

Section 1126.0.1 of the city's [Local Amendments to the 2015 Uniform Mechanical Code](#) requires cooling towers to be inspected annually for compliance with water efficiency standards and equipment requirements and the inspection forms sent to Austin Water.

## INSPECTION FORM DUE DATES

- Must be submitted by **March 1 of each year**. Inspections must be performed no more than 90 days before the March 1 due date.
- Forms must be completed and signed by either:
  - o an independent third party Texas licensed mechanical or chemical engineer;
  - o a person holding a TDLR Texas Air Conditioning and Refrigeration License (*Class A*) with a combined endorsement for process cooling and refrigeration; or
  - o other persons approved by Austin Water for performance testing of cooling towers

## EFFICIENCY STANDARDS & EQUIPMENT REQUIREMENTS

- **All cooling towers installed after December 31, 2007 that use Austin Water potable water** must have:
  - o Make-up and blow down sub-meters;
  - o A conductivity controller;
  - o A drift eliminator with a drift rate of not more than 0.005% of the circulated water flow rate for cross-flow towers and 0.002% for counter flow towers;
  - o An overflow alarm; and
  - o Achieve at least 5 cycles of concentration
- **New facilities** (*building permit application submitted after September 5, 2017*) **with 100 tons or greater combined cooling tower capacity:**
  - o Must have the make-up and blow down meters and overflow alarm connected to the building's Central Energy Management System or Utility Monitoring Dashboard; and
  - o The facility must have a water storage tank, plumbing and treatment system to either:
    - Utilize blow down water for wash down, cleaning, toilet flushing, subsurface irrigation and other authorized purposes; or
    - Offset a minimum of 10% of the makeup water with reclaimed or onsite alternative water sources

## CHECKLIST

- ☐ Submit a completed registration for towers at this property. A form provided by Austin Water must be used for registration.
- ☐ Complete a separate Inspection Form for each cooling tower. All information is required and must demonstrate full compliance with all applicable requirements for the inspection form to be complete. Austin Water **will not** accept incomplete forms.
- ☐ If there is more than one cooling tower at the facility, please include a site plan that shows each tower's location, identify each tower using the cooling tower's serial number, or another method.
- ☐ Submit the completed Inspection Form to Austin Water:
 

**Mail:** Austin Water Conservation, PO Box 1088, Austin, TX 78767  
**Email:** [watercon@austintexas.gov](mailto:watercon@austintexas.gov)  
**Fax:** 512-974-3504  
**In Person:** 625 E. 10<sup>th</sup> Street, Suite 615 Austin, Texas 78701
- ☐ Austin Water will review submitted information and contact customers about possible water efficient upgrades and available rebates.

## RESOURCES

[Cooling Tower Efficiency Program Frequently Asked Questions](#)



## COOLING TOWER EFFICIENCY PROGRAM ANNUAL INSPECTION FORM

### COMPLETE THE FOLLOWING SECTIONS:

#### PART A: Answer the following:

- ☐ YES    The cooling tower(s) at this property was installed **prior to January 1, 2008**
- ☐ NO
- ☐ YES    A fully completed cooling tower **registration form** has been submitted for the cooling tower(s) at this property to Austin Water using a form provided by Austin Water.
- ☐ NO
- ☐ YES    A fully completed cooling tower **inspection form** meeting all requirements has been submitted for the cooling tower(s) at this property to Austin Water using a form provided by Austin Water.
- ☐ NO

**If you checked "YES" to all above, fill out the contact information below, skip Part B, and submit this form.** However, if this cooling tower(s) is replaced, you will need to submit a new registration form for the new tower(s) prior to operation AND submit an annual inspection.

**If you checked "NO to any of the above, complete and submit Part B.**

Company Name: \_\_\_\_\_

Tower Site Name (Ex. North Tower or Store #53): \_\_\_\_\_

Property Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Mailing Address (if different): \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Site Management Contact Name: \_\_\_\_\_ Title: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

#### PART B:

- ☐ Submit a completed registration form for tower(s) at this property. A form provided by Austin Water must be used for registration.
- ☐ Submit completed Inspection Forms for each cooling tower at the property to Austin Water by the March 1 deadline. If there are more than one tower at the property, please provide a site map identifying the location of the towers.
- ☐ Have an approved licensed inspector complete and sign a separate Inspection Form and (see page 3) for each cooling tower site. See Inspection Form Due Dates on opposite page for approved inspector requirements.

#### RETURN FORMS TO AUSTIN WATER:

**Mail:** Austin Water Conservation, PO Box 1088, Austin, TX 78767

**Email:** watercon@austintexas.gov

**Fax:** 512-974-3504

**In Person:** 625 E. 10<sup>th</sup> Street, Suite 615 Austin, Texas 78701

**COOLING TOWER EFFICIENCY PROGRAM – INSPECTION FORM****CUSTOMER INFORMATION**

Austin Water Account Number: \_\_\_\_\_ Backflow Serial Number: \_\_\_\_\_

Company Name: \_\_\_\_\_

Tower Site Name (Ex. North Tower or Store #53): \_\_\_\_\_

Property Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Mailing Address (if different): \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Site Management Contact Name: \_\_\_\_\_ Title: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**COOLING TOWER INFORMATION**Cooling  
Tower:

Make &amp; Model: \_\_\_\_\_

Size (tons): \_\_\_\_\_ Date Installed: \_\_\_\_\_

Water Source(s): \_\_\_\_\_

Cycles of Concentration: Complete &amp; Submit the Cycles Of Concentration Worksheet (p. 4)

Make &  
Model of the  
Following:

Conductivity Controller: \_\_\_\_\_

Drift Eliminator: \_\_\_\_\_

Overflow Alarm: \_\_\_\_\_

Make-Up  
Meter:

Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Blow down  
Meter:

Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

☐ Yes ☐ No Are the makeup / overflow meters, as well as the overflow alarm, connected to the building's central energy management system or utility monitoring dashboard?

☐ Yes ☐ No Is the cooling tower blow down reused for on-site beneficial use?

☐ Yes ☐ No Is any make-up water supplied by reclaimed or an on-site auxiliary water source?

☐ Yes ☐ No Does the owner maintain an on-site, written log that contains the monthly make-up and blow down meter reads, conductivity values, and cycles of concentration?

☐ Yes ☐ No Have the cooling tower(s) been registered with Austin Water on a form provided by Austin Water?



## COOLING TOWER EFFICIENCY PROGRAM – COC CALCULATION WORKSHEET

### OPTION B) PH TRIMMING

Uses sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) to keep pH/alkalinity below 8.6 and minimize scale

	Phenol Alkalinity	Total Alkalinity	Total Hardness	Calcium	Conductivity (umohos/cm)	pH	Inhibitor	Langelier Saturation Index (LSI)
Austin Water Potable Water								
Cooling Tower								
Cycles of Concentration								

### OPTION C) WATER SOFTENING

Uses water treatment and/or filtration systems to reduce hardness (e.g., TDS, calcium carbonate)

	Phenol Alkalinity	Total Alkalinity	Total Hardness	Calcium	Conductivity (umohos/cm)	pH	Inhibitor	Langelier Saturation Index (LSI)
Austin Water Potable Water								
Cooling Tower								
Cycles of Concentration								

### INSPECTOR'S STATEMENT & SEAL

I certify that all statements and representations contained in this form are true, correct and complete.

Printed Name: \_\_\_\_\_  
*Inspector*

License Type/ Number: \_\_\_\_\_

Signature: \_\_\_\_\_  
*Inspector*

Date \_\_\_\_\_ P.E Seal:

**If the inspection was done under the supervision of an engineer or licensed contractor, include the name, signature, seal or license number as applicable.**

Printed Name: \_\_\_\_\_  
*Supervising Engineer or Licensed Contractor*

License Type/ Number: \_\_\_\_\_

Signature: \_\_\_\_\_  
*Supervising Engineer or Licensed Contractor*

Date \_\_\_\_\_ P.E. Seal:

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