

1.) One being whether a SAR (sodium absorbent ratio) test has been done to show effects of sodium on our turf.

- The SAR test for our irrigation water will be done several times a year to check water quality. Our soil testing several times a year gives us the CEC (cation exchange capacity) which tells us the soils capacity to supply nutrients for plant uptake. We do several soil tests throughout the season to monitor nutrients in the soil.

2.) I want to know how much experience our golf professionals have with effluent. I want to know if we need to hire a professional agronomist and if we are going to need to purchase gypsum to precipitate the salt.

- The golf course superintendent has 3 years of experience using effluent irrigation at Glen Riddle Golf Club. Also has a Turfgrass Science Degree from Penn State University so is a professional agronomist.
- We currently do use gypsum on the golf course to improve our soils. We will make adjustments accordingly if we see soil testing changes but it is currently a common practice

3.) Another question is how often will the system be flushed to prevent salt and bicarbonate build-up in the soil.

- Typically every 2-4 weeks the system could be flushed, most of the time we will get rainfall events that could naturally take care of flushing the soils. It will be determined based on conditions we monitor in the field.
- Currently with our use of wetting agents and our fertility program we have been able to keep our sodium conditions in acceptable range and get most of our flushes naturally

4.) . What will be done to prevent problems with irrigation heads having clogged screens? How will we protect the sprinkler heads?

- Our intake at the pumphouse has a screen on it where we currently draw our water from and the irrigation heads have a rock screen at the bottom just above the swing joint and have a screen at the base of the internals to keep them protected.
- The current state of our irrigation does allow debris to reach the internals but they can be pulled and manually be cleaned so we can keep the heads protected and in working order

5.) I want to know where we can see test results for NA sodium content, chloride, bicarbonate, carbonate and pH.

- I get several soil tests done each season and will have the results as well as the county will have records of water quality tests.

6.) What will be done to limit salt injury to plants in our slow draining soil areas?

- In order to manage the sodium content we will be applying fertilizers such as gypsum to increase our soil quality. We will also apply fertilizers such as potassium and calcium that help us offset sodium numbers in the soil. We also use wetting agents in the soil which help move nutrients down through the soil profile.

7.) How will algae growth be handled?

- Algae in the ponds can be managed with pond fountains for increased aeration and with chemical treatments.

8.) It is my understanding that the golf course is required to accurately report the number of gallons of water it pumps from wells out of our aquifer to the county. I would like to know that number based on some time frame history in order to gauge any positive results this may have on our aquifer? I have been under the belief that the majority of this water comes from our existing ponds.

-We report irrigation usage every 6 months. When we are irrigating often we use the well to refill the pond so a majority of the water that we use to refill the pond does come from the aquifer. Over the last 2 seasons we have averaged around 15,000,000 gallons of usage each year. The irrigation pond does receive water from rainfall events but that certainly does not keep the pond full. The only pond that we pull irrigation water out of is the pond by the clubhouse. None of the other ponds on the golf course are used for irrigation.

9.) Does the permitting require any buffer between the areas that are being sprayed and occupied homes; and if so why?

- There is no buffer requirement due to the quality of effluent we will be using