

## Villegas, Samantha

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**From:** Samantha Villegas [svillegas@loudounwater.org]  
**Sent:** Tuesday, August 25, 2009 4:40 PM  
**To:** Villegas, Samantha  
**Subject:** News from Loudoun Water

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## Raspberry Falls Water Notes

**Spread the news** -- Let your neighbors know they can sign up for this newsletter by sending an email to [svillegas@loudounwater.org](mailto:svillegas@loudounwater.org).

### Water Use: Drop It When It's Hot (adapted from EPA's WaterSense Program)

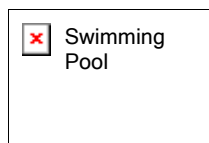
When the mercury rises, so does your water use. "Peak" water use describes the time of year when residential water use is at its highest. While using water efficiently throughout the year is important, sometimes the timing of when you use water can make a big difference for water supplies -- and your water bill.



In a community system such as yours, an average household's water use is 170 gallons per day. By contrast, peak seasonal water use can be 2 to 4 times that amount. When the collective water use is 2 to 4 times that of winter water use, peak periods become an issue, as water systems -- even those with plentiful supplies -- can be taxed by this spike in demand.

Extreme demand for water to water lawns, wash cars, fill backyard pools, and enjoy other warm-weather activities can sometimes outstrip supply; cause increased capital expenditure for the water system; tax water infrastructure; and, in extreme cases, require new water sources to be created solely for those peak use periods.

To reduce costs and ensure adequate supply for all customers, water utilities across the country encourage residents to limit water use during the hottest summer days, and to irrigate lawns and



### In This Issue

[Water Use: Drop It When It's Hot](#)

[Copper Pipe Investigation](#)

[Water System Update](#)

[Water Quality Update](#)

[Demand Report](#)

[Corrections](#)

[Tips for Drip Irrigation](#)

### Tips for Drip Irrigation

Use high quality parts that resist clogging and damage.

Lay drip lines under mulch; avoid burying under dirt.

gardens, refill pools, or perform other water-intensive tasks when demand is at its lowest (e.g., before 6:00 AM). They also institute a peak use charge. The peak use charge is a standard way many water utilities are able to recoup costs associated with seasonal peaks in demand.

Loudoun Water's peak use charge is calculated the same way for all of its customers. There are 2 ways that peak use charges may be determined. The equation that returns the greater result is applied. The 2 equations are:

Winter quarter gallons used + 6,000 gallons  
 $(\text{Winter quarter gallons used}/91.25) \times \text{number of billing days} \times 1.3$

The peak use charge for community systems is \$3.82/1000g. It is added to the base charge of \$2.55/1000g on water usage above the adjusted winter use threshold.

The following 2 examples show how peak use charges are calculated. Both examples include calculations for both formulas to show how the results compare. Presume 92 billing days for these examples.

#### **Scenario 1: Adding 6,000 Gallons Formula Returns Greater Result**

Winter use: 18,000 gallons  
 Summer use: 40,000 gallons  
 Number of billing days: 92

$((18,000/91.25) \times 92) \times 1.3 = 23,592$  gallons  
 $18,000 + 6000 = 24,000$  gallons

The greater result of 24,000 gallons will be subtracted from summer use gallons to determine peak use gallons.  
 $40,000 - 24,000 = 16,000$  gallons

Summer use charges are:  
 24,000 gallons billed at \$2.55/1000g  
 16,000 gallons billed at \$6.37/1000g [base + peak]

#### **Scenario 2: Billing Days x 1.3 Formula Returns Greater Result**

Winter use: 22,000 gallons  
 Summer use: 40,000 gallons  
 Number of billing days: 92

$((22,000/91.25) \times 92) \times 1.3 = 28,835$  gallons  
 $22,000 + 6000 = 28,000$  gallons

The greater result of 28,835 gallons will be subtracted from summer use gallons to determine peak use gallons.  
 $40,000 - 28,835 = 11,165$  gallons

Summer use charges are:  
 28,835 gallons billed at \$2.55/1000g  
 11,165 gallons billed at \$6.37/1000g [base + peak]

If you have any questions about peak use charges, contact Customer Service at 571-291-7880.

#### **Copper Pipe Investigation**

In July, several Raspberry residents alerted Loudoun Water to an issue affecting at least 48 homes in the neighborhood: copper pipe pitting.

Lay out drip tubing in straight or gently curving lines.

Blow air through the lines with a compressor at the end of the season.

Disconnect the system in the fall and bring components inside to prevent freeze damage.

Consider soil type, root structure, line friction and changes in elevation when placing emitters.

#### **Quick Links**

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Loudoun Water's Water Quality experts sprang into action and began a comprehensive effort to collect data from the residents.



An online survey was developed and emailed to the owners of all 48 homes that were identified as having been affected, a letter was mailed to all of the Raspberry residents that receive water from the Loudoun Water water system, and staff made calls to Raspberry residents, both those on individual wells and those serviced by the Loudoun Water community well water supply.

Loudoun Water collected information from 24 residents, obtained 9 samples of leaking copper pipe from 7 residences, and is working with experts at Virginia Tech to analyze the pitting, evaluate the water quality, and recommend actions to address the cause.

### Water System Update

Loudoun Water continues to work with Van Metre, residents of Raspberry Falls, and the Virginia Department of Health regarding implementation of a risk reduction project for your primary well, which is affected by bacteria following major rain events. As of the publishing of this newsletter, the state health department is analyzing the data and information provided to them. Initial discussions with the health department indicate that the well will likely be classified as "At Risk," rather than as "Groundwater Under Direct Influence" of surface water. This confirms that the current method of disinfection is able to provide water that meets all federal drinking water standards, that a new supply or treatment is unnecessary, and that any solution would be implemented solely as a risk reduction method.

✘ Conducting a ground survey

Loudoun Water has performed all of the legwork necessary to bring a new well or a treatment plant online in fairly short order. A decision on the path forward is expected by this fall. The path forward is intended to include added storage to better align supply and demand.

### Water Quality Update

✘ Beakers

Routine analysis of the water supply has shown "non-detect" levels of bacteria throughout this spell of dry weather, which is consistent with the pattern we have seen at Raspberry's well. In addition, a fifth Microscopic Particulate Analysis (MPA) was completed from a sample taken after the last major rain event in June. That MPA had a result of "0." The analysis included testing for both Giardia and Cryptosporidium. Neither were detected in the sample.

### Demand Report - You're Doing Great

With the heavy rains ending in June and the drier weather beginning in July, we saw a marked increase in water usage. The average water usage in June was 49,600 gpd (about 60% of permitted capacity). In July, the average usage increased to

✘ Gallons Challenge

75,600 gpd (about 90% of permitted capacity).

Summer water use (average gallons per day per home) continues to show a favorable trend.

July '09 -- 600 gpd/home

July '08 -- 650 gpd/home

July '07 -- 1150 gpd/home

While increased water use is to be expected during the hot summer months, congratulations are in order as 68% of the homes are at or below the target of 460 gallons/home per day. Also, 50% of households are using less than 286 gallons/day.

August and September are usually high demand months as well, and we're here to help you to continue to use water wisely. For tips on how to use water wisely, visit [www.loudounwater.org](http://www.loudounwater.org) and click on the Water

You Thinking  button.

### Corrections

The Water Quality Monitoring article from the July newsletter should read 4 counts per 100 milliliters in the following sentence: "We also made it a protocol to shut off your well anytime the E. coli count in the raw water exceeded 4 counts per milliliter or when Total coliform exceeded 100 counts per 100 milliliters in raw water."

### We Welcome Your Comments

We hope you found this new e-newsletter to be interesting and informative. We look forward to keeping you up-to-date on the latest happenings at Loudoun Water, and would like to hear from you on how we are doing. We invite you to contact us at [svillegas@loudounwater.org](mailto:svillegas@loudounwater.org).

**Warmest Regards,**

**Samantha Villegas, APR**

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