



# Do It Yourself Irrigation System Check

Contra Costa Water District suggests turning on your irrigation stations at least monthly to check for needed adjustments and repairs. Use this list as you walk-through each station.

## Irrigation Controller

### Irrigation controller battery needs to be replaced

Is the battery in your irrigation controller missing or old? Without a fresh battery, each time the power goes out your watering schedule will be erased. When the power comes back on, many controllers default to a water-wasting schedule that waters for 10 minutes every day. By keeping your back up battery fresh you won't have to worry about reprogramming your controller when there is a power outage. The battery will save the program even without power.

### Date and time are programmed incorrectly

Are the date and time incorrect on the controller? Keeping the date and time programmed correctly, will ensure that the system is running when it is supposed to.

### Irrigation wiring problem

Are the irrigation stations wired incorrectly or not clean? Check the condition of the wiring and see how many stations are wired compared to how many are programmed. Check that each station is working and has time scheduled. Gently remove any debris, cobwebs and bugs from the wiring area. These can cause the wiring to short out and not send a signal to the valve.

### Controller Programming Issues

Are you not sure how to program your irrigation controller? Learning how to program it is one of the most important actions you can take to be sure you're saving water and money by watering your yard efficiently. You can learn to program your controller by reading the manual, watching a video tutorial, or contacting your controller manufacturer for assistance. CCWD has a suggested Lawn and Landscape Watering Schedule on our website at [ccwater.com/conserv](http://ccwater.com/conserv) if you want recommendations for when and how much to water.

## General

### Mulch - needed in area

Stations \_\_\_\_\_

Is mulch needed in your shrub beds? We recommend the use of organic mulch at least 2 inches deep in all non-turf planting areas. This will reduce evaporation, moderate soil temperatures, add nutrients to soil, and discourage weeds. Keep mulch at least 6 inches away from the crown of plants to discourage disease. Contra Costa Water District has coupons at [www.cewater.com](http://www.cewater.com) to help you save money on mulch at local businesses.

**Run-off/sloped area** **Stations**\_\_\_\_\_

Is your landscape on a slope? Lawn or shrub areas in clay soil/sloped areas require a special irrigation technique called *repeat cycling*. This means taking the estimated daily run time and dividing it into two, three or more separate run times. This allows more time for the water to soak into the soil, instead of running off.

## Sprinkler Systems

**Mismatched heads** **Stations**\_\_\_\_\_

Is your lawn station being watered with more than one sprinkler type, i.e. rotors and spray heads? Because different sprinkler types put out water at different rates, this can cause the water to be applied unevenly leading to browning in some areas and overwatering in other areas. Make adjustments so that lawn areas watered by the same valve have the same kind of heads/nozzle; i.e., match application rates.

**Broken, leaking, or clogged sprinkler heads** **Stations**\_\_\_\_\_

Do any sprinkler heads appear to be broken, leaking, or clogged? Broken and leaking heads need to be fixed to save water and efficiently water the landscape. Clogged heads need to be cleaned to ensure proper coverage. Consider installing irrigation heads that have screens to prevent debris (grass, soil or bugs) from clogging the sprinkler heads.

**Broken/leaking valve or pipe** **Stations**\_\_\_\_\_

Are there any pipes or valves leaking? One sign of a leaking valve is the lowest head on the station is leaking and algae is growing in the area. Repair the valve or pipe.

**High pressure causing misting** **Stations**\_\_\_\_\_

Do you notice high pressure coming from your sprinklers, causing the water to mist? High pressure results in a very fine spray, which drifts downwind and creates high evaporation losses. High pressure can be corrected with a pressure regulator after the meter, pressure regulating sprinkler heads, or added devices on the individual sprinkler heads.

**Low head drainage** **Stations**\_\_\_\_\_

Does water continue to drain from any sprinkler head(s) after the station has turned off? If so, install check valves where appropriate, or replace existing heads with heads that contain built-in check valves to prevent drainage of water from pipes through the lower heads when the system is shut off. This will save a significant amount of water (the water needed to fill and pressurize the system), especially when using repeat cycles.

**Low pressure** **Stations**\_\_\_\_\_

Do your sprinklers appear to have low pressure? Low pressure could be caused by a break in the irrigation system or a design problem. Check for breaks or consult with a qualified professional on the possibility of redesigning the irrigation system.

**Over-spray** **Stations**\_\_\_\_\_

Does water spray onto the sidewalk or other areas where that station is not intended to water? If so, water is being lost due to the sprinklers over-spraying the planting area. The sprinklers' spray patterns should either be adjusted or changed to a pattern that will stay within the planting area. Another alternative would be to redesign the sprinkler system to spray only the planting areas for each station.

**Spray pattern blocked or misdirected** **Stations**\_\_\_\_\_

Are there shrubs blocking the spray pattern of your sprinklers? The irrigation head(s) need to be moved or raised to where they can spray as intended or the obstruction needs to be removed.

**Sunken heads/short pop-ups** **Stations**\_\_\_\_\_

Is the spray being blocked by grass blades near the sprinkler head? This results in over-saturated areas near the head and not enough water getting to the rest of the lawn. This can be caused by sprinkler heads that are either sunken or too short to spray over the grass blades. To correct the problem, replace short heads with 4" pop-ups on a swing joint or install a swing joint to raise sunken 4" heads to grade. You can also trim around existing heads to avoid blocking the spray but you will have to do this on a continual basis.

**Tilted heads** **Stations**\_\_\_\_\_

Are any of your sprinkler heads tilted? Straighten the sprinkler head so it is aligned vertically, making sure the head is set so that when it pops-up, the spray does not get blocked by the grass. Tilted sprinkler heads result in water not being applied evenly to the lawn.

**Uneven or extended head spacing** **Stations**\_\_\_\_\_

Does the water from one sprinkler head reach the sprinkler head next to it? To ensure even water distribution, irrigation heads need to have head-to-head spacing (the water from one sprinkler should reach the sprinkler heads around it). Consult with a qualified professional to design a system with head-to-head spacing.

## Drip Systems

**Clogged, broken, or missing emitters** **Stations**\_\_\_\_\_

Are there drip emitters that are missing, broken, or clogged? These emitters need to be replaced. Clogged emitters don't put out any water. If the system or valve does not have a water filter, one needs to be installed. If not, the emitters might continue to clog with dirt particles from the water. Missing emitters might have blown off due to high-pressure. Install a pressure regulator downstream of the filter to reduce the water pressure.

**Emitters too close/far from plant** **Stations**\_\_\_\_\_

Are your emitters placed directly at the base of the plant being watered? Emitters need to be at the edge of the root-ball on new plantings and moved out to the drip line (edge of foliage) of established plants.

**Pinched or broken tubing**

**Stations**\_\_\_\_\_

Is the drip tubing pinched or broken? Pinched tubing needs to be straightened or replaced. Broken tubing needs to be replaced to save water and efficiently water the landscape

**Tubing pulled off emitters or devices**

**Stations**\_\_\_\_\_

Is your drip tubing connected to the emitter or devices? If not, the tubing needs to be reattached or replaced. If the tubing is split or brittle, snip off the end before reattaching or replace it with new material. Tubing is easily pulled off these devices, especially when raking debris from the area. Use tubing stakes or staples to secure the tubing to the ground, and then cover with mulch. The tubing might have blown off due to high-pressure. Install a pressure regulator downstream of the filter to reduce the water pressure.