



# Thomson Reuters



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## Company Background

Thomson Reuters began as West Publishing in 1872 in Saint Paul. The Eagan campus was opened in 1992 and now employs 7,000. Thomson Reuters operates 1.1 million square feet of manufacturing and warehouse using offset, inkjet, and toner printing. Key book genres published include legal, educational, culinary, tax and accounting, and professional. Each year the facility prints 18 million books or 10 billion pages.



THOMSON REUTERS

*“Once data is gathered, solving the engineering problem itself is sometimes comparatively simple. Often it is determining what information is needed, how much, and the best source of that data that can prove to be the greatest challenge.” ~ AM*

## Project Background

Each year Thomson Reuters uses about 30 million gallons of water purchased from the city of Eagan. This water is used both industrially and domestically. Therefore, the search for conservation opportunities took place not only in buildings that house production and warehouse activities, but also in office buildings. An area of 2.7 million square feet provided ample opportunities to conserve water.

## Incentives To Change

Thomson Reuters has a history of environmental stewardship dating back to its inception. Waste reduction is a key element of Thomson Reuters’ manufacturing. On the Eagan campus alone, 4,500 tons of paper and 1,300 tons of books were recycled in 2015. Initiatives to reduce corporate carbon footprint have seen the metric fall by 30% since 2011. Water conserving implementations have already been enacted in some areas of the Eagan campus, but being the largest water customer in the city of Eagan, Thomson Reuters still recognizes opportunities for continued improvement.



*“Having a MnTAP intern onsite not only assisted us in finding new opportunities for improvement, it brought back some old, forgotten items we can now address. It was great to have a fresh set of eyes find these opportunities in places where our vendors regularly work. It is a reminder to us all not to become complacent and keep digging for opportunities to drive change and make our facilities as safe and efficient as possible.”*

*~ Alex Davis  
VP - Senior Facilities Manager  
JLL - Corporate Solutions, Thomson Reuters Account*

# Solutions

## Decrease Cafeteria Trough Rinse Water Volume

A rinsing system underneath the dish return carousel in the cafeteria was running 15 gallons per minute for all hours of the day. By leaving this flow off and replacing trough rinsing with a manual procedure, over 7,900,000 gallons of water use can be reduced for a net savings of \$54,000 per year.

## Replace Dish Room Solenoid Water Valve

Prior to the dishwasher, dishes are rinsed using a food rinser/soaker/disposal equipment with warm, flowing water. Although most of the equipment's water flow is recirculated, fresh, warm water is added. The intern discovered that water was continually flowing to the drain after the machine was turned off due to a failed solenoid valve. Replacing this valve will save 1,200,000 gallons of water and 5,600 therms annually, resulting in \$10,000 of yearly savings.

## Update Dish Room Standard Operating Procedures

The intern was able to observe dish room operating procedures and equipment run-times in the two main cafeterias. One improvement adds movable soak sinks for cookware to soak while leaving the dish rinse/soak equipment off during much of the shift. This suggestion reduces the power for three electric motors and the use of warm water. Another improvement reduces the hot water used during the trough cleaning by changing the cleaning rinse methods. Hot water can be saved by manually filling small containers as needed to wash down the surface.

## Replace and Maintain Laminator Heat Exchanger Thermostat

Interviews with bindery employees and maintenance staff pointed the intern toward a cooling water line on the laminator. Upon closer examination, it was determined that a thermostat had malfunctioned and was stuck open allowing softened cold water to run continually. Maintenance staff cleaned the equipment and replaced the thermostat. It is suggested that the laminator be added to the preventive maintenance schedule and the bindery team is instructed on monitoring the cooling water discharge pipe for unusually high flow.

## Move from Steam to Fogging Humidification

Industrial humidification on campus is supplied by two natural gas boilers. Instead of boiling water for moisture, fogging systems atomize high pressure purified water with nozzles using a variable frequency drive pump. Evaporation of this water also produces a cooling effect, resulting in potential summer energy savings. Installation of a high-pressure fogging system would eliminate this use of natural gas boilers, feedwater treatment chemicals, and reduce maintenance time and cost. Total savings include 67,000 therms of natural gas and \$41,000 per year.

Recommendation	Annual Reduction	Annual Savings	Status
Decrease cafeteria trough rinse water volume	7,900,000 gallons	\$54,000	In progress
Replace dishroom solenoid valve	1,200,000 gallons 5,600 therms	\$10,000	In progress
Update dish room Standard Operating Procedures	350,000 gallons 1,200 therms 2,000 kWh electricity	\$3,000	Recommended
Replace, maintain laminator heat exchanger thermostat	1,100,000 gallons	\$7,000	In progress
Move from steam to fogging humidification	67,000 therms 135 labor hours	\$41,000	Recommended

MnTAP Advisor: Paul Pagel, Senior Engineer