

9-27-19



2019 Board of Directors

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Board O' Gram 2019 - 19: Water Levels and Golf's Impact

Our ponds are always a hot topic during droughts. There are 14 ponds on the golf course, many more throughout the neighborhood, and of course the 288 acre lake. Of the ponds on the golf course, 9 of them were built after Palmer Design Co. finished the course. The developer decided they'd make a nice addition for the purpose of selling adjacent lots. The golf course irrigation system was tapped in many areas to assist in keeping these ponds full. In some cases, a well is also present to supplement water levels.

Our irrigation pump station, which was designed for an 18 hole course, has become a transfer pump in addition to an irrigation pump. The pump station sits behind the clubhouse and 18 green on the banks of the big lake. Pipe size and pumping capacity make it impossible for the pump station to satisfy both the needs of the course and the need for moving water to ponds simultaneously. Consequently, in dry times when water is in high demand and short supply, the ponds will get lower than we'd like. When we get some rain, we open pond valves and fill ponds. We can only open 2-3 at a time and it can take several days to fill one of them when it's extremely low.

We pump approximately 35 million gallons annually and much of that is moving water from the big lake to other ponds on the property. Water withdrawal data from the flow meter at our pump station is reported annually with Virginia DEQ. Simple math from the

flow meter when we are transferring water to ponds is how we determine a ballpark ratio of water used for irrigation vs. pond filling. For instance....if the only water being used is filling the pond at 3 tee box, then we can take a flow meter reading of, for example, 300 gallons per minute, and figure out how many gallons were used. We record the start and stop time of the valve opening, then do the math. 300 gallons per minute = 18,000 gallons per hour = 144,000 gallons in 8 hours. Often times ponds receive as much as 300,000 gallons in one "fill up" following a long dry spell. Ponds at 3 tee, 3 fairway, 3 green, 6 tee, 6 green, 13 tee, 13 green, 15 green, and 18 tee all get healthy doses of water from Fawn Lake every year.

More math tells us that our 288 acre lake has 7,800,000 gallons per inch of depth at the surface. One acre of water an inch deep = 27,154 gallons. Multiply that by 288 acres and you get 7,820,352 gallons of water per inch of water depth. If the lake drops 3 inches then that's 23,461,056 gallons of water. Our pump station uses roughly 4.5" of the big lake annually and conservatively 1/3rd of that is for transferring water to other ponds. At most, in a year of golf course irrigation, 3" of the lake is used. For perspective, that's equal to the amount that was released to the farm downstream in one weekend recently.

We are rationing water and have no intention of keeping things green and lush, which is obvious with a quick look around. Our goal is simply to keep things alive to avoid repair expenses we can't afford. We will continue to be good stewards of the lake, surrounding wetlands, and all of Fawn Lake.

Respectively,

Your Board

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FAWN LAKE COUNTRY CLUB

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