



Water Conservation Tips

No cost water conservation site assessments can net big cost savings

Interested in conserving water and saving money at your facility but uncertain where to start? MnTAP will provide free, confidential site visit assistance outlining detailed evaluations of process water, written recommendations, and follow up to answer questions and offer additional implementation assistance.

Water conservation assessments can shed light on opportunities to reduce pending metro sewer availability (SAC) charges. Assessments can also help with energy efficiency if the water is pumped, heated, or cooled. MnTAP has launched an effort to conduct water conservation assessments in the North and East Metro looking at both individual processes as well as the entire facility water use to help optimize conservation and maximize savings. If you are interested in seeing how much water and money your company can save, contact Mick Jost at jostx003@umn.edu / 612-624-4694 to make arrangements for a water conservation assessment.



Contact MnTAP for More Information



Let us know if you are interested in getting involved in this water conservation project, at no cost to your business. We welcome your questions and ideas for future newsletter topics, so please send them our way! For questions or further information, contact Mick Jost, MnTAP Program Coordinator and project lead, at jostx003@umn.edu or 612.624.4694.

The Minnesota Technical Assistance Program acknowledges and appreciates the Metropolitan Council Environmental Services Water Supply Planning Group expertise and project management support of this Clean Water, Land, and Legacy Amendment sponsored project.

MnTAP is a non-regulatory program in the School of Public Health at the University of Minnesota and is funded by the Minnesota Pollution Control Agency.



Did You Know...

Process washing and rinsing are important steps in a variety of industries that require passing a “clean and dry” criteria before the next step. Think about how your company meets that criteria from process to process and how and where water washing and rinsing can be optimized.

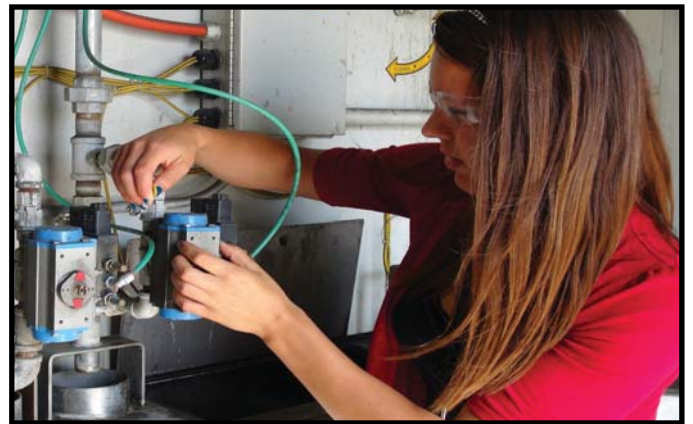
- Are your suppliers using oils and coatings that are difficult for you to clean when it gets to your process? Are there opportunities to negotiate a compromise that will save you and your supplier materials, time, and effort?
- Agitation, pressurized impingement, or higher temperature may be able to substantially aid the cleaning process in lieu of boosting the chemical concentration or adding process washing steps.
- Is the wash chemistry optimally matched to the cleaning need? In many cases, if the particulate and floating oil phases are removed, there is a reasonable chance that the cleaner supply life can be extended for additional applications. Chemical solutions should be routinely evaluated to ensure they are operating within an acceptable performance range.
- There is always a possibility that water/chemical washing may be the incorrect application, and that media blasting, or vibratory finishing maybe a better option.

In a complex, multi-step process where cleanliness is paramount, rinse steps play a critical role in removing contaminants and cleaners and are an important opportunity to optimize water use. Determine if less water can be used to achieve the same results, or if final (clean) rinses can be reused by routing them back into an earlier cleaning sequence. For example, rinse conductivity at a low enough concentration could allow for reuse of rinse water until a conductivity endpoint is reached. Water volume may or may not have the desired effect in rinsing. A mist may be just as effective as a soaking.

The process cleaning equipment setup could also have a significant impact on water conservation. Equipment factors for consideration include smaller tanks and sinks, intermittent and timed flow operated by float sensors and solenoid valves, covered tanks to reduce evaporation and contamination, and batch processing. For near-continuous cleaning such as in the sanitation-conscious food industry, cleaning process equipment in place (without disassembling) is definitely a more water-conservative choice.

Case Study

In 2013, a MnTAP intern came up with several suggestions to reduce water usage at Federal Cartridge in Anoka, MN. Her suggestions included installing timed rinse faucets, wash tub spray nozzles and automatic shut-off valves, recycling wastewater effluent, and recycling de-ionized water used in a condenser. These recommendations outlined annual potential savings of almost 5.5 million gallons of water and carried a cost savings opportunity of \$95,000.



For a more detailed project summary, please see: http://www.mntap.umn.edu/intern/pdf/Federal%20Cartridge_Kaylea%20Brase.pdf



About MnTAP

A program of the University of Minnesota, MnTAP offers a variety of technical assistance services to help Minnesota businesses implement industry-tailored solutions that maximize resource efficiency, prevent pollution, increase energy efficiency, and reduce costs. Our information resources are available online at <mntap.umn.edu>. Please call MnTAP at 612.624.1300 or 800.247.0015 for personal assistance.

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MCES - GWMA-6 5/6/15