

# Performance Compliance – Irrigation Audit & Landscape Inspection

For projects with **more than 2,500 square feet of total landscape area**. This checklist is intended as a reference for the auditor/inspector and should not be submitted to the Town. The following WELO requirements are necessary for a WELO compliant design.

## A. Irrigation Audit Report

APPLICANT	ITEM	AUDITOR		NOTES
		PASS	FAIL	
<input type="checkbox"/>	1. Dedicated irrigation meter has been installed per plans (not applicable for single family homes)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	2. Irrigation audit has been completed	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	3. The irrigation audit report includes:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	a. System inspection (inspect for leaks)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	b. System tune-up	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	c. Test the operating pressure of the irrigation system	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	d. Test to determine distribution uniformity (only for overhead irrigation)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	e. Test to determine precipitation rate of representative overhead irrigation valves	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	f. Confirm matched precipitation rates on valves with sprinkler heads, rotors and other emission devices	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	g. Report of any overspray or broken irrigation equipment	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	h. Report of overspray or run off that causes overland flow	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	i. Preparation of an irrigation schedule by month including: plant type, root depth, soil type, slope factor, shade factor, irrigation interval (days/week), irrigation runtimes, number of start times per irrigation day, gallons per minute for each valve, precipitation rate, distribution uniformity and monthly estimated water use calculations.	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	j. Confirm diagram of irrigation plan showing hydrozones is kept with irrigation controller.	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	k. Other:	<input type="checkbox"/>	<input type="checkbox"/>	

## B. Irrigation Equipment

APPLICANT	ITEM	AUDITOR		NOTES
		PASS	FAIL	
<input type="checkbox"/>	1. Irrigation equipment is installed (location, type and size) as shown in the approved plans:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	a. Automatic controller is ET-based or soil moisture-based and includes:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	I. Irrigation scheduling parameters	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	II. Hydrozone map	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	b. Sensors installed include rain, frost (if necessary) and wind sensors (if necessary)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	c. Point of connection includes:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	I. Backflow prevention devices (if necessary)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	II. Manual shut-off valve (at point of connection and before each valve or valve manifold)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	III. Master shut-off valve	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	IV. Flow sensor for landscapes over 5,000 sf only	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	d. Valves (station)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	I. Flow rate (gpm)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	II. Application rates (in/hr)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	III. Design operating pressure:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	e. If static pressure is above or below required dynamic pressure of the system, pressure-regulating devices are installed	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	2. Main and lateral lines	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	3. Sprinkler heads	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	a. No spray heads within 24 inches of non-permeable surface	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	b. Sprinkler heads and other emission devices have matched precipitation rates	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	c. Swing joints or other riser protection provided in high traffic areas and areas near hardscape	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	4. Low volume irrigation (drip, drip lines, and bubblers) is used in mulched planting areas (no spray irrigation) and in areas less than 10 feet wide	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	5. Slopes greater than 15% are irrigated with point source or other low-volume irrigation technology	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	6. Runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas are prevented	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	7. Check valves or anti-drain valves are installed to prevent low head drainage	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	8. Pressure regulating devices are used if the static water pressure at the connection of the public water system does not match the water pressure needs of the irrigation system	<input type="checkbox"/>	<input type="checkbox"/>	

## C. Irrigation Schedules

APPLICANT	ITEM	AUDITOR		NOTES
		PASS	FAIL	
<input type="checkbox"/>	1. Irrigation schedules have been developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	a. Irrigation scheduling is regulated by automatic irrigation controllers	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	b. Irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	2. The irrigation schedules have been developed to include the parameters used to set the automatic controller and are submitted for each of the following:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	a. Plant establishment period	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	b. Established landscape	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	c. Temporarily irrigated areas	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	3. Each irrigation schedule includes the following that apply for each station (valve):	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	a. Irrigation interval (days between irrigation)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	b. Irrigation run times (hours or minutes per irrigation event to avoid runoff)	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	c. Number of cycle starts required for each irrigation event to avoid runoff	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	d. Amount of applied water scheduled to be applied on a monthly basis	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	e. Application rate setting	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	f. Root depth setting	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	g. Plant type setting	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	h. Soil type	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	i. Slope factor setting	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	j. Shade factor setting	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	k. Distribution uniformity or efficiency setting	<input type="checkbox"/>	<input type="checkbox"/>	

## D. Schedule of Landscape and Irrigation Maintenance

APPLICANT	ITEM	REVIEWER		NOTES
		PASS	FAIL	
<input type="checkbox"/>	1. Attach schedule of maintenance for the landscape and irrigation system per ordinance to ensure water efficiency. The attached schedule of landscape maintenance includes:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	a. Routine inspection, auditing, adjusting and repair of the irrigation system	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	b. Aerating and dethatching turf areas	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	c. Topdressing planting areas with compost as needed	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	d. Replenishing mulch	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	e. Pruning and weeding	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	f. Routine inspection, auditing, adjusting and repair of the irrigation system	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	2. The irrigation audit was conducted by a third-party certified Irrigation Auditor professional who is not a part of the design team	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	3. Irrigation items identified for repair in the audit are fixed	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	4. In large project or projects with multiple landscape installations (i.e. production home developments) an auditing rate of 1 in 7 lots or 15% is conducted	<input type="checkbox"/>	<input type="checkbox"/>	

## E. Soil Management Report

APPLICANT	ITEM	REVIEWER		NOTES
		PASS	FAIL	
<input type="checkbox"/>	1. Attach soil analysis report of the soil in planting areas from a soil lab if not previously submitted with the Landscape Documentation Package per ordinance.	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	2. The soil sample follows laboratory protocol and includes:	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	a. Soil texture	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	b. Infiltration rate	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	c. pH	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	d. Total soluble salts	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	e. Sodium	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	f. Percent organic matter	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	g. Amendment recommendations	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	3. Attach document(s) showing that soil analysis report recommendations were used to amend the planting soil, such as delivery tags and receipts for compost and mulch.	<input type="checkbox"/>	<input type="checkbox"/>	

## F. Hydrozones

APPLICANT	ITEM	AUDITOR		NOTES
		PASS	FAIL	
<input type="checkbox"/>	1. Match on the landscape plan and irrigation plan	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	2. Are irrigated by valves with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	3. Trees are on separate valves unless planted in turf areas	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	4. Public LID features to be served by separate water service and meter from private LID features.	<input type="checkbox"/>	<input type="checkbox"/>	

## G. Water Features

APPLICANT	ITEM	AUDITOR		NOTES
		PASS	FAIL	
<input type="checkbox"/>	1. Use recirculating water systems	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	2. Use recycled water if available	<input type="checkbox"/>	<input type="checkbox"/>	

## H. Landscape Inspection

APPLICANT	ITEM	AUDITOR			
		PASS	FAIL	CORRECTED	N/A
<input type="checkbox"/>	1. Installed planting matches Landscape Design Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	2. No turf on slopes over 10%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	3. No turf in planting areas less than 10 feet wide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	4. No invasive plants are installed ( <a href="http://cal-ipc.org/landscaping/dpp/">http://cal-ipc.org/landscaping/dpp/</a> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	5. Delivery tags/receipts for compost submitted verifying a rate of 6 CY/1,000 sf to a minimum depth of 8"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	6. 3 inches of mulch installed in all non-turf planting areas, unless prohibited by fire code	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	8. Water features as installed match Landscape Design Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	9. Rain harvesting technology as installed matches Landscape Design Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	10. Graywater system as installed matches plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>