

WHAT IS IT?

The Cooling Tower Efficiency Program requires customers to register their cooling towers with Austin Water and submit annual inspection forms. Austin Water developed this program to help customers:

- Meet cooling tower water efficiency standards and equipment requirements
- Save money on water and wastewater bills by identifying potential water-efficient upgrades and available rebates.

AM I REQUIRED TO REGISTER MY COOLING TOWER AND HAVE IT INSPECTED?

Yes. Austin City Council approved the mandatory registration and annual inspection requirements on June 8, 2017 as part of the adoption of local amendments to the 2015 Uniform Mechanical Code §1126.0(5) and 1126.0.1 effective September 6, 2017.

If the cooling tower(s) was installed prior to January 1, 2008, registered with Austin Water, and has been inspected, then the tower may not need a subsequent inspection. If the tower has been replaced, or a new one has been installed, then the new equipment will need to be registered and inspected.

If you believe your tower meets these requirements, then you must fill out the first page of the [Cooling Tower Inspection Form](#) and submit to Austin Water.

WHEN DID AUSTIN ADOPT THE WATER EFFICIENCY STANDARDS AND REQUIREMENTS FOR COOLING TOWERS?

These standards were first adopted by City Council on October 18, 2007 and effective January 1, 2008 (*Ordinance No. 20071018-086*) and are currently codified under the city's local amendments to the 2015 Uniform Mechanical Code §1126.0, E 4023.2, E403.3 and 2015 Uniform Plumbing Code §614.0.

HOW WILL AUSTIN WATER USE THE REGISTRATION AND INSPECTION FORMS?

Austin Water staff will review the forms and:

- Determine whether a facility could increase its cooling tower's water efficiency
- Provide the customer with water saving recommendations and
- Provide information about eligibility for Austin Water's [Bucks for Business](#) rebate.

WHAT REBATES ARE AVAILABLE FOR RETROFITTING MY COOLING TOWER TO INCREASE WATER EFFICIENCY?

[Bucks for Business](#) rebates for retrofit projects include:

- **\$500 for an overflow alarm** (*for cooling towers installed prior to January 1, 2008*)
In only three months, a 2 gallon per minute overflow can result in 259,200 gallons of water loss and \$3,650 in water costs. Replacing a malfunctioning ballcock style (*float on a rod*) fill valve with a solenoid operated valve using an external level sensor to prevent overflows has a payback period of less than six months.
- **\$550 for an automated cooling tower conductivity controller** (*for cooling towers installed prior to January 1, 2008*)
Savings of up to 800,000 gallons and up to 40% in water costs a year, depending on current cycles, cooling size/capacity and load
- **Up to \$100,000 for water treatment, filtration, or other systems to increase cycles of concentration above five cycles**
Includes water softeners, sulfuric acid, ozonation, side stream filtration using rapid sand, cartridge, or cyclonic filters that help remove solids
- **Up to \$100,000 for alternative water systems for cooling tower make-up** (*for cooling towers installed prior to September 6, 2017*)

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Includes projects to recover and use on-site alternative water sources such as air conditioning condensate and manufacturing process water

- **Up to \$100,000 for alternative cooling systems that do not use water or use significantly less water than traditional cooling towers**

Includes but is not limited to hybrid systems, fluid refrigerant systems, dry or air cooled systems, and geothermal systems

WHAT ARE THE BENEFITS FROM IMPLEMENTING REQUIRED MEASURES?

The cooling tower requirements seek to optimize the water efficiency achievable by existing systems using Austin Water's high quality potable water with low Total Dissolved Solids levels (*average hardness of 84 ppm CaCO₃*) if properly operated and maintained. The requirements seek to protect public health from potential airborne bacteria by eliminating drift and preventing water waste caused by the overflow from the cooling tower basin.

Percentage Water Savings from Increasing Cycles of Concentration

Starting Number of Cycles	New Number of Cycles											
	2	3	4	5	6	7	8	9	10	12	15	20
1.5	33	50	56	58	60	61	62	63	63	64	64	65
2		25	33	38	40	42	43	44	44	45	46	47
3			11	17	20	22	24	25	25	27	29	30
4				6	10	13	14	16	17	18	20	21
5					4	7	9	10	11	13	14	16
6						3	5	6	7	9	11	12
7							2	4	5	6	8	10
8								2	3	5	6	8
9										3	5	6
10										2	4	5
12											2	4
15												2

WHAT IS THE PAYBACK PERIOD FOR RETROFITTING MY COOLING TOWER TO MEET THE COOLING TOWER REQUIREMENTS?

The estimated average cost to meet code requirements is less than \$10,000. The average payback period is less than one year due to significant savings in water, wastewater, chemical treatment and energy costs. As best management practices, most towers may already have some or all the required equipment.

ARE THERE OTHER BENEFITS TO IMPROVING MY COOLING TOWER'S WATER EFFICIENCY?

- Helps meet eligibility requirements for Austin Water's [Evaporative Loss Program](#). This program can reduce monthly wastewater bills for evaporated water from cooling towers that is not returned to the wastewater system. For more information, call the Consumer Services Division at (512) 972-0000 ext. 4.
- Helps existing buildings qualify for up to two points toward LEED certification. Installing sub-meters on cooling towers and continuously metering water used for cooling towers with data logging can qualify for more LEED points.