



Managing The Older
Irrigation Pump System:

When Is It Time To Replace?

AFTER 35 YEARS of building pump systems, the number one question we get asked about existing pump systems is when is it the right time to replace a pump system?



How to know?

There are no magic gauges on any mechanical equipment that predict the imminent or certain end of the road.

But we do know that there are a number of measurable signs that point to the right time for replacement!



NOT TOO SOON

Maximize the life of the equipment and your initial investment with routine maintenance and proper usage.



NOT TOO LATE

Don't waste too much money on large repairs that don't last. Avoid catastrophic failure and crisis decision making.



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Good Planning & Monitoring Pump System Performance

The efficient application of water is playing an increasingly important role and communities are focused more than ever on conserving water resources and protecting water quality.

Good Planning & Monitoring Pump System Performance

Good planning ensures that irrigated areas receive reliable replacement equipment in a timely manner within budgeted allocations.

If an organization waits too long to replace an aging pump system, the irrigation system incurs damages; unexpected costs skyrocket as operating and repair costs to both the irrigation and pump systems increase.

It is certain that all mechanical systems, such as the irrigation pump system, irrigation sprinklers, pipes, fittings, valves, and controllers eventually reach the end of their service life. Deciding to replace the irrigation pump system is a significant decision that deserves adequate time and a complete review of available data.



Evaluating Current System Status Begins With An Audit

Assessing the condition of an existing irrigation pump system is more complicated than evaluating simpler components such as sprinkler heads or other irrigation system parts.

Malfunctioning, inefficient pumps adversely affect irrigation coverage and eventually damage the irrigation mainline, piping and fittings. As irrigation piping breaks and underground leaks increase, they cause even more wear and tear, with pumps starting and stopping more frequently in an attempt to maintain pressure.

How To Audit The Efficiency Of Your System

Detailed information about your running costs will help you select the most suitable model replacement pump system for your needs. **The right pump system will provide adequate water at all times and operate reliably to provide a long term return on your investment.**

An annual review and analysis of the total costs compared to previous years will provide a clear window into the future: the time will come when the cost to keep old equipment running no longer makes financial sense. Keeping a systematic check on expenditures creates a clear understanding of how the irrigation system is performing - and where your budget is being spent.

Your capital reserve plan will include an estimated, conservative assessment of useful service life and an adequate, up-to-date replacement pump system budget - **including removal and installation costs.**

Once you have the facts and figures at your fingertips, combine the direct and related expenses with a sound capital reserve plan to help you decide when to replace the system at the most favorable time for the community.

Start Your Audit

- 1.** Assess your pump system fitness against the **7 Signs we've put together** in this section.
- 2.** Evaluate your costs by listing Direct and Related expenses.

7 Signs Your Irrigation Pump System Needs Replacing

At Hoover Pumping, we're well aware there's a lot of advice out there and while it can be a good thing to have such a wealth of information available, it can be confusing!

Based on feedback of pump system manufacturers, design engineering and irrigation professional associations, irrigation and irrigation pump system designers and professionals we've curated what we think are **the 7 most important questions to ask and answer if you're considering a pump system replacement project.**



1. Was there a Need for Major System Repairs in the last two years?

Pump systems are like cars. As they age, you can replace one part and soon replace another part. **It doesn't take long to spend \$1,000s to keep the old pump system running.** Like any mechanical equipment, irrigation and pump systems incur the most breakdowns in the last few years of their lives.



2. Is It Costing Too Much to Keep the Old System Running?

Unexpected pump system failures are expensive to troubleshoot and identify the cause of the problems. One repair may be done only to have new problems occur within a short time. Performing repairs that do not renew the system to a maintainable state rarely make financial sense.



3. Wasting Money on Increased Electric Bills?

Thousands of dollars per year can be lost when the irrigation pump system is cycling on and off to maintain pressure in irrigation piping. This is common with older systems and may not be noticed unless electrical expenses are tracked or pump motors fail. The loss of efficiency causes increased electrical power and is increasingly worse if the pump system has not been properly maintained.





4. Extra Labor and Attention Needed to Keep Irrigation Running?

When it is raining, failures of irrigation and pump systems are not apparent when the grass is green. Breakdowns are noticed only when irrigation is most needed during hot, dry weather. Irrigation managers may have to manually operate old irrigation equipment to keep it going. The extra time, manual labor and dedicated diligence is admirable, yet there is a risk that can turn upside down quickly if a critical person falls out, or cannot perform. The declining landscape that may occur in their absence may cost more to replace than installing a reliable system.



5. Irrigation Repairs Required More Frequently? Are Irrigation and Property Managers spending more time on irrigation problems?

More frequent irrigation repairs are common as the pump and irrigation systems approach the end of their useful life. When mainline breaks occur on a regular basis and other expensive components fail, it is throwing money away. If the situation cannot be improved to a maintainable state, repair expenses will continue.



6. Are Homeowner Complaints About Irrigation or Landscape Appearance On The Increase?

During hot dry weather, it is normal to experience minor losses of sod or annual plantings that may be located in less than ideal locations. If the topic of irrigation problems or loss of grass is discussed by residents and included in the Agenda at Board meetings, it's an indication that its time to address the causes of the problems.



7. Is the Irrigation System Design of Previous Years Still Serving the Community Needs Today?"

Developers often add pump stations as they build out large communities. After development, it is smart to evaluate whether the irrigation system design remains suitable for today's irrigation needs of homes and buildings. The locations and number of pump systems may be inefficient, waste horsepower and require higher operating costs than is necessary. **Many communities stand to gain significant financial savings by consolidating many pump systems into fewer systems of more appropriate size and placed in better locations.**

How To Evaluate The Costs

It's probable not everyone could honestly provide meaningful responses to these 7 questions. If your responses were a little uncertain, you wouldn't be alone.



Best practice says regularly tracking Direct and Related expenses is the best way to compare year over year costs and keep track of where the

OK, let's start by saying with regular maintenance (depending on the type of system and its age) you'll reduce the cost of keeping a pump system operational in terms of materials, parts and labor, and extend the life of the system. The cost in terms of stress levels of those responsible for maintenance shouldn't be overlooked either! Good maintenance will also keep water usage and energy costs under control.

It makes sense that when expenses start to show a consistently upward trend and frequent repairs and maintenance callouts are on the increase, the useful life of the pump system is approaching its end.



Gathering Direct and Related Expenses

Pump System Direct Expenses



Pump system routine maintenance and minor repairs (estimate annual **5%** of the initial cost).



Energy/Electricity usage of the pump motors. If on a shared meter, costs may be calculated based on usage hours and the size of the pump.



Pump system major repairs & component replacements. Maintain equipment log of maintenance, warranties, amount of downtime, major repairs, dates and costs.



Water Quality Costs. Water source treatment, pump system discharge filtration, and so on.



Water Usage if costs apply, such as reclaimed water. Don't forget to add costs to address pressure and availability issues.

Pump System Related Expenses



Irrigation maintenance and minor repairs. Costs will depend on size, age and configuration of system.



Irrigation major repairs. Maintain equipment log listing warranties, major repairs, dates and costs.



Sod Replacement. Look for rising trends.



Landscape Replacement. Look for rising trends.



Underground pipe and fitting leaks/breaks are common, **causing irrigation systems to lose water.**

Did You Know?

A small underground leak will lose **1-2 MILLION GALLONS** of water per year!



Need Help With A Pump System Audit?

Would you like help in evaluating or auditing your existing pump system? Have you carried out an audit but aren't sure of the next steps?

The most successful pump station or control package begins with understanding your needs. The first step is for us to evaluate your unique situation. We gather facts and analyze alternatives before we recommend your solution.

We encourage our customers and future customers to talk with a Hoover representative about their concerns and objectives right along with other providers. We rely on our reputation, experience, knowledge and skill to educate our customers and win the work at a reasonable cost, instead of just focusing on the lowest price.

Our ultimate goal for every project is to create an efficient and dependable irrigation pump system

that serves the specific needs of your property for many years into the future while conserving precious financial and water resources.

We are fueled by a passion to engineer better pump systems and create easy-to-use water management solutions that work reliably, give lasting value to our customers, and protect water and energy resources.

The Hoover family includes experienced irrigation, technology and production experts, skilled technicians and installation crews, manufacturing engineers, designers, horticultural experts, customer service specialists, fabricators and a strong and responsive support team.

BEST IN CLASS



✓ **Comprehensive solutions** provider

✓ **In-depth knowledge** and experienced staff

✓ **Largest pump service organization** in Florida

✓ **Industry leader** in pump designs and water management



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