SELF-CLEANING WASTEWATER PUMPING SYSTEMS

REDUCE CLOGGING AND CUT ENERGY COSTS BY 20% OR MORE

ELIGIBILITY REQUIREMENTS

- Municipal or industrial wastewater facility located in Oregon
- Served by Portland General Electric or Pacific Power
- Pumps handle solids
- Baseline pumps are fixed speed, 125 horsepower or less
- Pump station power and flow data available from metering, a draw-down test, or, for new construction, from design operating conditions

With use of disposable wipes tripling in the past 15 years*, municipal and industrial wastewater facilities are facing monumental quantities of non-dispersible solids. Combined with other household products such as dental floss and paper towels that end up down the drain, these materials clog pump stations, leading to costly efforts to pull, de-rag and repair pumps.

To decrease the likelihood of ragging, operators often run pumps at full speed, cycling them on and off to minimize clogging. This is inefficient and energy intensive because pumps are typically oversized to support de-ragging. Over time, pumps that run longer also lose capacity, exacerbating the problem.

Energy Trust of Oregon can help

We offer a solution to this growing dilemma by providing technical assistance and cash incentives when you install self-cleaning wastewater pumping systems. These systems can cut energy costs at individual pump stations by an estimated 20% and up to 50%. Eligible systems include:

- Upgrading to self-cleaning pumps, such as those with non-clog impellers and moveable impeller positioning
- Installing variable frequency drives (VFDs), which deliver extra power when needed and allow pumps to run in reverse
- Adding advanced controls capable of ragging event detection and automatic de-clogging

At no cost to you, our skilled energy professionals can help you decide if self-cleaning pumps make sense for your existing systems or new pump stations. Cash incentives are based on estimated energy savings and calculated at $0.38 per kilowatt-hour, up to 70% of eligible project cost.

Energy Trust of Oregon

The average cost to repair a single clogged pump station is $1,000. What could you save annually by upgrading to self-cleaning pumps?

Benefits go way beyond energy savings

In addition to cutting energy costs, self-cleaning pumping systems can provide significant value to wastewater facility operators. Non-energy benefits include:

- Substantial operation and maintenance cost savings. The average cost to repair a blocked pump station is $1,000, with most pump stations experiencing at least one clogging event per year
- Reduced time and labor to maintain pumps, particularly overtime incurred during night and holiday blockages
- Less need for specialized equipment such as cranes and vacuum trucks used for de-clogging
- Reduced risk of permit violations
- Decreased wear and tear on pumping systems
- Less frequent cleaning of fat and oil layer, with corresponding reduction in biohazard exposure
- Improved system reliability
- Increased real-time performance data available to system operators
- Opportunity for increasing wastewater flow and volume of non-organic solids without need for additional upgrades

Consumer use of non-dispersible products continues to accelerate, with no end in sight at least for the foreseeable future. Energy Trust can help you address this dilemma by making the investment in new pumping systems simple and affordable.

To get started, visit www.energytrust.org/industry-pumps, call us at 1.866.202.0576, or email production@energytrust.org.

*"*Managing Debris*" *by Jim McMahon, published Aug 9, 2017 in Water & Wastes Digest*

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