

Draft Guidelines for Irrigation Audits of WaterSense® Labeled New Homes

After the irrigation system is installed, the WaterSense irrigation partner shall conduct an audit of the system. It is recommended that the irrigation partner conduct the audit according to the “Irrigation Association Certified Landscape Irrigation Auditor Training Manual (2004).” The audit shall include, but is not limited to, the following components:¹

A. Distribution Uniformity Calculation

Conduct a system audit using a catch-can test to calculate distribution uniformity. This test shall be conducted according to the Irrigation Association’s “Recommended Audit Guidelines” located at www.irrigation.org/certification/pdf/AuditGuidelines_FINAL.pdf. The results of the catch-can test shall be recorded on the *WaterSense Labeled New Home Irrigation Audit Checklist*.

B. Verification of Specification Criteria by Visual Inspection

Conduct a visual inspection to verify the following specification criteria are met. The results of the visual inspection shall be recorded by the irrigation partner on the irrigation audit checklist.

- There is no runoff or overspray from the irrigation system that leaves the property during a minimum continuous operating duration (Criteria 4.2.1.2).
- Sprinkler heads are not used to water plantings other than maintained turf grass (Criteria 4.2.1.3).
- Microirrigation is used for planting beds and turf installed on strips of less than 8 feet wide (Criteria 4.2.1.4).
- Irrigation controllers contain the following features (Criteria 4.2.2):
 - Multiple programming capabilities – shall be capable of storing a minimum of three different programs to allow for separate schedules.
 - Multiple start times (cycling, cycle/soak, stackable start times) – shall be capable of a minimum of three different start times to allow for multiple irrigation cycles on the same zone for areas prone to runoff.
 - Variable run times – shall be capable of varying run times, for example from one minute to one hour.
 - Variable scheduling – shall be capable of interval scheduling (minimum of 14 days) to allow for watering on even day scheduling, odd day scheduling, calendar day scheduling, and interval scheduling.
 - Percent adjust (water budget) feature – shall include a “Percent Up/Down Adjust” feature (or “Water Budget” feature) such as a button or dial that permits the user to increase or decrease the run times or application rates for each zone by a prescribed percentage, by means of one adjustment, without modifying the settings for that individual zone.
 - Capability to accept external soil moisture and/or rain sensors.
 - Non-volatile memory or self-charging battery circuit.
 - Complete shutoff capability for total cessation of outdoor irrigation.

¹ Note that the specific water-efficiency and performance criteria contained in this guidance are based on the first draft of the *Water-Efficient Single-Family New Home Specification*. Criteria are subject to change based on the final version of the *Water-Efficient Single-Family New Home Specification*.

- Sprinkler heads have a 4-inch or greater pop-up height and matched precipitation nozzles (Criteria 4.2.3).
- Microirrigation systems include, at a minimum: pressure regulators, filters, and flush end assemblies (Criteria 4.2.4).
- Verify that two seasonal watering schedules have been created and are posted by the irrigation controller (Criteria 4.2.5):
 - A seasonal schedule for the plant establishment period.
 - A seasonal schedule for the established landscape that reflects varying irrigation needs throughout the year.

Irrigation schedules shall comply with local water restrictions. If the water budget approach was applied to meet Criteria 4.1.1, the schedule shall result in an applied water use consistent with the budget.



WaterSense Labeled New Home Irrigation Audit Checklist

Site Information	
Builder Name:	
Lot Number/Street Address:	
City:	
State:	
Zip:	
Audit Information	
Irrigation Partner Name:	
Company Name:	
Date:	
Time Started:	
Time Ended:	
Signature	
<p>By affixing my signature below, the undersigned does hereby declare that the WaterSense irrigation system criteria for new homes, as specified in the <i>Water-Efficient Single-Family New Home Specification</i>, have been met and, if requested, will provide the necessary supporting documents.</p>	
Irrigation Partner Name:	Company:
Signature:	Date:
Failed Inspection Information	
Deficiencies Identified:	
Corrective Action Taken:	

A. Catch-Can Test:

Irrigation System Distribution Uniformity (calculated from irrigation audit): _____%

B. Verification of Specification Criteria by Visual Inspection:

Item		Criteria ²	Yes	No	NI ³
Outdoor Water-Efficiency Criteria – Irrigation System Design					
Design and installation	4.2.1.2	System prevents runoff and overspray from leaving the property (checked during the audit)			
	4.2.1.3	Sprinkler heads only installed on turf areas			
	4.2.1.4	Microirrigation used on planting beds and strips of turf less than 8 feet wide			
Irrigation controller	4.1.2	Contains the following features: <ul style="list-style-type: none"> ○ Multiple programming capabilities – shall be capable of storing a minimum of three different programs to allow for separate schedules. ○ Multiple start times (cycling, cycle/soak, stackable start times) – shall be capable of a minimum of three different start times to allow for multiple irrigation cycles on the same zone for areas prone to run off. ○ Variable run times – shall be capable of varying run times, for example from one minute to one hour. ○ Variable scheduling – shall be capable of interval scheduling (minimum of 14 days) to allow for watering on even day scheduling, odd day scheduling, calendar day scheduling, and interval scheduling. ○ Percent adjust (water budget) feature – shall include a “Percent Up/Down Adjust” feature (or “Water Budget” feature) such as a button or dial that permits the user to increase or decrease the run-times or application rates for each zone by a prescribed percentage, by means of one adjustment without modifying the settings for that individual zone. ○ Capability to accept external soil moisture and/or rain sensors. ○ Non-volatile memory or self-charging battery circuit. ○ Complete shutoff capability for total cessation of outdoor irrigation. 			
Sprinkler heads	4.2.3	Have a 4-inch or greater pop-up height and matched precipitation			
Micro irrigation system	4.2.4	Includes a pressure regulator, filters, and flush end assemblies			
Schedule	4.2.5	Two seasonal water schedules (one for initial grow-in phase and one for established landscape) are posted at the controller			

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³ Not installed