

Name: \_\_\_\_\_ Auditor#: \_\_\_\_\_

Choose One:    **CLIA**    **QWEL**    **EPA**

## Field Audit Submission Package

### Summary

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- Read and follow the directions carefully. Field audits are mandatory for: new construction, rehabilitated projects, developer installed or home owner provided landscaping.
- All landscape irrigation audits shall be conducted by a third party certified landscape irrigation auditor. Landscape audits shall not be conducted by the person who designed the landscape or installed the landscape. Auditors must hold certifications from one of the following agencies; Irrigation Association-CLIA, Qualified Water Efficient Landscaper-QWEL, or the Environmental Protection Agency-Water Sense - Irrigation System Auditor.
- All landscape requiring a Building Permit, Improvement Plan Permit, or Design Review Permit require a certified landscape irrigation audit.
- In all commercial projects and auditing rate of 15% of the irrigation valves will satisfy the audit requirement. For projects with multiple landscape installations (i.e. production home developments) an auditing rate of 1 in 7 lots or approximately 15% of the projects irrigation valves will satisfy this requirement. City of Roseville Municipal Code 14.18.080 B.

### Background

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- Landscapes that are planned, designed, installed, and maintained with the watershed based approach can improve California's environmental conditions and provide benefits and realize sustainability goals.
- Irrigation systems that apply water at a usable rate within the root zone of the plants, through automatic irrigation controllers, containing moisture sensors that override automatic irrigation when the soil is already moist or wet are all measures that can reduce water demands, yet at the same time provide sufficient moisture to maintain the City's climate appropriate landscaping.

### Expectations

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The project applicant shall submit an irrigation audit report with the Certificate of Completion to the local agency that may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule, including configuring irrigation controllers with application rate, soil types, plant factors, slope, exposure and any other factors necessary for accurate programming.

# Audit Report



## Auditor Information

Auditor Name: \_\_\_\_\_ Auditor License #: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

## Site Information

Contact: \_\_\_\_\_ Date: \_\_\_\_\_

Company: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Site Name: \_\_\_\_\_ Lot Number: \_\_\_\_\_

Site Address: \_\_\_\_\_

## Site Type *Check applicable*

Residential      Commercial      Municipal

## Installation Type *Check applicable*

New Project      Rehabilitation

## Irrigation System Data *Check applicable*

Static Pressure: \_\_\_\_\_ Hose Spigot      Quick Coupler      Backflow (outgoing)      Other \_\_\_\_\_

Water Type:      Potable      Recycled      Meter Number: \_\_\_\_\_      Meter Size: \_\_\_\_\_

Units of Measure: \_\_\_\_\_ Backflow Preventer?      Yes      No

Flow Sensor Installed?      Yes      No      Size: \_\_\_\_\_      Master Valve Installed?      Yes      No      Size: \_\_\_\_\_

Booster Pump?      Yes      No      Size: \_\_\_\_\_      Pump Max Pressure: \_\_\_\_\_      Pump Max Flow GPM: \_\_\_\_\_

Water Source: *Check one*      Potable      Reclaimed      Other \_\_\_\_\_

## Backflow Device: *Check one*

Reduced Pressure Assembly      Double Check Valve      Pressure Vacuum Breaker  
Atmospheric Vacuum Breaker      None



# Audit Report

## Hydrozone Information

<b>Controller Name:</b>										
<b>Irrigated Area</b>										
<b>Plant Material</b> <i>All that apply</i>										
<b>Plant Condition</b> <i>Choose one</i>										
<b>Microclimate</b> <i>Choose one</i>										
<b>Soil Category</b> <i>Choose one</i>										
<b>Root Depth</b>		in.		in.		in.		in.		in.
<b>Slope</b> <i>Choose one</i>										
<b>Compaction</b> <i>Yes or No</i>										
<b>Runtime Until Runoff</b>		min.		min.		min.		min.		min.
<b>Standing Water</b> <i>Yes or No</i>										
<b>Hydrozone Separation</b> <i>Yes or No</i>										
<b>Wind Speed</b> <i>Catch can</i>										

## Abbreviation Key

### Plant Materials

- CS**= Cool Season Turf
- WS**= Warm Season Turf
- T**= Trees
- S**= Shrubs
- N**= Natives
- GC**= Ground Cover

### Plant Condition

- LM**= Low or lack of maintenance, stressed.
- TRD**= Traditional some stress, generally good condtion.
- HQ**= High quality, majority are vigorously growing.

### Microclimate

- FS**= Full sun
- PS**= Part shade, less 6hrs per day
- SH**= Full shade all day
- EX**= Extreme conditions (hot)

### Soil Category

- C**= Course
- MC**= Moderately Course
- M**= Medium
- MF**= Moderately Fine
- F**= Fine

### Slope

- F**= Flat
- SL**= Slight
- Mod**= Moderate
- STP**= Steep

### Other

- N/A**= Not Available

# Audit Report

## Sprinkler System Review

<b>Controller Name:</b>										
<b>Sprinkler Type</b> <i>Choose one below</i>										
<b>Station Flow Rate (Plan Set)</b>		gpm		gpm		gpm		gpm		gpm
<b>High Pressure</b>		psi		psi		psi		psi		psi
<b>Low Pressure</b>		psi		psi		psi		psi		psi
<b>Action Required</b> <i>X = Needs Correction ✓ = Completed</i>	X	✓	X	✓	X	✓	X	✓	X	✓
<b>Broken Pipes</b>										
<b>Missing/broken heads</b>										
<b>Missing nozzle</b>										
<b>psi adjustment needed</b>										
<b>Clogged nozzle</b>										
<b>Heads not turning</b>										
<b>Arc misalignment</b>										
<b>Low head drainage</b>										
<b>Leaking seals/fittings</b>										
<b>Spray deflected/blocked</b>										
<b>Sunken head</b>										
<b>Tilted heads</b>										
<b>Mismatched heads</b>										
<b>Spray/rotor separation</b>										
<b>Spacing uneven</b>										
<b>Valve malfunction</b>										
<b>Observations on Maintenance Frequency</b>										

## Site Conditions

CRITERIA		YES	NO	N/A
<b>Leaks</b>	System operates without leaks.			<input type="checkbox"/>
<b>Overspray Run-off</b>	System operates without overspray to buildings or hardscape?			<input type="checkbox"/>
	System confined to property, no run-off to hardscape, sidewalk, or gutter. These must be demonstrated and confirmed in the audit.			<input type="checkbox"/>
<b>Controller</b>	A self-adjusting weather or soil moisture based controller has been installed?			
	Weather sensor has been installed and is communicating with controller via on-site sensor, WiFi or central controller?			
	Controller installed per plan set?			
	Back up battery installed and tab removed?			
	Is the moisture sensor(s) operating properly with the controller?			
<b>Spray Heads Rotors Bubblers</b>	Spray heads installed in areas greater than 10 ft wide, only.			
	In areas where slope is greater than 25%, nozzles installed have a precipitation rate of .75"/hour or less.			
	All nozzles & bubbles have been installed with pressure regulation as needed per manufacturer recommended specifications?			
	All nozzles & bubbles have been installed per plan set standard details?			
	Nozzles have been adjusted to prevent ALL overspray and runoff?			
	All sprinkler heads have check valves designed to prevent run off from low head drainage where needed?			
	Spacing of heads is uniform and designed to promote a high DU?			
	Nozzles are of like kind and precipitation rates are not mismatched?			
<b>Drip Systems</b>	Low volume irrigation was used in mulched planting areas?			
	Drip is installed per manufacturers recommendation or per plan?			
	All drip valves, filters and tubing have been flushed and are operating per manufacturers specifications?			
<b>Landscape</b>	3 inches of mulch installed?			
	Plants have been installed per planting plan, planting notes and by hydrozone?			
<b>Master Valve</b>	If indicated on plan, the master valve has been installed, programmed to the controller and is fully functional per program			
<b>Flow Sensor</b>	Flow sensor has been installed per plans, is wired and is functioning properly with the programmed controller?			

### Notes:

# Audit Report



## Test Area Map \_\_\_\_\_

Project Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Auditor ID #: \_\_\_\_\_

Test Area/Station: \_\_\_\_\_

Test Run Time: \_\_\_\_\_ min      Wind: \_\_\_\_\_ mph      Pressure: \_\_\_\_\_ psi

Meter Start: \_\_\_\_\_      Meter Stop: \_\_\_\_\_      Total: \_\_\_\_\_

\*\*Indicate north and ALL audit area and sprinkler dimensions.

O = SPRINKLER – Record the location of each sprinkler and sprinkler spacing.

X = CATCH DEVICE – Record the location of each catch device and catch amount.

### Notes:

# Audit Report

## Catch Can Test

Project Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Auditor ID #: \_\_\_\_\_

Test Area/Station: \_\_\_\_\_

Catch Device Area (A<sub>CD</sub>): \_\_\_\_\_ in.<sup>2</sup> Test Run Time (t<sub>R</sub>): \_\_\_\_\_ min

## Catch Device Volumes

1		13		25		37		49		61		73	
2		14		26		38		50		62		74	
3		15		27		39		51		63		75	
4		16		28		40		52		64		76	
5		17		29		41		53		65		77	
6		18		30		42		54		66		78	
7		19		31		43		55		67		79	
8		20		32		44		56		68		80	
9		21		33		45		57		69		81	
10		22		34		46		58		70		82	
11		23		35		47		59		71		83	
12		24		36		48		60		72		84	
<b>Sub Total</b>		<b>Sub Total</b>		<b>Sub Total</b>		<b>Sub Total</b>		<b>Sub Total</b>		<b>Sub Total</b>		<b>Sub Total</b>	

### Calculate Distribution Uniformity (Show Work)

$$(DU_{LQ}) = \frac{\text{avg catch in low quarter}}{\text{avg catch volume}}$$

X \_\_\_\_\_  $\frac{\text{mL}}{\text{mL}}$  =

### Calculate Net Precipitation Rate (Show Work)

$$PR_{\text{net}} = \frac{3.66 \times V_{\text{avg}}}{T_r \times A_{CD}}$$

X  $\frac{3.66 \times (\text{mL})}{(\text{min}) \times (\text{in.}^2)}$  =



# Audit Report



Controller Name: \_\_\_\_\_ Date: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Total Operational Stations Being Used: \_\_\_\_\_

Smart Controller?    Yes    No

Type of Sensor:    Onsite    Wi-Fi    Central Controller

Notes:

System needs corrections

System functions properly

I, \_\_\_\_\_ declare that I have performed a third party Irrigation Audit on the property listed above and not affiliated with the property owner, builder or landscape installer. This audit was performed with all guidelines and codes of licensing body that certified me as a landscape irrigation auditor.

Irrigation Auditor Name: \_\_\_\_\_ Certification #: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_