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Boy Scouts of America Turf Area Water Reduction Project:

In conjunction with Par 3 Landscape Management – Water Management Services and Ez-Flo injection systems we have concluded that the injection of landscape products has resulted in a reduction of water use in excess of 14 % over the precious time period last year.

In order to insure that the water savings are not attributed to weather related water requirement reductions, the turf grass irrigation was managed by a RainBird IQ evapotranspiration managed system and water use was tracked based on the number of gallons applied per recorded ET inch of requirement.

Eighteen months prior to this project a complete Landscape Water Audit was done and system modifications were made in order to achieve a 71% DU and a recorded .66" Pr. No other modifications were made during the testing period other than routine maintenance.

The purpose of this project is to document water conservation results created with the use of EZ-FLO product delivery system. The process used was to track water applied each month and compare that amount in comparison to water requirement data (ET). Monthly water use was divided by the monthly ETo total. This calculation provided the number of gallons used each month for each 1 inch of ET. (See chart 2 - Water Use

Due to exceptionally heavy use of this property the condition of the turf area was in less than desirable condition when this project started. Additionally, further non-irrigation periods due to weekly use has affected the ability to provide normal irrigation application.

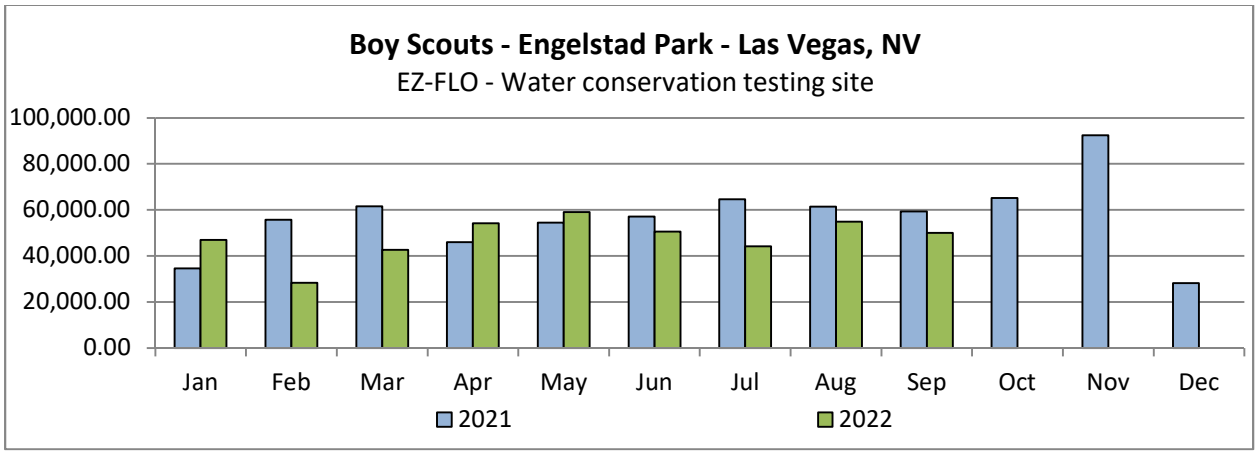
Gallons used / ET inch

	Jan	Feb	Mar	Apr	May	Jun
2020						
2021	34,558.75	55,688.44	61,599.80	46,001.92	54,438.89	57,119.63
2022	47,009.20	28,257.06	42,596.38	54,163.55	59,039.42	50,554.10
2023						

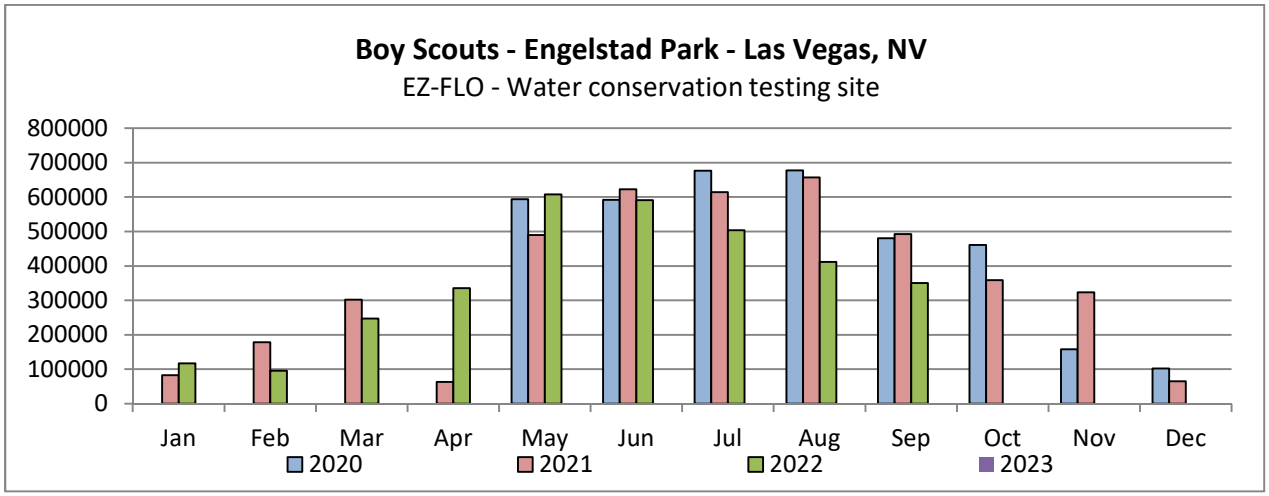
	Jul	Aug	Sep	Oct	Nov	Dec
2020						
2021	64,627.37	61,404.02	59,343.01	65,222.00	92,461.71	28,193.04
2022	44,191.05	54,884.69	50,071.47			
2023						

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The chart below indicates the amount of water used in gallons for each 1 inch of monthly ET. The purpose of this data will track the increased efficiency of the water use created by the daily application of nutrient via the EZ-FLO system. The irrigation management system makes daily runtime adjustments based on ET.



The water savings documented were created by systematically reducing the amount of water applied by 2% every 2 weeks until an obvious reduction in turf quality was observed. The systemic reduction was not started until after a period of 30 days in order to allow for the EZ-Flo products to become available in the soil and turf. Once the reduction in quality was observed the watering system was increased by 2% and allowed to settle for a period of 30 days. Additional observations were made to insure turf quality remained consistent.



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POC / System / Capacity	Application Period	Products
EZKIT-5	4-22-2022	FM Phos Free 12.5 LBS / FM Sugar 96 oz / Hydro-Maxx 96 oz / Maxx-Build 96 oz / Iron-Maxx 32 oz
	5-20-2022	FM Turf 25 LBS / FM Sugar 96 oz / Hydro-Maxx 64 oz / Maxx-Build 96 oz / Iron-Maxx 32 oz
	6-15-2022	1 Gal. Rhizo Max + 1 Gal. Root Max (#2 setting)
	6-22-2022	FM Turf 50 LBS / FM Sugar 96 oz / Hydro-Maxx 64 oz / Maxx-Build 96 oz / Iron-Maxx 32 oz
		Reevaluate results and adjust accordingly
	7-15-2022	20# Ferti Maxx - Turf, 32oz Hydro Maxx, 32Oz Hydro Maxx cc, 1280z Iron Maxx = Setting #2
	8-10-2022	35# Ferti Maxx - Landscape, 128 oz. Color Maxx, 64 oz Hyrdo Maxx = Setting #2
	9-12-2022	45# Ferti Maxx-Landscape, 64 oz. Hydro Maxx, 96 oz Color Maxx = Setting #2
	9-22-2002	45# Ferti Maxx-Landscape, 64 oz. Hydro Maxx, 96 oz Color Maxx = Setting #2





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My perception of landscape water management is that landscape sustainability comes first.

In the past 40 years I have obtained considerable experience in the field of computerized landscape water management, as a designer, installer, operator, business owner, business development manager, trainer and service provider. My greatest asset is that I have lived / worked nearly every aspect of the landscape water management industry.

I am currently the Director of Water Management for Par 3. Landscape Management in Las Vegas Nevada and the founding member of the "Water Smart Technology Group".

I started my career working in the commercial landscape installation business. In the mid 80's I expanded my experience as the first technology-based landscape water manager for the U.C.L.A. campus. At the same time, I acquired a C-27 California Landscape Contractors license, "Innovative Irrigation Systems, INC" as well as an Irrigation Association's "Landscape Irrigation Auditor" certification and Advanced Irrigation Design Certification.

Moving forward, my focus was sharing everything that I had learned, working as the "Central Control" division manager the Business Development function allowed me to share my knowledge and experience of technology-based irrigation control with mostly municipal users. In business development, sales are the first step, however providing training and service is my passion.

In my current role as the Director of Water Management for Par 3 Landscape Management, I manage over 500 controllers that operate on 9 different computer and cloud-based platforms. The highly completive market of commercial maintenance has been a challenge and the Las Vegas landscape environment is by far the most unforgiving of anywhere in North America.



With all that said my efforts have produced healthier landscapes across the Las Vegas Valley and created savings in excess of 700 million gallons in landscape water use saving Par 3 customers more than $2,000,000.00 in water cost.