

Taking Your Pulse; Maintaining the Heart of Your Golf

By E. Paul Eckho



As fall turns to winter, many of your thoughts turn to warm spaces and relaxing places. Good for you. I, however, would like to turn your thoughts back to your irrigation system. Now is a good time to think about the life blood of your turf, and how it is serving or dis-serving you. Maintenance and evaluation of your system should be ongoing. For many superintendents, the only time they worry about the system is when it fails, rather than being proactive.

In coming articles I will try to walk you through all of the things

that you need to consider and how to go through the process. There are a number of professionals that can help in this evaluation process. Irrigation consultants can be hired for a fee to evaluate your system and give you recommendations. Their fees are usually based on how much information you want. Irrigation sales professionals often will be willing to help you evaluate your system. They of course are looking to sell you product, so it might be worth it to speak to all of the available manufacturers and see the different options.



Fellow professionals can also be a good source; they may have experienced a problem that you should be looking for.

WATER QUALITY

For simplicity sake I will start at the water source and work our way out. So, what is your water source? Do you have a well, municipal water, holding pond, river, lake or stream? What is the quality of the source? Does it need additional treatment before you try to irrigate with it? Does it have algae in it during portions of the year? Have you

ever sent out a sample to know what the quality is? How much is available to irrigate in a specified time period? All of these are things you should be considering about your irrigation water since all of them will affect the quality of the turf you irrigate with this water. Many of the problems found with your water source can be corrected.

There are filtration systems that can be customized to help take out many different kinds of particulate matter. Whether you have sand, muscles, or any other particle problem, there are solutions. Likewise, if you have a pH issue there are solutions to help adjust the water to a desired pH that will help you maintain better turf. If algae are a problem there are a number of options, chemically as well as aeration and other non chemical solutions to help you clean up the water you are providing to your turf.

When was the last time you saw the intake pipe to the system? Is it clogged with debris, is the pond silted in, both correctable problems. Much like the computer saying, ‘garbage

in, garbage out', we have bad water in, bad water out. If you know the limitations, a solution can usually be found to improve the situation and thus make your life, and you turf-grass, a whole lot better.

PUMP STATION

Now that you know the condition of your water supply, time to think about the next step in the system, your pump site. As I mentioned earlier, there are a number of sources to help you evaluate and maintain your pump site.

The pump site is the heart of the irrigation system. If you can't pump the amount of water the system is designed for, you will not experience the performance you are looking for. How long has it been since you serviced the pumps? Typically the impellers of a centrifugal pump should be inspected after they have

been in use for 5 years and replaced if there is significant wear. If you are pumping water with a large amount of particulates like sand this time frame should be reduced. You may not have noticed that you have lost pump capacity since it goes away so slowly, but once you put in a new

impeller, you will be amazed at how much water and pressure you have been missing.

Do you have a leaking seal on the impeller shaft? This will cause wear on the shaft as well as increased cycling of the pumps. In fact, any type of leakage anywhere on the pump site will increase the cycling of the pumps, which will put severe stress

on the pump site as well as the piping of the system.

Are your pumps correctly sized for the output you are looking for? Correction of this is a little more difficult since it will entail purchasing



new pumps and sometimes new motors as well, but it can significantly change the performance of your entire system, without changing the piping on the course.

Do you have a hard start, soft start, or VFD? Do you know what the differences are and how they affect the

system and your electrical consumption rate? As electricity costs rise, the need for evaluation of the pump site and its control system becomes increasingly important.

Many times the costs for better motor controls can be offset with reduced electric rates and subsidies from your electric company, making an upgrade a more viable option.

These are but a few of the major items that need to be looked at when evaluating your system. In future articles we will look further the system

at piping, heads and control systems. Please remember that evaluation and maintenance of the irrigation system is not a onetime thing, but rather an ongoing concern if you are to be able to rely on the system when you need it most.



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All photographs were taken by Erin McManus, Superintendent at Medina Golf and Country Club.