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## BOOST PERFORMANCE WITH MINIMAL RESOURCES

**T**imes are tough and you're probably not going to get that new irrigation system this year. But let's pretend that you just received a budget windfall – a 5-percent goose in capital funds over last year without any foreseeable increase in expenses. It's not a huge chunk, but an opportunity for upgrades.

Your turf maintenance equipment is in pretty good shape, so you've elected to dedicate the entire lump to irrigation. Finally, those recurring hotspots that show up on your approaches and collars can be more permanently addressed. Where to begin?

Most irrigation consultants will suggest you begin, well, at the beginning. Where can you make the most effective and logical upgrades with limited funds that will affect the long-term performance of your irrigation system – and therefore your golf course? What single irrigation system component could yield the greatest results for your turf management program?

### EVALUATE AND PONTIFICATE

You dust off your irrigation master plan that was tucked away for such an occasion and know exactly where to go based on system age, wear and overall performance. When considering new features, look toward your control systems first. Pump controls and a central/satellite upgrade can offer new heights of system control that will deliver efficiencies from the piping system to the base of the sprinklers.

Upgraded pump controls and logic can enable you to use your entire system more efficiently by maximizing your pump curves through the optimization of your hydraulic tree in each irrigation set, while keeping your main and laterals filled and pressurized more consistently. This is a significant

move, so unless you're adept at reading pump curves and familiar with the technology, bringing in an outside professional might be in order.

Pump controls also should be considered if you wish to add an injection system to your irrigation set-up. Most superintendents find it cost effective to apply gypsum, wetting agents or other water-enhancing products through their irrigation systems in small, digestible increments, head by head.

Golf courses, particularly muni courses, take tremendous abuse throughout the season. Healthy root growth is important to turf's durability and resilience, so by injecting more frequently you can quickly rehabilitate stressed turf areas without worrying about manual product applications. Moreover, if you're dealing with water or soil pH problems, these tools, along with turf moisture/pH sensors can help establish and maintain the desired balance.

looking at features. As a rule, if you upgrade your field satellites, always select a model that offers more stations than you currently need. For any golf project, future system expansion is inevitable.

Some sites might lend themselves to remote-control capabilities. Activating and programming irrigation from any point on the site can save precious time and eliminate grief, especially when troubleshooting irrigation systems or syringing. Larger facilities with multiple functions will find remote control capabilities particularly helpful.

There are both universal and brand-specific remote control products out there that put power in your hand. Remote control capabilities are one of the more practical upgrades, and at the same time they're amazing time savers. Those who have them vow never to go without again – most state their handheld remote is the equivalent to additional staff.

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Where can you make the most effective upgrades **with limited funds** that will affect the long-term performance of your system?

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### BRAIN POWER

As it relates to controls, it may be time to graduate to a new, digital, solid-state irrigation control system.

Newer controllers are affordable and offer more features than most water managers are willing to use. But most manufacturers offer modularized features, so you can pick and choose your desired functions without buying the total package.

There's a wide selection of control systems available to you. Again, consult your master plan and consider all of your site's needs before you start

These are only a few opportunities on the list to improve irrigation performance. Any upgrade that significantly affects system delivery and pressure – adding or changing sprinkler heads, zones, pump controls and so forth – needs to be carefully evaluated and accurately specified, so ensure you have access to an expert. If you ever get that budget bump, be ready. Need another good reason to properly plan for such an occasion? The green committee may only give you a short window to act and then the dollars could disappear. **GCI**