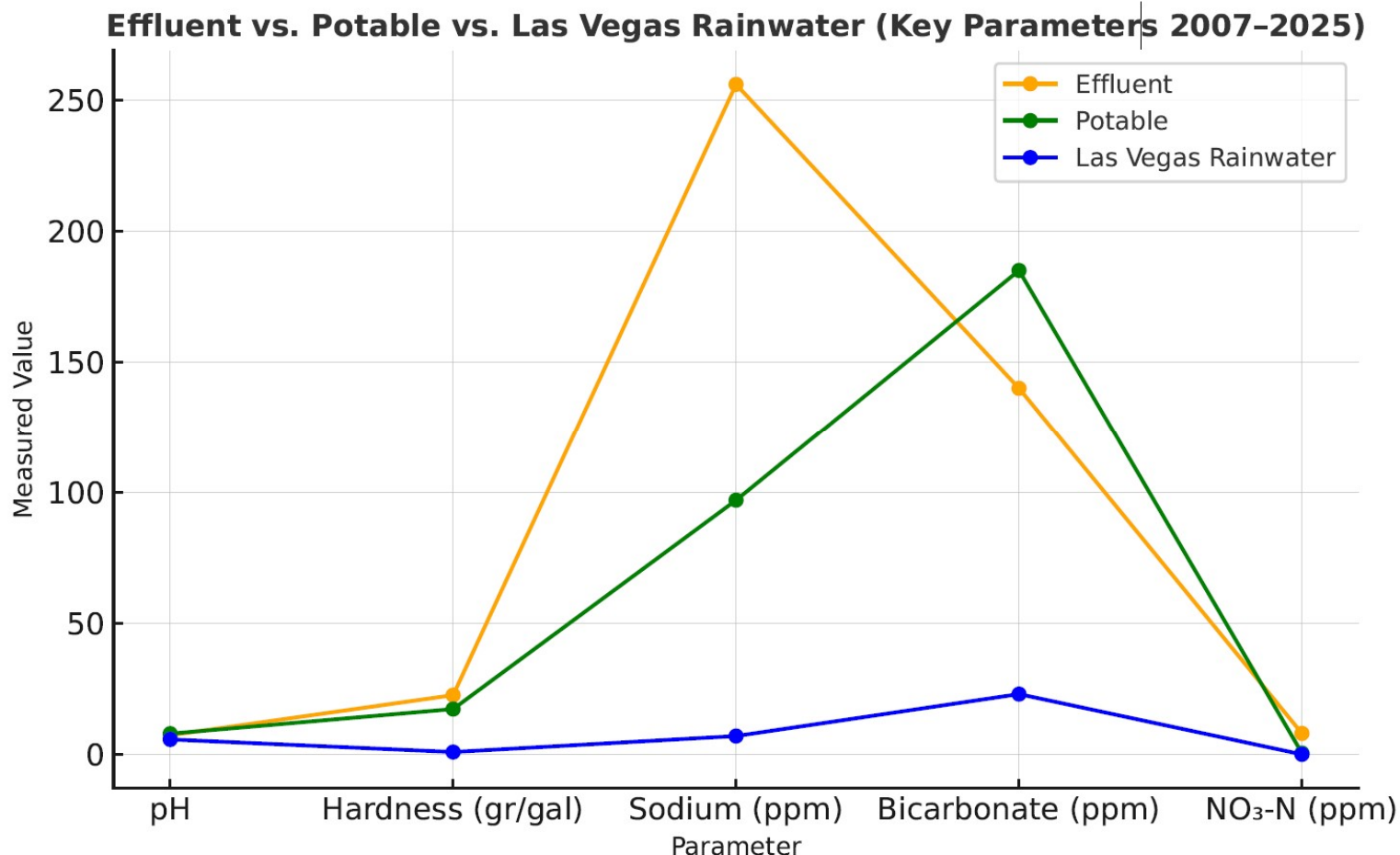




IRRIGATION WATER



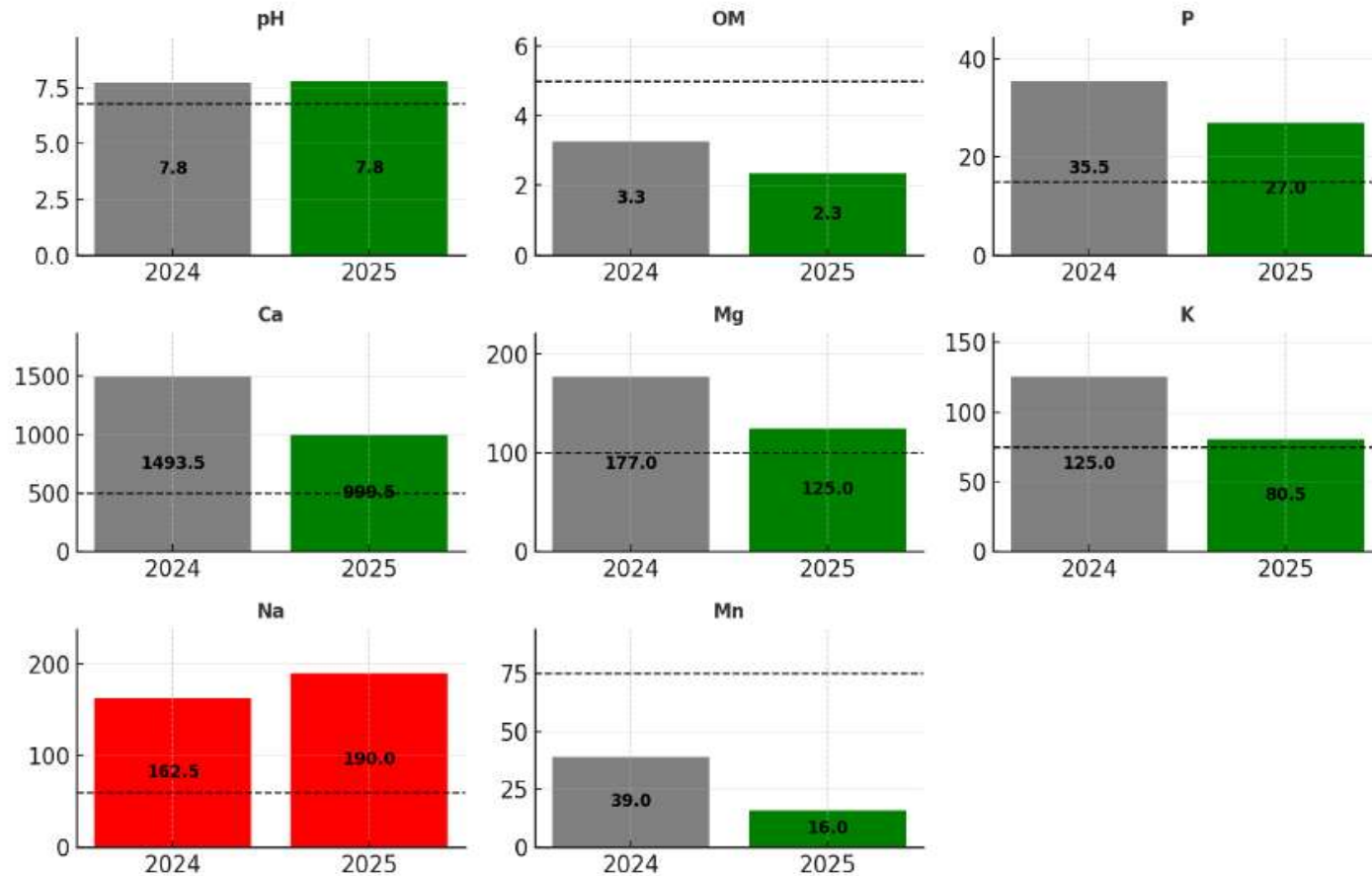
- The best irrigation water any golf course can receive is rain. I have never thought there was a perfect irrigation water and therefore setting acceptable ranges is not quite accurate enough. As this sample is average for your water source, I have compared your water sample to rain from October that you collected on the course.





TEES

DragonRidge CC - Tee Soil Test vs Acceptable Ranges (2024 vs 2025)



Target/Max Threshold (Black Dashed Line)

pH ≥ 6.8 | OM $\leq 5\%$ | P ≥ 15 ppm | Ca ≥ 500 ppm | Mg ≥ 100 ppm | K ≥ 75 ppm | Na ≤ 60 ppm | Mn ≥ 75 ppm

- Although the Organic matter in the tees is not excessive, the current levels do lead to holding on to sodium and other salts.

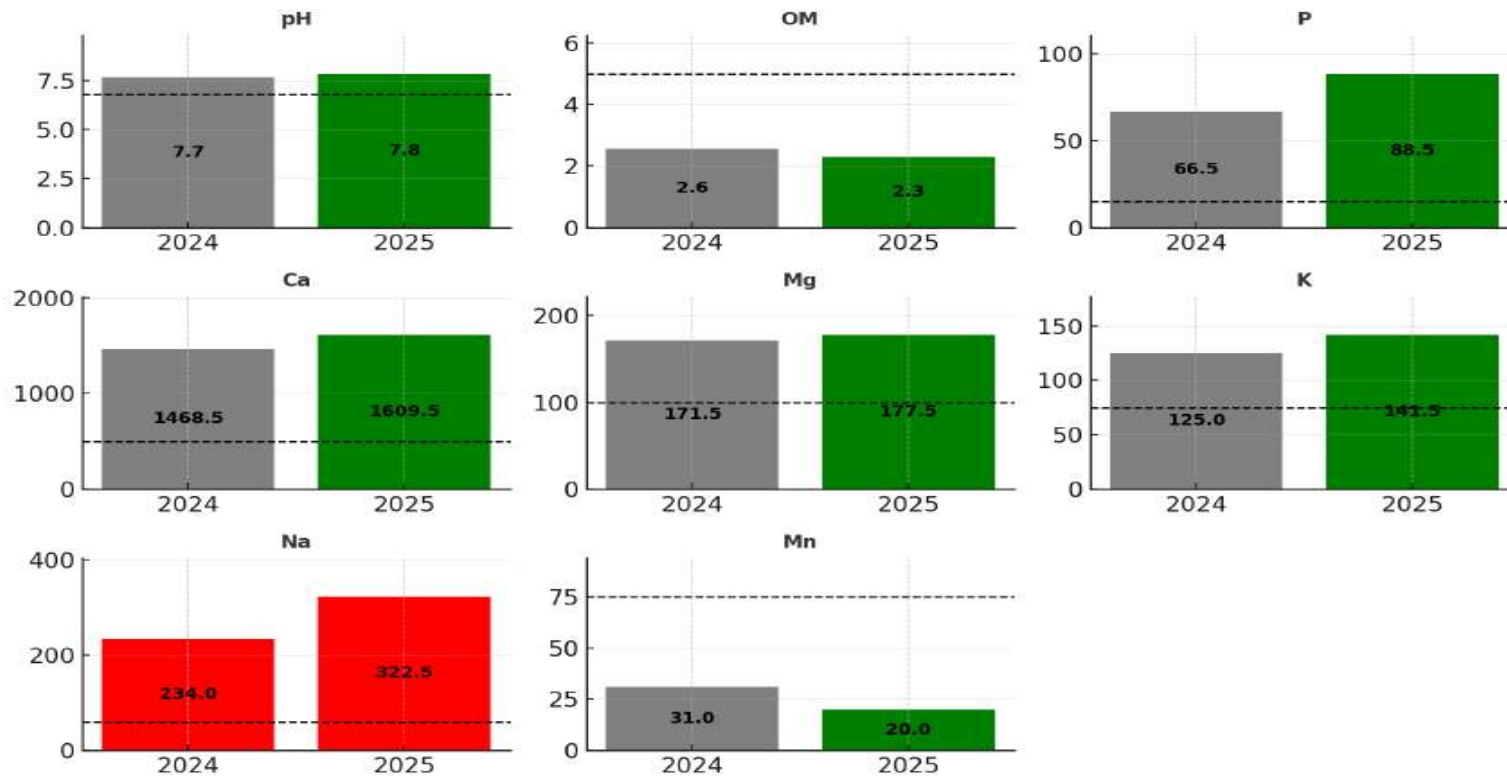


DRAGONRIDGE COUNTRY CLUB



FAIRWAYS

DragonRidge CC - Fairway Soil Test vs Acceptable Ranges (2024 vs 2025)



Target/Max Threshold (Black Dashed Line)

pH ≥ 6.8 | OM $\leq 5\%$ | P ≥ 15 ppm | Ca ≥ 500 ppm | Mg ≥ 100 ppm | K ≥ 75 ppm | Na ≤ 60 ppm | Mn ≥ 75 ppm

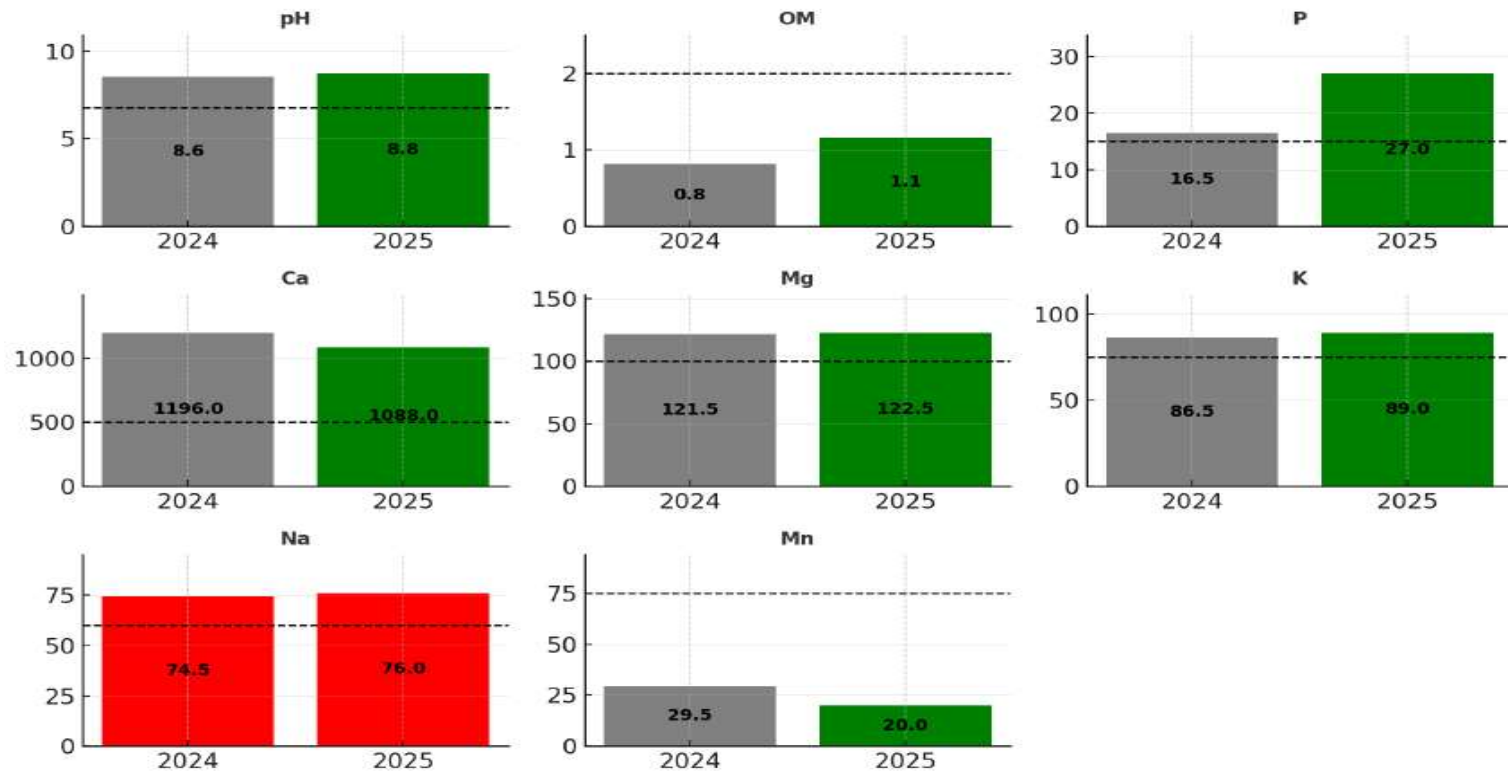
- More of a status quo on the fairways. Continue work with water treatment to mitigate Sodium levels and aerification in season.





GREENS

DragonRidge CC - Green Soil Test vs Acceptable Ranges (2024 vs 2025)



Target/Max Threshold (Black Dashed Line)

pH ≥ 6.8 | OM $\leq 2\%$ | P ≥ 15 ppm | Ca ≥ 500 ppm | Mg ≥ 100 ppm | K ≥ 75 ppm | Na ≤ 60 ppm | Mn ≥ 75 ppm

- Continue work on the Manganese levels. Sodium levels are staying low and stable which is a positive sign of how you water the greens.



SUMMARY

DragonRidge Country Club – Overall Soil Health Summary (2024 vs 2025)

Tees

- pH remains slightly alkaline (avg. 7.8), consistent with desert irrigation conditions.
- Organic Matter dropped slightly from 3.3% to 2.3%, trending positively for cool season turf rooting and firmness.
- Potassium and Magnesium remain balanced within target ranges, supporting nutrient uptake stability.
- Sodium increased from ~160–170 ppm to ~190 ppm in 2025, pushing beyond the 60 ppm target—monitor for salt accumulation.
- Overall structure remains acceptable; topdressing and leaching should continue routinely.

Fairways

- pH steady near 7.8–8.0; expect limited micronutrient solubility under these conditions.
- Organic Matter stable around 2.3%, reflecting consistent clipping removal and aeration practices.
- Calcium and Magnesium remain high and balanced, offering good soil aggregation strength.
- Sodium continues to rise (avg. >300 ppm), requiring gypsum supplementation.
- Manganese levels remain below 75 ppm, suggesting the need for occasional foliar Mn supplementation.

Greens

- pH increased slightly to ~8.7, continuing the strong alkaline trend of 2024.
- Organic Matter improved from 0.8% to ~1.1%, still within the ≤2% benchmark for bent/Poa greens.
- Phosphorus and Potassium remain moderate and within functional ranges.
- Sodium levels (~75 ppm) exceed ideal thresholds; surface flushing and acidifying amendments advised.
- Manganese values (~20 ppm) remain below benchmark—supplement Mn sulfate during growth months.

Summary Statement

Overall soil chemistry at DragonRidge CC remains functional but continues to show the region's characteristic high pH and sodium pressure. OM management and nutrient balance are on track, while sodium and Mn require targeted correction through leaching, gypsum, and foliar supplementation. Continued focus on topdressing, aeration, and pH mitigation will sustain turf vigor across all surfaces.

Solid vs. Hollow Tine Aerification – Oxygen Impact Summary

Solid tine aerification punches holes into the turf without removing any soil. It offers a quick way to vent the surface and relieve short-term stress but doesn't truly decompact the profile. The tines compress soil around each hole, limiting long-term oxygen movement. Air exchange improves only along the channels, which tend to close quickly—usually within a few weeks. Solid tining is best used between major aerifications or before events when cleanup and downtime must be minimal.

Hollow tine aerification, on the other hand, physically removes soil cores. This creates lasting pore space, reduces compaction, and dramatically improves oxygen diffusion and gas exchange in the rootzone. It also allows topdressing to dilute organic matter and further enhance long-term soil structure. The results last for months rather than weeks.

In short, **solid tines provide a temporary vent**, while **hollow tines create genuine, sustained oxygen and root improvement**—the difference between poking holes and performing real soil surgery.



Corey Angelo | Owner
Soil & Water Consulting

848-225-5115

www.soilandwaterconsulting.com