



## Evaporative Cooler Maintenance

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### Overview

Evaporative coolers, operating properly, can use between 3 and 15 gallons of water per hour! Working improperly, they can waste hundreds of gallons. To reduce your personal water footprint, make sure your evaporative cooler is well maintained, especially as it pertains to water use.

The following *Swamp Cooler Maintenance* guide is provided by the University of Arizona, Cooperative Extension, Cochise County (<http://extension.arizona.edu/cochise>).

### Cool Rules

If you want to save water and operate your cooler efficiently, here are "**Cool Rules**" that should rule your cooler operation and maintenance:

- Be brave, delay turning on your cooler until the outside temperature reaches 85 degrees rather than turning it on when it is 79 degrees. You will use 50% less water.
- Turn on the water pump a few minutes before turning on the fan. This saturates the pads first, making your cooler more efficient.
- Open a window a crack in the rooms you are cooling. This will draw the cooled air through these spaces.
- Use ceiling fans to circulate air within your home.
- In the evenings, operate your cooler fan without the water pump. Cool air will be moved through your house without using any water.
- Install a thermostat so your cooler can be as water-wise and energy-wise as possible.

## Spring Cleaning

- Uncover your cooler, remove the panels and clean out any debris in the water pan at the bottom.
- Check the motor's fan belt tension. When pressed it should move about one half inch. Lightly oil the bearing on the blower assembly and the motor if it has an oil receptacle.
- Install new cooler pads. Aspenwood fiber pads are a good choice, or follow manufacturer's recommendations.
- Reconnect the water line and turn on the water supply. Check the float valve and make sure it is operating properly. If necessary, adjust the float arm by bending it.
- Switch on the cooler motor and recirculating pump, making sure the cooler pads are being evenly saturated with water. Look for split seams in the casement, or rusted areas in the tray, which could cause a leak.

## Mid-summer Checkup

- Check the water level in the bottom tray. It should be about one inch below the top of the tray, and below the top of the overflow pipe. If the water level is too high or too low, adjust the float arm.
- Make sure your float valve is working properly. If the valve sticks, the water will run continuously, causing water to overflow the tray and be wasted. Adjust your float arm and, if that doesn't fix the problem, install a new float valve or call a cooler specialist.
- Check all other working parts, including the pump, motor and fan belt.
- Check the condition of the cooler pads. The cleaner the pads, the more efficient the cooler. If they have a heavy accumulation of mineral deposits, replace them.
- Some coolers have a "bleed-off valve" to drain the recirculating water to prevent excessive mineral buildup. Make sure the valve is adjusted properly to drain no more water than is necessary. Check your manufacturer's recommendations for best results.

## Winterize

- When the weather begins to cool, it is time to winterize your evaporative cooler. If you do these few simple things, you will minimize your cooler problems in the spring when the hot weather hits.
- Get rid of minerals in the bottom tray. Vinegar can be used to dissolve the buildup.
- Clean out the tray at the bottom of the cooler. Drain the water and gently scrape it out.
- Inspect the water trough for clogged holes, clean as necessary.
- Thoroughly dry the tray and inspect it for signs of cracking.
- Coat the entire tray with submarine sealer or another product to prevent rust.
- To prevent freezing of the cooler's water line, disconnect the water line from the cooler and blow out the water.
- Cover your cooler to protect it and to keep cold air out of your house.