DESERT CONTROL | WOODLAND HILLS COUNTRY CLUB CASE STUDY

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TABLE OF CONTENTS

Introduction

- Introduction 02
- Executive Summary 03
- History 04

Methods 05

Results 06

- Water Usage 07
- Playability 09
- Turf Quality 10
- Thermal Stability 11
- Soil Water Retention and Availability 12
- Soil Salinity Response 14

Conclusions 15

Desert Control (the “Company”) produces a novel soil amendment called Liquid Natural Clay (“LNC”). LNC is an OMRI organic certified, all natural soil amendment which improves moisture retention and promotes healthy turf, reducing irrigation requirements and improving turf quality. Typical results demonstrate irrigation savings of 25-35%, with some results as high as 60%. LNC provides long-term soil improvement, with a single application typically remaining effective for 3-5 years.

Woodland Hills Country Club (“WHCC", or the “Club”) is a private golf course in Los Angeles County, California. Despite managing only 53 acres of irrigated turf, the Club spent over $800,000 per year on water for irrigation prior to LNC treatment. As water costs rise at dramatic and unpredictable rates, such a significant operational expenditure posed an unsustainable and intolerable risk to WHCC. To mitigate this risk by reducing irrigation demands and improving water-use efficiency, Desert Control applied LNC across the Club’s fairways, roughs, tees, surrounds, and approaches in Spring 2025. The product and service were provided at no up-front cost to the Club under Desert Control’s “Pay As You Save”, or “PAYS” Program, wherein the value of water savings are split between the two organizations. This report will focus on product performance and the early results of this application, which demonstrate meaningful reductions in water usage, significant financial savings, and improved turf quality.

KEY HIGHLIGHTS

- We have saved **$115,000** in 5 months. Expect to save over **$200,000** in a year
- Single application effective for **3-5 years,** providing long-term soil improvement.
- No upfront cost for WHCC; PAYS Program split water savings.
- Improved turf health and water-use efficiency across fairways, roughs, and tees.

Desert Control applied its novel water saving technology, Liquid Natural Clay to approximately 53 acres of managed turf at Woodland Hills Country Club. This service was provided to the Club at no up-front cost under the Company's "Pay As You Save" Program, wherein Desert Control is only paid based on a portion of the value of monthly water savings. In addition, WHCC qualified for rebate programs which refund up to 100% of payments made to Desert Control based on verified water savings.

Between July and November of 2025 after LNC was applied, the Club achieved net water savings of 27% (total verified savings), and an average monthly savings of 37% (the average of each month's percent savings). Monthly savings ranged from a low of 14% to a high of 68%. During these five months, WHCC saved approximately $115,000 off their water bill and qualified for rebates of nearly $60,000.

In addition to water savings and financial benefits, the Club's superintendent describes turf quality as "excellent", and greener than it was prior to application— especially through the winter months. The turf has also been excellent, greener and more resilient, allowing the Club to return to normal play after heavy rain events significantly faster than without LNC treatment. Soil salinity has also declined dramatically.

KEY RESULTS

27% Total Verified Water Savings
between July - November 2025.

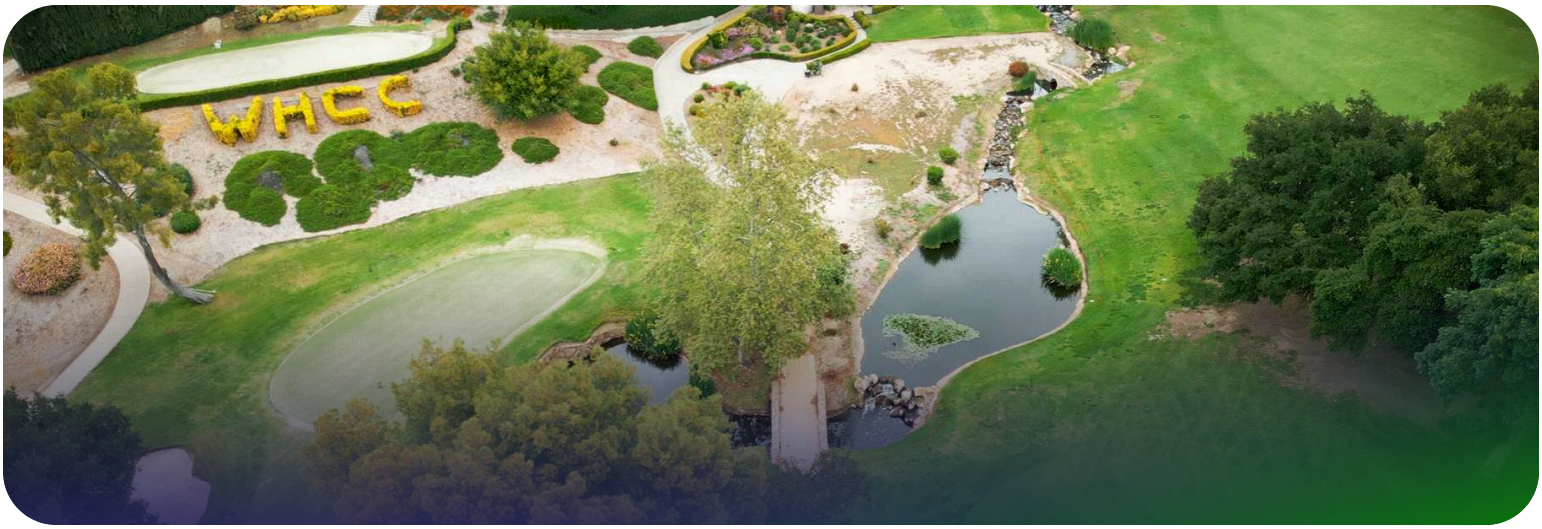
Achieved average monthly water savings of 37%
between July - November 2025.

Qualified for 100% Rebates
Eligible for nearly $60,000 in rebates from LADWP and MWD.

Improved Turf Quality
Turf described as "excellent... greener and more resilient to rainfall".

$115,000 Saved from Water Bills
WHCC saved approximately $115,000 off water bills in just five months.

Following successful results in treating agricultural soils, Desert Control saw early success in small-scale LNC trials on golf courses and sports fields across California and Arizona. Woodland Hills Country Club was the first golf course to transition from a pilot evaluation to a full-scale application. The Club was an ideal candidate for Desert Control's water saving technology as the 53-acre course spent over $800,000 per year to irrigate with potable water. Desert Control hoped to reduce their water consumption by 25%, worth at least $200,000 per year.



In addition to projected water savings, Desert Control's LNC qualifies for the rebate programs offered by Los Angeles Department of Water and Power ("LADWP"), the distributor from whom WHCC purchases water, and Metropolitan Water District ("MWD"), the wholesaler who sells water to LADWP. Under both programs, rebates are provided against the project cost at a rate of $7.00 and $0.60 per 1,000 gallons saved by LAWDP and MWD, respectively.

First golf course to transition from pilot program to full-scale application

- Woodland Hills Country Club selected for high potential to reduce irrigation costs

High Water Costs: $800,000 per year

- WHCC spent over $800,000 annually irrigating 53 acres of turf

Eligible for rebates of up to 100%

- LADWP and MWD programs provide up to $7.00 and $0.60 per 1,000 gallons saved

LNC program selected to demonstrate **25% water use reduction,** with potential savings of **$200,000+** annually.

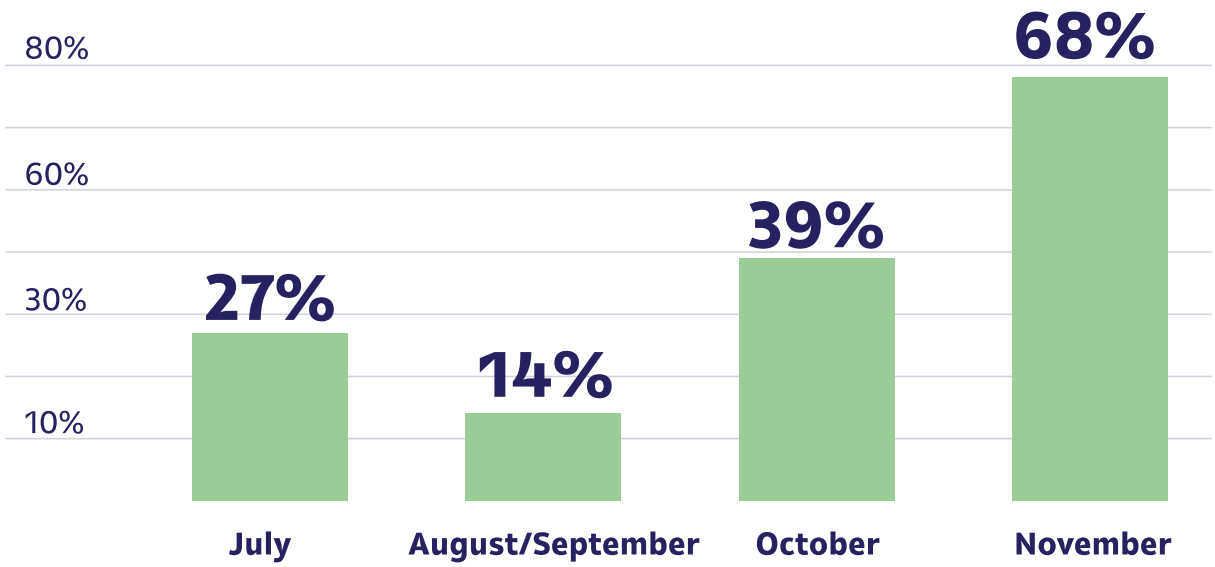
Baseline soil data were collected prior to application, including soil texture and chemistry, permanent wilting point, field capacity, and water holding capacity. Sensoterra moisture sensors were installed in duplicate at selected locations across the course, at a depth of approximately 4-6 inches.

Liquid Natural Clay was initially applied to a pilot area measuring approximately 60 by 100 foot strip across the fourth fairway, using Desert Control's above-ground temporary irrigation system. Following the pilot, LNC was applied to the remainder of the golf course, including all irrigated fairways, tees, roughs, approaches, and surrounds. Follow-up soil samples were collected in the months after application to evaluate soil properties.

The Club's superintendent gradually reduced irrigation relative to historical practices. His actions are informed by a combination of his experience and data provided by Desert Control's soil moisture sensors. To monitor ongoing progress of the project, Desert Control uses sensor data, maintains regular contact, and receives frequent updates from Woodland Hills Country Club's superintendent.

The table below summarizes documented monthly water savings over the observed period. August and September are combined due to a missed meter read by LADWP. Savings are measured relative to average historical water use over the past 5 years. As a result, individual months are subject to atypically high or low savings results in times of abnormal weather or non-irrigation water demands requiring high volumes of water such as extreme heat, rain, cultural events, pond-filling, distribution uniformity adjustment. It is worth noting that this particular savings model was chosen in large part due to its lower monthly variability related to these factors as compared to other models.

For the July-November reporting window, Monthly water savings ranged from a minimum of 14% (August-September billing cycle) to a maximum of 68%, with an average savings of 37% and net savings of approximately 27% based on total water use. Exact usage values are excluded for confidentiality.



LNC's effect is also visible in moisture readings, as displayed in the graph below. These results are the combined readings of all 15 reporting soil moisture sensors at WHCC. Rain events are noted in red, and the timeline goes from 01 July 2025 to 30 November 2025.

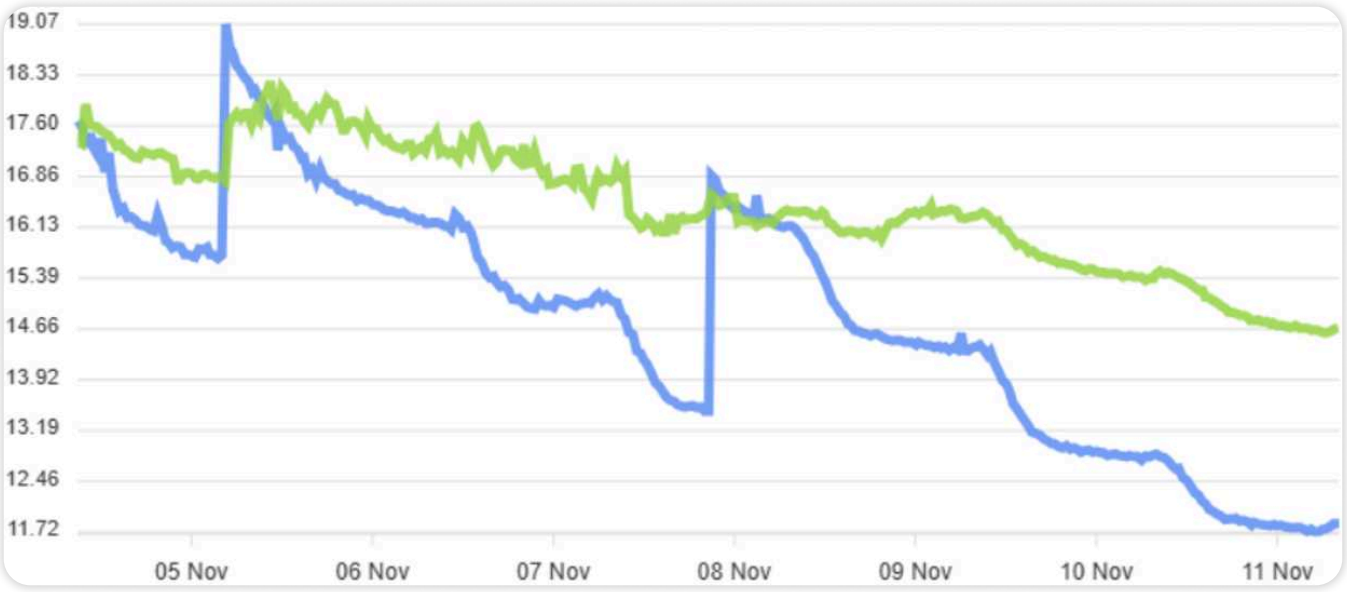
Soil Moisture Readings

Two noteworthy features of this graph are LNC's performance during the warm dry period, and its performance during the cooler wet periods. From 01July until the first rain event in mid-October, and especially from the beginning of August to mid-October, WHCC's soil moisture was extremely stable, lacking the sharp spikes and declines in moisture that are typical of warm-season irrigation cycles. Following both rain events, drydowns occur very slowly and steadily, with moisture levels remaining high for approximately one month.

During this time, the club reported minimal irrigation with extended intervals of approximately two weeks between irrigation events. It is worth noting that the average daytime high in the month of October in Woodland Hills was approximately 85°F (30°C) while November averaged highs of 69°F (21°C). These represent warmer than average highs in October and average highs in November.

While side by side data are not available from WHCC, the graph below from a nearby golf course with LNC treatment clearly shows the difference in drydown speed. In this graph, the LNC-treated moisture levels are shown in green, while the untreated control is in blue.

Sample Soil Moisture Readings (at a nearby club)



The untreated control shows rapid moisture loss, while LNC treated soils show slower, more uniform drydown and extended root-zone water availability.

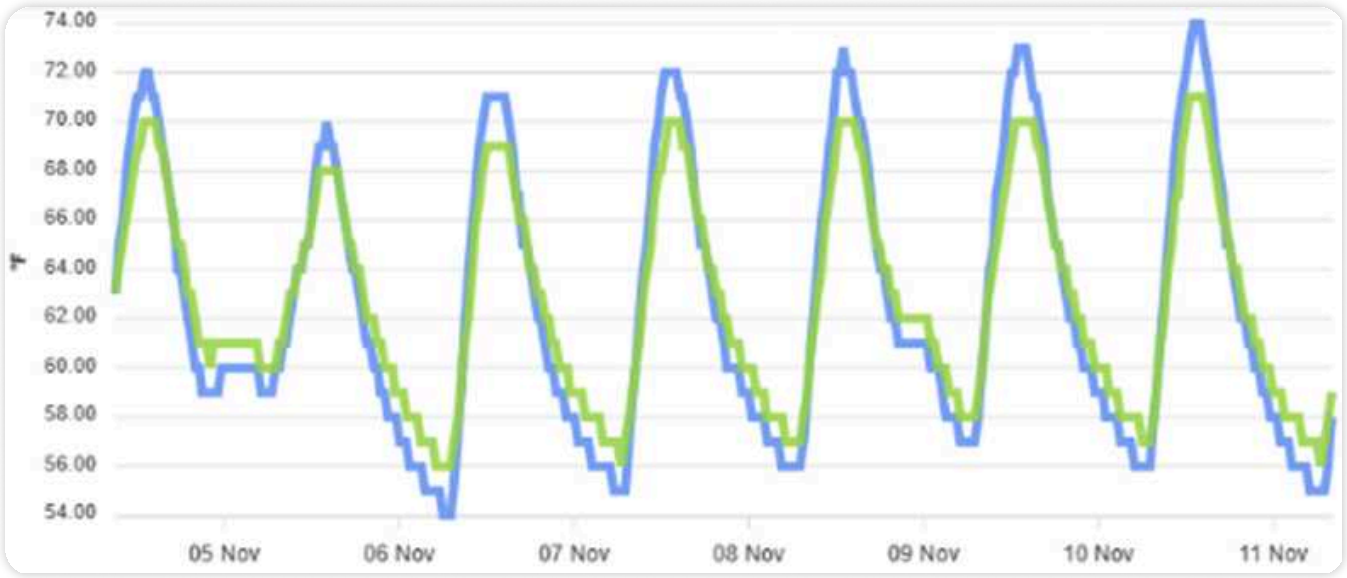
WHCC's playability, as described by the Club, has been superb. Despite increased moisture retention, infiltration rates appear improved, and the course remains firm and fast. The Club's superintendent reports the ability to reopen the course and allow carts to return off-path more quickly after rain events than prior to LNC application. Members have also reported to the superintendent that typically flood-prone areas of the course now remain dry.

Such results are consistent with typical LNC performance, as the product is believed to reduce the hydrophobicity associated with organic material in the soil. This effect is particularly pronounced in turf due to the presence of thatch in the upper soil layer.

Woodland Hills Country Club's turf, comprised predominantly of warm season *Kikuyu grass* (Cenchrus clandestinus), has responded extremely well to LNC treatment. As reported by members and staff of WHCC, the turf has "never looked better." Instances of localized dry spots ("LDS") are reduced, due to water's improved lateral dispersion with LNC. Turf color is extremely green.

A contributing factor to greener turf is expected to be the thermal stability that comes with increased moisture levels, due to the high thermal mass of water. As a result, it is typical in turf for soil temperatures to experience higher lows and lower highs, typically by a difference of approximately 2°F in the summertime. Side by side comparison is not available for WHCC, however the effect is clearly demonstrated on the GroundWorx sensor data from a neighboring golf course as seen below. In this graph, the blue line is the root zone soil temperature in the control, vs. that of the LNC treated in green.

Sample Temperature Readings



This graph clearly shows more extreme nighttime and daytime temperatures in the untreated control as compared to the LNC treated areas.

Another contribution this improved thermal stability provides is delayed dormancy in the warm season Kikuyu grass compared to historical norms. It is the opinion of WHCC's superintendent that warmer nighttime temperatures have prevented the turf from going dormant, and it has remained vibrant throughout the winter.

A pilot application was conducted first to guide application rate decisions and to confirm that the soil responded as expected before proceeding with a full-scale application. Soil samples were collected before and after the pilot treatment to document changes in soil physical properties and to confirm that the application resulted in measurable improvements in soil water retention. This approach allowed treatment performance to be evaluated at a small scale prior to implementation across the course. Summary results from the pilot application are presented in the following table.

Soil Samples (Pilot)

Sample	Treatment	Field Capacity	Wilting Point	Water Holding Capacity	Sand	Silt	Clay	Soil
Name		%	%	%	%	%	%	Classification
FWY #4	Untreated	37.4	32.7	4.64	68	26	6	Sandy Loam
FWY #4	Treated	37.9	30.8	7.14	68	26	6	Sandy Loam
Relative change		1.3	-5.8	53.9				

Results from the pilot area (FWY #4) showed no change in soil texture classification, indicating that the samples were broadly comparable in particle-size distribution. Following treatment, field capacity increased slightly from 37.4% to 37.9%, while the wilting point decreased from 32.7% to 30.8%. Together, these changes resulted in an increase in water holding capacity from 4.4% to 7.1% (a 2.5 percentage point increase in plant-available water), representing a greater than 50% relative increase. This increase reflects a wider range of water available to the turf and supports the ability to reduce irrigation inputs without inducing plant stress. Despite the low number of samples collected, these results are in line with the typical results and expectations of LNC.

Following the full-scale application, soil samples were collected from Fairway 18 (FWY #18) to evaluate whether the pilot-scale response was observed under full operational conditions. Soil physical and chemical properties measured before and after the full-scale application are summarized in the table below. Similar to the pilot results, the full-scale sampling showed consistent improvements in calculated plant-available water.

Both the pilot and full application soil samples showed increases in calculated plant-available water. While the relative magnitude and the contributions of field capacity and wilting point differed between locations, both results showed an increase in root-zone water availability following treatment. This increase in plant-available water helps explain the observed ability to reduce irrigation frequency and applied volumes while maintaining turf quality.

Following the full-scale application, soil samples were collected from Fairway 18 (FWY #18) to evaluate whether the pilot-scale response was observed under full operational conditions. Soil physical and chemical properties measured before and after the full-scale application are summarized in the table below. Similar to the pilot results, the full-scale sampling showed consistent improvements in soil water retention.

Soil Samples (Full Application)

Sample	Treatment	Field Capacity	Wilting Point	Water Holding Capacity	Sand	Silt	Clay	Soil
Name		%	%	%	%	%	%	Classification
FWY #18	Untreated	36.6	27.2	9.39	72	20	8	Sandy Loam
FWY #18	LNC Treated	38.6	27.3	11.3	68	24	8	Sandy Loam
Relative change		5.5	0.4	20.3				

Field capacity increased from 36.6% before application to 38.6% after application, while the wilting point remained essentially unchanged. As a result, water holding capacity increased from 9.4% to 11.3%, corresponding to a 20.3% relative increase. These results confirm that the improvements observed during the pilot application were maintained following full-scale implementation.

The consistency between the pilot and full-scale results indicates that the improvements in soil water retention are repeatable at scale, and that the increase in plant-available water helps explain the observed ability to reduce irrigation frequency and applied volumes while maintaining turf quality.

Soil samples were collected from Fairway 18 before and after the application to evaluate changes in soil chemical properties, with particular focus on salinity. Results showed a substantial reduction in soil salinity following treatment—however, given the limited number of samples collected, results should be considered preliminary. Electrical conductivity decreased from 4.9 dS/m before application to 1.4 dS/m after application, representing a 72.2% reduction. Sodium concentrations declined from 276 ppm to 245 ppm, while soil pH decreased slightly from 6.1 to 6.4 (Table 4).

Soil Salinity

	Sodium	Salinity	pH
Unit	ppm	ds/m	
Before LNC	276	4.9	6.61
After LNC	245	1.36	6.35
Relative Change (%)	-11.2	-72.2	-3.9

The decrease in soil salinity indicates improved chemical conditions for turf growth. Elevated salinity can limit the ability of turf roots to access water, even when soil moisture is present, and can contribute to reduced root development and increased stress. Lower salinity reduces these constraints, allowing turf to more effectively utilize available soil water and support more uniform growth and recovery.

Changes in soil salinity can be influenced by several factors, including irrigation management, rainfall, and leaching conditions. Nevertheless, the reduction in electrical conductivity observed in the post-treatment sampling is consistent with improved soil water movement and root-zone conditions following treatment.

Overall, the observed reduction in salinity complements the improvements observed in soil water retention and supports more flexible irrigation management. Together, the combination of increased plant-available water and reduced salinity improves the amount of usable water in the root zone and contributes to improved soil conditions for turf growth.
Soil analyses conducted before and after application showed improvements in soil water dynamics through two complementary responses. The application increased soil water holding capacity, expanding the amount of water retained in the root zone and available for plant uptake, while at the same time, a marked reduction in soil salinity was observed. The reduction in salinity represents an added benefit, as lower salt concentrations reduce constraints on root water uptake and allow turf to more effectively utilize the water retained in the soil. Together, the combination of increased water holding capacity and reduced salinity maximizes the amount of usable water in the root zone, improving overall soil conditions, and supporting more efficient irrigation management.

Liquid Natural Clay demonstrates significant positive financial and agronomic benefits at Woodland Hills Country Club. Compared to an expected 25% water savings, net savings at the Club to date are 27%, with an average monthly water savings of nearly 40%. These savings are valued at $113,955.47 This, combined with the PAYS model and rebates from MWD & LADWP, has led to substantial financial benefit to the Club.

Agronomically, soil sampling showed increases in calculated plant-available water and lower measured salinity in the sampled areas following treatment. LNC has shown increased water holding capacity by an average of 37.1% relative to before LNC treatment and a decrease in salinity by 72%. The course demonstrated improved playability after rain and heavy irrigation events, improved infiltration rates, and the ability to return to normal play more quickly. Qualitatively, the turf has improved visibly with greener than before treatment, especially in the cooler months, and the warm season turf has not gone dormant in the wintertime— likely due to a measured improvement in thermal stability. Overall, LNC performance has exceeded expectations by surpassing the expected level of water savings, yielding an improvement in color and playability, and providing unexpected benefits such as delayed dormancy for warm season turf.

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