

Water, Water Everywhere

Turf®

Tree Services®
Taking Tree Care to New Heights

DesignBuild®

PLOW®

Source: www.TurfMagazine.com

Clear Water PSI looks to make irrigation systems more efficient



Soil moisture sensors prevent overwatering and eliminated heavy dollar weed in a down gradient area.

Photos courtesy of Judy Benson.

Twelve years ago, Judy Benson turned her 20-year expertise in selling water handling equipment and her love of gardening into a career as an irrigation specialist when she started Clear Water PSI in Longwood, Fla. “I started the company with the idea of not doing a lot of new construction, but to make existing systems more water-efficient,” Benson says. “The more I spoke with people and saw what systems were available, I saw the inadequacies in existing designs.”

Her company’s services include landscape and irrigation evaluations and audits; CAD irrigation system and renovation designs; Florida-friendly landscaping and irrigation; water and turf management; system installations, renovations and design upgrades; walk-through inspections and repairs; and sales of high-efficiency and water-conserving products.

Benson built Clear Water PSI to become a viable one-source consulting firm that understands the water source, water application and water quality. "Irrigation is our specialty, with each service call completed including basic landscape issue diagnosis provided to our clients," she says. "We understand and utilize the concept of plant/soil/water relationship as we focus on improving not only a landscape, but [also] the impact on our environment."



Judy Benson, president of Clear Water PSI.

Such diversification has strengthened her company to weather difficult economic times, notes Benson. "Early in the company's history, we utilized all of our experience and expanded our services to include shallow well installations for irrigation systems as an alternative water source and potable water well repair and water treatment systems," she says.

Clear Water PSI currently has four employees serving a five-county area.

Benson says her company utilizes its design expertise in residential and commercial irrigation system renovations. "The typical mature system can have an efficiency or DU [distribution uniformity] averaging between 25 percent and 40 percent. Clear Water PSI completes design criteria evaluations of the existing system, identifies components and structure of the system, and redesigns and implements improvements to provide efficiencies of 50 percent to 75 percent," she says.

Notable improvements allow a reduction in run times due to increased application rates with enhanced uniformity, which reduces overall water consumption while sustaining the landscape, says Benson. Additional benefits include runoff reduction, improved turf conditions and enhanced fertilizer absorption, she adds.

The company utilizes the latest irrigation technology available with soil moisture sensors and ET/weather-based controllers that reduce water use by 50 to 80 percent.

About 80 percent of Clear Water PSI's work is residential clients. "In the residential sector, we do a lot of consulting work with local purveyors in improving irrigation efficiency," says Benson. "These are typically contracts that are put out for bid by the purveyors or the government."

Benson says Florida is running out of groundwater supplies. "We're using a lot of water for irrigation, and our consumption of water and our withdrawal

from the aquifer is larger than our return into the aquifer, so we're out of balance with our water supply," she says. "Most of that here in Florida is due to irrigation."



A renovated irrigation system design and repairs can reduce water use while sustaining turf.

Therefore, in 2000, she took a formal irrigation auditors course offered by the Florida Irrigation Society and incorporated it into her business practices. She netted her first contract with a water purveyor in 2001 that had exceeded permitted withdrawals and was seeking water conservation efforts.



Remote access monitoring adds ease of system management control to Clear Water PSI's tool kit.

While Clear Water PSI is focused on the water source for turf, employees do have some knowledge in landscaping. "All of my staff has a very good knowledge base of why we irrigate, and they are required to understand that they have to be able to identify landscape diseases, such as turf issues, so we can tell consumers, 'No, turning your irrigation system up by 50 percent

is not going to fix this problem. It may, in some cases, make it worse.'"

As a certified master gardener, Benson can also diagnose plant and turf problems. "It's something I did after I got my auditor's certification," she says. "I just keep building and incorporating. Now when you go to an irrigation auditor's course, they're talking about plant, soil and water, something I was doing 12 years ago. The industry as a whole is changing and adapting to the need to have better irrigation practices."

Three years ago, Clear Water PSI was named an EPA WaterSense partner, one of the first seven companies so named in Florida. "The EPA program recognizes irrigation certifications such as certified irrigation contractor, certified landscape and irrigation auditor, irrigation designer and other certifications as well," says Benson. The company also recently received a B.E.S.T. (Businesses for an Environmentally Sustainable Tomorrow) Partner award from Orange County Utilities. "I'm very proud of that," Benson says. "We've worked with Orange County for a number of years. It's a very selective group that receives that annual award."

Benson has also recently received the Bob Owens Award from the St. John's River Water Management District. Named for a private citizen who took personal interest in and contributed greatly to Florida's natural resources, Benson was awarded for her efforts with the Florida Water Star Program for inspecting homes and promoting the voluntary water conservation program throughout central Florida. "I've been involved as a stakeholder helping to develop some of the criteria for the program and promoting the program within the industry with local homebuilders and water purveyors and municipalities as well," says Benson. She is also involved in Florida Water Star, a voluntary certification program for new and existing commercial developments.

Benson is actively involved in the industry. She holds two board positions with the local and state chapters of the Florida Irrigation Society, and is an active member of the Irrigation Association.

Clear Water PSI has a comprehensive marketing strategy that includes an information-rich Web site, social networking quarterly newsletters and severe weather e-mail alerts to interested clients. "My mother was a teacher, so education was embedded in me," Benson says. "Due to that, I have always utilized education in everything we do inside the company. I educate myself, our staff and everyone in turn educates clients and consumers. We use education as a sales tool. We feel an educated consumer is a good consumer.

Benson finds LinkedIn to be the most effective form of social media to help her business. "It gives me an avenue to speak to other professionals for all of those business-to-business connections, maybe a landscape architect who has seen some of my postings," she says.

"The feedback I get is very positive because we have a unique approach in the industry. We're not a contractor that's just going out there; we're going out there and doing it well. We're doing it in a way that has long-term effects, and we're making a positive impact for the company and the industry as well as the environment."

Doing reclaim water connections via purple pipe has become a market for Clear Water PSI. "Florida is one of the top states that utilizes reclaimed water as an alternative water source," says Benson, and she is a strong proponent of that movement. Irrigation systems in central Florida use well water and municipal water. "Wells are a difficult topic here in Florida," notes Benson. "The utilities are not a proponent of utilizing wells. They would rather have the service connection for their customers remain on their meter source, so there is a bit of discussion going on about how wells may be curtailed.

"Currently, there is a rule out there that if reclaimed is available on a residential or commercial property, that a water well cannot be installed. I'm a proponent of that. We want that reclaimed water utilized."

Benson says some utilities are requesting if there is any type of service line on a property that no well can be installed. "That's very limiting to the water well contractors," she says. "This also means if there is a potable water line, no water well can be installed. Shallow wells pulled from a surficial aquifer is a much lesser water quality. My belief as an irrigator is you use the least quality of water available to irrigate your lawn, whether it be a shallow well, reclaimed, a stormwater pond or something of that nature. I am a firm believer in protecting our drinking water sources, so I'm not solely in agreement with this proposed rule."

Clear Water PSI works with landscapers that install new plantings, while Clear Water PSI executes the irrigation renovations. "That coordinated effort works very well with certain knowledgeable landscapers," Benson says. "I would like to see more of that. We do have some landscapers in the area doing landscape renovations as well as irrigation renovations, but it's not always done properly, which is a bit of a concern of mine. There's enough business for everyone to gain and move forward with, as long as they do it well.

"There are some ordinances and more in the pipes coming to us that we'll see come into effect later this year as well as in 2011, but current landscape ordinances require irrigation renovation for large landscape alterations."

Benson believes turf is "misunderstood" in Florida. "Everyone seems to like the appearance of St. Augustine. It's a good grass if placed in the proper situation on the property. It has a lot of benefits, is pretty durable and it really does not require all of the water people think it does. It does bring some water-conserving concerns to me, but it's more of a misnomer out there. With that said, there are parts of central Florida that I believe some of the different varieties [of] St. Augustine absolutely should not be utilized in," she says. Many people don't like the look of Bahia, notes Benson, adding it previously had been widely used in Florida and still is to some extent.

"It's all-inclusive what we do as an industry, whether we're landscapers putting in new plants, irrigators trying to provide sustainability for those plants or a homebuilder changing the lay of the land and creating these new developments," Benson says. "There's an all-inclusive plant, soil and water relationship, and we're all starting to come on board in Florida and work towards making better choices."

Benson works closely with the St. John's Water Management District, water purveyors and the regulators, all of whom are required to curtail the overuse of water supplies. "The only way that can truly be managed and enforced has been to restrict it by days, but that's not best for the landscape," Benson says. "In Florida, we have some variances that are soon to come into play as some local government and water purveyors are doing assessments of smart irrigations."

In a contract with Toho Water Authority in Florida, Clear Water PSI installed more than 50 Rain Bird soil moisture sensors. Preliminary results showed an average 50 percent savings on water consumption for the homes where the sensors were installed. Additionally, the program has increased awareness among property owners. "We discuss soil, water and landscape," says Benson. "We also provide them with a brief diagnosis of any landscape issues." The program is a success because of the reduction in water use, but other benefits will depend on property owner commitment: how involved they are, what benefits they derived in reduced landscape costs and reduced fertilizer applications that positively impact the environment and water quality.

Benson's greatest challenge is informing others not familiar with irrigation and water quality issues about the effects on the environment and the benefit and impact of utilizing a qualified contractor. She has beaten the drum of industry professionalism for many years and finds it especially critical in the tight economy. "Having the need to watch your budget extremely cautiously compounds this issue. People just see the total on the bottom of the invoice," she says, "They don't see the long-term benefits, and they may not be aware of all of these other benefits."

Carol Brzozowski is a member of the Society of Environmental Journalists and has written extensively about environmental issues for numerous trade journals for more than a decade. She resides in Coral Springs, Fla.