



The Water Chronicles

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New Years Resolution

Welcome to a New Year. With every New Year we look at ways to better ourselves, physically, emotionally and financially. I am sure you have been hit up by the ads of a "New and Improved you" to start out the New Year. If that is true, the only way we can improve going forward is by correcting what has been done in the past.

I don't have a quick weight loss plan or a bank that can gain you a higher percentage on your CD or Savings account. We can however, rate how efficient your irrigation system is delivering the required water to your lawn and landscape. The process is relatively simple and can be done anytime during the year, winter or summer. Like dealing with weight loss, you only need to know how much you weigh and what foods you consume on a daily basis to determine a new plan of action to lose weight.

For property irrigation, we only need to know the size of the property being irrigated, the crop which is being irrigated, the actual water meter readings and the weather which was delivered by Mother Nature. With site surveys and aerial imagery we can quickly determine the square footage of the area being watered. The crop which is being irrigated will determine the amount of water actually needed to sustain that crop through any given weather situation.

For systems that operate off of city water supplies we only need the water meter readings. Weather data is vaulted in many universities and weather data collection centers for the last 50-100 years. With all of the data compiled, we can determine the actual efficiency rating of your irrigation system.

Many Home Owners associations operate on one irrigation system for the whole property. The expense of the maintenance of the system and the water consumed is shared by each member through the dues which are collected. As a large entity the water bills can weigh a huge cost on the Association. If managed improperly the mistakes can cost HOA's thousands each year.

Here is a case study of an actual efficiency report provided for a Home Owners association in the West Metro.

Case Study: *Home Owners Association West Metro*

Property Info

Location: **West Metro**

Acreage: **7.8 Acres**

Average per Year Water Usage Last 5 Years April-October:

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2,610,000 Gallons

Average Weather Data Last 5 Years April-October

Total Evaporation Rate: **28.2 Inches**

Crop: **Bluegrass/Ryegrass Cool Season Grass**

Crop Coefficient: **.80**

Average per year Rain Delivered last 5 Years April-October:

Total **23.82 Inches**

The total annual water used by this system was 2,610,000 gallons. The required water for the property to produce Bluegrass and Ryegrass on average for each of the last 5 years should have been 801,586 gallons. This system has been operating at a 31% capacity. 31% would be the irrigation systems efficiency rating.

So is 100% efficiency achievable? NO

In fact 80% efficiency is the maximum that can be achieved if the plot of land was flat and covered with a dome. 50% percent is a good starting goal and 65-75% is achievable. To get there it begins with an Audit.

An audit begins, by ensuring that all of the equipment is operating properly, such as adjustment of sprinkler heads, or leaking pipes. Once the system is operational, the audit continues with performance collection. Collection pans are placed on a grid throughout the property. The system then runs for 5 minutes. Collection pans are gathered and measured for content. The resulting number gives us a precipitation rate for each zone of irrigation. The audit continues with soil sampling and observation of the shade conditions. Precipitation rate, mixed with soil and shade conditions and reoccurring weather conditions for the site. This information will provide us the necessary info to create a program which provides enough water for the plant to grow and eliminates any unnecessary waste. A report will also be provided giving prioritized recommendations for updates which will improve the performance of the system.

So make that New Years resolution to get your irrigation system Audited. An audit should pay for itself within one year of operation and provide the benefits for years to come. For more information or an efficiency rating on your current irrigation system, you can email us at Info@useyourwaterright.com or call 320-310-4241.

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Happy Writing
From the staff at UseYourWaterRight.com

