



SOIL AND WATER CONSULTING

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March 26, 2018

Re: Spring Course Visit

Dear Jake,

You will notice a report that is more concise and focuses on the nutrients that are most important to you growing healthy turf. Also, I made some adjustments to the specific testing that I asked the lab to do on the samples. With higher pH alkaline soils, we need to do an analysis called the Olsen Method. I have done this in the Desert Southwest for almost 10 years. However, one downside to it is that the minor elements have been harder to gauge whether or not they are sufficient because the acceptable ranges are small numbers. For example, manganese levels, for you, are very important with Take- All Patch disease and Fairy Ring being very real concerns. So, I am now using the Melich 3 extraction for the minor elements. We will get more useful minor nutrient readings, I believe, because the acceptable ranges are higher numbers. What used to be 1- 4 ppm as an acceptable range for Manganese is now 50-80 ppm. I have also added Nitrogen readings to the Soils test so that I can compare them to your Saturated Pastes tests.

With that said, your manganese levels are low throughout the course . I would like you to apply a 2 pounds of product per 1,000 square feet rate of manganese sulfate at your next greens aerification. I think it is too expensive with not enough return to apply manganese sulfate wall-to-wall. For now, try adding a minors package high in Manganese on each tee and fairway spray.

The entire course was low in calcium and potassium. This is an area that I would spend the money necessary to erase those deficiencies. It seems like it has been a year or so since gypsum and potash have been applied. I would recommend 500 pounds of product per acre of Gypsum and 150 pounds of product per acre of 0-0-50. As we have discussed in the past, the sand cap is great but does allow nutrients to flow through as quickly as the water does.

On the topic of water, I would like to see you follow through with the purchase or rentals of the sulfur burner units. I agree with a comment that was made when me, you and Curt met that it can become "an unused piece of equipment lying around!". I think if Coyote Springs made that a base of its agronomic program going forward that it would make a difference. For example, I am recommending that you apply gypsum this Spring. You have plenty of calcium in the soil but it is unavailable. By acidifying the water and reducing the very high bicarbonates in the water, you could gain access to some of the "free" nutrients in the soil. The bicarbonates in the water are increasing slightly. Also, as you bring housing to the area and possible reclaimed water for irrigation some day, having the sulfur burner added to the Club's routine makes all of that less traumatic if and when the water source becomes worse for turf. In Nevada, water is by far the dominant influence on the turf. It stands to reason that having the irrigation source as good as possible will only make turf conditions better.

With regards to the greens, I would recommend that you apply the following at your upcoming aerification:

10 pounds of product per 1,000 square feet rate of Gypsum

4 pounds of product per 1,000 square feet rate of Poly-K (0-0-50)

As you have time, let's go over the report in more detail. I appreciated your time during my visit and I look forward to talking with you soon. Thank you.

Sincerely,
Corey Angelo
Owner
Soil and Water Consulting