

Directions

CSU Extension Lawn Irrigation Self Audit (LISA)



Introduction

Congratulations, you are on your way to discovering how using the LISA toolkit can help you irrigate your lawn more efficiently. Landscape irrigation audits have been around for several years, however professional audits can be costly. For this reason, Colorado State University Extension is empowering homeowners to take action against unsound irrigation practices that can lead to over or under watering of lawns. By following this easy four step process you can become a responsible lawn irrigator.

Why Audit? We audit to identify where lawn watering techniques and systems could be improved to benefit the homeowner. Most Colorado homeowners or renters with yard maintenance responsibilities know water conservation is important, but some may not know how to apply it in the most effective manner. LISA is a means of not only improving lawn watering practice but filling water knowledge gaps.

The audit is broken into 2 main components that overlap to form a complete audit. The first is the physical audit which consists of collecting lawn irrigation data. The second is analysis and scheduling by the LISA web-tool.

If the information provided in this direction package is not sufficient in answering your questions, please visit our LISA website at www.lisa-audit.colostate.edu. There, you can find more resources to help answer your questions.

Step 1 – Pre-audit inspection

Inspect irrigation system to ensure all irrigation components are functioning properly. Optimizing system performance before the audit takes place will ensure your audit creates the most efficient watering schedule. LISA **is not** designed to diagnose or treat problems with your irrigation system, but rather enhance system performance to water your lawn more efficiently. Please be sure to diagnose and correct any problems with your irrigation system prior to your irrigation audit.

Step 2 – Weather conditions

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Before performing a LISA, make sure your site is suitable for an audit. Follow these steps to ensure the audit is set up properly:

- Wind speed should not exceed 5 miles per hour or 2.3 meters per second (anemometer located in LISA kit)



- LISA should not be performed in the rain or snow (for obvious reasons)

Step 3 – Audit setup

Follow these easy steps to carry out a successful audit.

1. Using the soil core tool in the LISA kit, extract a soil core from your lawn (**1 & 2** below). Slide the soil core towards the top of the probe to expose the bottom of the core (**3**). Starting at the bottom of the soil core, break apart the soil until you identify roots (**4 & 5**). Measure the core, this is the rooting depth of your lawn.



2. Locate sprinkler heads (**1** below). Find sprinkler heads that are representative (in terms of distance apart) of the zone being audited and mark them with flags (**2**). Using the measuring tape in the audit kit, measure the distance between sprinkler heads (**3**). 50% of the measured distance between sprinkler heads will be the distance between catch can devices.



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3. Starting in one corner, measure (or pace) out the distance from step 2. Place a ring at this point followed by a catch can device. Make sure the catch can devices are level! Measure and place catch can devices in a uniform grid pattern. Do not place a catch can device within 16 inches of a sprinkler head, simply move the catch can 18 inches away from the sprinkler head if this occurs. A minimum of 12 catch cans should be used for each zone audited.
4. Turn on Zone 1 (or the appropriate zone being audited) and leave running for a specified run



time, usually between 5-10 minutes. Make sure to record the amount of time the sprinkler has been running. Also, you can use this time to make any notes about sprinkler performance such as “west corner sprinkler is watering the driveway” or “sprinkler head height too low on south west sprinkler”.

5. After the runtime has expired turn off the system and record the volume of water in each catchcan. The catch cans have two units; **MAKE SURE YOU RECORD THE DEPTH IN INCHES (in)**. This is vital information for the final step, which involves the online irrigation scheduling tool.
6. Repeat steps 1-5 for subsequent irrigation zones.

Step 4 – Enter audit data into the web tool irrigation scheduler

Go to www.lisa-audit.colostate.edu and follow the easy process of entering your auditing results. This free and simple web tool will allow you to irrigate your lawn more efficiently and reduce the harmful effects of over or under watering your lawn.

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Follow up steps (*only if needed*): If the distribution uniformity of your sprinkler setup is less than ideal (as determined from highly irregular catch can volumes), use the tools in the LISA kit to test sprinkler pressure. If you have pop-up nozzles, use the pressure gauge attached to test the pressure.



If you have rotor, impact, or rotator nozzles, use the pressure gauge below by placing the metal tip into the stream of water.



Comparing nozzle pressures from valves in the same zone will tell you where distribution uniformity issues may arise and which sprinkler heads may be contributing the most to the poor uniformity. If your lawn sprinkler system seems to be applying water in a highly irregular pattern, consult a professional landscape irrigation company to remedy the issue.