



IRRIGATION WATER



BACK CREEK GOLF CLUB

IRRIGATION WATER QUALITY COMPARISON

Three-Year Trend Analysis: 2023 vs 2024 vs 2026



VISIT DATE:
June 1, 2026

WATER QUALITY SUMMARY

Parameter (units)	2023 (Pond)	2024 (Pond)	2026 (Hole #2)	Benchmark (Target)
pH (pH units)	6.33	6.53	6.65	6.5 (Target)
Hardness (grains/gal)	1.44	1.78	2.09	< 5 grains/gal
Sodium (ppm)	2.82	6.77	5.06	< 35 ppm
Bicarbonate (ppm)	35.39	43.54	34.88	< 120 ppm
Chloride (ppm)	< 2.00	< 2.00	4.18	< 60 ppm



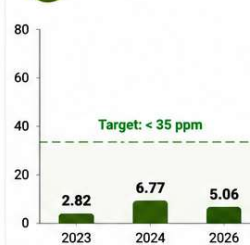
pH (pH units)



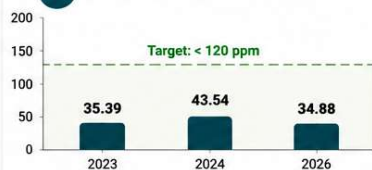
Hardness (grains/gal)



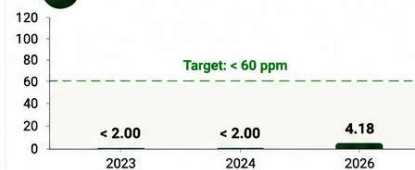
Sodium (ppm)



Bicarbonate (ppm)



Chloride (ppm)



SUMMARY

- pH has improved from 6.33 in 2023 to 6.65 in 2026, now within the optimal target range.
- Hardness, sodium, bicarbonate and chloride levels are all well within recommended limits.
- Calcium and magnesium levels are adequate and stable.
- Overall water quality is excellent for irrigation across all three sampling periods.

IRRIGATION WATER BENCHMARKS



pH
Target: 6.5



Hardness
Target: < 5 grains/gal



Sodium
Maximum: 35 ppm



Bicarbonate
Maximum: 120 ppm



Chloride
Maximum: 60 ppm

- The irrigation water is excellent for turfgrass. It is soft and should penetrate the soil easily.
- There is no evidence that it should be treated.





BACK CREEK GOLF CLUB

TEE SOIL CHEMISTRY COMPARISON

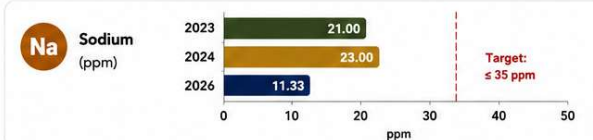
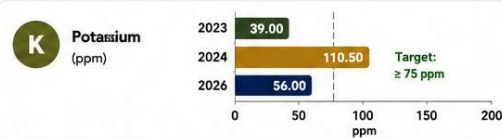
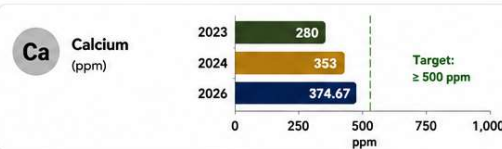
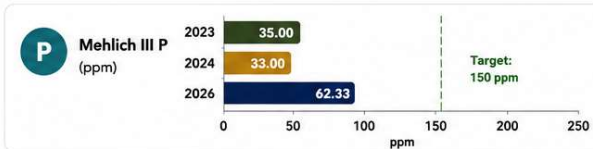
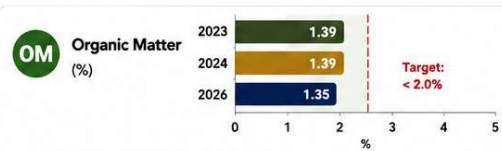
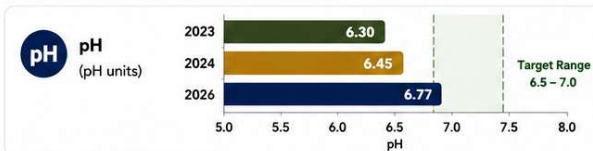
Three-Year Averages: 2023 vs 2024 vs 2026



DATE OF VISIT:

June 1, 2026

■ 2023 Average ■ 2024 Average ■ 2026 Average



SUMMARY

- pH** Improved from 6.30 in 2023 to 6.77 in 2026, now within target range.
- Mehlich III P** Increased significantly in 2026 but remains below the 150 ppm target.
- Calcium** Improved each year but remains below the 500 ppm target.
- Potassium** Decreased from 2024 levels and remains below the 75 ppm target.
- Manganese** Within the 50-80 ppm target range.
- Sodium** Well below the 35 ppm maximum in all years.

SOIL CHEMISTRY BENCHMARKS

pH pH 6.5 - 7.0 **OM** < 2.0% (Tees/Greens) **P** Mehlich III P 150 ppm **Ca** ≥ 500 ppm **Mg** ≥ 100 ppm **K** ≥ 75 ppm **Na** ≤ 35 ppm **Mn** 50 - 80 ppm

All results are averages of tee soil samples for each respective year.

- There has been a good increase in the pH since you took over the course. The organic matter has been stable, which shows that aerification programs are consistent and working well.
- The main nutrient deficiencies on the tees are calcium, magnesium, potassium, and manganese. However, the levels are fairly consistent the last three seasons. So, if you are happy with the performance of the tees then these levels show that the grass can tolerate less than optimal mineral levels.





FAIRWAYS



BACK CREEK GOLF CLUB

FAIRWAY SOIL CHEMISTRY COMPARISON

Three-Year Averages: 2023 vs 2024 vs 2026



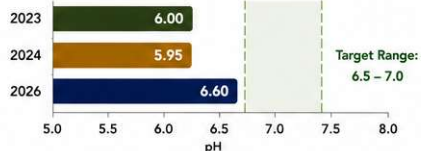
DATE OF VISIT:

June 1, 2026

2023 Average 2024 Average 2026 Average

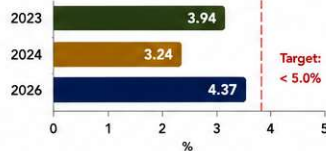
pH

pH
(pH units)



OM

Organic Matter
(%)



SUMMARY



pH

Improved each year and is now within the optimal target range.



Mehlich III P

Slight increase in 2026 but remains below the 150 ppm target.



Calcium

Strong and improved each year; above the 500 ppm target.



Magnesium

Above the 100 ppm target and continues to improve.



Potassium

Decreased in 2026 but still above the 75 ppm target.



Sodium

Well below the 35 ppm maximum in all years.



Manganese

Below the target range in 2026, monitor closely.

P

Mehlich III P
(ppm)



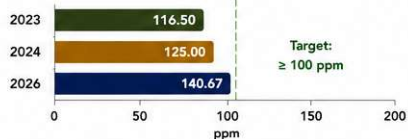
Ca

Calcium
(ppm)



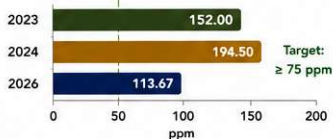
Mg

Magnesium
(ppm)



K

Potassium
(ppm)



Na

Sodium
(ppm)



Mn

Manganese
(ppm)



SOIL CHEMISTRY BENCHMARKS

pH

pH
6.5 - 7.0

OM

Organic Matter
< 5.0%
(Fairways)

P

Mehlich III P
150 ppm

Ca

Calcium
≥ 500 ppm

Mg

Magnesium
≥ 100 ppm

K

Potassium
≥ 75 ppm

Na

Sodium
≤ 35 ppm

Mn

Manganese
50 - 80 ppm

All results are averages of fairway soil samples for each respective year.

- The only nutrient that is less than optimal is phosphorus. But as we've seen at some of the other courses, the turf seems to perform well in the 50 to 100 ppm range.





GREENS



BACK CREEK GOLF CLUB GREENS SOIL CHEMISTRY COMPARISON

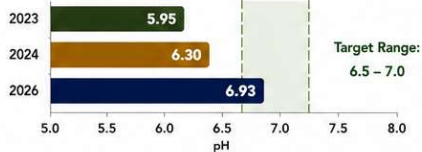
Three-Year Averages: 2023 vs 2024 vs 2026

2023 Average 2024 Average 2026 Average

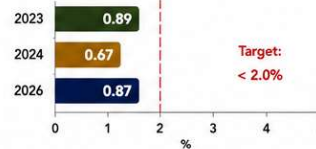


DATE OF VISIT:
June 1, 2026

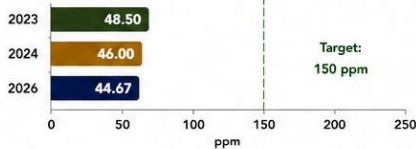
pH pH
(pH units)



OM Organic Matter
(%)



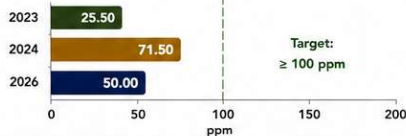
P Mehlich III P
(ppm)



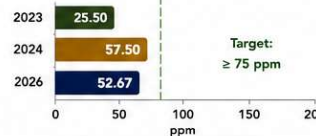
Ca Calcium
(ppm)



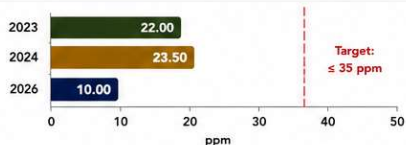
Mg Magnesium
(ppm)



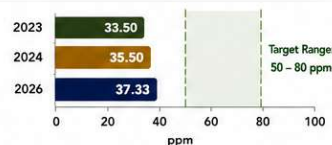
K Potassium
(ppm)



Na Sodium
(ppm)



Mn Manganese
(ppm)



SUMMARY

- pH** Improved from 5.95 in 2023 to 6.93 in 2026, now within target range.
- Mehlich III P** Fairly stable over the years but remains below the 150 ppm target.
- Calcium** Declined in 2026 and remains below the 500 ppm target.
- Magnesium** Improved in 2024 but still below the 100 ppm target.
- Potassium** Improved from 2023 but still below the 75 ppm target.
- Sodium** Greatly improved in 2026 and well below the 35 ppm maximum.
- Manganese** Below the 50-80 ppm target range.

SOIL CHEMISTRY BENCHMARKS

pH pH 6.5 - 7.0 **OM** < 2.0% (Greens) **P** Mehlich III P 150 ppm **Ca** ≥ 500 ppm **Mg** ≥ 100 ppm **K** ≥ 75 ppm **Na** ≤ 35 ppm **Mn** 50 - 80 ppm

All results are averages of green soil samples for each respective year.

- Although there were amendments added in April, at least one more application(s) of Gypsum, Pro-Mag and O-O-50 will help with Summer stresses.
- From the Physical Analysis done in 2023, we know the greens are very coarse/sandy after about 2" deep in the profile. So, holding the amendments in the root zone is difficult.



SUMMARY

- ❑ Soil temperatures measured **61°F**, with a forecasted high of **75°F**, providing favorable conditions for continued turf growth, rooting, and recovery from spring cultivation.
- ❑ **Tees, fairways, and greens were aerified on April 27**, and recovery has progressed well. Gypsum was applied to tees and fairways this spring, while **potash, gypsum, and ProMag 36** were incorporated into the green's aerification program.
- ❑ Fairway rooting extends **beyond 6 inches**.
- ❑ Green 16 exhibited a uniform sand-based rootzone profile. Green 9 maintained approximately **4 inches of concentrated root mass** and recorded **shear strength values at 18** across all testing locations, indicating a stable, well-anchored surface.
- ❑ The course recorded **230 rounds on Sunday**, reflecting strong play volume while maintaining quality playing conditions throughout the property.
- ❑ A recent lightning strike near the 4th hole damaged a section of the irrigation system. Repairs were underway during the visit, and water availability remains.
- ❑ Overall course presentation was impressive. Turf quality was consistently strong, and the rough was particularly well maintained despite the significant acreage of out-of-play turf requiring regular mowing.
- ❑ Recent equipment investments included **two new Baroness greens mowers** and a **Baroness bunker rake**, providing additional resources to support surface quality and operational efficiency.



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