# Irrigation Audit Checklist

## A. Project & Auditor Information

Inspection Date

Project Name

Project Address

Application Number

Irrigation Auditor Name

Irrigation Auditor Company

Irrigation Auditor Address

Irrigation Auditor Phone Number

Irrigation Auditor Email

Auditor Certified by:

* Irrigation Association
* EPA WaterSense program
* Other:

Note: For large projects or projects with multiple landscape installations (i.e. production home developments), an auditing rate of 1 in 7 lots or approximately 15% satisfies the audit requirement.

## B. Audit Report

| **APPLICANT** | **ITEM** | **FOR** **AUDITOR** | |
| --- | --- | --- | --- |
| PASS | FAIL |
| ⬜ | 1. Separate landscape customer service water meter or private submeter has been installed as applicable: | ⬜ | ⬜ |
| ⬜ | a. Non-residential projects: Greater than 1,000 sf landscape area | ⬜ | ⬜ |
| ⬜ | b. Residential projects: Greater than 5,000 sf landscape area | ⬜ | ⬜ |
| ⬜ | 2. The irrigation audit report includes: | ⬜ | ⬜ |
| ⬜ | a. System inspection | ⬜ | ⬜ |
| ⬜ | b. Inspect for leaks | ⬜ | ⬜ |
| ⬜ | c. System tune-up | ⬜ | ⬜ |
| ⬜ | d. Test the operating pressure of the irrigation system | ⬜ | ⬜ |
| ⬜ | e. Test to determine distribution uniformity | ⬜ | ⬜ |
| ⬜ | f. Test to determine precipitation rate of representative overhead irrigation valves | ⬜ | ⬜ |
| ⬜ | g. Confirm matched precipitation rates on valves with sprinkler heads, rotors and other emission devices | ⬜ | ⬜ |
| ⬜ | h. Report of any overspray or broken irrigation equipment | ⬜ | ⬜ |
| ⬜ | i. Report of overspray or run off that causes overland flow | ⬜ | ⬜ |
| ⬜ | j. Written recommendations to improve performance of the irrigation system | ⬜ | ⬜ |
| ⬜ | k. 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 | ⬜ | ⬜ |
| ⬜ | l. Other: | ⬜ | ⬜ |

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## C. Irrigation Equipment

|  |  |  |  |
| --- | --- | --- | --- |
| **APPLICANT** | **ITEM** | **FOR** **AUDITOR** | |
| PASS | FAIL |
| ⬜ | 1. Irrigation equipment is installed (location, type and size) as shown in the approved plans: | ⬜ | ⬜ |
| ⬜ | a. Automatic controller is ET-based or soil moisture-based and includes: | ⬜ | ⬜ |
| ⬜ | I. Irrigation scheduling parameters | ⬜ | ⬜ |
| ⬜ | II. Hydrozone map | ⬜ | ⬜ |
| ⬜ | b. Sensors installed include rain, frost (if necessary) and wind sensors (if necessary) | ⬜ | ⬜ |
| ⬜ | c. Point of connection includes: | ⬜ | ⬜ |
| ⬜ | I. Backflow prevention devices (if necessary) | ⬜ | ⬜ |
| ⬜ | II. Manual shut-off valve (gate, ball, butterfly valve) | ⬜ | ⬜ |
| ⬜ | III. Master shut-off valve | ⬜ | ⬜ |
| ⬜ | IV. Flow sensor for landscapes over 5,000 sf only | ⬜ | ⬜ |
| ⬜ | d. Valves (station) | ⬜ | ⬜ |
| ⬜ | I. Flow rate (gpm) | ⬜ | ⬜ |
| ⬜ | II. Application rates (in/hr) | ⬜ | ⬜ |
| ⬜ | III. Design operating pressure: | ⬜ | ⬜ |
| ⬜ | e. If static pressure is above or below required dynamic pressure of the system, pressure-regulating devices are installed | ⬜ | ⬜ |
| ⬜ | 2. Main and lateral lines | ⬜ | ⬜ |
| ⬜ | 3. Sprinkler heads | ⬜ | ⬜ |
| ⬜ | a. No spray heads within 24 inches of non-permeable surface | ⬜ | ⬜ |
| ⬜ | b. Sprinkler heads and other emission devices have matched precipitation rates | ⬜ | ⬜ |
| ⬜ | c. Swing joints or other riser protection provided in high traffic areas and areas near hardscape | ⬜ | ⬜ |
| ⬜ | 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 | ⬜ | ⬜ |
| ⬜ | 5. Slopes greater than 25% are irrigated with an application rate not exceeding 0.75 inches per hour | ⬜ | ⬜ |
| ⬜ | 6. Runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas are prevented | ⬜ | ⬜ |
| ⬜ | 7. Check valves or anti-drain valves are installed to prevent low head drainage | ⬜ | ⬜ |
| ⬜ | 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 | ⬜ | ⬜ |
| ⬜ | 9. Check irrigation legend and manufacturer’s online data that sprinkler heads and other emission devices have matched precipitation rates | ⬜ | ⬜ |
| ⬜ | 10. Confirm that swing joints or other riser protection are provided in high traffic areas and areas near hardscape | ⬜ | ⬜ |

## D. Hydrozones

|  |  |  |  |
| --- | --- | --- | --- |
| **APPLICANT** | **ITEM** | **FOR** **AUDITOR** | |
| PASS | FAIL |
| ⬜ | 1. Match on the landscape plan and irrigation plan | ⬜ | ⬜ |
| ⬜ | 2. Are irrigated by valves with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use | ⬜ | ⬜ |
| ⬜ | 3. Trees are on separate valves | ⬜ | ⬜ |
| ⬜ | 4. Biotreatment areas are on separate valves | ⬜ | ⬜ |

## E. Water Features

|  |  |  |  |
| --- | --- | --- | --- |
| **APPLICANT** | **ITEM** | **FOR** **AUDITOR** | |
| PASS | FAIL |
| ⬜ | 1. Use recirculating water systems | ⬜ | ⬜ |
| ⬜ | 2. Use recycled water if available | ⬜ | ⬜ |

## F. Irrigation Schedules

|  |  |  |  |
| --- | --- | --- | --- |
| **APPLICANT** | **ITEM** | **FOR** **AUDITOR** | |
| PASS | FAIL |
| ⬜ | 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: | ⬜ | ⬜ |
| ⬜ | a. Irrigation scheduling is regulated by automatic irrigation controllers | ⬜ | ⬜ |
| ⬜ | b. Overhead irrigation is scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it | ⬜ | ⬜ |
| ⬜ | c. Irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data | ⬜ | ⬜ |
| ⬜ | 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: | ⬜ | ⬜ |
| ⬜ | 1. Plant establishment period | ⬜ | ⬜ |
| ⬜ | 1. Established landscape | ⬜ | ⬜ |
| ⬜ | 1. Temporarily irrigated areas | ⬜ | ⬜ |
| ⬜ | 3. Each irrigation schedule includes the following that apply for each station (valve): | ⬜ | ⬜ |
| ⬜ | a. Irrigation interval (days between irrigation) | ⬜ | ⬜ |
| ⬜ | b. Irrigation run times (hours or minutes per irrigation event to avoid runoff) | ⬜ | ⬜ |
| ⬜ | c. Number of cycle starts required for each irrigation event to avoid runoff | ⬜ | ⬜ |
| ⬜ | d. Amount of applied water scheduled to be applied on a monthly basis | ⬜ | ⬜ |
| ⬜ | e. Application rate setting | ⬜ | ⬜ |
| ⬜ | f. Root depth setting | ⬜ | ⬜ |
| ⬜ | g. Plant type setting | ⬜ | ⬜ |
| ⬜ | h. Soil type | ⬜ | ⬜ |
| ⬜ | i. Slope factor setting | ⬜ | ⬜ |
| ⬜ | j. Shade factor setting | ⬜ | ⬜ |
| ⬜ | k. Irrigation uniformity or efficiency setting | ⬜ | ⬜ |

## G. Reviewer Comments