrangement option.

Attachment: (1) PowerPoint slides regarding pipeline options.

Raspberry Falls

Town of Leesburg
Review of Pipeline Options

Town Installs Pipe & Operates Raspberry Falls System

- Pros - None
- Cons
 - Town's water infrastructure is extended beyond Town service area
 - Water quality concerns
 - Additional resources required including staff, treatment costs and flushing
 - Management of special assessment fee collection
- Cost for Construction – The entity responsible for construction of the proposed pipeline extension is currently unknown. However, Town would operate system after completion. Pipeline project estimate is \$7.5 Million per Hazen & Sawyer report.
- Operational Responsibility – Town of Leesburg
- Cost to Customers – Quarterly water usage rate based on out of town water rates. Residents would be required to pay Town water availability fee and any special assessment.
- Town Revenue Generated – Revenue for water usage would be approximately \$270,000 annually. However, additional resource expenditures will off set the generated revenue. Availability fees would be approximately \$655,000 based on FY12 water availability fee for 350 gallons per day per single family dwelling.
- Rate to Charge – Current adopted out of town water rates.
- Liability – Town is responsible to meet all Virginia Department of Health Waterworks Regulations including water quality and pressure.

Town Provide Wholesale/Bulk Water to Loudoun Water

Note: Water is sold “as is” at a water meter vault.

- Pros – Town infrastructure is not extended outside the Town’s service area.
- Cons - None
- Cost for Construction – LW to pay for water meter vault and all costs to extend pipeline. Pipeline project estimate is \$7.5 Million per Hazen & Sawyer report.
- Operational Responsibility – Loudoun Water
- Cost to Customers – Water usage costs charged by Loudoun Water based on whole sale water and water treatment cost at community system. It is undetermined how Loudoun Water will handle charging residents the Town’s water availability fee.
- Town Revenue Generated - Wholesale revenue would be approximately \$190,000 annually based on FY12 in town water rates. However, expenditures for the additional usage most likely will off set the generated revenue. Availability fees would be approximately \$655,000 based on FY12 water availability fee for 350 gallons per day per single family dwelling.
- Rate to Charge – Wholesale water rate to be calculated based on in town water rate.
- Liability – Wholesale agreement will address minimum requirements for water quality, water quantity, and water pressure.

TOWN OF LEESBURG FLOW PROJECTIONS
FY 2011-2016

| PROJECT | PROPOSED UNITS OR AREA | | TYPE | ESTABLISHMENT TYPE | USAGE | PERMITS ISSUED FOR UNITS OR S.F. | PERMITS REMAINING FOR UNITS OR S.F. | TOTAL AVERAGE FLOW (GPD) | ANTICIPATED FLOWS(MGD) | | | | | REMAINING FLOWS (GPD) | | |
|---|------------------------|-----------|------|----------------------------|---------------------|----------------------------------|-------------------------------------|--------------------------|------------------------|---------|---------|---------|---------|-----------------------|---------|----------------|
| | | | | | | | | | FY 2012 Jan-June | FY 2013 | FY 2014 | FY 2015 | FY 2016 | | FY 2017 | |
| 116 E MARKET ST | 1,921 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 1921 | 69 | | | 69 | | | | | 0 |
| 134 FT EVANS RD NE | 1,800 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 1800 | 59 | | 59 | | | | | | 0 |
| 202 CHURCH ST(HOUP T SUBD) | 10,651 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 10651 | 351 | | | 351 | | | | | 0 |
| 209&211 CHURCH ST | 12,356 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 12356 | 408 | | | 408 | | | | | 0 |
| AIRPORT COMMERCE CENTER PHASE 2 | 26,911 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 26911 | 888 | | | 888 | | | | | 0 |
| ALLMAN-STANFIELD-OFFICE | 73,350 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 73350 | 2,421 | | | 658 | | | | | 1,763 |
| ALLMAN-STANFIELD-RESTAURANT | 70 | SEATS | 7 | RESTAURANT | 10.00 gpd/meal/seat | 0 | 70 | 700 | | | 377 | | | | | 323 |
| ARCADIA OFFICE BUILDING | 29,645 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 29645 | 489 | | | 489 | | | | | 0 |
| BARBER & ROSS ** | 332 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 0 | 332 | 99,600 | | | | | | | | 99,600 |
| BARBER & ROSS ** | 32,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 32000 | 1,056 | | | | | | | | 1,056 |
| BARBER & ROSS ** | 45,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 45000 | 1,620 | | | | | | | | 1,620 |
| BANYON COVE | 24 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 0 | 24 | 7,200 | | 2,000 | 2,500 | | | | | 2,700 |
| BATTELFIELD PARK | 1,500,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 1500000 | 49,500 | | | | | 29,500 | 20,000 | | 0 |
| BATTELFIELD PARK | 250,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 250000 | 9,000 | | | | | 1,500 | 1,500 | | 6,000 |
| BATTELFIELD SHOP.CTR- OFFICE | 17,600 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 17600 | 581 | | | | | | | | 581 |
| BOLEN PARK | 60,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 60000 | 25,560 | | 5,560 | 10,000 | 10,000 | | | | 0 |
| BUFFALO WILD WINGS | 6,072 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 4560 | 4,560 | | 4,560 | | | | | | 0 |
| CATOCTIN CIRCLE CENTER | 28,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 28000 | 1,008 | | | | 1,008 | | | | 0 |
| CATOCTIN CIRCLE CENTER | 60,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 60000 | 1,980 | | | | | 1,980 | | | 0 |
| CHIPOTLE REST | 40 | SEATS | 7 | RESTAURANT | 10.00 gpd/meal/seat | 0 | 40 | 400 | | 400 | | | | | | 0 |
| COMFORT SUIT ADDITION | 14,316 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 14316 | 258 | | 258 | | | | | | 0 |
| CORNER STONE ADMIN BUILDING | 19,700 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 19700 | 650 | | | 650 | | | | | 0 |
| CORNER STONE CHAPEL (2200 SEATS) | 50,575 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 50575 | 1,669 | | | 1,669 | | | | | 0 |
| CORNER STONE GYM | 51,600 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 51600 | 1,703 | | | 1,703 | | | | | 0 |
| CORNERSTONE OFFICE DAY CARE | 200 | CHILDREN | 17 | DAY CARE | 10.00 gpd/child | 0 | 200 | 2,000 | | | 2,000 | | | | | 0 |
| CORNWALL COMMONS | 19 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 0 | 19 | 5,700 | | 2,700 | 3,000 | | | | | 0 |
| COURT HOUSE COMMONS | 12,028 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 12028 | 397 | | 397 | | | | | | 0 |
| COURTHOUSE SQUARE | 113,650 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 113650 | 4,091 | | | | | | | | 0 |
| COURT YARD BY MARRIOTT | 82 | UNITS | 6 | HOTEL/MOTEL | 100.00 gpd/unit | 0 | 82 | 8,200 | | | 8,200 | | | | | 0 |
| CROSS ROADS AT LEESBURG, PARCEL D-1(7.5 AC) | | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 0 | 0 | | | | | | | | 0 |
| CROSS ROADS AT LEESBURG, PARCEL F-1(12 AC) | 350,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 350000 | 11,550 | | 1,000 | 5,000 | 5,550 | | | | 0 |
| CROSS ROADS AT LEESBURG, PARCEL 48(11 AC) | 350,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 350000 | 11,550 | | 1,000 | 5,000 | 5,550 | | | | 0 |
| CROSS ROADS AT LEESBURG, PHASE 1(OFFICE) | 60,900 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 60900 | 2,010 | | 2,010 | | | | | | 0 |
| CROSS ROADS AT LEESBURG, PHASE 2 (TH) | 43 | UNITS | 14 | DUPLEX | 350.00 gpd/unit | 0 | 43 | 15,050 | | 3,500 | 3,500 | 8,050 | | | | 0 |
| CROSS TRAIL County** | 3,500,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 3500000 | 115,500 | | | | | | | | 115,500 |
| CROSS TRAIL County** | 500,000 | GR.SQ.FT. | 9 | LT/MED INDUSTRY/ WAREHOUSE | 0.01 gpd/sq.ft. | 0 | 500000 | 5,000 | | | | | | | | 5,000 |
| CROSS TRAIL County** Restaurant | 80,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 80000 | 2,880 | | | | | | | | 2,880 |
| CROSS TRAIL County** RETAIL | 75,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 75000 | 2,700 | | | | | | | | 2,700 |
| CROSS TRAIL County** Conference Center | 100,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 100000 | 3,300 | | | | | | | | 3,300 |
| CROSS TRAIL County** Fitness | 225,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 225000 | 8,100 | | | | | | | | 8,100 |
| CROSS TRAIL County** Hotel | 360 | ROOM | 21 | HOTEL | 90.00 gpd/room | 0 | 360 | 32,400 | | | | | | | | 32,400 |
| CROSS TRAIL Office .in Town | 195,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 195000 | 6,435 | | | 4,435 | 2,000 | | | | 0 |
| DELASHMUT | 67,500 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 67500 | 2,228 | | | | | | | | 2,228 |
| DULLESS CHRYSLER | 22,762 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 22762 | 819 | | 819 | | | | | | 0 |
| DOUGLASS ES | 850 | | 18 | ELEMENTARY/MIDDLE | 10.00 gpd/stud. | 0 | 850 | 8,500 | | 8,500 | | | | | | 0 |
| EXETER NEIGHBORHOOD CENTER | 32,500 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 32500 | 1,170 | 150 | 500 | 520 | | | | | 0 |
| FORM BASE CODE | | | | | | | | | | | | | | | | 600,000 |
| HOMEWOOD SUITS | 91 | UNITS | 6 | HOTEL/MOTEL | 100.00 gpd/unit | 0 | 91 | 9,100 | 9,100 | | | | | | | 0 |
| HARRISON SUBD | 2 | UNITS | 1 | SINGLE-FAMILY | 350.00 gpd/unit | 0 | 2 | 700 | | 700 | | | | | | 0 |
| TUSCARORA CROSSING | 456 | UNITS | 1 | SINGLE-FAMILY | 350.00 gpd/unit | 0 | 456 | 159,600 | | | | | | | | 159,600 |
| TUSCARORA CROSSING | 294 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 0 | 294 | 88,200 | | | | | | | | 88,200 |
| LEESBURG AIRPARK II | 147,083 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 147083 | 4,854 | | | 2,854 | 2,000 | | | | 0 |
| LEESBURG CENTRAL | 22,300 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 22300 | 736 | | | | 736 | | | | 0 |
| LEESBURG COMMERCE CENTER | 56,424 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 56424 | 1,862 | | 862 | 1,000 | | | | | 0 |
| LEESBURG FIRE STATION | 44,056 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 44056 | 1,454 | | 454 | 1,000 | | | | | 0 |
| LEESBURG INN | 13,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 13000 | 429 | | | 429 | | | | | 0 |
| LEESBURG TOYOTAL | 51,700 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 51700 | 1,706 | | | | | | | | 0 |
| LEESBURG WEST | 28 | UNITS | 1 | SINGLE-FAMILY | 350.00 gpd/unit | 0 | 28 | 9,800 | | | | | | | | 9,800 |
| LOUDOUN BAPTIST TEMPLE ADDITION | 19,300 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 19300 | 637 | | | 637 | | | | | 0 |
| LOUDOUN COUNTY ADC PHASE 2 | 256 | BED | 8 | JAIL | 55.00 gpd/bed | 0 | 256 | 14,080 | 7,000 | 7,080 | | | | | | 0 |
| LOUDOUN COUNTY BUS GARAGE ADDITION | 12,374 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 12374 | 408 | | | | 408 | | | | 0 |
| LOUDOUN COUNTY COMUTER BUS GARAGE | 18,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 18000 | 594 | | | | 594 | | | | 0 |
| LOUDOUN FUNERAL HOME | 2,500 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 2500 | 83 | | | | | | | | 0 |
| LOWES HOME IMPROVEMENT CENTER | 152,245 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 152245 | 5,481 | | | 2,400 | 2,000 | | | | 1,081 |
| LOWES RETAIL | 152,245 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 152245 | 5,481 | | | 5,481 | | | | | (0) |
| LOWES RETAIL ASSOCIATED USES | 120,093 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 0 | 120093 | 4,323 | | | | 4,323 | | | | 0 |
| MARKET SQ. AT POTOMAC STATION | 36 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 0 | 36 | 10,800 | | 3,000 | 5,400 | 2,400 | | | | 0 |
| MARKET SQ. AT POTOMAC STATION | 290 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 0 | 290 | 87,000 | | 9,000 | 20,400 | 20,400 | 20,400 | 20,400 | 16,800 | 0 |
| MARKET SQ. AT POTOMAC STATION | 12,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | 0 | 12000 | 396 | | | 396 | | | | | 0 |

TOWN OF LEESBURG FLOW PROJECTIONS
FY 2011-2016

| PROJECT | PROPOSED UNITS OR AREA | | TYPE | ESTABLISHMENT TYPE | USAGE | PERMITS ISSUED FOR UNITS OR S.F. | PERMITS REMAINING FOR UNITS OR S.F. | TOTAL AVERAGE FLOW (GPD) | ANTICIPATED FLOWS(MGD) | | | | | | REMAINING FLOWS (GPD) |
|---|------------------------|-----------|------|-----------------------|-----------------|----------------------------------|-------------------------------------|--------------------------|------------------------|---------|---------|---------|---------|---------|-----------------------|
| | | | | | | | | | FY 2012 Jan-June | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | |
| MARKET SQ. AT POTOMAC STATION | 32,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 32000 | 1,152 | | | 652 | 500 | | | 0 |
| MEADOW BROOK RESIDENTIAL (LEESBURG SOUTH) | 402 | UNITS | 1 | SINGLE-FAMILY | 350.00 gpd/unit | | 402 | 140,700 | | | 23,800 | 23,800 | 93,100 | | 0 |
| MEADOW BROOK RETAIL/COMMERCIAL (LEESBURG SC | 185,000 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 185000 | 6,660 | | | 3,660 | 3,000 | | | 0 |
| NORTH ST SENIOR CENTER | 85,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 85000 | 2,805 | | 1,805 | 1,000 | | | | 0 |
| OAKLAWN EMPLOYMENT CENTER PEC | 1,298,500 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 1298500 | 42,851 | | | | | 22,851 | 20,000 | 0 |
| OAKLAWN MUC5 | 7,200 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 7200 | 238 | | | | | 238 | | 0 |
| OAKLAWN MUC5 | 14,400 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 14400 | 518 | | 518 | | | | | 0 |
| OAKLAWN OFFICE CENTER- MIXED USE - PRC | 132,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 132000 | 4,356 | | | 2,356 | 2,000 | | | 0 |
| OAKLAWN PRC | 271 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 106 | 165 | 49,500 | | | | 20,500 | 29,000 | | 0 |
| OFFICES AT GEORGETOWN | 52,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 52000 | 1,716 | | 1,716 | | | | | 0 |
| PARKWAY OFFICE PARK | 130,690 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 130690 | 4,313 | | | | | 3,017 | 1,296 | 0 |
| PATRIOT OFFICE PARK | 103,155 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 103155 | 3,404 | | 2,404 | 1,000 | | | | 0 |
| PAXTON SCHOOL | 500 | STUDENT | 19 | HIGH SCHOOL | 3.20 gpd/stud. | | 500 | 1,600 | | 800 | 800 | | | | 0 |
| PMW FARM SF | 140 | UNITS | 1 | SINGLE-FAMILY | 350.00 gpd/unit | 31 | 109 | 38,150 | | 10,500 | 10,500 | 10,500 | 6,650 | | 0 |
| PMW FARM TH | 135 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 22 | 113 | 33,900 | | 9,000 | 9,000 | 9,000 | 6,900 | | 0 |
| POTOMAC STATION RETAIL PARCEL B.LOT C | 5,763 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 5763 | 207 | | 1,729 | | | | | 0 |
| POTOMAC STATION RETAIL PARCEL B.LOT D | | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 0 | 0 | | | | | | | 0 |
| RIVER CREEK | 177 | UNITS | 1 | SINGLE-FAMILY | 350.00 gpd/unit | 162 | 15 | 5,250 | | 3,500 | 1,750 | | | | 0 |
| RIVER CREEK VILLAGE | 55,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 55000 | 1,815 | | | 1,815 | | | | 0 |
| RIVER CREEK VILLAGE | 69,850 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 69850 | 2,515 | | | 2,515 | | | | (0) |
| SOMMERSET PARK(TAVISTOCK) | 21 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | | 21 | 6,300 | | | | | | 6,300 | 0 |
| ST JAMES EPISCOPAL CHURCH | 28,553 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 28553 | 1,028 | | | | | | | 1,028 |
| ST.JOHN THE APOSTLE CATHOLIC CHURCH | 28,553 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 28553 | 1,028 | | 1,028 | | | | | 0 |
| STAR PONTIAC | 6,259 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 6259 | 225 | | 225 | | | | | 0 |
| SYCOLIN COMMONS | 184 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | 106 | 78 | 23,400 | | | | | | | 23,400 |
| SYCOLIN COMMONS | 7,500 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 7500 | 248 | | | | | | | 248 |
| TAVISTOCK COMMERCIAL | 32,690 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 32690 | 1,079 | | | | 1,079 | | | 0 |
| TAVISTOCK OFFICE BUILDING | 32,690 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 32690 | 1,079 | | | | 1,079 | | | 0 |
| VALLEY VIEW SF | 8 | UNITS | 1 | SINGLE-FAMILY | 350.00 gpd/unit | | 15 | 5,250 | | 3,500 | 1,750 | | | | 0 |
| VALLEY VIEW TH | 15 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | | 15 | 4,500 | | 2,250 | 2,250 | | | | 0 |
| VILLAGE AT LEESBURG PHASE 1 | 154,300 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 148262 | 4,893 | | 1,893 | 3,000 | | | | 0 |
| VILLAGE AT LEESBURG PHASE 1 | 1,210,893 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | 326925 | 883968 | 31,823 | | 13,231 | 10,000 | 8,592 | | | (0) |
| VILLAGE AT LEESBURG LANDBAY C | 160 | UNITS | 2 | TOWNHOUSE/MULTIFAMILY | 300.00 gpd/unit | | 160 | 48,000 | | 8,000 | 20,000 | 20,000 | | | 0 |
| VILLAGE AT LEESBURG LANDBAY D&E | | | | | | | | | | | | | | | 0 |
| VILLAGE AT LEESBURG LANDBAY Q | 13,600 | GR.SQ.FT. | 11 | COMMERCIAL | 0.04 gpd/sq.ft. | | 13600 | 490 | | 490 | | | | | (0) |
| WATERFORD AT KING | 145,000 | GR.SQ.FT. | 3 | OFFICE/EMPLOYMENT | 0.03 gpd/sq.ft. | | 145000 | 4,785 | | 2,785 | 2,000 | | | | 0 |
| WOLF FURNITURE | 46,030 | GR.SQ.FT. | 5 | SHOPPING/RETAIL | 0.04 gpd/sq.ft. | | 46030 | 1,657 | | 1,657 | | | | | 0 |

TOTAL ANTICIPATED FLOWS **16,250** **119,674** **181,958** **168,495** **220,730** **59,596** **1,175,408**

1,942,111

Note

** Areas shaded in yellow are based on the last application filed with the Town

New Proposals

IRRIGATION LOADING @ 10% **1,625** **11,967** **18,196** **16,850** **22,073** **5,960** **117,541**

| CURRENT AVERAGE FLOWS | |
|-----------------------|-------|
| WPCF(Avg Day flow) | 5.85 |
| WTF(Max Day Flow) | 7.40 |
| CURRENT CAPACITY | |
| WPCF | 7.50 |
| WTP | 12.50 |
| Flow Projections | |
| WPCF(Avg Day flow) | |
| WTF(Max Day Flow) | |

| | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Beyond 2017 |
|--------------------|---------|---------|---------|---------|---------|---------|-------------|
| WPCF(Avg Day flow) | 5.87 | 5.99 | 6.17 | 6.34 | 6.56 | 6.62 | 7.79 |
| WTF(Max Day Flow) | 7.44 | 7.70 | 8.10 | 8.47 | 8.96 | 9.09 | 11.41 |