

Irrigation Option

Using a well to save water

by Marcia Passos Duffy



PHOTOS COURTESY OF WELL WATER CONNECTION

Water is becoming an increasingly expensive—and sometimes scarce—commodity for irrigating landscapes. Type in “water restrictions, US” in Google and you’ll come up with over 34 million hits including local and regional Web sites that list restrictions for activities such as washing cars, filling pools and watering lawns.

Home owners who install landscaping that requires frequent watering to thrive may be interested in alternatives other than letting their investment wilt or watering illegally. Some municipalities (for example, in Massachusetts) do not even allow the installation of an automatic sprinkler system.

Drilling a private irrigation well is an option that is becoming increasingly popular with home owners who have a lot invested in their landscapes, says John Larsen, of Water Well Connection of Tewksbury, Mass. (www.wellwaterconnection.com), who has been installing private irrigation wells throughout New England for 12 years. When properly designed and installed, the use of an irrigation well to water the landscape can be a practical, cost-effective and environmentally conscious alternative to using our limited clean drinking supplies.

“Town wells only have so much water and town officials often get very nervous that they will run out,” said Larsen. In the summer months the town wells are being depleted by sprinkler systems and other outside water use; restrictions are the only way a town feels it can control its drinking water supply. “What we do is to create an alternative to using potable water than has been treated and chlorinated and is, frankly, too expensive to use to water the lawn,” he said.

Savings for the home owner

While the cost of installing an irrigation well can range from \$4,000 to \$10,000, it can pay for itself in a few years in water bills. A typical home owner in suburban Massachusetts can shell out over \$1,000 during the summer months for a water/sewer bill. “My neighbor has a \$1,600 water bill for six months, which includes the summer months,” said Larson, who has a similar size property but pays \$350 for those same six months because he has had an irrigation well installed on his land. The average client, Larson said, can save anywhere between \$1,000 to \$3,000 a year on water/sewage costs.

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from installing an irrigation well instead of using town water to irrigate lawns, trees and shrubs.

Still, is spending that kind of money any guarantee that enough water will be found underground? A good irrigation well should put out 10 gallons a minute for two hours a day. "But that is not difficult to attain," said Larson. Most drilling operations do find water—it depends on how deep they have to go for it and the conditions of the soil that determine the cost. Drilling through sand and gravel is not as costly as drilling through bedrock or a ledge.

Ecological benefits

Another benefit to irrigation wells is ecological. Well water is untreated, pure water from the ground. There is no chlorine or fluoride or expensive filtration systems that are needed to pump

water across town through pipes. "It is wasteful to turn around and dump that kind of water in the lawn... it is water that should be saved for domestic use. An irrigation well reduces the reliance on the public water supply." Still, even for an irrigation system, the water should be tested. If there is enough water, customers may even want it for their household use as well.

Despite the benefits, many landscapers, Larson said, are not familiar with irrigation wells. "This is an option you can give to your clients when faced with this water supply problem," he said. There is a resistance to offering this kind of advice because many landscapers don't understand how a well works and can't explain it to the home owner.

"We are trying to bring awareness to the green industry," said Larson. "We want them to do what they do best, build beautiful landscapes. But they have to realize that without a reliable source of water, they don't have a



Completed well on the side of a home owner's driveway. Above right: Trench dug for electricity to power the irrigation well's pump.



landscape that is sustainable." What good is a \$100,000 landscape if it can't be watered, he said. "Any town, at any time, could issue a complete water ban on sprinklers in the summer, which means that these expensive landscapes will not be watered unless the home owner has a private irrigation system, or they cheat."

Creating a private irrigation well

The process of creating an irrigation well is very similar to creating a well for drinking water, except the water is hooked up to a sprinkler system and not pumped into the home. The irrigation well can be one of two types: a shallow well (which uses groundwater), or an artisan well, which is a deep well drilled into bedrock. The well is drilled, and a pump, sprinkler clock and electricity are installed.

If you decide you'd like to offer irrigation wells to your customers, you will need to the advice and guidance of other professionals. Landscapers need more than someone to drill a hole in the ground since there is quite

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a bit of design work involved.

Larson, for example, makes his business managing irrigation wells for contractors. "There's a lot of misinformation about wells that leads to costly mistakes, and problems with clients and designers." The key is understanding the property and the right kind of well. "It doesn't always have to be an expensive artisan well, it can be a shallow well, which requires a different kinds of equipment."

Still, it is important that landscapers who wish to approach their clients with the option of creating an irrigation well know what they are getting into, and understand the process enough to answer questions that will come up.

Here are some critical questions to ask yourself, town officials, drilling professionals, and your client before starting an irrigation well project:

- **Is it feasible?**

Look at the property. Well drilling requires big, heavy equipment. Can this kind of equipment get in and out of the property without substantial damage? Is there access to where the well will be drilled?

- **Will the town approve it?**

There could be restrictions within the town about irrigation wells. Every town is different so check first. Some towns even determine where a well will go. If the town does not have a permit process for irrigation wells, follow the state guidelines.

- **Is the location for the well too far away from the house and too expensive?**

While Larson does not subscribe to dowsing, he does try to pick a location that minimizes the overall expense to the home owner. Remember, there will not only be well drilling, but also the cost of digging trenches for the electrical wiring. These costs increase the further you get from the electrical source to the well.

- **Will the well be an eyesore?**

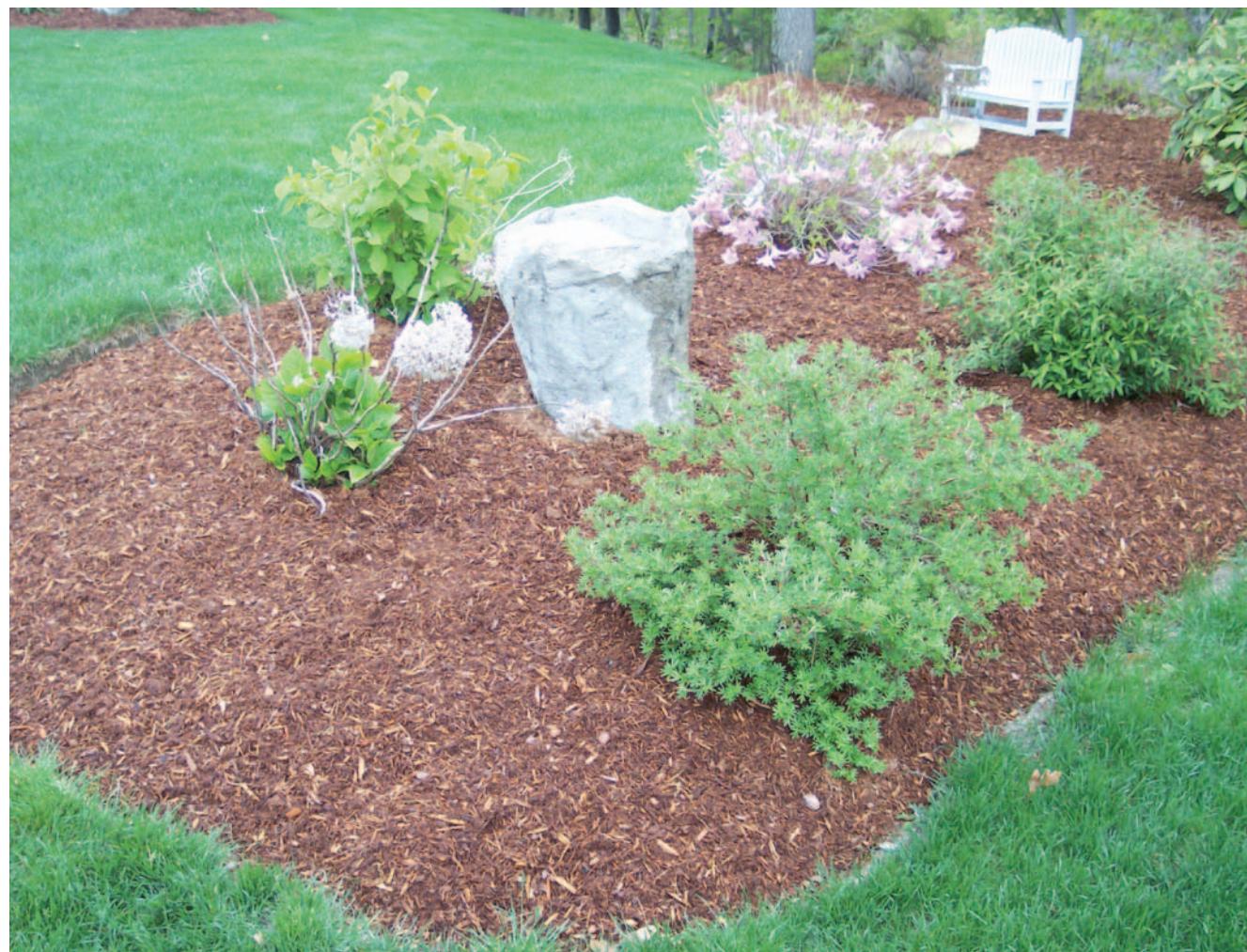
Wells can be small and easily blend in, or be camouflaged by creative landscaping.

- **Does the home owner plan future renovations?**

Have the home owner think five to 10 years down the road. Will they ever put an addition in? Will that addition be over the well? Once the well is in, it cannot be moved and it has to remain accessible.

- **Do you have access to licensed drillers who can trust?**

Wells have to be installed by a licensed driller. Still, many drillers don't provide complete service—



Same driveway (previous picture) with landscaping to cover the well (the rock in the center is an artificial rock)

including trenching, installing a pump system and a tank, plus electrical work. You may want to hire a general contractor to pull all the pieces together.

- **Is the property on wetlands or a vernal pool?**

Regulations usually restrict wells that will draw from water in conservation areas. Understand the property before you approach the town for a permit.

- **Is the well within 100 feet of a neighboring well?**

Find out if there are other water wells in the community.

- **What kind of obstructions are there to getting equipment into the site?**

Are there stone walls in the way or do fences need to be removed? Do you need to lay down plywood to protect the lawn?

- **Should you consider doing the project in the winter?**

Well drilling, believe it or not, can be done in the dead of winter, however, many people don't even consider that option. From the landscaping perspective, it can cause the least damage since the frozen ground protects

the turf—and heavy equipment can get in and out without disruption to the lawn.

- **Is the client prepared for the disruption?**

Home owners also need to realize that the process of well drilling is not a pretty sight. It is a lot of disruption and is a loud, messy job. But by managing the installation process, containing debris, and controlling the equipment getting in and off the property, you can make the whole process tolerable to the home owner.

- **Are you, as a landscaper, prepared to handle the project and help reduce disruption to the landscape?**

Your expertise in landscaping should come into play before, during and after the well has been installed. There are many techniques to help limit disruption to the lawn area, reduce damage to the property and contain the debris. You need to consider, for example, how to contain 600

feet of stone, dust, mud and slurry that is being unearthed from the well. When the drill hits water, it will come up from the ground, which will be isolated (this can be done by pumping it into a wooded area on the site or kept temporarily and used in other areas of the site, such as in a terraced garden). With careful planning, the well debris can be utilized in the landscape, instead of using expensive trucks to haul it off the site.

For more information about installing irrigation wells, contact John Larsen at Well Water Connection for a free Well Planning Guide at info@wellwaterconnection.com, 978-640-6900.

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