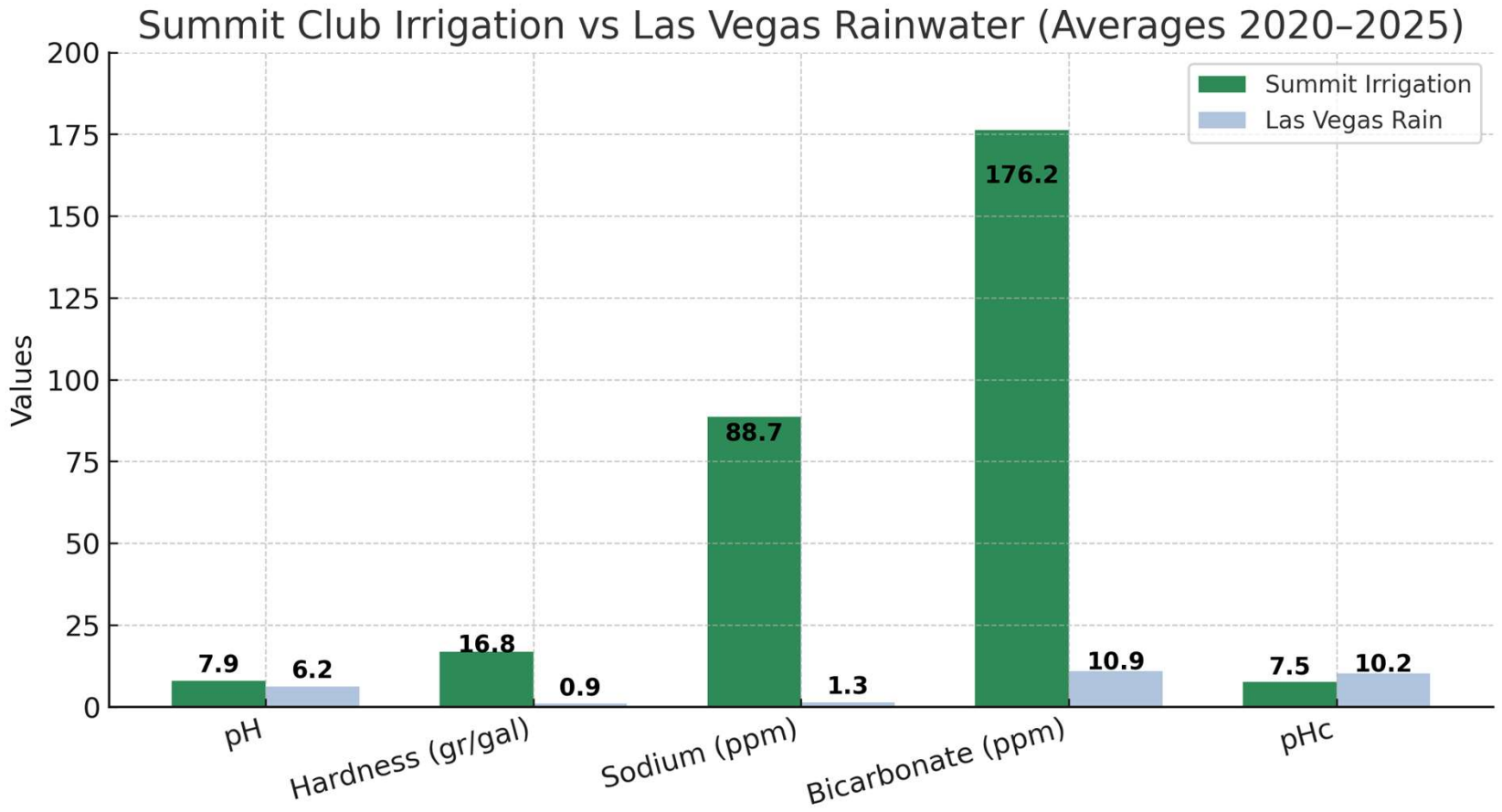
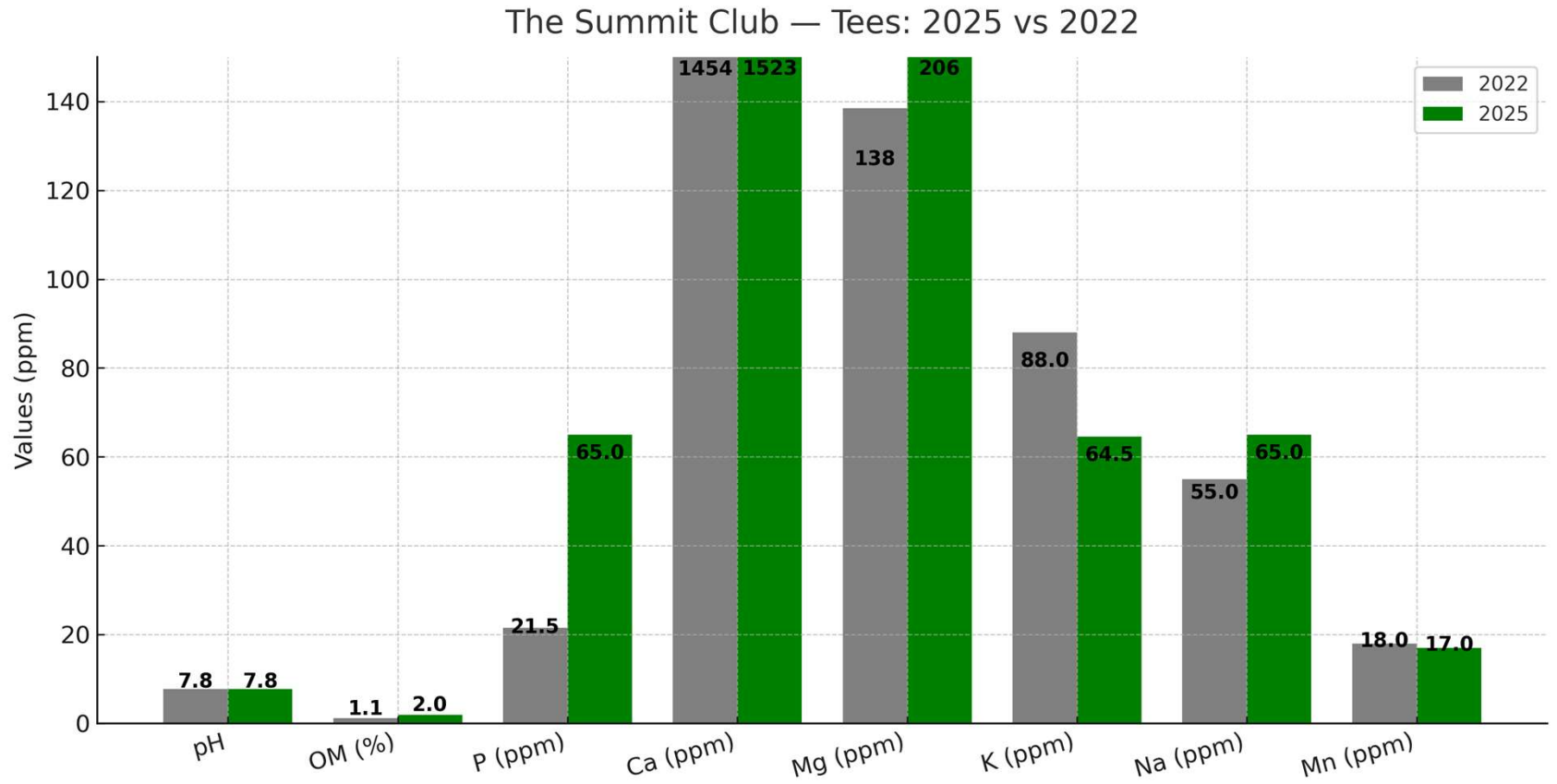
IRRIGATION WATER



- 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 samples to rain that have been collected in Las Vegas since 2020.

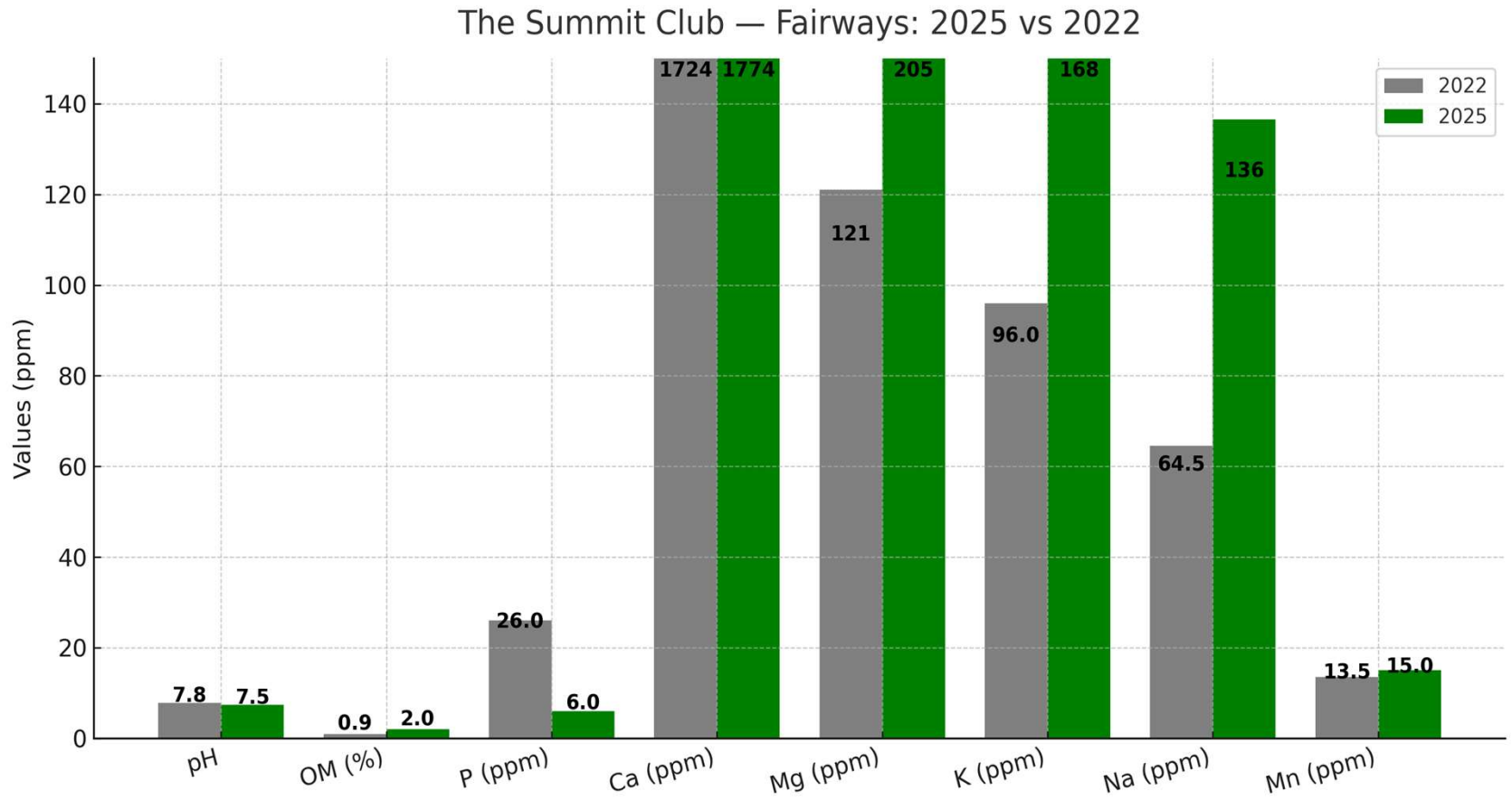
TEES



Benchmark targets: pH ≥ 6.8 · OM < 5% · P ≥ 15 ppm · K ≥ 75 ppm · Ca ≥ 500 ppm · Mg ≥ 100 ppm · Na ≤ 60 ppm · Mn ≥ 75 ppm

- The Potassium to Sodium ratio is best at 2:1. Currently it is 1:1 on the tees. The OM % has doubled since we last tested these holes.

FAIRWAYS



Benchmark targets: pH ≥ 6.8 · OM < 5% · P ≥ 15 ppm · K ≥ 75 ppm · Ca ≥ 500 ppm · Mg ≥ 100 ppm · Na ≤ 60 ppm · Mn ≥ 75 ppm

- Organic matter percentage has doubled since 2022. Based on how I collect the samples, it includes the top turf as well. This is a good measurement of how thatch has developed in a three-year span.

GREENS

Benchmark targets: pH ≥ 6.8 · OM ≤ 2% · P ≥ 15 ppm · K ≥ 75 ppm · Ca ≥ 500 ppm · Mg ≥ 100 ppm · Na ≤ 60 ppm · Mn ≥ 75 ppm

- The greens data was excellent. The significant difference between how I collect greens compared to Tees and Fairways is that I remove the top turf and replace in the probe hole. So, the better way to see how thatch is accumulating is to continue the ***2-4-6 OM Analysis*** that we did last Winter.

SUMMARY

The Summit Club – Overall Soil Health Summary (Fall 2025)

TEES

- Phosphorus (P) increased substantially to 53–77 ppm in 2025, surpassing target ≥15 ppm — nutrient availability is strong.
- Calcium (Ca) remains high (1326–1721 ppm) with adequate Magnesium (Mg) 197–216 ppm, providing strong base saturation.
- Potassium (K) 59–70 ppm sits near benchmark (75 ppm target); moderate supplementation could optimize balance.
- Manganese (Mn) stable near 16–18 ppm — acceptable for desert conditions but well below 75 ppm optimal threshold.

FAIRWAYS

- Phosphorus (P) declined sharply (26 ppm → 6 ppm), below target — reestablish P fertility via spring amendment cycle.
- Calcium (Ca) and Magnesium (Mg) both elevated (1,600–1,900 ppm and 190–220 ppm respectively), promoting strong structure but mild carbonate accumulation.
- Potassium (K) rose significantly (96 → 168 ppm) — exceeds target and supports drought resilience.
- Manganese (Mn) stable at ~15 ppm — moderate deficiency range, maintain micronutrient programs through chelated Mn applications.

GREENS

- pH ~8.2 remains high; monitor bicarbonate inputs in irrigation (≈175 ppm) to control surface alkalinity.
- Phosphorus (P) improved (6 → 10.5 ppm), still below 15 ppm goal — light soluble P programs recommended in spring.
- Calcium (Ca) and Magnesium (Mg) steady near 925 and 95 ppm respectively — balanced for sand-based rootzones.
- Potassium (K) ~70 ppm and Sodium (Na) ~47 ppm — balanced and within tolerance for bent/Poa greens.
- Manganese (Mn) increased substantially (26 → 103 ppm) — now meeting and exceeding 75 ppm target, supporting improved color and redox balance.

SUMMARY

- Overall soil health at The Summit Club shows balanced structure and strong base cation profiles.
- Main focus areas: reduce sodium accumulation, maintain phosphorus fertility, and monitor pH drift from alkaline irrigation inputs.
- Continued acid injection and flushing cycles recommended to manage bicarbonate and maintain infiltration rates.
- Turf health reflects strong base saturation, resilient nutrient availability, and gradual improvements in Mn and OM stability.

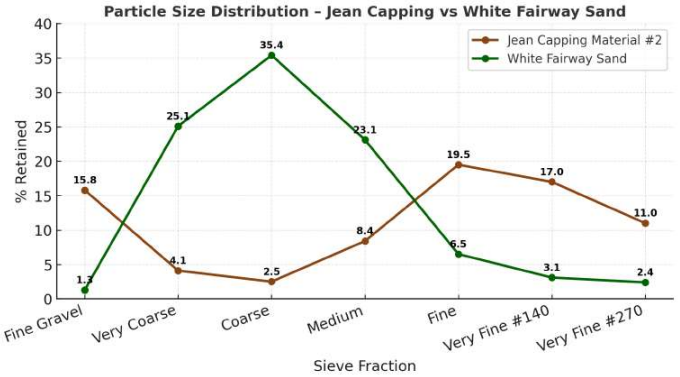
Soil Test Interpretation Template – Corey Standard 2025

This template is designed for quick interpretation of soil test data across Greens, Tees, and Fairways using Corey's standard benchmarks.

Parameter	Benchmark	Notes
pH	6.8 target	Neutral balance for nutrient availability
OM (%)	≤ 2 (G) / ≤ 5 (T,F)	Control thatch & maintain firmness
P (ppm)	≥ 15	Olsen P baseline
K (ppm)	≥ 75	Stress tolerance & drought resistance
Ca (ppm)	≥ 500	Structural cation; root zone stability
Mg (ppm)	≥ 100	Chlorophyll & structure support
Na (ppm)	≤ 60	Salinity hazard threshold
Mn (ppm)	≥ 75	Disease resistance & turf color

Use this as a baseline to flag Low / Ideal / High nutrient values. Always compare results to previous years and water test chemistry for complete interpretation.

Jean Capping Material #2 vs White Fairway Sand – Corrected Layering Summary



- **Particle Size Contrast:** The white sand is much coarser, peaking in coarse–medium fractions, while Jean Capping is finer and gravel-rich.
- **Hydraulic Behavior:** Layering the white sand over Jean Capping causes a permeability mismatch, forming a perched water layer above the interface.
- **Drainage Rate:** White sand drains ≈20 in/hr; Jean Capping ~4–6 in/hr, producing a >3:1 infiltration contrast.
- **Rooting Effect:** Roots concentrate in the coarse white sand, limiting deeper penetration into the finer Jean layer.
- **Moisture Dynamics:** Minimal upward capillary movement—upper sand dries quickly while the sublayer retains moisture.
- **Recommended Action:** Blend 1–1.5" transition zone before layering; continue topdressing with white sand to gradually integrate textures.
- **Outcome:** Improved short-term drainage but higher risk of surface drought and non-uniform moisture without mechanical blending.

Corey Angelo | Owner

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