

## EXHIBIT 3-C

### RULE 172 - LANDSCAPE WATER AUDITS

- A. Landscape Water Audits shall be conducted under the supervision of an individual who has been certified by the Irrigation Association to conduct audits and establish Landscape Water Budgets. Each audit shall be signed by that Person, who shall attest that the audit was performed under his/her direction.
- B. Landscape Water Audits and Landscape Water Budgets shall be offered by the District and/or California American Water or their agent free of charge to all Water Users of California American Water with Dedicated Irrigation Meters, large irrigated areas over three acres, and Large Residential Water Users. Landscape Water Audits and Landscape Water Budgets shall be required for new Dedicated Irrigation Meters at the time the meter is installed.

California American Water shall review its Residential customer consumption records at the completion of every Water Year to identify all Residential Users that consumed an average of 32 units per month during the prior Water Year. Using this information, California American Water shall identify the Users that require a Landscape Water Audit and Landscape Water Budget and that do not have a Water Budget on file at MPWMD and California American Water. Newly identified Users shall be notified by California American Water that they are required to obtain a Landscape Water Audit and Landscape Water Budget. Once notified of the requirement to obtain a Landscape Water Audit and Landscape Water Budget, a User must arrange to complete the audit process within sixty (60) days. Existing customers subject to this Rule shall be given annual notice by California American Water to report any changes to the Landscaping or Irrigation Systems. Significant changes shall necessitate a follow-up audit.

1. California American Water Users shall be required to obtain Landscape Water Audits and establish Landscape Water Budgets if the property:
  - a. Has a Dedicated Irrigation Meter; or
  - b. Is an irrigated area of greater than three acres; or
  - c. Is a Large Residential Water User.
2. All Landscape Water Budgets must be prepared by an individual certified by the Irrigation Association.
3. All Water Users required to complete a Landscape Water Audit and establish a Landscape Water Budget shall have the option of obtaining a Landscape Water Audit and Landscape Water Budget from a Landscape Irrigation Auditor of their choice at their own expense if the auditor is certified by the Irrigation Association.

4. Landscape Water Audits and Landscape Water Budgets not conducted and prepared by the District and/or California American Water shall be completed as specified in this Rule. Completed Landscape Water Budgets and Landscape Water Audits shall be submitted to California American Water. California American Water shall forward a copy of all completed Landscape Water Audits and Budgets to the District within ten (10) days of receipt by California American Water. Landscape Water Audits not performed by the District or California American Water are subject to review and acceptance by the District. Landscape Water Audits and Landscape Water Budgets rejected by the District may be appealed to the Board of Directors pursuant to Rule 70 (Appeals).
5. Audit
  - a. An On-Site Landscape Irrigation Audit shall be completed or overseen by a Certified Landscape Irrigation Auditor (CLIA) and shall include evaluation and documentation of the following:
    - (1) Visual and physical evaluation of Irrigation System.
    - (2) Description of the type(s) of Irrigation System contained on the property.
    - (3) Location of problems with Irrigation System which may be contributing to excessive water use.
    - (4) Condition and performance of the following:
      - Points of connection
      - Backflow device(s)
      - Valves
      - Piping (to include mains and laterals)
      - Control system
      - Sprinklers/emitters
      - System coverage
    - (5) Landscaped areas irrigated by each valve/zone/running station.
    - (6) Plant materials, plant hydrozone compatibility, soil type, Irrigation System operating pressure, irrigation water requirements, and efficiency for each zone
    - (7) Site map, photographs and or a detailed zone description summary including: Zone location, zone efficiency, sprinkler type and zone comments.

b. Upon completion of an On-Site audit, the Irrigation System data shall be analyzed and compiled into a usable, written report that shall include at least the following:

- (1) Calculation and determination of Site Landscape Water Budget using the Irrigation Association Water Requirement (WR) calculation, as follows:

$$WR = \frac{ET_o \times KL \times A}{DU \times E_{wm} \times C_u}$$

Where:

WR	=	Water Requirement <sup>1</sup>
ET <sub>o</sub>	=	Reference Evapotranspiration (inches per year) <sup>2</sup>
KL	=	Landscape Coefficient
A	=	Area (square feet)
C <sub>u</sub>	=	Conversion Factor (convert to CCF = 1,200)
E <sub>wm</sub>	=	Management Efficiency <sup>3</sup>
DU	=	Distribution Uniformity

- (2) The budget shall include calculations for each of the following hydrozones assuming they are present in the landscape.
  - Cool season turf (.8)
  - Warm season turf (.6)
  - All other vegetation (.5)
- (3) Monthly irrigation schedule.
- (4) Condition and functionality of existing Irrigation System.
- (5) Recommendations for improvements to Landscape material and Irrigation System (to include “Smart” irrigation technology and information about Rebates available).
- (6) Estimate of water and money savings potential, including cost estimates for recommended improvements.
- (7) Site map and or a detailed zone description summary which identifies relevant Irrigation System details, including valves/zones, and sprinkler/emitter types for each zone.

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1 Water Requirement calculations, for the purpose of establishing the Landscape Water Budget, shall not include a variable for Effective Rainfall. Property owners/irrigators will need to adjust their actual watering schedules based on actual rainfall, as this will help them stay within their Landscape Water Budgets. One of the top recommendations given to all audited properties must be the installation of a Rain Shut-Off Switch.

2 Historic ET<sub>o</sub> data for specific properties shall be provided to consultant(s), by MPWMD, as requested.

3 Due to the unique and critical water supply situation in the Monterey Peninsula Water Resource System, a higher standard of Management Efficiency (E<sub>wm</sub>) will be required, especially for properties identified as needing Landscape Water Audits and Budgets. Therefore, E<sub>wm</sub> shall not be less than 0.90 for the purpose of establishing a Landscape Water Budget.

The following minimum criteria will be used to establish the hydrozone distribution uniformity:

<b>Type of Zone</b>	<b>Minimum Distribution Uniformity (DU)</b>
Fixed Spray	50%
Rotor	60%
Stream Rotor	60%
Impact	60%
Micro Spray	80%
Drip - Standard	80%
Drip - Pressure Compensating	80%
Bubbler - Standard	80%
Bubbler - Pressure Compensating	80%

The following Landscape Coefficients (species factors) shall be used:

<b>Type of Vegetation</b>	<b>Coefficient</b>
Cool Season Turf	0.80
Warm Season Turf	0.60
All Other Landscape Vegetation	0.50

6. California American Water shall provide monthly status notices to each Water User required to follow a mandatory Landscape Water Budget during Stage 2 through Stage 4.

**C. MODIFICATIONS TO AUDITED LANDSCAPES**

Following significant modification to an existing audited Landscape, a new Landscape Water Audit shall be conducted to establish an appropriate Landscape Water Budget. It shall be the responsibility of the property owner to ensure that a Landscape Water Audit is conducted within 60 days of any such change and to submit a new Landscape Water Audit and Landscape Water Budget to California American Water.

**D. REPORTING AND ANALYSIS**

California American Water shall preserve water use records and budgets for all Water Users subject to this Rule. Updated Landscape Water Budgets shall supersede previous data. Monthly during Stage 2 through Stage 4, California American Water shall notify the District of Water Users who have exceeded their Landscape Water Budget. Quarterly, a report shall be compiled by California American Water and provided to the District showing the account information and comparing the Landscape Water Budget with actual consumption.

E. LANDSCAPE IRRIGATION RESTRICTIONS

Unless watering is by drip irrigation or through a hand-held hose with a Positive Action Shut-Off Nozzle, the following watering schedule shall apply:

1. Odd Numbered Properties shall water after 5 p.m. or before 9 a.m. on Saturdays and Wednesdays only. This schedule shall also apply to properties located on the South or West side of the street in cities where no street address is available.
2. Even Numbered Properties shall water after 5 p.m. or before 9 a.m. on Sundays and Thursdays only. This schedule shall also apply to properties located on the North or East side of the street in cities where no street address is available.
3. Sprinkler irrigation overseen by a professional gardener or landscaper who is available on Site may occur between 9 a.m. and 5 p.m., but shall not exceed two watering days per week.

*Rule added by Ordinance No. 92 (1/28/99); amended by Ordinance No. 119 (3/21/2005); Ordinance No. 134 (8/18/2008); Ordinance No. 137 (12/8/2008)*