

# HOW TO SPOT AND STOP SPRINKLER INEFFICIENCIES

## Broken Heads and/or Nozzles

### How to Spot:



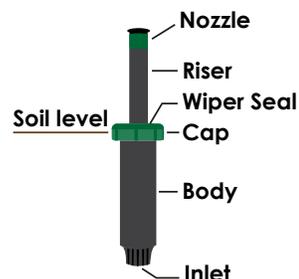
Your sprinkler heads/nozzles may need to be adjusted if any of the following is occurring:

- Brown spots
- Standing water
- Incorrect spray pattern
- If the wiper seal is leaking
- If the stem, cap, nozzle or main body are cracked
- If the head has been disconnected from the lateral pipe
- If the stems will not extend or retract
- If the nozzle has broken off

If the nozzle is broken, you can fix it by doing the following:

- Pull up the riser
- Unscrew the old nozzle
- Replace it with a nozzle that has the correct arc and distance of spray.

For broken heads, it is often easier to replace the entire body.



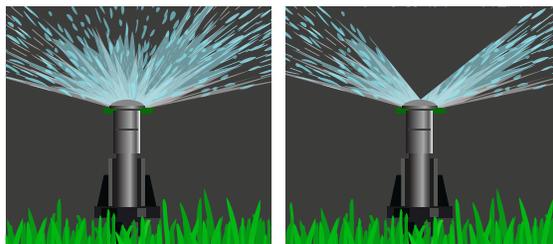
### How to Stop:



## Clogged Nozzles and/or Filters



Clogged nozzles and filters are very easy to spot and clean. The only sign of a clogged nozzle or filter is a gap in the spray pattern.



Properly Functioning Nozzle

Clogged Nozzle

To clean clogged parts:

- Pull up the riser
  - \*make sure to secure it with a gentle clamp to prevent it from retracting into the head
- Unscrew and remove the nozzle and filter from the stem.
- Clean the filter or remove debris from the nozzle

If either part is too worn or clogged with particles, replace the entire nozzle and/or filter.



## Tilted and Sunken Heads



Tilted and sunken heads prevent proper watering as surrounding turf begins to block the spray. As soil shifts over time, heads will naturally begin to sink and/or tilt. Heads should be inspected on a regular basis and straightened or raised as necessary. If any of the following is occurring, you may have a tilted or sunken head:

- Flattened grass in a circular pattern
- Heads that are visibly leaning
- Brown spots that indicate poor coverage

**To repair a tilted head:**

1. Dig around the head, removing the soil.
2. Straighten the head and replace the soil, compacting it as you backfill the hole.

**To repair a sunken head:**

1. Dig up the soil around the head
2. a) Back-fill under/ around the base to return soil to normal height  
OR  
b) Add a longer riser to the base of the sprinkler to ensure the top of the head is level



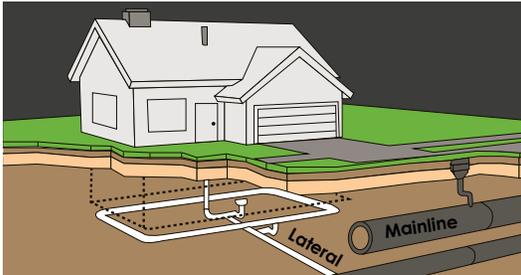
# Broken Mainline or Lateral Leaks

## How to Spot:



Mainline and lateral leaks exhibit the same signs when there is an inefficiency or break. If any of the following is occurring, you may have a mainline or lateral leak:

- Pooling water
- Flowing water
- Soft “squishy” areas
- “Sunken” areas



**Mainlines** feed the control valves and are always under pressure. A break in a mainline will cause water to leak at a very high volume until the system has been manually shut down. A mainline break can waste hundreds of gallons per minute.

**Lateral lines** run from valves to sprinkler heads and are only pressurized when that specific zone is operating. If broken, high volumes of water can be wasted each time that zone turns on. Lateral line breaks often go unnoticed.

**All line breaks need to be repaired immediately. Contacting a professional is recommended.**

## How to Stop:



# Incorrect Arc and/or Radius



The **arc** of a sprinkler nozzle is the degree of a circle the spray covers. The **radius** is how far from the head the nozzle sprays. Check for the following signs that your

arc or radius may be incorrect:

- Overspray
- Evidence that some parts of the lawn are not getting enough water

A sprinklers' arc may spray in quarter circles, half circles, two-thirds circles, full circles or the arc may be adjustable. **Replace where appropriate. This only applies to fixed spray heads.**

The radius can be adjusted down from the factory specified distance, but by **no more than 25%**. **This only applies to rotor heads.**

Radius Adjustment Screw



# Mixed Heads



- Different types of heads on the same zone  
*For example, having a fixed spray head and a rotary nozzle in the same zone*



Fixed Head



Rotary Nozzle

Having mixed heads is an issue because each type of sprinkler requires different lengths of time to apply the appropriate amount of water. This leads to the sprinkler heads either overwatering or underwatering your grass.

**Replace the necessary sprinkler heads to ensure all of the heads in one zone are the same.**



# High Pressure



- Misting while on – look for the rainbow effect
- Overspray – this is caused by fine water spray blowing away in wind

If your sprinklers are experiencing problems due to high pressure, make sure you **replace the whole head with a new one that has built-in pressure regulation.**



# Obstructed Spray

## How to Spot:



- Any obstruction of the intended spray pattern.
- This includes bushes, tree branches, new structures in the yard (playground equipment is a common one), grass length, etc.

Remove anything that is causing an obstruction.



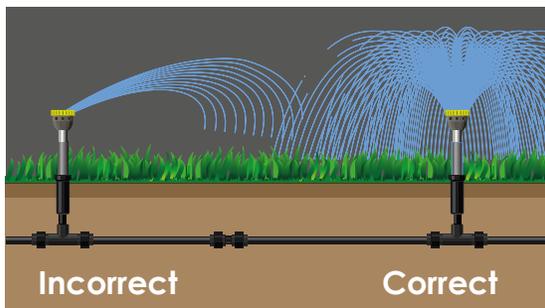
## How to Stop:



# Misdirected Heads



- When a sprinkler head is no longer spraying in the direction it was intended to.



In some cases the sprinkler's stem ratcheting feature (mostly found in rotors) is worn out and will no longer hold the stem in place. If it is still in good working condition, the head can be adjusted. You can do the following to fix this problem.

- If the ratcheting feature is no longer holding the stem in place, you need to replace the head.
- For spray heads with variable arc nozzles, these can be adjusted by twisting at the top of the nozzle until it is corrected.



# Inappropriate Head Height



It is recommended to have a minimum pop-up height of 4 inches for all turf areas, 6 inches when adjacent to streets and 12 inches in groundcover/perennial beds. Look for the following signs that your sprinkler head may be at an inappropriate height:

- Water pooling around the head
- Brown spots on the grass due to underwatering
- If your head is 2 inches high or less

Replace the sprinkler head so it can reach the recommended height:

- 4 inches for all turf areas
- 6 inches when adjacent to streets
- 12 inches in groundcover/ perennial beds

