**Date of Council Work Session: February 11, 2013**

**TOWN OF LEESBURG**
**TOWN COUNCIL WORK SESSION**

**Subject:** Utility Capacity Presentation Follow-up

**Staff Contact:** Amy Wyks, Director of Utilities

**Recommendation:** Follow up from January 22, 2013 presentation only at this time.

**Issue:** Follow up information from Utility Capacity Presentation.

**Fiscal Analysis**: N/A

**Background:** List below is follow up information to Town Council questions from the January 22, 20313 Meeting regarding the documents on Utility Plant Capacity at the Water Treatment and Water Pollution Control Facilities.

**Utilities Capacity Presentation**
**Follow Up Information**
**January 22, 2013 Town Council Meeting Questions**

1. Can we request copies of what has been submitted by other water works? What are the documented requirements for Virginia Department of Health (VDH) to approve such a waiver?
   a. We received the following response from our contact at VDH regarding the required documentation from a waterworks who will not exceed rated capacity. We also had requested the name of any waterworks who has been in this situation.

      Response from Robert D. Edelman, P.E., District Engineer at the Culpepper Office of VDH:

      "Thank you for your inquiry. The section of the Virginia *Waterworks Regulations* referenced assumes that a community waterworks is continuing to grow in terms of service area and demand. This is not always the case as the geographic service area may be limited by Town boundaries or areas outside town are already developed, the existing County Comprehensive Plan, etc.

      When the 80% of design capacity level is met or exceeded on a monthly average basis for three consecutive months, the referenced section of the *Regulations* becomes applicable. If the Town exceeded the 80% threshold, but felt that it would not exceed 100% of the design capacity, Virginia Department of Health Office of Drinking Water (VDH ODW) would expect a written explanation that the design capacity would not be exceeded and ODW should not require the

waterworks to expand. This explanation should include or reference applicable planning documents, population growth estimates, water demand histories, etc.

We note for the three high demand months of 2012, the Town was in the range of 45% to 50% of the permitted design capacity and we don't see this as a significant current issue.

We have addressed this issue with City of Manassas, and Virginia American Water Company, Alexandria District."

2. What is average day flow for Water Treatment Plant?
   a. We will add a line for average day at the Water Treatment on the Flow Projections spreadsheet and provide with upcoming Utilities Capacity reports.

3. How many maximum (max) days have we had, on average for the past 2-3 years?
   a. Water supply staff is in the process of finalizing their annual report. We will address this question with the next submission of the next Utilities capacity report.

4. What will be the tipping point to push us over 80%? (Types of commercial or amounts of commercial).
   a. This is difficult to address considering the trends and factors. However, staff will consider and prepare additional information with the next submission in July 2013.

5. Do we have projections on what we would have to get to in order to reach the 3 month average? (Increased development commercial and residential.)
   a. This is difficult to address with trends and other factors. However, staff will be preparing a sample for July 2013.

6. Every time a big development comes in can you provide a revised flow projection spreadsheet? Can you update the projections and show the proposed change in use?
   a. The spreadsheet will be reviewed and revised as applicable with any changes in land development. The current spreadsheet provided includes all known developed parcels based on densities per the current zoning.

7. Why are we seeing the demand flatten?. How can you survey customer habits?
   a. Staff will explore the possibility of a survey but recognize water use can be a sensitive topic. Overall, the decrease in demand is a trend water utilities are experiencing throughout the United States and is not unique to Leesburg.

8. What is our expected water flow for a large fire?
   a. **Clarification** – During the Council meeting I replied with a value on the possible amount of fire flow used. (2000 gpm for 20 minutes = 40,000 gallons) However, I want to clarify the design fire flow criteria considered when determining the

Town's water storage capacity is the maximum required fire flow per DCSM of 2700 gpm for 3 hours which equates to 486,000 gallons.

9. What is our capacity to absorb excess flow during rain storms at the Water Pollution Control Facility? What capacity can be stored or absorbed?
   a. It is difficult to set a number to the capacity since each storm is different especially with duration and intensity. However, staff is diligent by monitoring oncoming storms and developing an operations plan per situation while determining a target flow for the plant and diversion of flow. A specific weather event and corresponding flows is as follows:

      i. During Hurricane Sandy On October 29th we had 4.10 inches of rain at the WPCF and total flow of 8.62 MGD and Max Flow of 12.12 MG.
      ii. October 30th we had 0.75 inches of rain and a total flow of 9.45 MGD and a MAX Flow of 15.00 MG.
      iii. October 31st we had 0.0 inches of rain and a total flow 6.43 MGD and a MAX Flow of 9.87 MG.
      iv. Flow from rain events raise very quickly and after the rain has stopped, the sanitary sewer flows decrease just as fast. On October 27th the day before the start of the rain, total flow was 3.887MGD with MAX of 5.125MG. On November 1st after two days of no rains, flows were at 4.825MGD with a MAX of 6.250MG.

10. Can you add a line on the Utilities capacity graph to represent the maximum 90 day period. Could we track how often are we getting into trouble?
    a. This request will be included with the July 2013 capacity report submitted to Council.

11. Can you add a separate tab to show the lines for each anticipated fiscal year?
    a. This request will be included with the next capacity report submitted to Council.

12. What is the average flow at the Station Car Wash?
    a. The following table represents commercial car wash usage:

| **CARWASH CONSUMPTION** | | | |
|---|---|---|---|
| **Name** | **Address** | **Avg GPD** | |
| Station Carwash | 149 Catoctin Circle SE | 35,376 | |
| First Street Carwash | 15 First Street SE | 3,505 | |
| Sunoco | 615 E Market Street | 7,600 | * |
| Sunoco | 1017 Edwards Ferry Rd | 2,172 | |
| Exxon | 984 Edwards Ferry Rd | 1,450 | * |
| Dulles Motor Cars | 107 Catoctin Circle | 858 | * |

* Meter serves carwash and domestic service