

What is the EDF-GEMI WaterMAPP Tool?

The EDF-GEMI Water Management Application (WaterMAPP) is a free tool developed to help facility managers evaluate a building's water usage and identify opportunities for reducing water consumption. For buildings that utilize cooling towers, the calculator can be used to calculate consumption and cost savings associated with improved operational efficiency of their cooling systems and increased free air cooling.

In 2012, EDF and AT&T launched a pilot project to identify opportunities to reduce water and energy use in buildings, with a focus on cooling towers. The project found that many buildings have an opportunity to reduce water use in their cooling towers. Through the pilot, the initial WaterMAPP Tools and Resources were developed to help AT&T and other organizations reduce their water use. The toolkit has the potential to save 28 billion gallons annually if deployed across all U.S. companies. Seeing an opportunity to scale, GEMI and EDF collaborated on the redesign, hosting and co-promotion of the EDF-GEMI WaterMAPP as our joint effort to help organizations reduce water and energy use in buildings.

What does it do?

The EDF-GEMI WaterMAPP includes three complementary tools: *The Water Scorecard*, *The Water Efficiency Calculator*, and the *Cycles of Concentration Estimator*.

The Water Scorecard:

- Provides a single and clear metric for quantifying the overall effectiveness of the water management program at a facility
- Recognizes where water efficiency efforts have been made
- Identifies facilities where greater water efficiency initiatives should be evaluated

The Water Efficiency Calculator:

- Uses the input from the Water Scorecard and quantifies the water, sewer, chemical and energy savings associated with improving the cooling systems at a building
- Calculations are tailored for each building's operating characteristics
- Utilizes historical weather data to calculate savings associated with free air cooling based on a site's geographic location

Cycles of Concentration Estimator:

- Takes information about your water quality and estimates the recommended maximum Cycles of Concentration (COC)—a key indicator of cooling tower water efficiency—when using chemicals to treat the water.
- Helps identify appropriate non-chemical water treatment options to increase the potential COC.

Why was it created?

Water scarcity will continue to have increasing impacts on society and business. How facilities are operated has a substantial influence on the efficient use of water at both a site level and across an enterprise. Cooling towers and water cooled chillers are an extremely efficient method for cooling a building, but they require a great deal of water and chemicals to operate. There is an opportunity to operate these systems more efficiently, or even reduce the hours they run, and save water and money in the process. The WaterMAPP tool was created to identify these opportunities and calculate savings that can be used to help support the business case for making these improvements.