

Squires Grove Management Association - Lawn Watering Restrictions

Effective immediately, Squires Grove Management Association is imposing a lawn watering restriction for all properties using the Squires Grove Water Trust Resources. This restriction is being imposed because of the extreme drought conditions and the extended forecast of temps in the upper 80's and 90's with little chance for rain.

The lawn watering restriction applies to outdoor watering of lawns and washing of cars. The restriction **does not** apply (**yet**) to the every other day hand watering of flowers, trees or shrubs, vegetable gardens and any new grass or new trees planted within the last year. Approved watering can be done on an odd day/even day schedule using your address as a reference (e.g. if your address ends in an odd number you can water flowers trees and shrubs only on odd days). **This watering is restricted to watering before 9 a.m. and after 7 p.m. only.** Please do only what you absolutely have to keep these areas alive.

In support of our position a host of Water Resource articles and the modified Water Usage update (attached below) will be posted to www.squiresgrove.com for your review in the next couple of days.

As you will see in memo from our water service provider (below), over the past few weeks the Association's water utility has seen some of its highest water pump rates since finding a leak in our system last year. Using the other links to the articles from the USGS you will also see that we have made this decision with quite a bit of information and multiple discussions among the SGMA (Squire Grove Management Association) Members.

Our water table has been confirmed to be 3 feet lower than "full/normal.". With our mild winter and lack of rain this spring and summer, groundwater elevations were already lower than they would be during a normal year. And, while we might not experience a water availability decline immediately, there is still a high risk that our aquifer will not be replenished until after the 2012-2013 winter thaw.

Both our shallow well pump and deep well pump are running at near capacity for much of the day. We are not able to sustain this level of activity since the pumps and motors do not get a chance to cool down. If it continues, this activity may require additional maintenance before our already planned rebuilding of these units on our 5-year schedule. If this happens it would mean a special assessment to all Water Trust participants. We would like to maintain our successful track record of

having no special assessments. With your help and proper management of our resources we can continue this trend.

In addition, as you may or may not know, we need both wells operating in order to “blend” our water and keep the level of “known toxins” below the acceptable DNR and safe drinking water limits dictated by law. This would mean a higher dose of radium could contaminate our drinking supply. There is a very good chance that the shallow well will not be able to pump at the required rate of production if we continue to water our lawns. Our deep well is not as much at risk now but may be if we do not have an aquifer replenishing event soon.

We know that our water supply is the most basic and critical service we provide to our residents. Sometimes “Mother Nature” just gets the best of us. These restrictions, while unfortunate, are necessary to preserve our most precious resource.

We will continue to monitor this situation closely and decide whether or not to place a full ban on all watering or we will let you know when the restrictions will be lifted. Thank you for your cooperation.

On behalf of the Squires Grove Management Association,
Thank you.

Rick Ormsby
President

The following page is for your informational purposes only and may not make full sense to you. The message is clear, however, that we have a current situation that if addressed today, will help us avoid problems in the future. Thank you for you help in this matter.

MEMO: Subject- water usage:

As documented by Municipal Well & Pump on July 17, 2012.

We believe that water usage is now becoming more critical to the Squire Grove system as it is with other systems in the Midwest.

The daily usage is up to 128,224 gallons per day. That is more than either well pump can continue to produce in 24 hours.

The water table in both wells is ok. **The problem is not necessarily in the water table but in the production of well nr.1 and the mix of your water.** Nr. 1 is down to 66.8 gpm. nr.2 is at 86.7 gpm and remains unchanged. Well nr.1 was at 87.9 on 5-8-12 and this is down from the approx. 120 gpm when the pump was last rebuilt.

Yesterday the reservoir dropped down to 3 feet below full and both well pumps came on to run continuous until shut off. **At this point the red light (warning light) on the outside of the pump house is on.** The booster lock out is at approx. 10 feet down and there and is probably not in any danger of reaching that point.

Well nr.1 is running **17.4 hrs./day** and well nr.2 is running **11.22 hrs./day**. This is the gallons per day on each well pump on:

5-22-12	nr.1	52,557	nr.2	26176
6-18-12		57,718		29215
6-28-12		66,350		45,395
7-9-12		68,209		61,812

The YTD numbers:

2012	7-9-12	nr.1	12,478,500	nr.2	5,407,890	total	17,886,390
2011	7-6-12	nr.1	9,069,900	nr.2	5,387,990	total	14,457,890

The system is reaching its maximum capacity. I believe a ban on lawn watering should be mandated. As to what to do with well nr.1 this is not the time to take it down unless it is an emergency. I would suggest investigating the possibility of cleaning the well without pulling the pump. There are several methods available and at your direction I would inquire with our management.

IMPORTANT INFORMATION REGARDING GROUND WATER SUSTAINABILITY AND OR WATER TRUST RESOURCES.

Infiltration:

<http://ga.water.usgs.gov/edu/watercycleinfiltration.html>

Ground Water Development:

http://pubs.usgs.gov/circ/circ1186/html/gw_dev.html#hypo

Effects of Ground Water Development on Ground Water Storage:

http://pubs.usgs.gov/circ/circ1186/html/gw_storage.html

Effects of Ground Water Development on Ground Water Flow:

http://pubs.usgs.gov/circ/circ1186/html/gw_effect.html

Groundwater depletion:

<http://ga.water.usgs.gov/edu/gwdepletion.html>

Sustainability of Ground Water Resources:

<http://pubs.usgs.gov/circ/circ1186/>

Water Quality Factors Affecting Ground Water Sustainability

http://pubs.usgs.gov/circ/circ1186/html/wq_factors.html

Droughts, Climate Change, and Ground Water Sustainability

<http://pubs.usgs.gov/circ/circ1186/html/boxb.html>

There are other resources available for your review but I found these to be most educational and applicable to our circumstances. Thank You. Rick Ormsby