

Soil Health

The title 'Soil Health' is rendered in a large, green, rounded font. The letters are decorated with small green leaves and a red ladybug. Below the text is a horizontal band of brown soil texture, represented by small dark brown dots.

Soil Health

More and more studies are finding that the role of soils in water conservation is more vital than may have been initially perceived. While the tendency to focus on the above ground aspects of plant health and water use is tempting, soil may be the most “unacknowledged tool” when it comes to getting to the root of conservation. With 60 to 80 percent of a plant’s mass living underground, that can span meters in width and depth, the true state of plant health is largely unseen. >>

Healthy Soils Mean Less Water

Typically, the undisturbed plant is the healthiest. Using their own ‘wastes’, plants are quite adept at feeding themselves. The longer they have to live in one single area, the stronger and more efficient they become.

The maintenance of healthy soils is not simply a benefit to plantlife, but to homeowners and landscape managers as well. Earth rich in nutrients requires at least 50 percent less water in order to thrive, with attainable goals of up to 80 to 90 percent less in all properly treated areas.



More Potable Water

This overall reduction also means less strain on the local potable water supply, with estimates ranging from 2500 to 6000 m³ per 4000 square meters. This would, in turn, increase available reserves for vital daily activities, such as cooking and general consumption, imperative to minimal quality of life.



Reduce Energy Use, Reduce Taxes

With less water required for exterior landscaping, energy usage would be lowered as well, with a significantly reduced need to run already efficient irrigation systems. This benefit, along with reduced water use, not only impacts the individual as a homeowner, but as a taxpayer, with lowered irrigation costs for schools, municipal buildings, and other government-maintained establishments.



No More Runoff

Healthier landscapes with rich soils see drastically reduced runoff, erosion, and sediment leaving the site. This is not only important from an aesthetic standpoint, but an environmental one. Erosion often results in stormwater-transported pollutants travelling to local streams, rivers, and oceans, both from the project site and any downstream interfaces. This is not only a gross waste of resources, but also a potential negative impact on other organisms as well as a larger overall reduction in local water quality.



No City Is an Island

A heat island is an area that is significantly warmer than its surrounding areas. The main cause is urban development as aided by a quickly expanding population in a particular area. In turn, more energy is used in the form of air conditioning and refrigeration. The heat island effect costs Los Angeles an estimated US\$100 million per year in energy.



However, the increase of healthy, vital landscapes has been shown to decrease this phenomenon. In 2006, New York City announced an initiative to combat its heat island status by increasing urban forestry and living roofs, along with light surfaces.

So addressing even poorest performing soils can have a profound impact in a myriad of factors. Ecologically, economically, and socially, healthy soils are an imperative component to sustainability.



For more information or to find out how to get your soil tested, visit <http://www.soilfoodweb.com>.

Hunter[®]

ACC with Solar Sync: Easy, Automatic Water Savings

The standalone, water-saving solution the industry has been waiting for. The ACC connects directly to Hunter's revolutionary Solar Sync sensor for automated weather adjustment and maximum water savings.

Solar Sync measures on-site evapotranspiration (ET) and adjusts ACC runtimes via Seasonal Adjustment. All other ACC functions remain the same. All 99 decoder stations and each of the 6 automatic programs will operate normally but smarter.

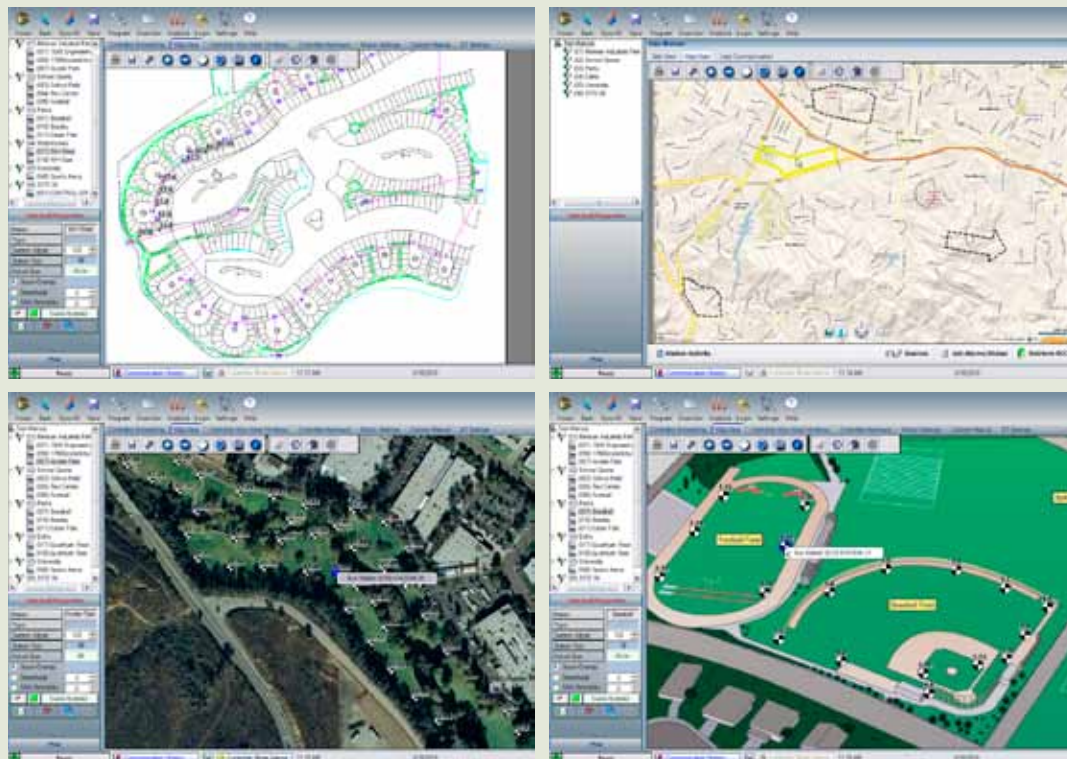
Adjustments are tracked in the controller logs and visible in the main display. Any program may be exempted from automatic adjustment, if desired.

The Solar Sync sensor will also serve as the controller's rain and freeze shutdown sensor. >>



Solar Sync sensor installed

IMMS Graphics Screen Shots



IMMS 3.0 Map-based Central Control Software Now Available

Hunter Industries has released a map-based version of its Irrigation Management and Monitoring Software (IMMS) for wide-area, multi-site irrigation control. This 3.0 release features customizable map graphics with interactive control capabilities.

The central control software uses a computer to manage irrigation at hundreds of controllers via telephone, cell phone, and radio or hardwire signals. The map interface provides a management tool to organize these assets visually, and use the maps for command purposes.

Utilizing background images from virtually any source, IMMS 3.0 orients users to irrigated areas. Beginning with wide-area views, the map graphics can be clicked to access individual sites and then individual controllers. Each click brings a closer and sharper view of the next level of detail. IMMS includes drawing and linking tools to create "hotspots" with intelligent controls, as an overlay on the maps.

At the controller level, individual valves can be displayed as actual locations in the landscape. The irrigation valves may be turned on directly from the graphical maps.

IMMS software can use weather data from its own cost-effective sensors to adjust irrigation automatically for climate conditions. The controllers may also be equipped with flow meters, to measure and monitor flow.

"IMMS now closes the loop between water conservation technology and flow monitoring and alarms," said Dave Shoup, product manager for central controls at Hunter. "It will create water conserving irrigation scenarios, and then verify that everything ran according to plan."

Shoup pointed out that the controllers would automatically detect abnormal flow conditions, and shut down to prevent waste and damage. "Any alarms will be reported to the operator via the central software, after the controllers have handled the situation," said Shoup.

IMMS is selectable to multiple languages and has been updated to operate in Microsoft Windows 7 operating systems. "With a host of reporting features that can be exported into popular spreadsheet software, we expect this version of IMMS to be the irrigation manager's best friend," Shoup said. "It is very popular in our international markets, in particular."

The graphical map interface is a free update for existing IMMS users and is included in all new purchases of the software.

According to Jeff Kremicki, Senior Product Manager for electronics at Hunter Industries, "This latest release is only a part of a comprehensive development strategy. If you like what you see, stay tuned. There is much more to come." Kremicki said that every element of irrigation systems, from nozzles to central systems, was being re-examined by Hunter to optimize the use of water and to maintain its lead in water conservation technologies of all types. >>

“IMMS now closes the loop between water conservation technology and flow monitoring and alarms . . .”



Reach for the Sun: See How You Save with Solar Sync Calculator

How much can you save? With Hunter's Solar Sync, the possibilities are endless. Use the Solar Sync calculator, now available on the Hunter website, to determine exactly how much money your clients can save each year.

Evapotranspiration (ET) sensor-based irrigation control, such as that with Solar Sync, conserves water when compared with standard irrigation control with no sensor input. As weather changes throughout the year, so does water use. This analysis looks at the annual savings, and not just the peak irrigation month.

But why listen to us? The numbers speak for themselves. >>

Try it today:
www.hunterindustries.com/sscalculator

1.50	Per Unit Rate
243,458	Annual Savings Potential in Liters
24%	Percentage Savings
366	Annual Savings Potential

Hunter SOLAR-SYNC

This worksheet will calculate the approximate water savings on a project, where a Hunter Controller is used in conjunction with a Hunter Solar Sync.

Project Name: _____
 Estimated by: _____

Region 1: Region 2: Region 3: Region 4: [Click Here to View Table](#)

1.000 Turf Area 2.000 Other **STEP 2:** Enter the approximate square area of turf, and of other landscape areas.

Climate: Dry Semi-Arid Arid Subtropical Tropical **STEP 3:** Check the boxes for the months that you typically run your irrigation system.

City: _____ **STEP 4:** Choose the billing unit based on your water bill.
 Cubic Meters Gallons

\$ 1.50 Per unit rate **STEP 5:** Enter your unit billing rate.

243,458	Annual Savings Potential in Liters
24%	Percentage Savings
366	Annual Savings Potential

Note: Hunter's Solar Sync is a registered trademark of Hunter Industries. All other trademarks are the property of their respective owners.

Solar Sync calculator



Solar Sync sensor

Rotors as Conservation Devices?

Rotors get a bad rap. Quite often people will see large expanses of turf in parks and on athletic fields, and think of how wasteful they are in regard to water. That perception is increased when they see the irrigation system running and spraying large amounts of water into the air. What they don't understand is that those lush, green turf areas are more than just important recreational sites, they are air purifiers, contaminant filters, oxygen producers, air conditioners, and carbon sinks. They also provide pleasing green space, imperative to mental health, and help to offset the effects of hardscapes and buildings in urban environments.

What about the water they use? Yes, water is needed to keep these surfaces in top shape, but professionally managed, well-maintained sports turf, watered by a professionally designed, installed, and maintained irrigation system actually uses water very efficiently. >>

PERCEPTION:

Large rotors spraying great amounts of water are inefficient.

FACT:

Manufacturers of sports turf sprinklers spend huge amounts of engineering, testing, and development time and money to produce emission devices that rate in the excellent category as far as irrigation efficiency, as defined by the Irrigation Association. A properly designed and installed irrigation system operating at the appropriate pressure distributes water with a high degree of uniformity, ensuring the system only needs to run for the optimum amount of time to provide adequate water. Inefficient sprinklers that poorly apply water must run for extended time to make sure the driest area receives enough water to keep it green, while wetter areas are overwatered, sometimes by more than twice what they need.

PERCEPTION:

Large rotors operate for long periods of time compared with spray sprinklers, wasting water.

FACT:

Large rotors do run for longer times than typical spray sprinklers, and they need to. Small area spray sprinklers apply water at a high application rate, generally around 38 millimeters per hour. Some are much higher than that as well, but just imagine a rainstorm that measured 38 millimeters in one hour. That's a lot of rain at a rapid pace. Spray sprinklers by their nature apply a lot of water quickly, and only need to run for a short time. Large rotors by comparison apply water at very slow rates, normally in the range of 13 millimeters per hour, one third the rate of sprays. They do need to run 3 times longer than spray sprinklers to apply the same amount of water to an area, but they do it with greater efficiency. Not only is their distribution of water superior to spray sprinklers, but the lower application rate ensures more of the water is absorbed by the soil and available for the plants. Soils in general cannot accept water at high rates, so some of the water applied by spray sprinklers may not reach its intended destination—the root zone.

Of course there are areas of the landscape where spray sprinklers are the best irrigation method. Under the pressure of legislative measures, and out of a desire to contribute to the conservation of our precious natural resources, irrigation manufacturers continue to work on developing more efficient small area heads and nozzles. But for large turf areas such as sports fields, rotors remain the sprinkler of choice.



Hunter®



In response to the prolonged drought condition that was being experienced across southeastern Australia, the Mornington Peninsula Shire (MPS) commenced program sports field rehabilitation. The program was designed to ensure the impact on the community's sporting clubs would be significantly reduced. With 53 active playing fields across 720 square kilometres of municipality, it was determined very early on in the development stage of the program that works would need to be rolled out over a 10 year period.

The framework of the program was as follows:

- Standardize the condition of the 2 levels of playing fields across the municipality, Premier and Secondary
- Prioritize playing fields, Premier Years 1–5, Secondary Years 6–10
- Upgrade or introduce irrigation systems across Premier playing fields, using existing Hunter Industries' products as the standard operating system
- Introduce subsurface drainage systems to Premier playing fields, where required
- Seek alternative water source in order to substitute use of potable supply for irrigation
- Convert all playing fields from cool season turf types to warm season turf types
- Reduce overall consumption of potable water for irrigation by 46% by 2012

On commencement of the program in 2002, the State Government of Victoria introduced water restrictions; this was to eventually extend to the Stage 3A restrictions that are currently in place. Under Stage 3A, 1 in 4 sports grounds as nominated by council can be watered.

By 2008, all Premier playing fields were fitted with Hunter Industries operating systems, with the introduction of IMMS (6 locations) coming on board in 2005, eventually being upgraded to ET in late 2008.

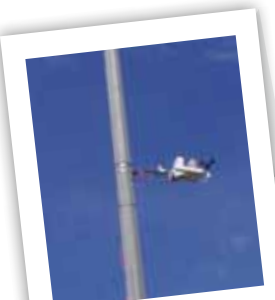
The implementation of the program achieved greater than expected outcomes than those set out in the original program scope: A 46% reduction in potable water usage was achieved in 2006, and with the introduction of IMMS and ET, numerous other savings in resources have enabled the program to be extended beyond its timeframe.

From an operational perspective, having a weather-based operating system such as IMMS-ET has reduced significantly the level of resources required to operate, monitor, and maintain the irrigation systems, with resources being better utilized on more important areas of operation. This alone has had a cost saving for MPS in relation to man hours monitoring the Shire's irrigation systems over the vast area the Shire occupies. In addition the level of reporting through the use of dial-in, access to the individual location enables the Shire's Parks and Roadsides Maintenance Team to better track faults, consumption, and maintenance requirements throughout the irrigation season from any location.

Although not introduced for weather data reporting, ET was soon to be identified by MPS to have many other uses. The Shire's drainage engineers and risk management teams very quickly took advantage of the data being collected, particularly wind speed and rainfall. Never before had such accurate, localized weather data been available.

The extreme weather conditions of summer 2008-09 saw an additional use for IMMS-ET with the provision of localized weather data to the Victorian Country fire Authorities Local Incident Control Centre. The information reported back to the center via email at hourly intervals provided invaluable data, which would be used to monitor conditions across the Mornington Peninsula.

In the 10 years of drought conditions experienced throughout the nation, good planning and the use of the most modern systems by MPS have ensured that not one of its playing fields has required closure, thus reducing the impact on the community. >>



ET installation



Pictured from left:
Gavin Jones and Greg Powell



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news@hunterindustries.com

60 Billion Liters Saved and Counting...

60,849,376,418

At Hunter, we love numbers. Especially BIG numbers. So when we sat down to figure out how many liters of water we've helped to save customers with our revolutionary MP Rotators, we couldn't have been happier. And just think about how all your clients would feel. With 30 percent increased efficiency, the MP Rotator means even more big numbers in savings on monthly water bills. Is 60 billion big enough? We don't think so. >>



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