

Blueline

WATERING DONE RIGHT • MOSQUITOS AND WATER
CONSCIOUS LANDSCAPING • WATER – STINGY PLANTS
SCADA

Dear Kingsbridge M.U.D. Customer,

Greetings friends and neighbors and welcome to our third edition of the Kingsbridge Municipal Utility District newsletter. We publish this newsletter to keep you informed of events, some within and some beyond our control. As residents of the District we are committed to providing the best service at the best possible price. We hope you find this newsletter helpful and appreciate any comments and suggestions you may have. You may learn more at our web site: www.kingsbridgemud.com

Sincerely,
Robert Shindler
President



HAND-WATERING AND LAWN SPRINKLING DONE RIGHT

Not everyone is in a position to finance a water-stingy lawn makeover. Everyone, however, can maximize the precious water they dedicate to their lawns with just a few basic rules in mind.

First of all, consider "soaking hoses" that slowly release water via drip irrigation over an extended period of time as opposed to water sprinklers. Sprinklers dispense water to lawns and flowerbeds, but when run at full force they do it hastily ... and, most often, non-efficiently. Too much water introduced to a lawn too quickly translates to wasteful runoff. If the ground is parched and hard, water runs off of grass like it's rolling down the proverbial duck's back.

Water your lawn as early in the morning as possible. Days with minimal wind are best, as still wind conditions greatly reduce evaporation. Avoid downright windy days altogether.

Water with low pressure. If, during the process, any pooling occurs, shut off the water until the standing water has had sufficient time to be absorbed. Repeat the process until



the lawn has received enough water coverage to penetrate the ground surface by an inch or so.

Typically, St. Augustine ("carpet") grass requires ¾-inch to 1 inch of water per week to remain robust and green. If a lawn is aerated prior to watering, water retention will be increased substantially. The more aeration, the better the water absorption and the deeper the roots of the resident grasses will grow.

Common-sensical as it may seem, don't water your lawn before it truly needs watering. One way to verify a lawn's readiness for watering is to walk across it and pay close attention to the reaction of the grass blades. If the grass does not promptly bounce back, and the walker leaves discernible footprints as he or she treads over the turf, it's watering time.

Avoid mowing your lawn to buzz-cut level. A mower blade that's set to leave a higher bed of grass saves substantial quantities of water, and for a simple reason. Long-bladed grass requires less water to stay verdant and vibrant. Set the blade height for St. Augustine grass at 3 inches; for Bermuda grass, less than half that high, or roughly 1-1/2".

Lastly, leave grass clippings where they are. Aside from eliminating the hassle and cost of taking out the "thatch," remnant grass clippings are actually beneficial in the sense that as they dry out and decompose they deposit nutrients in the soil. It's the cheapest ... and most environmentally-friendly ... fertilizer that money can't buy.

MOSQUITOS AND STANDING WATER CREATE A VICIOUS CYCLE

There's not a single life form, large or small, living on Planet Earth that does not to some degree depend upon the presence of water for it's own survival.

Mosquitos are no exception.

It's no surprise to Texas coastal residents that wetlands, shallow ponds and coastal marshes produce millions upon millions of the biting, disease-spreading insects. Ripe with flooded, egg-holding grass and random puddles of standing and sometimes-stagnant water to accommodate hatches, such places are virtual mosquito-breeding factories.

What surprises many, however, is the fact that even during periods of prolonged drought, mosquitos continue to make their dreaded late-evening attacks on those who venture outside. Despite the punishing, lawn-parching drought conditions that Fort Bend County and surrounding areas have endured throughout the past several months, mosquitos have endured ... in some areas, much more prolifically than others.

Why?

Water. In this particular case, a very small amount of water ... just enough to accommodate the hatching and development of super-hardy eggs that remain viable until just a meager dose of rainfall or artificially-introduced water arrives.

Over-watering lawns does more than waste a precious resource. It sets the scene for the near-instan-

taneous hatching of millions of mosquito eggs. Likewise, over-watered potted plants, even tiny ones, can facilitate substantial hatches, especially within clay, ceramic or plastic pots that don't have holes at the bottom to allow for drainage.

A mere quarter-inch of water atop the saturated soil of a 6-inch-diameter plant pot is more than ample to facilitate the hatching and development of hundreds of mosquito larvae. The squiggling, comma-shaped creatures are easy to see with the naked eye, and as such, easy to detect throughout the typical lawn or garden.

The best maintenance is the preventive kind. Close monitoring of containers and pots can stop the mosquito problem before arises.

Mosquitos have been around for 100 million years. Encased in amber, there is evidence aplenty of the malevolent insects' longevity. There are over 3,000 species of mosquito, worldwide. In North America, that number goes down to approximately 170 species.



Depending upon the region in which they reside, mosquitos are prime carriers of a variety of diseases, more than a few of which have the potential to be fatal. In the U.S., mosquitos spread several types of encephalitis, along with the exotic and fortunately, relatively rare West Nile virus.

In the tropics, and in particular remote and poverty-plagued locales, mosquito-borne malaria, dengue fever and yellow fever continue to pose a lethal threat to humans.

Man's best friend is not exempt from affliction, either. Both dogs and cats can suffer from heartworms introduced by biting mosquitos. Heartworms are especially endemic, not surprisingly, to "water dogs," species like the Labrador, Chesapeake and Golden retriever. Frequently taken afield to waterfowl-hunting locales that host countless mosquitos, retrievers are terribly vulnerable to heartworm infestations. Left untreated, heartworms are fatal to afflicted animals.

Despite popular belief, mosquitos do not feed on blood. Female mosquitos require the ingestion of blood for development of their eggs. Rather, the insects generally dine on a variety of plants and plant by-products ... fruit juices, decaying or rotted vegetation and even flower nectar. The larvae are "filter feeders" that subsist upon decomposed, water-suspended particulates.

Mosquitos have very poor eyesight, a shortcoming that is more than compensated for by their propensity to locate warm-blooded creatures like so many heat-seeking missiles. Inside a range of 10 feet or so a mosquito's incredibly sensitive thermal receptors, located on the tip of the insect's antennae, serve as homing devices.

The target? Blood located near the surface of the skin. It's easy to understand, accordingly, the mosquito's decided preference for the typically-thin skin of the human hand, wrist areas, ankles, neck and face. When humidity conditions are high ... which, in the Houston area, translates to around 90 percent of the time ... a mosquito's heat sensors are triply effective, allowing the insect to detect an unsuspecting victim from a distance of 30 feet.

The average life span of a male mosquito is 10 to 20 days. Female mosquitos, the blood-voracious creatures that inflict so much misery on Gulf Coast residents, can live up to 100 days. Eggs develop to adulthood in a scant 4 to 7 days.

The best-case control scenario is one that denies mosquitos their all-important water sources. It's

impossible to eliminate all of the potential sources of water to these highly-opportunistic insects. Yet, one emptied out bucket and drained potted plant at a time, we can all individually put a substantial dent in their numbers.

Come sunset, the coolest time of the day, when we are most likely to want to enjoy being outdoors during the heat of Texas summertime, the payback should be immediately obvious.

A single female mosquito typically lays 100 to 300 eggs at a time. Over the course of its brief lifetime, it can create anywhere between 1,000 to 3,000 offspring.

As a rule, a mosquito remains within a 1-mile radius of its breeding site throughout its entire abbreviated life. It doesn't take a statistician or a biologist to figure out that a mosquito-battling neighborhood, working together to eliminate breeding sites within a single mile one water source at a time, can make a massive difference in the misery-producing potential of a local mosquito population.

Considering the time frames involved, there's no better time to start than now. It can never be too soon to start, it can only be too late.



The Art and Science of Water-Conscious Landscaping

Part botanist, part engineer and part artist, Melvin Holley epitomizes today's special breed of environmentally-conscious landscaper.

Melvin Holley grew up on the south side of Houston, long before most residents of the nation's fourth-most-populous city could begin to grasp its inevitable westward expansion to the faraway, windblown grasses of the Katy Prairie. At the time, Holley's father worked as a professional landscaper for Ayrshire Corporation, one of the Houston area's preeminent developers and a major player in the growth and evolution of the suburban enclave of Stafford.

Now 55 and owner of his own firm, ETD Landscaping & Construction, Holley looks back fondly on the

early days of what would eventually become the Kingsbridge Municipal Utility District (MUD). Working for his dad, Holley felt obligated to put in the extra hour whenever possible, to learn everything he could about the trade and to someday apply that extra measure of knowledge to his own business. It's safe to say he accomplished his mission.

That, however, doesn't mean he's complacent.

Talk landscaping with Melvin Holley, particularly the specialized brand of conservation-focused landscaping that for so many reasons is currently in high demand, and you quickly find yourself immersed in deep discussions of form, functionality, layout and composition. A broad variety of water-sipping plant species collec-

tively provide him a vast natural palette, each boasting its own unique combination of color and texture.

For Melvin Holley, landscaping is an art form.

Holley has been in the business for almost 30 years. Many things have changed, he says, but one element of the equation has remained a constant. In light of the state's current drought conditions, it has now become more apparent than ever.

Water is a precious and finite commodity.

As with all commodities, it increases in value as it declines in availability. Although Kingsbridge MUD currently has an adequate water supply despite near-nonexistent

rainfall, maintaining that supply of groundwater and well water remains a never-ending challenge. With much of Texas coping with record-high temperatures and the worst first-quarter drought since 1850, that challenge has the very real potential to become overwhelming. Not, however, if Melvin Holley has his say and conservation-conscious consumers are listening.

Says Holley, "ETD stands for 'Experience the Difference.'" It's a catchy acronym, no doubt, but it's a far more literal catch-phrase than most customers imagine. That's because, from the plant species Holley utilizes to how he goes about applying each one to its own distinct purpose, his efforts do indeed make a difference. From conserving water reserves to lowering lawn maintenance costs, Holley's efforts yield tangible benefits.

Still, there's no one solution to all residents' concerns. Every job Holley

takes on is carefully evaluated in terms of expense and return on investment. And landscaping, no matter the scope or style, does represent a considerable investment.

"Many Kingsbridge MUD residents have spent a lot of money on landscaping," Holley says. "Understandably, they're not willing to watch their investments wilt like dried-out leaves of grass. No one wants a lost front lawn to be the cost of water conservation."

According to the veteran landscaper, Kingsbridge MUD is currently encouraging water rationing, asking its customers to limit lawn watering to no more than three times a week and to water as lightly as possible. Rationing is not yet mandatory, but with a prolonged drought and excessive groundwater usage it's not inconceivable that it could be in the future.

"I try to tell everyone that over-watering is just as devastating as having no water," Holley explains.

"Given the current situation, we all have to make a conscious effort to conserve as much water as possible. It takes surprisingly little water to keep things alive."

That's true of even traditional lawns, those carpeted with St. Augustine grass. As for one of Holley's signature custom landscapes, it's a profound understatement.

All the same, reduced water consumption is only one of several demonstrable benefits endemic to carefully-planned landscapes. For one thing, savvy landscaping is the foundation of a visually-impressive lawn, one that displays the rich, natural beauty of a broad and remarkably hardy spectrum of low-maintenance grasses and shrubs. For another, over the long run, efficient lawn design and planting will ultimately pay for itself.

It's not, however, a quick-return investment. It may take ten years or

more to realize the savings. Still, it's not inconceivable that thoughtful planting and efficient maintenance can ultimately save a consumer enough money to meet and at some point surpass the initial costs of a "complete lawn makeover."

All facts realistically considered, the property owner has to make some long-term decisions.

"One of my primary goals is to use plant species that require minimal water and can endure periods of drought," Holley says. "From the very beginning, virtually every job I take on, large or small, revolves around that concept."

Plant-wise, the available options for an environmentally-friendly, cost-efficient lawn are far more expansive than what most people expect.

"There are a variety of ground cover species available," Holley notes, "including some perennials that need only a fraction of the water required by traditional lawn grasses. One of the most popular is Asian jasmine. It doesn't have to be mowed, and is about as low-maintenance as ground cover gets," Holley explains.

"With a species like Asian jasmine," he explains, "you're letting Mother Nature take over, but doing so in a visually appealing way. Mondo (a.k.a.: "monkey grass") is another great species, as well as liriopse.

Variegated Aztec is especially drought-resistant, and it grows in very similar fashion to giant liriopse grass (sometimes called "big blue.") It has a greenish-white color that's really appealing.

"All of these grasses produce some sort of bloom at one time or another, beautifully subtle blues and lavenders that are really eye-catching. We're using more and more Asian jasmine as time goes by," Holley continues. "That's largely because of way it grows and the amount of surface area that it effectively

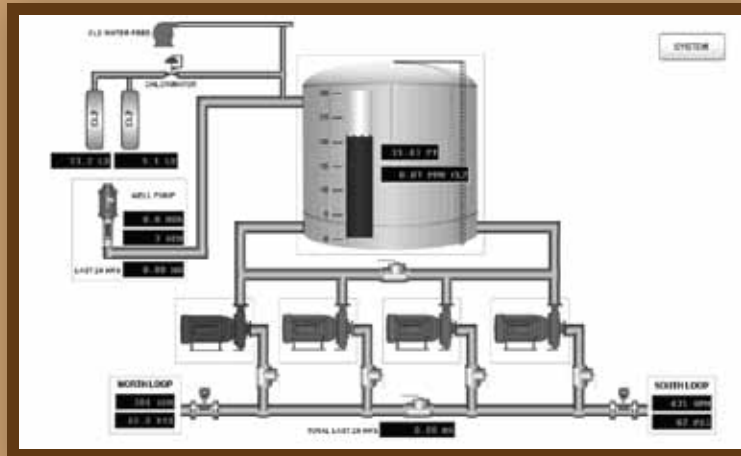


SCADA

For the past several months Kingsbridge MUD has been running a trial Remote Monitoring System. This is known as SCADA (Supervisory Control and Data Acquisition) in Industry circles. This allows operators and engineers to see what is happening and make control changes to the

plants without actually having to be onsite. This allows for a much faster response time to problems or issues and therefore minimizes any plant downtime for our customers.

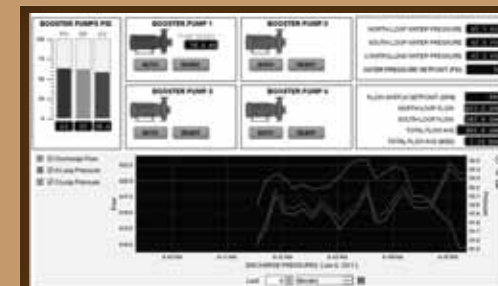
Operators and Engineers are notified immediately by email when the



SCADA system detects there is a problem such as a High Lift Station Level. They can then connect into the system and make adjustments or initiate the call out of an Operator much sooner than would have previously been possible. This enables the MUD to avoid possible spillage fines by the county.

Another benefit of the Automated Monitoring System is the ability to

produce the reports required by the state Automatically and using up to the minute accurate data. This ensures the MUD will comply with State Water requirements.



The initial demonstration system is currently set up to monitor Water Plant 2 and in the future will be expanded to include all the other Water Plants and Lift Stations within the Kingsbridge MUD.

To reduce capital costs to MUD districts for equipment such as Servers and other monitoring equipment the system is provided on a remotely hosted Server in a secure

covers. A lot of folks like variegated Aztec," he adds, "for many of the same reasons: It requires very little maintenance and grows very quickly with a minimal amount of water." Of course, despite their Spartan characteristics all of these plants nonetheless require some degree



of watering. Hand-watering is the norm in most yards, and given the initial cost of irrigation and automated watering systems, understandably so.

But, assuming the landowner can budget the money, and the eventual payback combined with the immediate results provides sufficient incentive, Holley strongly recommends irrigation systems. "All plants, ground cover or shrubs, have different moisture requirements," he notes. "An irrigation system is extremely beneficial to efficient watering of those plants and grasses."

Some such systems are remarkably high-tech.

"I'm a licensed irrigator," Holley points out. "When I propose a layout to a prospective client, the specific types of plants and the level of watering they require are my essential sales parameters. We always keep water-efficiency high

on the list of priorities. Ideally, you end up with species that are both hardy and extremely responsive to restricted irrigation.

"There has to be a separation between the irrigation of ground cover and the irrigation of flower beds and shrubs," he adds. "Usually, based upon the type of plants selected, flower beds require a little bit more water than the lawn. The two should never be tied in together."

Holley discourages clients from hand-watering, be it for ground cover, flower beds or shrubbery. "Yes," he acknowledges, "it's an investment. But if you can take the erratic nature and labor demands of hand-watering out of the equation by using an automatic irrigation system, that is definitely the way to go."

That automation is achieved largely through the use of computer systems. "Irrigation through a com-

puterized system is as efficient and effective as it gets," Holley emphasizes. "You can get a specific amount of water delivered to a specific plant at a predetermined time, day after day."

Holley calls systems of this sort "smart computers." Considering what they do, it's an apt description.

"They precisely determine the ground moisture, and keep a record of rainfall via sensors that not only provide the amount of precipitation but also the humidity, the wind velocity and even wind direction. A system like this can automatically determine what plant needs water, how much it needs and when to disperse it, in accordance with the soil type. In effect," he says, "it's basically a weather station."

Understanding and effectively using a system of this kind requires some learning. Accordingly, Holley annually attends continuing-education classes relevant to irrigation and the constantly-evolving technologies that make it so amazingly effective.

"It all boils down to making sure that the water you use is utilized to its utmost," he says. "When Holley installs systems for new clients it's a mandatory requirement as a licensed irrigator that he educate those individuals as to the use of their new equipment."

Holley recommends early-morning watering sessions, based in part on the velocity of the wind. "In the still of the morning, it's far less likely that you will lose a significant amount of water to evaporation," he explains. "That may not sound

like a big deal. But put into practice, it makes a substantial difference ... one that's important not only to the well-being of the vegetation, but also to the consumer's budget. We make every drop count."

Some customers still prefer and request either St. Augustine (carpet grass or Bermuda grass, and Holley emphasizes that his job is always

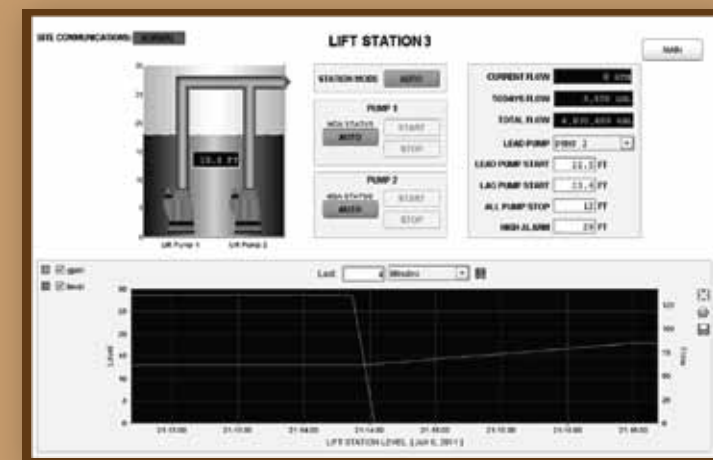


to deliver what his customers want. The distinction between the two grasses is "as different as night and day," he says. "Bermuda grass is a much dryer grass," Holley explains. "It's often used on golf courses, and it doesn't require as much water as St. Augustine."

"Fertilization is always essential to grass and ground cover, especially in the early stages of planting," he adds. "It's also important to design a landscape with the soil makeup in mind. The Kingsbridge MUD area is typically comprised of a mix of sandy loam and clay. Sand allows for water saturation, actually filtering the water in the process, and clay is critical to retaining that water. Ninety-nine percent of the Kingsbridge region is predominantly clay, which is one reason why we have a large number of retention ponds that hold ample water on such a consistent basis."

Although many area residents have very attractive lawns that were initially planted with St. Augustine grass, a longtime Gulf Coast favorite, more and more of those lawns are being uprooted and transformed through the efforts of Holley and others like him who teach the gospel of conservation-friendly, cost-effective landscaping.

Nationally, landscaping is a multi-billion-dollar industry. "But," Holley stresses, "much of the value of an experienced and capable landscaper comes in the form of creativity. Some might think it strange to say so, but again, done well, landscaping is an art form. Working with a conscientious landowner, the possibilities are virtually endless."



data center and the MUD only pays a monthly service fee after initial setup. The whole system is completely maintained and managed by Pondhop Automation and Controls of Houston so it does not require intervention or regular maintenance by MUD personnel.

Duncan Sinclair
Pondhop Automation
and Controls INC
www.pondhop.com

"Especially with the economy as it is, it can get very expensive when you start ripping out a complete yard and refurbishing it just to save money," he continues. "Those savings will definitely occur, but again, it can take a very long time to reach anything close to break-even. On the other hand, on the typical neighborhood lot the average annual cost, just for maintenance,

comes to about \$2,000. And that doesn't include fertilization; that's just to have someone come to the property, cut the grass and go.

"Landscaping jobs, as you would expect, are priced according to their size and complexity," Holley concludes. "Projects start out at around \$3,500 and go up from there."

Melvin Holley

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For more information, check out the ETD Landscaping & Construction website at www.etdlandscape.com.

WATER-STINGY PLANTS FOR A CONSERVATION-CONSCIOUS LANDSCAPE

When it comes to shrubs and hedges and moderately-proportioned trees, the punctuation marks of any well-thought-out lawn, native plants hold a special appeal for some of landscaper Melvin Holley's Kingsbridge MUD-area customers.

"Yaupon is a very drought-resistant species, both the regular and dwarf varieties," he says. "Texas sage is another.

"Also," Holley adds, "the knockout rose, a wild roses species that blooms year-round and can be had in a number of colors, is a very popular choice. Knockout roses love



the sun, and in our area they can grow as tall as 4 feet. Like yaupon and others, the knockout rose is a species that can be trimmed and cut back to create a particular shape or size."

All of these plants are both attractive and non-demanding. They are also surprisingly disease-resistant. Their hardy nature and resilience in the face of dry conditions make them ideal for the typical Houston-area lawn.

There is no shortage of distinctive shrubs and decorative plants from which to choose, intriguing types of eye-catching vegetation that can lend a great deal of appeal and value to homeowner's properties. These are the virtual paint brushes of the creative landscaper, and each



possesses its own shade, hue and texture (and occasionally, thorns).

Along with native plants, there are a many other choices available to the person who wants to give his or

her lawn a drought-friendly face-lift. Given the broad spectrum of what's on the market, keeping the unique attributes, and occasionally, drawbacks of each species in mind, Holley makes it a standard practice to present a comprehensive list of low-maintenance, high-return plant species to all of his prospective customers.

"There really is a lot out there," notes Holley, "for example, Texas bottlebrush, Texas sage, variegated pittosporum, variegated ginia and wax myrtles. Then you have the Burford hollies, oleander and dwarf



oleander, crepe myrtles and cherry laurels. Japanese blueberry trees and Japanese boxwood are always popular as well.

"And that's just to name just a few."



We at Kingsbridge want to ensure our residents are happy and well informed regarding any district related happenings. Don't forget, the board of directors are usually residents here too. Naturally, as elected officials, we strive to keep the district safe and operational while keeping the district finances in order and as reasonable as possible.

If you have any general questions you may contact the communications consultant at admin@kingsbridgemud.com or by visiting our web site at www.kingsbridgemud.com. Below we've also listed relevant district contact info for district related personnel.

DISTRICT CONTACTS

BOARD OF DIRECTORS:

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Vice President
Dave Aitken

Secretary
Mark Hollis

Asst. Secretary
John Buhner

Treasurer
Carl Peters

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Bob Leared Interests
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OTHER CONTACTS:

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Allied Waste 713-937-9955

Water Leaks
Southwest Water Co. 281-240-1700

Gas Leaks –
Centerpoint Energy 800-752-8036

Sheriff's Dept. –
Fort Bend 281-342-6116

IMPORTANT DATES:

Board of Director Meetings –
Second Thursday, 6:30pm

Kingsbridgemud.com for contact info