



IRRIGATION WATER



BLUE HERON PINES

GOLF CLUB

IRRIGATION WATER QUALITY SUMMARY



VISIT DATE:
May 19, 2026

SOURCE DATA – INDIVIDUAL SAMPLES

Report Date	Location	pH	Hardness (grains/gal)	Sodium (ppm)	Bicarbonate (ppm)	Chloride (ppm)
5/19/2026	Hole #2	6.89	1.88	24.86	56.58	37.53
5/30/2024	Pond	6.65	2.06	23.08	50.02	20.35
5/22/2023	Pond	6.74	1.94	25.40	41.72	24.01
5/11/2021	Pond	6.76	1.96	22.99	45.97	29.82
5/14/2019	Hole #3	6.40	1.65	22.47	29.24	20.93
5/8/2018	Hole #6	6.67	1.78	22.80	38.53	22.06
5/2/2017	Lake #5	6.49	1.68	21.39	34.85	25.00
4/26/2016	Sprink Head	6.72	1.84	25.42	38.69	31.17
5/6/2015	Sprink Head	6.52	1.89	20.15	34.73	26.28
4/30/2014	Sprink Head	7.24	2.37	28.34	46.53	38.16
5/7/2013	Hole #17	6.75	1.90	23.54	41.70	28.43
4/16/2012	Lake #5	6.69	2.27	26.05	36.02	27.73



NOTE: All samples included in the averages above. These are predominantly springtime samples.

IRRIGATION WATER QUALITY – AVERAGE OF ALL SAMPLES (n = 12)



SUMMARY

- Average pH of 6.80 is slightly above the ideal target of 6.5.
- Average hardness of 1.95 grains/gal is within the acceptable limit (< 5 grains/gal).
- Average sodium of 23.74 ppm is within the recommended maximum of 35 ppm.
- Average bicarbonate of 40.97 ppm is within the recommended maximum of 120 ppm.
- Average chloride of 29.23 ppm is within the recommended maximum of 60 ppm.

BENCHMARKS USED:

pH = 6.5 (target)

Bicarbonate < 120 ppm

Hardness < 5 grains/gal

Sodium < 35 ppm

Chloride < 60 ppm

- The irrigation water source has been very stable over the years.
- Clean and soft water. It is somewhere between rain and potable water.



Blue Heron Pines Golf Club



TEES



BLUE HERON PINES
GOLF CLUB

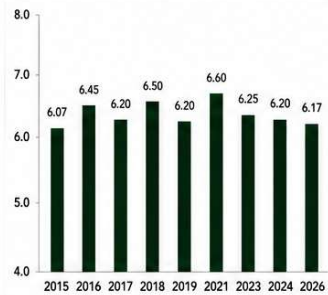
TEE SOIL ANALYSIS SUMMARY

Year-by-Year Average Comparison

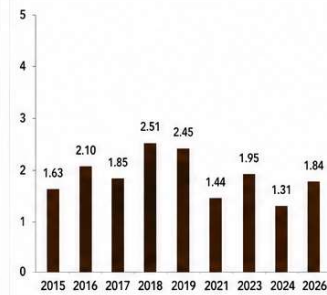


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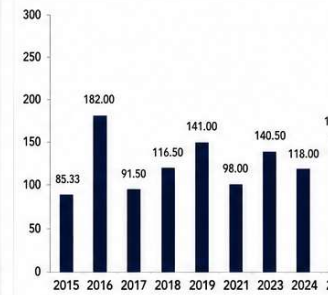
pH Optimal Range: 6.5 – 7.0



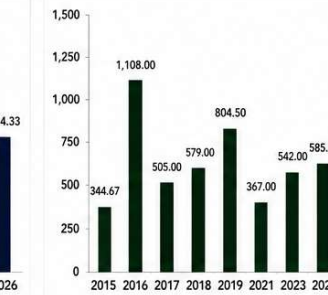
Organic Matter (%) (Tees) Target: < 2%



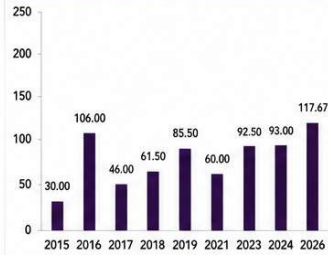
Mehlich III P (ppm) Target: 150 ppm



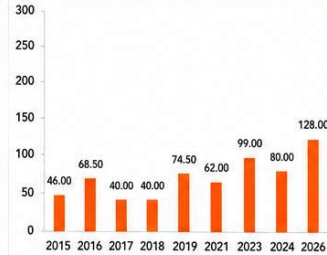
Calcium (ppm) Target: > 500 ppm



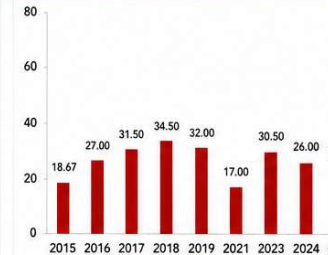
Magnesium (ppm) Target: > 100 ppm



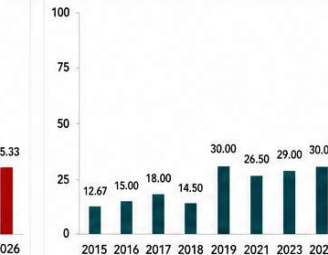
Potassium (ppm) Target: > 75 ppm



Sodium (ppm) Target: < 35 ppm



Manganese (ppm) Optimal Range: 50 – 80 ppm



Note: Soil test results are from samples collected on the dates shown. Results represent laboratory analysis of the tees sampled.

ppm = parts per million

- Some of the inconsistencies from year to year that I see in these values, is most likely due to when I collected the samples. Meaning, you could have just aerified and applied amendments and therefore you'll see a spike in that area.
- Currently, there are no significant deficiencies, and the sodium levels are low. Manganese could be a focus on the tees, as that level is very low.
- The low pH is not a “problem”, but you may consider applying lime to the tees.





FAIRWAYS



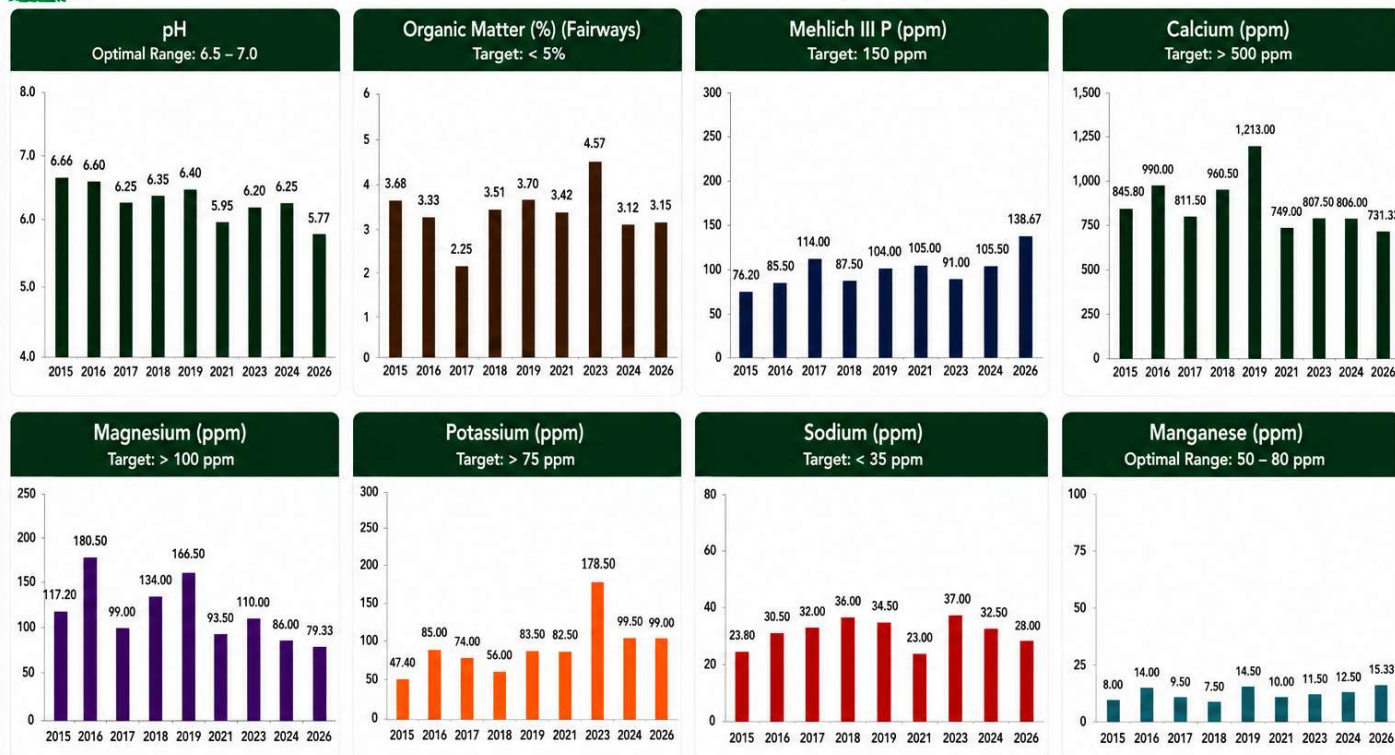
BLUE HERON PINES
GOLF CLUB

FAIRWAY SOIL ANALYSIS SUMMARY



Visit Date:
May 19, 2026

Year-by-Year Average Comparison



Note: Soil test results are from samples collected on the dates shown. Results represent laboratory analysis of the fairway samples.

ppm = parts per million

- The pH has become too low on this recent set of samples. Although you don't need the calcium, I would recommend lime applications on the fairways. I would try to do it in multiple applications over the next three years. Setting a goal of 6.5 to 7.0 pH.
- The OM % in the fairways has reduced over the last 10 years. Aerification is the best way to keep on top of this and you've done a good job with that.
- Magnesium is slightly deficient. You could increase these levels through, adding Epsom salts to the spray tank or through an application of ProMag 36 at a rate of 100 pounds of product per acre.





GREENS



BLUE HERON PINES
GOLF CLUB

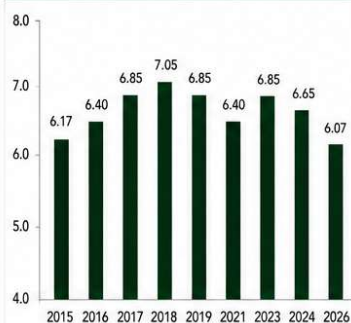
GREEN SOIL ANALYSIS SUMMARY



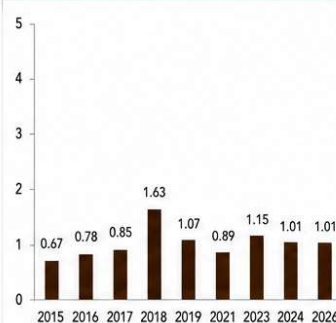
Visit Date:
May 19, 2026

Year-by-Year Average Comparison

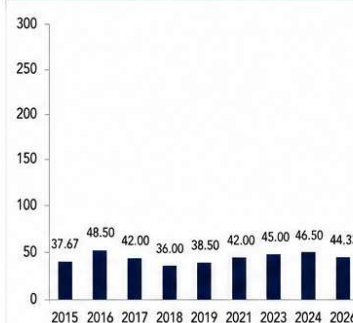
pH
Optimal Range: 6.5 – 7.0



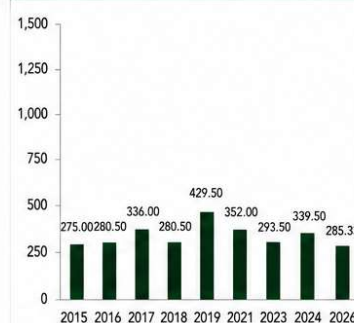
Organic Matter (%) (Greens)
Target: < 2%



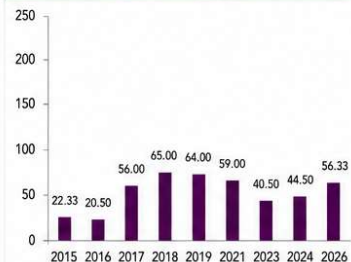
Mehlich III P (ppm)
Target: 150 ppm



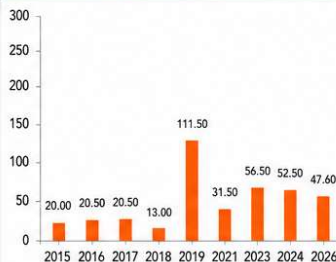
Calcium (ppm)
Target: > 500 ppm



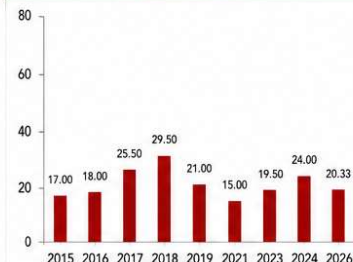
Magnesium (ppm)
Target: > 100 ppm



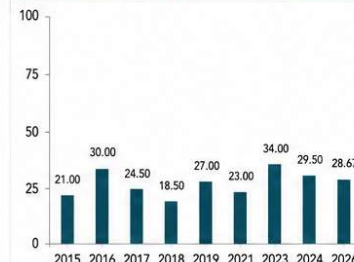
Potassium (ppm)
Target: > 75 ppm



Sodium (ppm)
Target: < 35 ppm



Manganese (ppm)
Optimal Range: 50 – 80 ppm



Note: Soil test results are from samples collected on the dates shown.
Results represent laboratory analysis of the greens samples.

ppm = parts per million

- pH of the greens has stayed about the same over the last 10 years, but you can see a major decrease in the last 45 years.
- Because these greens are saying based, OM % has stayed relatively low and has been consistent over the last 5 years. However, with that, it is hard to hold onto nutrients that leach easily. So, you will see several deficiencies from the samples I just collected.
- Phosphorus and manganese can be dealt with probably over a year or two at most. Once you get the levels to the acceptable ranges, you won't have to deal with that much after that.
- Calcium, magnesium and potassium are all amendments that would need to be done monthly throughout this season. Calcium should be applied in the limestone form to address the low pH.



Blue Heron Pines Golf Club

SUMMARY

- ❑ First site visit since spring 2024; use this visit as a benchmark to compare current conditions against observations from the prior evaluation period.
- ❑ Air temperatures are forecast to reach 95°F with average soil temperatures of 61°F, creating elevated surface stress potential while rootzone temperatures remain moderate.
- ❑ Very dry conditions were evident following the recent heat wave, and irrigation influence was limited as pumps did not run the night prior to sampling; interpret moisture and surface response observations with that context in mind.
- ❑ Detail work has improved noticeably compared to the 2024 visit period, with overall presentation and maintenance execution showing better consistency.
- ❑ No. 18 green profile showed an active root mass extending approximately 3 inches with no significant thatch accumulation observed. Surface softness was concentrated in the upper canopy, with a slightly puffy condition at current mowing height rather than excess organic matter deeper in the profile.
- ❑ Shear strength on No. 18 green measured 15 and the surface released easily during testing, supporting field observations that softness is concentrated from the crown through the leaf blade. Focus on maintaining firmness and avoiding practices that further elevate surface puffiness while preserving rooting performance.



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