

## How to Apply for a Permit to Install or Replace a Water Heater

---

### What kind of permits do I need to install or replace a water heater?

You need a plumbing permit. For new installations you may need a building or electrical permit.

### How do I apply for a permit to install a new water heater?

Submit an application to the Building Division that identifies the property, lists the name of any architect or engineer who will work on the project, and describe the proposed work in detail, applications are on the city website. You need to submit additional plans only for new installations, not replacements. For a new installation, submit three sets of plumbing details, electrical plans, and a floor plan showing the water heater location. If a water heater is to be installed on the exterior in a new enclosure a plot plan will be required.

### How do I apply for a permit to replace an existing water heater?

Applications can be downloaded from the city website. Applicants will need to know the owners name and address and the contractors information. Installation Requirements for new or replacement water heaters.

- 1) Water heaters must be anchored or strapped to prevent toppling during an earthquake. For water heaters less than 75 gallons 2 straps are required one 6" from the top of the water heater and the other above the water heater controls.

Water heaters 75 gallons or more require 3 straps. 2 straps as outlined above and an additional strap in the middle of the water heater.

- 2) To conserve energy, water heater must be wrapped with an insulation blanket having an R-value of at least 12. Internal and external insulation together must equal R-16.
- 3) Hot and Cold water pipes must be insulated for the first 5 feet from the water heater.
- 4) Electrical bonding is required between hot and cold water pipes
- 5) Water heater installed inside the home need to have a safety pan that has the drain piped to the exterior or an approved disposal point.

The water heater pressure relief valve must be piped to the pan or run parallel to the exterior or approved disposal point.

- 6) Water heaters in the garage area must be raised onto an 18" platform which is secured to the garage floor.
- 7) Replacement water heaters located in garage pit locations are allowed to be replaced. No new installations will be allowed in a garage pit location.

### At what point should I call for an inspection of my water heater?

A replacement water heater requires only one inspection, which is conducted after the installation has been completed.

During the installation of a new water heater system, you should request inspections before concealing work. After you have completed the project, a final inspection needs to be conducted.

New installation inspections can involve a framing, electrical, plumbing, gypsum board, combustion air and other inspections.

### What fees must I Pay?

For a replacement of a water heater you must pay for a plumbing permit and a document imaging fee.

For new installations you will need a plumbing permit, & document imaging fee and possibly electrical, building and plancheck fees

## Water Heater Strapping

You can purchase pre-made water heater strapping kits or you can make your own strapping.

An example is listed below.

- 1) Mark heater 6" down from top and the other above the water heater controls from bottom, locate studs in wall on both sides.
- 2) Drill 3/16" hole 3" deep into stud.
- 3) Measure around heater, add 3". Cut 2 pieces 1 1/2" x 16 gauge metal strips to this measurement.
- 4) Bend 1 1/2" from end 90E. Bend straps into a curve the same as the water heater.
- 5) Cut four pieces of EMT conduit equal to midpoint of the water heater to the wall. Add 1 1/2" to these measurements. Drill 3/8" hole at this midpoint.

- 6) Flatten the all ends approximately 1 1/2". Be sure to flatten all ends on the same plane (angle).
- 7) Drill a 3/8" hole in each end about 3/4" from the end. Bend ends to approximately 45E.
- 8) Wrap straps around heater insert 5/16" x 1 1/2" bolts with washers tighten nuts finger tight. Insert 5/16" x 3/4" bolts in midpoint holes in strap. Attach one end of flattened pipes to these bolts. Tighten finger tight. Insert 5/16" lag screws into holes on pipes and into wall.
- 9) Adjust and tighten straps to marks installed on water heater in step #1. Tighten nuts snugly but not too tight.

## Externally Mounted Tankless Water Heaters

- 1) Cannot be free-standing
- 2) Should not be mounted on any portion of the front facade

- 3) Should not be mounted on any other street-facing facade unless:
  - screened by an existing fence or wall (if mounted no higher than the fence or wall); or
  - hidden in an enclosure color and material matched to the adjacent exterior wall area
- 4) Should not be mounted higher than 8 feet above grade on a non street-facing facade unless hidden in an enclosure color and material matched to the adjacent exterior wall area
- 5) May be located within a minimum required setback, but not less than 3 feet from any property line
- 6) Should be located next to existing utility equipment, such as gas and electric meters
- 7) Landscaping is not an acceptable form of screening



Water Heater  
Permit Process  
&  
Frequently Asked  
Questions

City of Millbrae  
Community Development Dept.  
Building Division  
621 Magnolia Ave.  
Millbrae, Ca. 94030  
650-259-2330  
650-697-2657  
Website: [www.ci.millbrae.ca.us](http://www.ci.millbrae.ca.us)