MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

ORDINANCE NO. 199
AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE MONTEREY PENINSULA WATER MANAGEMENT DISTRICT AMENDING RULE 142.1, WATER EFFICIENT LANDSCAPE REQUIREMENTS

FINDINGS

1. The Monterey Peninsula Water Management District ("District") is organized and exists under the Monterey Peninsula Water Management District Law (Chapter 527 of the Statutes of 1977, and published at Water Code Appendix, Section 118-1, et seq.) ("District Law").

2. The District is charged under the Monterey Peninsula Water Management District Law with the integrated management of all ground and surface water resources on the Monterey Peninsula area.

3. Water savings can be gained by efficient landscape design, installation, management, and maintenance. This is accomplished by choosing climate adapted plants, improving soil conditions, and using and maintaining high efficiency irrigation equipment and managing the irrigation schedule to fit the plants' water needs as they are influenced by local climate.

4. To increase water efficiency and better use a valuable resource, rainwater and stormwater collection and Graywater and Recycled Water can replace or augment Potable water use in landscapes.

5. Water conservation in landscaping serves the public health, safety, and welfare by minimizing water use, eliminating Water Waste, and maximizing energy efficiency.

6. Assembly Bill 325 - The Water Conservation in Landscape Act of 1990 ("AB 325") was signed into law on September 29, 1990, requiring the California Department of Water Resources ("DWR") to develop and adopt a State Model Water Efficient Landscape Ordinance with provisions for water efficient landscape design, installation, and maintenance by January 1, 1992.

7. Assembly Bill 1881-The Water Conservation in Landscaping Act of 2006 ("AB 1881") required DWR to develop and adopt an updated State Model Water Efficient Landscape Ordinance ("MWELO"). Government Code Section 65595 as enacted by AB 1881 mandates that local governments either adopt the MWELO or a local ordinance that is at least as effective in water conservation by January 1, 2010. If neither has occurred by that date, the MPWMD is required to enforce the MWELO.

8. On January 29, 2010, MPWMD notified the DWR that the MPWMD intends to follow the MWELO.

9. On April 1, 2015, the Governor of the State of California issued Executive Order B-29-15 due to the continued severe drought conditions. This order required DWR to revise the MWELO through expedited regulation to increase water efficiency standards for new and retrofitted landscapes through more efficient Irrigation Systems, Graywater usage, onsite storm water capture, and by limiting the portion of landscapes that can be covered in Turf.

10. In accordance with Section 490 of the California Code of Regulations Title 23 (Waters), Division 2, Chapter 2.7, the purpose of the MWELO is to establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in New Construction (including new buildings with landscape or other new landscape, such as a park, playground, or Greenbelt without an associated building) and Rehabilitated Landscape projects by encouraging the use of a watershed approach. Title 23 further states that such landscapes will make the urban environment resilient in the face of climatic extremes and result in an improved urban setting. Consistent with the State's purpose, this ordinance is intended to govern those types of landscapes that are ornamental in nature and typically found in urban settings.

11. On July 15, 2015, the California Water Commission approved a revised MWELO. Local governments were required to enforce the revised MWELO as of December 15, 2015, unless the MPWMD adopted a local ordinance.

12. New development and retrofitted landscape water efficiency standards are governed by the MWELO. The MWELO is also referenced by Title 24, Part 11, Chapters 4 and 5 CalGreen Building Code. All local agencies must adopt, implement, and enforce the MWELO or a local Water Efficient Landscape Ordinance (WELO) that is at least as effective as the MWELO.

13. The purpose of this ordinance is to adopt a local ordinance that is at least as effective in water conservation as the revised MWELO and accordingly enable the District to apply this ordinance in lieu of the revised MWELO.

14. The purpose of water efficient landscape ordinances is to not only increase water efficiency but to improve environmental conditions in the built environment. Landscaping should be valued beyond the aesthetic because landscapes replace habitat lost to development and provide many other related benefits such as improvements to public health and quality of life, climate change mitigation, energy and materials conservation and increased property values.

15. The intent of the recent MWELO amendments was to improve the implementation and enforcement of MWELO by providing clarity, improving organization, and reducing ambiguities. The proposed amendments were needed so that regulated parties can understand what is required by MWELO and correctly guide project Applicants.

Because of the ambiguities in the MWELO, local agencies and project Applicants may have misinterpreted or not clearly understood what is required.

16. In accordance with Sections 65595(c)(1) and 65597 of the Government Code, the Board of MPWMD hereby finds that Ordinance No. 199 is at least as effective in conserving water as the revised MWELO. Pursuant to Section 65596 of the Government Code, specific elements were identified to be included within the revised MWELO. These elements have been incorporated into this ordinance; therefore, it meets the minimum requirements of State law.

17. MPWMD as the regional agency responsible for compliance with the MWELO, adopted as Ordinance No. 172 in August 2016, that implemented a local version of the WELO that is more effective than the MWELO.

18. Ordinance No. 199 replaces the previous Water Efficient Landscape Requirements enacted by Ordinance No. 172 with the 2025 MWELO provisions, which are a simplified and clearer version of the previous MWELO.

19. Ordinance No. 199 maintains certain local provisions of its previous Rule 142.1, such as more stringent irrigation requirements than the MWELO and a slightly smaller Turf allowance.

20. Ordinance No. 199 adds a Landscape Water Permit requirement for landscaping related to construction that occurs within one year after a project or that is the result of unexpected damage to an existing landscape.

21. This ordinance is exempt from review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.). Pursuant to State CEQA Guidelines sections 15307 and 15308, this ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for protection of the environment.

NOW THEREFORE, be it ordained:

ORDINANCE

Section One: <u>Short Title</u>

This ordinance shall be known as the 2025 Update to Rule 142.1, Water Efficient Landscape Requirements.

Section Two: <u>Purpose</u>

This ordinance replaces the existing Rule 142.1 to reflect updates to the State of California's Model Water Efficient Landscape Ordinance (MWELO) adopted as Chapter 2.7 in the California

Code of Regulations in 2025. Updates include extensive revisions to the original versions of the MWELO to simplify the language and process. These revisions are implemented by MPWMD with a new Rule 142.1 that reflects the State's amendments.

Section Three: **Amendments to MPWMD Rule 11, Definitions**
Rule 11 shall be amended as shown in bold italics (additions) and strikeout (deletions) as follows:

~~IRRIGATION SURVEY – "Irrigation Survey" shall mean an evaluation of an Irrigation System that is less detailed than an Irrigation Audit.~~

CERTIFICATE OF COMPLETION PACKAGE – "Certificate of Completion Package" shall mean the document with the required elements pursuant to Rule 142.1-J.
ESTIMATED WATER USE (EWU) – "Estimated Water Use" (EWU) is the calculated water used for each Hydrozone as described in Rule 142.1-L. Estimated Water Use equals the Evapotranspiration Adjustment Factor times the Hydrozone area in square-feet times the appropriate Evapotranspiration Adjustment Factor x 0.62.

LANDSCAPE AREA – "Landscape Area" shall mean all the planting areas, Turf areas, and Water Features in a Landscape Design Plan subject to the Maximum Applied Water Allowance and the Estimated Applied Water Use calculations. The Landscape Area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other Pervious or non-Pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., Open Spaces and existing Native Vegetation). ***The Landscape Area is the sum of the landscape projects' Regular Landscape Areas (RLA) and Special Landscape Areas (SLA). LA = RLA + SLA.***

LANDSCAPE DOCUMENTATION PACKAGE – "Landscape Documentation Package" means the documents required per the compliance option chosen by the applicant, as described in Rule 142.1-G.

LANDSCAPE WATER PERMIT – "Landscape Water Permit" shall mean a permit issued by the District for landscape projects subject to Rule 142.1.

REGULAR LANDSCAPE AREA – "Regular Landscape Area" (RLA) is the portion of the irrigated Landscape Area that is not a Special Landscape Area. RLA = LA - SLA.

REHABILITATED LANDSCAPE – "Rehabilitated Landscape" shall mean any ~~relandscaping of existing landscapes~~ ***landscape renovation project*** where the modified Landscape Area is equal to or greater than two thousand five hundred (2,500) square feet. ***This definition also may be called the Rehabilitated Landscape Area.***

SOIL~~S~~ MANAGEMENT REPORT – "Soil~~s~~ Management Report" shall mean an analysis of the existing soil conditions relative to horticulture (versus agriculture or structural integrity) resulting in recommendations of appropriate soil amendments.

TURF ***or TURFGRASS*** – "Turf" ***or "Turfgrass"*** shall mean a ground cover surface of mowed

grass and does not include artificial Turf surfaces. For example, Annual ~~b~~***B***luegrass, Kentucky ~~b~~***B***luegrass, Perennial ~~r~~***R***yegrass, Red ~~f~~***F***escue, and ~~t~~***T***all ~~f~~***F***escue are cool-season grasses and Bermuda ~~g~~***G***rass, Kikuyu ~~g~~***G***rass, Seashore Paspalum, St. Augustine ***G***~~g~~rass, Zoysia ***G***~~g~~rass, and Buffalo ~~g~~***G***rass are warm-season grasses.

Section Four: **Amendments to MPWMD Rule 24-A-5**

Rule 24-A-5 shall be amended as shown in bold italics (***additions***) and strikeout (~~deletions~~) as follows:

5. Exterior Residential Water Demand Calculations

See Rule 142.1, Water Efficient Landscape Requirements, for calculation of landscape water demand. An additional 0.01 Acre-Foot of water shall be added for outdoor water uses other than irrigation.

~~a.~~ Exterior water demand shall be calculated according to Rule 142.1. ~~The Exterior Water Demand Calculation shall be the Estimated Total Water Use plus 0.01 Acre-Foot. Any modification to the landscaping that results in an Intensification of Use shall require a new Water Permit.~~

~~b. Sites utilizing rainwater storage as a component in an Irrigation System. For all new Connections on Sites where rainwater storage is included as a source of water supply for an Irrigation System, the Estimated Total Water Use as determined by the landscaping plan shall be reduced by the available Rainwater Harvesting Capacity. Any modification to the landscaping that results in an Intensification of Use shall require a Water Permit. An additional 0.01 Acre-Foot of water from the Water Distribution System shall be added for outdoor water uses other than irrigation.~~

~~c. Sites utilizing rainwater storage as a component in an Irrigation System shall have landscape water use restricted by a recorded covenant on the title of the property or other deed restriction enforceable by the District. The recorded covenant or deed restriction shall provide notice to each subsequent owner that failure to maintain and utilize the rainwater storage component of the Irrigation System shall constitute an Intensification of Use which may result in collection of additional Capacity Fees and debits to a Jurisdiction's Allocation or Water Entitlement and/or other enforcement actions.~~

Section Five: **Deletion and Replacement of MPWMD Rule 142.1**

Rule 142.1 shall be deleted in its entirety. The following text shall be added as Rule 142.1:

RULE 142.1 – WATER EFFICIENT LANDSCAPE REQUIREMENTS

A. **Purpose**. The purpose of this Rule is to provide landscape standards that minimize water use, eliminate Water Waste, and reduce stormwater Runoff by requiring low water landscape plantings, design, and irrigation methods. Pursuant to California Government Code Section 65595, this Rule is intended to be at least as effective in water conservation and efficiency as the State's Model Water Efficient Landscape Ordinance (MWELO).

B. General Requirements

1. Water Waste prohibitions remain in place according to MPWMD Rule 162.

2. Recycled Water.

   a. All Recycled Water use is subject to applicable provisions of the California Code of Regulations (Cal. Code Regs.), Titles 17 and 22, the California Plumbing Code (Cal. Code Regs., Title 24, Part 5, Chapter 15), and all applicable local and State laws.

   b. Landscape Areas using Recycled Water are considered Special Landscape Areas.

3. Graywater Irrigation Systems. All Graywater Irrigation Systems are required to conform to the California Plumbing Code (Cal. Code Regs., Title 24, Part 5, Chapter 15) and any applicable local ordinance standards.

   a. Graywater Irrigation Systems promote the efficient use of water and are encouraged to assist in on-site landscape irrigation.

   b. For projects using treated or untreated Graywater, any Parcel within the project that has less than 2,500 square-feet of Landscape Area and meets the Parcel's landscape water requirement (Estimated Total Water Use or ETWU) entirely with Graywater is subject only to Rule 142.1-H-1-b.

4. Stormwater Management and Rainwater Retention.

   a. Project Applicants shall refer to the Jurisdiction or Regional Water Quality Control Board for information on any applicable stormwater technical requirements.

   b. All Non-Potable rainwater catchment systems are required to conform to the California Plumbing Code (Cal. Code Regs., Title 24, Part 5, Chapter 16).

   c. All Landscape Areas are required to have Friable soil to maximize water retention and infiltration. Refer to Rule 142.1-I-1.

   d. For projects using rainwater captured on site, any Parcel within the project that has less than 2,500 square-feet of Landscape Area and meets the Parcel's landscape water requirement (ETWU) entirely through stored rainwater captured on site is subject only to Rule 142.1-H-1-b.

e. It is strongly recommended that Landscape Areas be designed for capture and infiltration capacity that is sufficient to prevent Runoff from impervious surfaces (i.e., roof and paved areas) from either:

(1) the one inch, 24-hour rain event, or

(2) the 85th percentile, 24-hour rain event, and/or additional capacity as required by any applicable local, regional, state or federal regulation.

f. It is recommended that landscape projects incorporate any of the following elements to improve on-site storm water and dry weather Runoff capture and use:

(1) Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas.

(2) Minimize the area of impervious surfaces such as paved areas, roofs, and concrete driveways.

(3) Incorporate pervious or porous surfaces (e.g., gravel, permeable pavers or blocks, pervious or porous concrete) that minimize Runoff.

(4) Direct Runoff from paved surfaces and roof areas into planting beds or Landscaped Areas to maximize site water capture and reuse.

(5) Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems.

(6) Incorporate infiltration beds, swales, basins, and drywells to capture storm water and dry weather Runoff and increase percolation into the soil.

(7) Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants.

5. Fire Safe Landscaping.

a. A Landscape Design Plan for development and construction in Local Responsibility Areas designated as Very High Fire Hazard Severity Zones and areas designated by the Board of Forestry and Fire Protection as State Responsibility Areas are required to comply with the California Fire Code (Cal. Code Regs., Title 24, Part 9, Chapter 49) "Requirements for Wildland- Urban Interface Fire Areas."

b. Public Resources Code section 4291(a) and (b) describes the requirements for a person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, shrub-covered lands, grass-covered lands, or land that is covered with flammable material to address fire safety and prevention by maintaining a defensible space or zone around a building or structure.

(1) Avoid fire-prone plant materials and highly flammable Mulches.

c. Local Fuel Modification Plan guidelines may prescribe additional requirements per Public Resources Code section 4291(a) and (b).

6. Plant Selection.

a. Any plant may be selected for the landscape project provided that the requirements of the selected compliance option are met.

b. Select trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area.

c. The use of Invasive Plant Species, such as those listed by the California Invasive Plant Council, is strongly discouraged. Pursuant to Food and Agricultural Code section 52334, the declaration of a plant, seed, nursery stock, or crop as invasive is a power reserved for the Secretary of the California Department of Food and Agriculture.

7. The architectural guidelines of a Common Interest Development shall not prohibit or include conditions that have the effect of prohibiting the use of Low Water Use Plants as a group (Civil Code sections 4100 and 4735).

8. Environmental Review. The Jurisdiction must comply with the California Environmental Quality Act (CEQA), as appropriate.

9. Public Education. Education is a critical component to promote the efficient use of water in landscapes. The use of appropriate principles of design, installation, management, and maintenance that save water is encouraged in the community.

10. Local agencies shall provide information to owners of permitted renovations and new Residential homes regarding the design, installation, management, and maintenance of water efficient landscapes based on a Water Budget.

11. Model Homes. All model homes that are landscaped shall display signs that provide information demonstrating the principles of water efficient landscapes described in this Rule.

    a. Signs shall be used to identify the model home as an example of a water efficient landscape. Signage shall include:

        (1) Fundamental water efficient landscape elements such as Hydrozones, irrigation equipment, native plants, Graywater systems, rainwater catchment systems, and other elements as applicable that contribute to the overall water efficient theme.

        (2) Information about the Site water use budget as designed per this Rule; specify who designed and installed the water efficient landscape.

    b. Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.

C. Applicability

This Rule shall apply to all of the following landscape projects:

1. New construction (including demolition projects) with a new Landscape Area or Rehabilitated Landscape Area as defined equal to or greater than 500 square feet requiring a building or landscape permit, plan check, or design review;

2. Rehabilitated Landscape projects with a Landscape Area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review;

3. Landscape projects with a new Landscape Area equal to or greater than 500 square feet or a Rehabilitated Landscape Area equal to or greater than 2,500 square feet undertaken within one (1) year of completion of projects requiring a grading permit, building permit, or design review;

4. Landscape projects with a new Landscape Area equal to or greater than 500 square feet or a Rehabilitated Landscape Area equal to or greater than 2,500 square feet undertaken to repair unintended damage from a project requiring a grading permit, building permit, or design review;

5. Existing non-Rehabilitated Landscapes are limited to Rule 142.1-D; and

6. Any project with a Landscape Area of 2,500 square feet or less may comply with either the performance requirements described in Rule 142.1-I or conform to the prescriptive measures contained in Rule 142.1-H.

7. This rule does not apply to:

   a. registered local, state, or federal historical Sites;

   b. ecological restoration projects that do not require a permanent Irrigation System;

   c. existing plant collections, as part of botanical gardens and arboretums open to the public.

D. Requirements for Existing Non-Rehabilitated Landscapes

This section shall apply to all existing non-Rehabilitated Landscapes that were installed before December 1, 2015, and are over one acre in size.

1. For all existing non-Rehabilitated Landscapes that have a Water Meter, the District and the Water Distribution System Operator shall administer programs that may include, but not be limited to, irrigation water use analyses, Irrigation Surveys, and Irrigation Audits to evaluate water use and provide recommendations as necessary to reduce landscape water use to a level that does not exceed the Maximum Applied Water Allowance (MAWA) for existing non-Rehabilitated Landscapes.

   a. The Maximum Applied Water Allowance for existing non-Rehabilitated Landscapes shall be calculated as: MAWA = (ETo) x (0.62) x (0.8 x RLA + 1.0 x SLA).

2. For all existing non-Rehabilitated Landscapes that do not have a Water Meter, the District and the Water Distribution System Operator shall administer programs that may include, but not be limited to, Irrigation Surveys and Irrigation Audits to evaluate water use and provide recommendations as necessary in order to prevent Water Waste.

3. All landscape Irrigation Audits shall be conducted by a Certified Landscape Irrigation Auditor.

E. Requirements for New Construction or Rehabilitated Landscapes

There are two options for compliance with Rule 142.1:

1. Prescriptive compliance option as described in Rule 142.1-G-1, H, and J-1; or

2. Performance compliance option as described in Rule 142.1-G-2, H, and J-2.

3. An Applicant may comply with either the prescriptive or performance compliance option for any new construction project with a Landscape Area between 500 and 2,500 square feet.

4. An Applicant shall use the performance compliance option for any landscape project with a Landscape Area of 2,500 square feet, or greater.

F. Compliance Responsibilities

1. Designation of Responsibility. The District may, by mutual agreement, designate another agency, such as a water purveyor, to implement some or all of the requirements contained in Rule 142.1.

2. The District is responsible for the enforcement of Rule 142.1 in coordination with the local land use agency, including but not limited to, approval of a Landscape Water Permit, plan check, and/or design review of a project. Prior to construction, the District or its agent shall:

   a. provide the project Applicant with the rule and procedures for permits, plan checks, or design reviews;

   b. review the Landscape Documentation Package submitted by the project Applicant;

   c. approve or deny the Landscape Documentation Package;

   d. issue a Landscape Water Permit.

3. Project Applicant.

   a. Prior to construction, the project Applicant shall submit a Landscape Documentation Package to the District.

   b. Upon approval of the Landscape Documentation Package by the District, the project Applicant shall:

      (1) receive a Landscape Water Permit and record the date of the permit in the Certificate of Completion;

      (2) submit a copy of the approved Landscape Documentation Package along with the Record Drawings, and any other information to the property owner or their designee unless the property owner is the project Applicant.

G. Elements of the Landscape Documentation Package

1. **Prescriptive Compliance**. The Landscape Documentation Package shall include:

   a. A project information sheet with the following elements:

(1) date the project information sheet is completed;

(2) name of the project Applicant;

(3) contact information for the project Applicant and property owner;

(4) project address and Parcel number;

(5) total Landscape Area (square feet);

(6) project type (e.g., institutional (i.e., public), private, cemetery, homeowner-installed);

(7) water supply type (e.g., Potable, recycled, Well) and identify the local retail water purveyor if the Applicant is not served by a private Well; and,

(8) Applicant signature and date with statement: *"I agree to comply with the requirements of the prescriptive compliance option of the MPWMD Water Efficient Landscape Requirements."*

b. A Landscape Design Plan that includes:

(1) Total Landscape Area (square feet); and

(2) A breakdown of Turfgrass and plant material (e.g., plant legend).

2. **Performance Compliance**. The Landscape Documentation Package shall include the following six (6) elements:

a. A project information sheet with the following elements:

(1) date the project information sheet is completed;

(2) name of the project Applicant;

(3) contact information for the project Applicant and property owner;

(4) project address and Parcel number;

(5) total Landscape Area (square feet);

(6) project type (e.g., institutional (i.e., public), private, cemetery, homeowner-installed);

(7) water supply type (e.g., Potable, recycled, well) and identify the local retail water purveyor if the Applicant is not served by a private Well;

(8) checklist of all documents in Landscape Documentation Package; and,

(9) Applicant signature and date with statement: "*I agree to comply with the requirements for the performance compliance option of the MPWMD Water Efficient Landscape Requirements and submit a complete Landscape Documentation Package.*"

b. Soil Management Report pursuant to Rule 142.1-I-1;

c. Landscape Design Plan pursuant to Rule 142.1-I-2;

d. grading design plan pursuant to Rule 142.1-I-3;

e. Irrigation Design Plan pursuant to Rule 142.1-I-4; and

f. Water Efficient Landscape Worksheet pursuant to Rule 142.1-I-5:

(1) Maximum Applied Water Allowance (MAWA);

(2) Estimated Water Use (EWU); and

(3) Estimated Total Water Use (ETWU).

H. <u>Prescriptive Compliance Option</u>

This section contains prescriptive requirements, which may be used as a compliance option for new construction projects with a Landscape Area between 500 and 2,500 square feet. Compliance with the requirements of this section is mandatory and must be documented in the Landscape Documentation Package pursuant to Rule 142.1-G-1 to use the prescriptive compliance option.

1. Landscape project requirements.

a. Incorporate compost at a rate of at least four cubic yards per 1,000 square feet to a depth of six inches into Landscape Area (unless contra-indicated by a soil test). Soils with greater than 6% organic matter in the top six inches of soil are exempt from adding compost and tilling.

b. Irrigation Systems shall comply with the following:

(1) For Non-Residential projects with Landscape Areas of 1,000 square feet or more, a dedicated irrigation Water Meter or private submeter(s) to measure landscape water use shall be installed.

(2) Automatic irrigation controllers are required and must use either evapotranspiration (weather-based) or soil moisture (sensor- based) data and utilize a rain sensor.

(3) Irrigation controllers shall use non-volatile memory.

(4) Pressure Regulating Devices, which may include pressure boosters or reducers, shall be installed on the Irrigation System to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range.

(5) Manual shut-off Valves (such as a gate Valve, ball Valve, or butterfly Valve) shall be installed as close as possible to the point of connection to the water supply.

(6) All irrigation emission devices must meet the requirements set by ANSI in the 2020 ASABE/ICC 802 Landscape Irrigation Sprinkler and Emitter Standard, which is herein incorporated by reference. All sprinkler heads installed in the landscape must document a low-quarter Distribution Uniformity of 0.65 or higher using the protocol defined in 2020 ASABE/ICC 802 Standard.

(7) Non-rotating spray sprinkler bodies are required to meet the standards described in the California Code of Regulations, Title 20, Division 4, Chapter 4, Section 1605.3(x).

(8) Landscape Areas less than 10 feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no Water Waste, Runoff or Overspray.

c. Plant material shall comply with all of the following:

(1) For Residential landscapes, install climate adapted plants that require occasional, little, or no summer water (average WUCOLS plant factor 0.3) for 75% of the Landscape Area excluding areas permanently and solely dedicated to edible plants, and areas using Recycled Water;

(2) For Non-Residential landscapes, install climate adapted plants that require occasional, little, or no summer water (average WUCOLS plant factor 0.3) for 100% of the

Landscape Area excluding areas permanently and solely dedicated to edible plants, and areas using Recycled Water;

(3) Turfgrass shall comply with all of the following:

(a) Turfgrass shall not exceed 20% or a maximum of 1,500 square feet of the Landscape Area, whichever is less;

(b) There shall be no Turfgrass in Non-Residential landscapes; and

(c) Turfgrass shall not be planted on sloped areas which exceed a slope of one foot vertical elevation change for every four feet of horizontal length; and,

(d) Turfgrass is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit vehicles. Any Turfgrass in parkways must be irrigated by subsurface irrigation or by other technology that creates no Water Waste, Overspray or Runoff.

d. A minimum three-inch (3″) layer of Mulch shall be applied on all exposed soil surfaces of planting areas except in Turfgrass areas, creeping or rooting groundcovers, or direct seeding applications where Mulch is contraindicated.

2. The designer of record shall make plants identifiable to an inspector during final inspection. Plants must be identifiable by botanical name, common name or cultivar as specified in Section 53481 of the Food and Agricultural Code.

3. At the time of final inspection, the Landscape Water Permit Applicant must provide the owner of the property and the District with a Certificate of Completion Package pursuant to Rule 142.1-J-1.

I. Performance Compliance Option

The performance compliance requirements shall be used as the compliance option for any landscape project with greater than 2,500 square feet of area and documented in the Landscape Documentation Package, as described in Rule 1421.1-G-2, and the Certificate of Completion Package, as described in Rule 142.1-J-2.

1. **Soil Management Report**

A Soil Management Report shall be completed by the project Applicant, or their designee, as follows:

a. Submit soil samples to a laboratory for analysis and recommendations. Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants. The soil analysis shall include:

(1) soil texture;

(2) infiltration rate determined by laboratory test or soil texture infiltration rate table;

(3) pH;

(4) total soluble salts;

(5) sodium;

(6) percent organic matter; and

(7) recommendations.

b. In landscape projects with multiple landscape installations (i.e., production home developments) a soil sampling rate of 1 in 7 lots or approximately 15% of the total number of lots will satisfy this requirement.

(1) Large landscape projects shall sample at a rate equivalent to 1 in 7 lots.

c. The project Applicant, or their designee, shall comply with one of the following:

(1) If significant mass grading is not planned, the report shall be submitted to the District as part of the Landscape Documentation Package; or

(2) If significant mass grading is planned, the Soil Management Report shall be submitted to the District as part of the Certificate of Completion Package.

(3) The Soil Management Report shall be made available, in a timely manner, to the professionals preparing the Landscape Design Plans and Irrigation Design Plans to make any necessary adjustments to the design plans.

(4) The project Applicant, or their designee, shall submit documentation verifying implementation of Soil

Management Report recommendations to the District with the Certificate of Completion Package.

2. **Landscape Design Plan.**

a. The Landscape Design Plan, at a minimum, shall:

(1) delineate and label each Hydrozone by number, letter, or other method;

(2) identify the Plant Water Use Factor for each Hydrozone as very low, low, moderate, high, or mixed water use.

(a) Temporarily irrigated Landscape Areas shall use the low water use plant factor range in the water budget calculation specified in Rule 142.1-5-b-(1).

(3) identify Special Landscape Areas, including:

(a) recreational areas;

(b) areas permanently and solely dedicated to edible plants; and,

(c) areas irrigated with or water features using Recycled Water;

(4) identify type of Mulch and application depth;

(5) identify type and quantity of soil amendments;

(6) identify type and surface areas of water features;

(7) identify hardscapes (pervious and non-pervious);

(8) identify location, installation details, and 24-hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Project Applicants shall refer to the Jurisdiction or Regional Water Quality Control Board for information on any applicable stormwater technical requirements. Stormwater best management practices are encouraged in the Landscape Design Plan and examples are provided in Rule 142.1-B-4 requirements;

(9) identify any applicable rain harvesting or catchment technologies and their 24-hour retention or infiltration capacity, if applicable;

(10) identify any applicable Graywater discharge piping, system components, and area(s) of distribution;

(11) identify designated insect habitat;

(12) make plants identifiable to an inspector during final inspection:

(a) Plants must be identifiable by botanical name, common name or cultivar as specified in Section 53481 of the Food and Agricultural Code.

(13) contain the following statement: "*I have complied with the performance compliance option criteria of the MPWMD Water Efficient Landscape Requirements and applied them for the efficient use of water in the Landscape Design Plan.*"; and

(14) bear the signature of the designer of record as defined.

b. Plant Selection.

(1) Any plant may be selected for the landscape, providing the ETWU in the Landscape Area does not exceed the MAWA.

(2) The architectural guidelines of Common Interest Developments shall not prohibit or include conditions that have the effect of prohibiting the use of Low Water Use Plants as a group.

(3) Each Hydrozone shall have plant materials with similar water use.

(a) Exceptions are allowed for Hydrozones that use a mix of plant materials with low and moderate plant factors or moderate and high plant factors, as specified in Rule 142.1-I-4-c-(7).

(4) High water use plants, characterized by a plant factor range of 0.7 to 1.0, are prohibited in street medians.

(5) Turfgrass is not allowed on slopes greater than 25% where the toe of the slope is adjacent to a non-pervious hardscape and where 25% means one (1) foot of vertical elevation change for every four (4) feet of horizontal length (rise divided by run x 100 = slope percent).

(6) Methods to achieve water efficiency shall include one or more of the following:

(a) protection and preservation of native species and natural vegetation;

(b) selection of plants based on local climate suitability, disease, and pest resistance;

(c) selection of water-conserving plant, tree, and Turfgrass species, especially local native plants;

(d) selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area;

(e) selection of plants from local and regional landscape program recommended plant lists; and

(f) selection of plants from local Fuel Modification Plan Guidelines.

(7) Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. Methods to achieve water efficiency shall include one or more of the following:

(a) use the Sunset Western Climate Zone System, 2007, which is herein incorporated by reference, which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;

(b) recognize the horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure (e.g., buildings, sidewalks, power lines); allow for adequate soil volume for healthy root growth; and

(c) consider the solar orientation for plant placement to maximize summer shade and winter solar gain.

c. Water Features.

(1) Recirculating water systems shall be used for water features.

(2) Where available, Recycled Water shall be used for decorative water features.

(3) Surface area of a water feature shall use the high water use Hydrozone plant factor in the water budget calculation.

(4) Pool and spa covers are highly recommended pursuant to subdivision (d) of Section 115921 of the Health and Safety Code.

d. Soil Preparation, Mulch, and Amendments.

(1) Prior to the planting of any materials, compacted soils shall be transformed to a Friable condition. On engineered slopes, only amended planting holes need to meet this requirement.

(2) Soil amendments shall be incorporated according to recommendations of the Soil Management Report and what is appropriate for the plants selected (see Rule 142.1-I-1).

(3) For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of pervious area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6% organic matter in the top six inches of soil are exempt from adding compost and tilling.

(4) A minimum three-inch (3″) layer of Mulch shall be applied on all exposed soil surfaces of planting areas except in Turfgrass areas, creeping or rooting groundcovers, or direct seeding applications where Mulch is contraindicated.

(a) To provide habitat for beneficial insects and other wildlife, up to 5% of the Landscape Area may be left without Mulch and identified in the landscape design plan (see Rule 142.1-I-2-a-(11)).

(5) The mulching portion of the seed/Mulch slurry in hydro-seeded applications shall meet the mulching requirement in Rule 142.1-I-d-(4).

(6) Stabilizing mulching products shall be used on slopes that meet current engineering standards.

(7) Organic Mulch made from recycled or post-consumer materials shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer

organic products are not locally available.

(a) Organic Mulches are not required where prohibited by local Fuel Modification Plan Guidelines or other applicable local ordinances. (Public Resources Code section 4291).

3. Grading Design Plan.

a. Grading of a project site shall be designed to minimize soil erosion, Runoff, and Water Waste. A grading plan shall be submitted by the project Applicant as part of the Landscape Documentation Package. A comprehensive grading plan approved by the Jurisdiction for other Jurisdictional permits satisfies this requirement.

(1) A landscape grading plan that indicates finished configurations and elevations of the Landscape Area, including:

(a) height of graded slopes;

(b) drainage patterns;

(c) pad elevations;

(d) finish grade; and

(e) stormwater retention improvements, if applicable.

(2) To prevent excessive erosion and Runoff, it is highly recommended that project Applicant(s):

(a) grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-pervious hardscapes;

(b) avoid disruption of natural drainage patterns and undisturbed soil; and

(c) avoid soil compaction in Landscape Areas.

(3) The grading design plan shall contain the following statement: "*I have complied with the performance compliance option criteria of the MPWMD Water Efficient Landscape Requirements and applied them accordingly for the efficient use of water in the grading design plan.*" and

shall bear the signature of a licensed professional as authorized by law.

4. Irrigation Design Plan.

a. This section applies to Landscaped Areas requiring permanent irrigation, not areas that require temporary irrigation solely for the plant establishment period. For the efficient use of water, an Irrigation System shall meet all the requirements listed in this section and the manufacturers' recommendations. The Irrigation System and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An Irrigation Design Plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

b. Irrigation System Efficiency.

(1) The Irrigation System must be designed and installed to meet, at a minimum, the Irrigation Efficiency criteria described in Rule 142.1-I-5 regarding the MAWA.

(2) For the purpose of determining ETWU, average Irrigation Efficiency is assumed to be:

(a) 0.75 for overhead Irrigation Systems; and

(b) 0.81 for Drip Irrigation.

(3) Sprinkler head spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations. Head-to-head coverage is recommended.

c. The Irrigation Design Plan, at a minimum, shall contain the following:

(1) location and size of separate water meters and submeters;

(2) location, type, and size of all components of the Irrigation System, including Controllers, main and lateral lines, Valves, emission devices, moisture sensing devices, Rain Sensors, quick couplers, Pressure Regulating Devices, and Backflow Prevention Devices;

(3) static water pressure at the point of connection to the public water supply;

(4) Flow Rate (gallons per minute), application rate (inches per

hour), and design operating pressure (pressure per square inch) for the emission devices controlled by each station;

(5) identification of Special Landscape Areas irrigated with and water features using Recycled Water as specified in Rule 142.1-B-2;

(6) identification of any applicable Graywater discharge piping, system components, and Landscape Areas where Graywater is distributed;

(7) identification of Hydrozone areas shall be designated by number, letter, or other designation as identified on the Landscape Design Plan. Designate the areas irrigated by each Valve and assign a number to each Valve using the Water Efficient Landscape Worksheet (see Appendix A). This table can also assist with the Irrigation Audit and programming the Controller.

(a) Each Valve shall irrigate a Hydrozone, or part of a Hydrozone, with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.

(8) the following statement: "*I have complied with the performance compliance option criteria of the MPWMD Water Efficient Landscape Requirements and applied them accordingly for the efficient use of water in the Irrigation Design Plan.*"; and

(9) the signature of the designer of record. (See Division 3, Chapter 3.5, Article 3 of the Business and Professions Code).

d. General Design Criteria.

(1) Backflow Prevention Devices shall be required to protect the water supply from contamination by the Irrigation System as specified in the California Plumbing Code (Cal. Code Regs., Title 24, Part 5, Chapter 6).

(2) The design of the Irrigation System shall conform to the Hydrozones of the Landscape Design Plan.

(3) Emission devices shall be selected based on what is appropriate for the plant type within that Hydrozone.

(4) Where feasible, trees shall be placed on separate stations from Hydrozones that include shrubs, groundcovers, and Turfgrass to facilitate the appropriate irrigation of trees. The mature size and extent of the root zone shall be considered when designing irrigation for the tree.

(5) In Mulched planting areas, the use of low-pressure and low volume Irrigation Systems is required to maximize water infiltration into the root zone.

(6) Areas less than 10 feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no Water Waste, Runoff, or Overspray.

(7) Individual Hydrozones that use a mix of plants with low and moderate plant factors, or moderate and high plant factors, may be allowed if the plant factor used in the calculation of the EWU is either:

(a) plant factor calculation is based on the proportions of the respective plant factors; or

(b) the highest plant factor is used.

(8) Individual Hydrozones that use a mix of plants with high and low plant factors shall not be permitted.

(9) Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing Irrigation Systems.

(10) Overhead irrigation shall not be permitted within 24 inches of any non-pervious surface. Allowable irrigation within the setback from non-permeable surfaces may include Drip Irrigation, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be Mulch, gravel, or other porous material. These restrictions may be modified if:

(a) no Runoff occurs; or

(b) the adjacent non-pervious surfaces are designed and constructed to drain entirely to landscaping; or

(c) the irrigation designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates

strict adherence to the prevention of Water Waste. Prevention of Overspray and Runoff must be confirmed during the Irrigation Audit.

(11) Restrictions regarding Overspray and Runoff in any Irrigation System may be modified if:

(a) the Landscape Area is adjacent to pervious surfaces and no Runoff occurs; or

(b) the adjacent non-pervious surfaces are designed and constructed to drain entirely to the landscaping.

(12) Slopes greater than 25% shall not be irrigated with an Irrigation System using an application rate exceeding 0.75 inches per hour.

(a) This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates no Runoff or erosion will occur. Prevention of Runoff and erosion must be confirmed during the Irrigation Audit.

(13) It is highly recommended that the project Applicant inquire with the local water purveyor about water restrictions that may impact the effectiveness of the Irrigation System.

e. Irrigation System Components.

(1) Meters.

(a) Pursuant to California Water Code section 535, a water purveyor with 15 or more service Connections shall install a dedicated irrigation Water Meter(s) for new retail water service to a property with more than 5,000 square feet of irrigated landscape, excluding Single-Family Residential Connections and Connections for the commercial production of agricultural crops or livestock.

(b) For the purposes of this rule, a submeter or dedicated Irrigation Meter shall be installed and may be used to assist with leak detection and water management for:

(i) Non-Residential landscapes with an irrigated landscape of 1,000 square feet but not more than 5,000 square feet.

(ii) Residential landscapes with an irrigated landscape of 5,000 square feet or more.

(2) Water Pressure.

(a) Static water pressure, dynamic or operating pressure, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

(b) If the static pressure is above or below the required dynamic pressure of the Irrigation System, Pressure Regulating Devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the Irrigation System.

(c) If the water pressure is below or exceeds the recommended pressure range of the specified emission devices, the installation of a pressure-regulating device is required to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.

(3) Water Waste Prevention Equipment.

(a) The Irrigation System shall be designed to prevent Water Waste.

(b) Master shut-off Valves are required on all projects except landscapes that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.

(c) Manual shut-off Valves (such as a gate Valve, ball Valve, or butterfly Valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an

emergency (such as a break in the pressurized pipeline that delivers water from the water source to the Valve or outlet) or routine repair.

(d) Check Valves or anti-drain Valves are required on all sprinkler heads where low point drainage could occur.

(e) Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to hardscapes or in high traffic areas of Turfgrass.

(f) Flow sensors that detect high flow conditions created by system damage or malfunction are required for all Non-Residential and Residential landscapes of 5,000 square feet or larger.

(4) Emission Devices.

(a) Emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.

(b) All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2020 "Landscape Irrigation Sprinkler and Emitter Standard," which is incorporated herein by reference.

(i) All overhead Irrigation Systems installed in the landscape must document a low quarter distribution uniformity of 0.65 or higher using the protocol defined in ASABE/ICC 802-2020.

(c) Non-rotating spray sprinkler bodies are required to meet standards described in California Code of Regulations, Title 20, Division 2, Chapter 4, Section 1605.3(x).

(5) System Controls.

(a) Automatic irrigation Controllers utilizing either

Evapotranspiration or Soil Moisture Sensing Device data utilizing non-volatile memory shall be required for scheduling irrigation events.

(b) Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all Irrigation Systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.

5. Water Efficient Landscape Worksheet.

a. A project Applicant shall complete the Water Efficient Landscape Worksheet in Appendix A, which compares the landscape project's ETWU with the MAWA. ETWU must be equal to or below the MAWA.

(1) The MAWA is calculated based on the maximum ETAF allowed for the landscape project and is expressed as annual gallons allowed. The maximum ETAF allowed is:

(a) 0.55 for Residential Regular Landscape Areas,

(b) 0.45 for Non-Residential Regular Landscape Areas,

(c) 1.0 for new and existing (non-rehabilitated) Special Landscape Areas.

(2) ETWU is the sum of EWU for each Hydrozone. The evapotranspiration adjustment factor (ETAF) for each Hydrozone is based on the Plant Water Use Factor and the average Irrigation System Efficiency. EWU is calculated using the ETAF, Regular Landscape Areas, and the Special Landscape Areas.

(3) In calculating the MAWA and ETWU, a project Applicant shall use the ETo values from the Reference Evapotranspiration Table (Table 142.1-1).

b. Water budget calculations shall adhere to the following requirements:

(1) The Plant Water Use Factor used shall be from WUCOLS or from horticultural researchers with academic institutions or professional associations as approved by the California

Department of Water Resources. The plant factor ranges are:

(a) less than 0.1 for very Low Water Use Plants,

(b) 0.1 to 0.3 for Low Water Use Plants,

(c) 0.4 to 0.6 for moderate water use plants,

(d) 0.7 to 1.0 for high water use plants.

(2) All Water Features shall use the high water use plant factor in the Water Budget calculations.

(3) Temporarily irrigated areas shall use the Low Water Use Plant factor in the Water Budget calculations.

(4) All Special Landscape Areas (SLA) shall be identified in the Landscape Design Plan (Rule 142.1-2) and the Irrigation Design Plan (Rule 142.1-4) and their water use calculated as shown in Rule 142.1-L.

(5) Effective Precipitation (Eppt) (25% of annual precipitation) may be considered in tracking water use and may use the following equation to calculate MAWA:

(a) Residential landscapes:

$$MAWA = (ETo - Eppt) \times (0.62) \times [0.55 \times RLA + 1.0 \times SLA].$$

(b) Non-Residential landscapes:

$$MAWA = (ETo - Eppt) \times (0.62) \times [0.45 \times RLA + 1.0 \times SLA].$$

6. Irrigation Scheduling.

a. All irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health and prevent Water Waste. Irrigation schedules shall meet the following criteria:

(1) Irrigation scheduling shall be regulated by automatic irrigation Controllers.

(2) Parameters used to set the automatic irrigation Controller shall be developed and submitted with the Certificate of

Completion for each of the following:

(a) the plant establishment period;

(b) the established landscape; and

(c) temporarily irrigated areas.

(3) Each irrigation schedule shall consider for each station all of the following parameters that apply:

(a) irrigation interval (days between irrigation events);

(b) irrigation run times (hours or minutes per irrigation event to avoid Runoff and prevent Water Waste);

(c) number of cycle starts required for each irrigation event to avoid Runoff and prevent Water Waste;

(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; and

(k) distribution uniformity or irrigation efficiency setting.

(4) Irrigation Systems shall be scheduled between 8:00 p.m. and 9:00 a.m. on Saturdays and Wednesdays only, unless weather conditions prevent it, except for irrigation overseen by a professional gardener or landscaper who is available on Site and that is not exceeding a maximum two watering days per week. Operation of the Irrigation System outside the normal watering window is allowed for auditing and system maintenance.

(5) Total annual applied water shall be less than or equal to

MAWA.

(a) Actual irrigation schedules shall be regulated by automatic irrigation Controllers using current Reference Evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.

(b) For implementation of the irrigation schedule, carefully consider the irrigation run times, emission device, flow rate, and current Reference Evapotranspiration, so that applied water does not exceed the ETWU.

7. Landscape and Irrigation Maintenance Schedule.

a. Landscapes shall be maintained to ensure water use efficiency. A regular Landscape and Irrigation Maintenance Schedule shall be submitted with the Certificate of Completion Package.

b. A regular maintenance schedule shall include, but not be limited to, routine inspection; auditing, adjustment, and repair of the Irrigation System and its components; aerating and dethatching Turfgrass areas; topdressing with compost, replenishing Mulch; fertilizing; pruning; weeding in all Landscape Areas; and removing obstructions to emission devices.

(1) Operation of the Irrigation System outside the normal watering window is allowed for auditing and system maintenance.

c. Repair of all irrigation equipment shall be done with replacement parts for the originally installed components or their equivalents, or with components that improve the average Irrigation Efficiency.

d. A project Applicant is encouraged to implement established landscape industry sustainable Best Management Practices for all landscape maintenance activities.

8. Irrigation Audit.

a. All landscape Irrigation Audits shall be conducted by a Certified Landscape Irrigation Auditor. Landscape Irrigation Audits shall not be conducted by the person who designed the landscape or installed the landscape.

b. In large landscape projects or landscape projects with multiple landscape installations (i.e., production home developments) an auditing rate of 1 in 7 individual lots or approximately 15% of the

total number of individual lots will satisfy this requirement.

c. For new construction and Rehabilitated Landscape projects installed after December 1, 2015, as described in Rule 142.1-I:

(1) the project Applicant shall submit an Irrigation Audit report with the Certificate of Completion Package to MPWMD that may include, but is not limited to, inspection, system tune-up, system test with distribution uniformity, and reporting Overspray or Runoff that causes overland flow; and

(2) MPWMD shall administer programs that may include, but not be limited to, Irrigation Water Use Analysis, Irrigation Audits, and Irrigation Surveys for compliance with the MAWA.

J. <u>Certificate of Completion Package</u>

The Certificate of Completion Package is completed by the project Applicant or their designee to certify that the landscape project has been installed in accordance with the MPWMD Water Efficient Landscape Requirements.

1. Prescriptive Compliance Option. The Certificate of Completion Package (see Rule 142.1-M for a sample certificate) shall include a Certificate of Completion limited to:

a. Project Information Sheet (Rule 142.1-M – Element 1);

b. according to the Landscape Documentation Package (Rule 142.1-M – Element 2);

c. addressing applicable parameters as described in Rule 142.1-I-6-a-(3) (Rule 142.1-M – Element 4); and

d. Landscape and Irrigation Maintenance Schedule (Rule 142.1-M – Element 5).

2. Performance Compliance Option. The Certificate of Completion Package (see Rule 142.1-M for a sample certificate) shall include the project information sheet that contains the following elements:

a. date the project information sheet is completed;

b. project name;

c. project Applicant name, telephone, and mailing and email address;

d. project address and location; and

e. property owner name, telephone, and mailing and email address.

b. certification by the designer of record that the landscape project has been installed per the approved Landscape Documentation Package (see Rule 142.1-G):

(1) Where there have been significant changes made in the field during construction, the As-Built Drawings or Record Drawings shall be included with the certification.

(2) A diagram of the irrigation plan showing Hydrozones shall be kept with the Automatic Irrigation Controller for subsequent management purposes.

c. Soil Management Report, if not submitted with Landscape Documentation Package, and documentation verifying implementation of soil report recommendations (see Rule 142.1-I-1);

d. irrigation scheduling parameters used to set the Automatic Irrigation Controller (see Rule 142.1-I-6);

e. Landscape and Irrigation Maintenance Schedule (see Rule 142.1-I-7);

f. Irrigation Audit report (see Rule 142.1-I-8); and

3. The project Applicant shall:

a. submit the signed Certificate of Completion Package to the District for review; and

b. ensure that copies of the approved Certificate of Completion Package are submitted to the District and the property owner or their designee, unless the property owner is the project Applicant.

4. The District shall:

a. receive the signed Certificate of Completion Package from the project Applicant; and

b. approve or deny the Certificate of Completion Package. If the Certificate of Completion Package is denied, the District shall provide information to the project Applicant regarding reapplication, appeal, or other assistance.

K. Reporting

The District or its agent shall submit annual reports to the Department of Water Resources by January 31st for the previous calendar year (January 1 to December 31) using the WUEdata portal for submission.

L. Sample Water Efficient Landscape Worksheet *(When codified, insert Rule 142.1-L provided as an attachment to this ordinance.)*

M. Sample Certificate of Completion Package *(When codified, insert Rule 142.1-M, provided as an attachment to this ordinance.)*

N. Table 142.1 Reference Evapotranspiration (ETo) Table *(When codified, insert Table 142.1-1, provided as an attachment to this ordinance.)*

O. Definitions Used In Regulation XV

The following Rule 11 Definitions are used in Regulation XV:

APPLICANT – "Applicant" shall mean the Person or Persons responsible for completing the requirements of an application. The "Applicant" is usually the property or business owner.

AS-BUILT DRAWINGS – "As-Built Drawings" shall mean landscape drawings prepared by the contractor that show, in red ink, on-site changes to the original landscape construction documents.

AUTOMATIC IRRIGATION CONTROLLER – "Automatic Irrigation Contoller" shall mean a timing device used to remotely control valves that operate an Irrigation System. Automatic Irrigation Controllers are able to self-adjust and schedule irrigation events using either Evapotranspiration (weather-based) or soil moisture data.

BACKFLOW PREVENTION DEVICE – "Backflow Prevention Device" shall mean a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water.

BEST MANAGEMENT PRACTICES – "Best Management Practices (BMP)" or "BMP" shall mean a conservation measure or series of measures that is useful, proven, cost-effective, and generally accepted among conservation experts to reduce water consumption and protect water quality.

CERTIFICATE OF COMPLETION – "Certificate of Completion" shall mean the document with the required elements pursuant to Rule 142.1-J.

CERTIFICATE OF COMPLETION PACKAGE – "Certificate of Completion Package" shall mean the document with the required elements pursuant to Rule 142.1-J.

CERTIFIED LANDSCAPE IRRIGATION AUDITOR – "Certified Landscape

Irrigation Auditor" shall mean a Person certified to perform landscape Irrigation Audits by an accredited academic institution, a professional trade organization or other program such as the United States Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

COMMON INTEREST DEVELOPMENT (CID) – "Common Interest Development" shall mean community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Article 2. Definitions [4075 - 4190] (Article 2 added by Stats. 2012, Ch. 180, Sec. 2.).

CONTROLLER – "Controller" shall mean an automatic timing device used to remotely control valves or heads to operate an Irrigation System. A weather-based Controller is a Controller that utilizes Evapotranspiration or weather data to make adjustments to irrigation schedules. A self-adjusting irrigation Controller is a Controller that uses sensor data (e.g., soil moisture) to adjust irrigation schedules.

DISTRIBUTION UNIFORMITY (DU) – "Distribution Uniformity (DU)" shall mean the measure of the uniformity of irrigation water over a defined area.

DRIP IRRIGATION – "Drip Irrigation" shall mean any non-spray Low Volume Irrigation System utilizing emission devices with a Flow Rate measured in gallons per hour. Low Volume Irrigation Systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants. The term "Drip Irrigation" shall have the same meaning as "Micro Irrigation" and "Trickle Irrigation."

EFFECTIVE PRECIPITATION (EPPT) – "Effective Precipitation" ("Eppt") shall mean the portion of total precipitation which becomes available for plant growth. Effective Precipitation is also known as "useable rainfall."

ESTIMATED TOTAL WATER USE (ETWU) – "Estimated Total Water Use" ("ETWU") shall mean the total water used for the landscape based on the plants used in the landscape design.

ESTIMATED WATER USE (EWU) – "Estimated Water Use" (EWU) is the calculated water used for each Hydrozone as described in Rule 142.1-L. Estimated Water Use equals the Evapotranspiration Adjustment Factor times the Hydrozone area in square-feet times the appropriate Evapotranspiration Adjustment Factor x 0.62.

EVAPOTRANSPIRATION ADJUSTMENT FACTOR or ET ADJUSTMENT FACTOR – "Evapotranspiration Adjustment Factor" or "ET Adjustment Factor" ("ETAF") shall mean, except for Special Landscape Areas, a factor of 0.55 for Residential projects and 0.45 for Non-Residential projects that, when applied to Reference Evapotranspiration, adjusts for Plant Water Use Factors and Irrigation Efficiency.

FLOW RATE – "Flow Rate" shall mean the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.

FRIABLE – "Friable" shall mean a soil condition that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.

GRAYWATER – "Graywater" shall mean untreated waste water which has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to; waste water from bathtubs, showers, Bathroom Washbasins, clothes washing machines and laundry tubs. It does not include waste water from Kitchen Sinks and Dishwashers Health and Safety Code Section 17922.12. "Graywater" shall have the same meaning as "Greywater."

GREENBELT – "Greenbelt" means cemeteries, Golf Courses, parks, highway Landscaping and shall include other broad expanses of Landscape area including housing and other Projects with common Landscape uses.

HYDROZONE – "Hydrozone" shall mean a portion of the Landscape Area having plants with similar water needs and rooting depths served by a valve or set of valves with the same schedule. A Hydrozone may be irrigated or non-irrigated.
INVASIVE PLANT SPECIES – "Invasive Plant Species" shall mean a species of plants not historically found in California that spreads outside cultivated areas and can damage environmental or economic resources and is listed as an Invasive Plant Species in either the California Invasive Plant Inventory; USDA invasive, noxious weeds database, or the Landscape Manual.

IRRIGATION AUDIT – "Irrigation Audit" shall mean an in-depth evaluation of the performance of an Irrigation System conducted by a Certified Landscape Irrigation Auditor. An Irrigation Audit shall include, but is not limited to: inspection, system tune-up, system test with Distribution Uniformity or emission uniformity, reporting Overspray or Runoff that causes overland flow, and preparation of an irrigation schedule. The audit must be conducted in a manner consistent with the Irrigation Association's Landscape Irrigation Auditor certification program or other U.S. Environmental Protection Agency "WaterSense" labeled auditing program.

IRRIGATION DESIGN PLAN – "Irrigation Design Plan" "IE" shall mean an irrigation plan and drawings designed and signed by a licensed Landscape Architect, Certified Irrigation Designer, licensed Landscape Contractor, or any other Person authorized to design an Irrigation System (see Sections 5615, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of

Regulations, and Section 6721 of the Food and Agricultural Code).

IRRIGATION EFFICIENCY – "Irrigation Efficiency" shall mean the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation Efficiency is derived from measurements and estimates of Irrigation System characteristics and management practices. The Irrigation Efficiency is 0.75 for overhead spray devices and 0.81 for drip systems.

IRRIGATION SURVEY – "Irrigation Survey" shall mean an evaluation of an Irrigation System that is less detailed than an Irrigation Audit.

IRRIGATION SYSTEM – "Irrigation System" shall mean a device or combination of devices having a hose, pipe or other type of conduit installed in the Landscape which transmits water, and through which device or combination of devices, water is drawn and applied to Residential, industrial or commercial lawns, Landscapes or green space.

IRRIGATION EFFICIENCY – "Irrigation Efficiency" shall mean the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation Efficiency is derived from measurements and estimates of Irrigation System characteristics and management practices. The Irrigation Efficiency is 0.75 for overhead spray devices and 0.81 for drip systems.

IRRIGATION WATER USE ANALYSIS – "Irrigation Water Use Analysis" shall mean an analysis of water use data based on meter readings and billing data.

JURISDICTION – "Jurisdiction" shall mean one of the following: (1) Carmel-by-the-Sea, (2) Del Rey Oaks, (3) Monterey City, (4) Monterey County, (5) Monterey Peninsula Airport District, (6) Pacific Grove, (7) Sand City, (8) Seaside, and (9) Department of Defense.

LANDSCAPE AND IRRIGATION MAINTENANCE SCHEDULE – "Landscape and Irrigation Maintenance Schedule" shall mean a document provided to the property owner and submitted with the Certificate of Completion for landscape installation that provides information about routine inspection; auditing, adjustment and repair of the Irrigation System and its components; aerating and dethatching Turf areas; topdressing with Compost, replenishing Mulch; fertilizing; pruning; weeding in all Landscape Areas; and removing obstructions to emission devices.

LANDSCAPE AREA – "Landscape Area" shall mean all the planting areas, Turf areas, and Water Features in a Landscape Design Plan subject to the Maximum Applied Water Allowance and the Estimated Applied Water Use calculations. The Landscape Area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other Pervious or non-Pervious hardscapes, and other non-irrigated areas designated for non-development (e.g., Open Spaces and existing Native Vegetation).

LANDSCAPE DESIGN PLAN – "Landscape Design Plan" shall mean a plan (and drawings) that: (1) delineates and labels each Hydrozone; (2) identifies each Hydrozone as low, moderate, high water, or mixed water use; (3) identifies any Recreational Areas; (4) identifies areas permanently and solely dedicated to edible plants; (5) identifies areas irrigated with Recycled Water; (6) identifies type of Mulch and application depth; (7) identifies soil amendments, type, and quantity; (8) identifies type and surface area of any Water Features; (9) identifies hardscapes (Pervious and non-Pervious); (10) identifies applicable storm water Best Management Practices; (11) identifies any applicable rain harvesting or catchment technologies; and (12) identifies any applicable Graywater discharge piping, system components and area(s) of distribution. A Landscape Design Plan must be signed by a licensed Landscape Architect, Certified Irrigation Designer, licensed Landscape Contractor, or any other Person authorized to design an Irrigation System (see Permitted Practices in California prepared by the Landscape Architects Technical Committee (LATC), the licensing and regulatory agency for the practice of landscape architecture in California. "Landscape Design Plan" shall also be known as a "Planting Plan."

LANDSCAPE DOCUMENTATION PACKAGE – "Landscape Documentation Package" means the documents required per the compliance option chosen by the applicant, as described in Rule 142.1-G.

LANDSCAPE WATER PERMIT – "Landscape Water Permit" shall mean a permit issued by the District for landscape projects subject to Rule 142.1.

LOW WATER USE PLANT – "Low Water Use Plant" shall mean any plant categorized as low water need by the Water Use Classification of Landscape Species ("WUCOLS") guide.

MAXIMUM APPLIED WATER ALLOWANCE (MAWA) – "Maximum Applied Water Allowance" shall mean the upper limit of annual Applied Water for the established Landscape Area. It is based upon the area's Reference Evapotranspiration, the ET Adjustment Factor, and the size of the Landscape Area.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) – "Model Water Efficient Landscape Ordinance" shall refer to the California Code of Regulations, Title 23. Waters, Division 2. Department of Water Resources, Chapter 2.7. Model Water Efficient Landscape Ordinance.

MULCH – "Mulch" shall mean any organic material such as leaves, bark, straw, Compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.

NEW CONSTRUCTION – "New Construction" means any construction of a

previously nonexistent structure or additions to a structure requiring a discretionary or ministerial permit. "New Construction" shall include additions, modifications, or structural improvements which add square footage to floor space of Existing Structures.

NON-POTABLE – "Non-Potable Water" shall mean water which is not fit for human consumption.

NON-RESIDENTIAL – "Non-Residential" shall mean water uses not associated with Residential use. These uses include Commercial, Industrial, Public Authority, Golf Course, Other Use, Non-Revenue Metered Use, and Reclaimed Water.

OVERSPRAY – "Overspray" shall mean the irrigation water that is delivered beyond the Landscape Area, wetting pavements, walks, structures, or other non-Landscaped Areas.

PARCEL – "Parcel" shall mean any unit of land which qualifies as a Parcel under the Subdivision Map Act, and shall include all units of land: (1) which are contiguous to any other Parcel (or are separated only by a road or easement), and (2) which have identical owners, or (3) are an Accredited Institution of Higher Education Site, a Department of Defense Site, a Jurisdiction Site, a Public School District Site, or Community Hospital Site. The term "Parcel" shall be given the same meaning as the term "Site".

PLANT WATER USE FACTOR – "Plant Water Use Factor" shall mean a value, when multiplied by "Reference Evapotranspiration," that estimates the amount of water needed by plants. The Plant Water Use Factor range for very Low Water Use Plants is less than 0.1, the Plant Water Use Factor range for Low Water Use Plants is 0.1 to 0.3, the Plant Water Use Factor range for Moderate Water Use Plants is 0.4 to 0.6, and the Plant Water Use Factor range for High Water Use Plants is 0.7 to 1.0. Plant Water Use Factors are derived from the publication "Water Use Classification of Landscape Species." Plant Water Use Factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources.

POTABLE – "Potable" shall mean water that is suitable for drinking.

PRESSURE REGULATING DEVICE – "Pressure Regulating Device" shall mean a water pressure reducing device installed in the water line after the Water Meter that automatically reduces the pressure from the water supply main to a lower pressure.

RAIN SENSOR – "Rain Sensor" shall mean a component of an Irrigation System which automatically suspends irrigation when it rains. The term "Rain Sensor" shall have the same meaning as the term "Rain Sensing Shutoff Device."

RECORD DRAWINGS – "Record Drawings" shall mean landscape documents prepared by the Landscape Architect that reflects on-site changes the contractor noted in the As-Built Drawings. They are often compiled as a set of on-site changes made for the owner per the owner-architect contract.

RECYCLED WATER – "Recycled Water" shall mean treated or recycled waste water of a quality suitable for Non-Potable uses such as landscape irrigation and Water Features. This water is not intended for human consumption.

REFERENCE EVAPOTRANSPIRATION – "Reference Evapotranspiration" shall mean a standard measurement of environmental parameters which affects the water use of plants. Reference Evapotranspiration is expressed in inches per day, month, or year, and is an estimate of the Evapotranspiration of a large field of four to seven inches tall, cool-season grass that is well watered. Reference Evapotranspiration is used as the basis of determining the Maximum Applied Water Allowance so that regional differences in climate can be accommodated.

REGULAR LANDSCAPE AREA – "Regular Landscape Area" (RLA) is the portion of the irrigated Landscape Area that is not a Special Landscape Area. RLA = LA - SLA.

REHABILITATED LANDSCAPE – "Rehabilitated Landscape" shall mean any relandscaping of existing landscapes where the modified Landscape Area is equal to or greater than two thousand five hundred (2,500) square feet.

RESIDENTIAL – "Residential" shall mean water used for household purposes, including water used on the premises for irrigating lawns, gardens and shrubbery, washing vehicles, and other similar and customary purposes pertaining to Single and Multi-Family Dwellings.

RUNOFF – "Runoff" shall mean water which is not absorbed by the soil or landscape to which it is applied and flows from the Landscape Area. For example, Runoff may result from water that is applied at too great a rate (application rate exceeds Infiltration Rate) or when there is a slope.

SOIL MANAGEMENT REPORT – "Soil Management Report" shall mean an analysis of the existing soil conditions relative to horticulture (versus agriculture or structural integrity) resulting in recommendations of appropriate soil amendments.

SOIL MOISTURE SENSING DEVICE – – "Soil Moisture Sensing Device" shall mean a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

SPECIAL LANDSCAPE AREA (SLA) – "Special Landscape Area" or "SLA" shall mean an area of the landscape irrigated with Recycled Water, Water Features using Recycled Water, and areas dedicated to active play such as parks,

sports fi elds, golf courses, and where Turf provides a playing surface.

TURF or TURFGRASS – "Turf" or "Turfgrass" shall mean a ground cover surface of mowed grass and does not include artificial Turf surfaces. For example, Annual Bluegrass, Kentucky Bluegrass, Perennial Ryegrass, Red Fescue, and Tall Fescue are cool-season grasses and Bermuda Grass, Kikuyu Grass, Seashore Paspalum, St. Augustine Grass, Zoysia Grass, and Buffalo Grass are warm-season grasses.

VALVE – "Valve" shall mean a device used to control the flow of water in the Irrigation System.

WATER BUDGET – "Water Budget" shall mean a maximum annual water allowance in gallons per year that takes into consideration the types of plants, Evapotranspiration Rates and Irrigation System.

WATER DISTRIBUTION SYSTEM OPERATOR – "Water Distribution System Operator" shall mean the Person or Persons who assume through the District Permit process legal responsibility for the proper performance of the requirements of a Water Distribution System Permit holder as defined in the Rules and Regulations and/or in conditions attached to a Permit.

WATER EFFICIENT LANDSCAPE WORKSHEET – "Water Efficient Landscape Worksheet" shall mean the form used in the Landscape Package to calculate the Water Budget for a landscape. The form is found in Appendix B of the Landscape Package.

WATER FEATURE – "Water Feature" shall mean a design element where open water performs an aesthetic or recreational function. Water Features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and Swimming Pools where water is artificially supplied. The surface area of Water Features is included in the high water use Hydrozone of the Landscape Area. Constructed facilities used for Site waste water treatment or Storm Water Control Measures that are not irrigated and used solely for water treatment or storm water retention are not considered Water Features.

WATER METER – "Water Meter" means any measuring device intended to measure water usage. The term "Water Meter" shall have the same meaning as the term "Water Measuring Device."

WATER PERMIT – "Water Permit" shall mean a document issued by the MPWMD that authorizes a specific amount and type of water use on a Site.

WATER WASTE – "Water Waste" shall mean the indiscriminate, unreasonable, or excessive running or dissipation of water as defined in Rule 162.

WELL – "Well" means any device or method, mechanical or otherwise, for the

production of water from Groundwater supplies within the District excluding seepage pits and natural springs.

WUCOLS – "WUCOLS" shall mean the Water Use Classification of Landscape Species guide published by the University of California Cooperative Extension and the California Department of Water Resources 2014, as may be periodically updated.

Section Six: Effective Date

This ordinance shall take effect at 12:01 a.m. thirty days following adoption after second reading.

Section Seven: Severability

If any subdivision, paragraph, sentence, clause or phrase of this ordinance is, for any reason, held to be invalid or unenforceable by a court of competent jurisdiction, such invalidity shall not affect the validity or enforcement of the remaining portions of this ordinance, or of any other provisions of the Monterey Peninsula Water Management District Rules and Regulations. It is the District's express intent that each remaining portion would have been adopted irrespective of the fact that one or more subdivisions, paragraphs, sentences, clauses, or phrases be declared invalid or unenforceable.

PASSED AND ADOPTED on this 17th day of November 2025 on a motion by Director Edwards with a second by Director Paull by the following vote:

AYES: Edwards, Lindor, Paull, Gawain, Oglesby and Riley

NAYS: None

ABSENT: Daniels

I, David J. Stoldt, Secretary to the Board of Directors of the Monterey Peninsula Water Management District, hereby certify the foregoing ordinance was duly adopted on the 17th day of November 2025.

Dated: November 19, 2025

David J. Stoldt,
Secretary to the Board

Rule 142.1-L
Sample Water Efficient Landscape Worksheet

When the performance compliance option is selected, this worksheet is to be filled out by the project applicant or their designee and is required to be submitted with the Landscape Documentation Package. Additional rows or multiple sheets should be used if there are more than 10 Hydrozones. The ETWU (gallons per year) must be equal to or less than the MAWA (annual gallons allowed) to comply with the MPWMD Water Efficient Landscape Requirements (Rule 142.1).

Project Applicant: _____ **Phone Number:** _____

Email Address: _____ **Date:** _____

Project Address: _____ **APN:** _____ **(ETo [a])** (in./year): _____

Maximum Applied Water Allowance (MAWA):

MAWA = ETo [a] x 0.62 x [ETAF x RLA + 1.0 x SLA] = _____(Annual Gallons

Allowed) The maximum ETAF allowed in the MAWA equation must be equal to or below:

0.55 -- for Residential Regular Landscape Areas (RLA)

0.45 -- for Non-Residential Regular Landscape Areas (RLA)

1.0 -- for Special Landscape Areas (SLA)

Estimated Total Water Use (ETWU) Table: (see instructions)

A *Hydrozone (Number, letter, or other designation)*	*B* *Plant Factor [b] "PF"*	*C* *Irrigation Efficiency[c] "IE"*	*D* *Evapotranspiration Adjustment Factor ETAF = PF / IE*	*E* *Hydrozone Area (sq.ft.)*	*F* *Estimated Water Use "EWU" = D x E x ETo [a] x 0.62 (gallons/year)*
SLA -	NA	NA	1.0		
SLA -	NA	NA	1.0		
SLA -	NA	NA	1.0		
ETWU Total	NA	NA	NA	NA	
MAWA	NA	NA	NA	NA	

[a] Annual ETo for the nearest City from Table 142.1-1

[b] Plant Factor (PF) from WUCOLS:

Very Low	= -less than 0.1
Low	= 0.1 - 0.3
Moderate	= 0.4 - 0.6
High	= 0.7 - 1.0

[c] Average Irrigation System Efficiency (IE):

Overhead Irrigation	= 0.75
Drip Irrigation	= 0.81

WATER EFFICIENT LANDSCAPE WORKSHEET INSTRUCTIONS

1. **Reference Evapotranspiration.**

   a. Look up the Annual ETo [a] value for the nearest City using the Reference Evapotranspiration (ETo) Table provided in Table 142.1-1 and use this value in the EWU and MAWA calculations.

2. **Calculate the Maximum Applied Water Allowance (MAWA).**

   a. RLA is the total regular Landscape Area in square feet.

   b. SLA is the total Special Landscape Area in square feet.

   c. MAWA is calculated based on the maximum ETAF allowed for the type of Landscape Areas for the landscape project and is expressed as annual gallons allowed.

   d. Effective Precipitation. The following equation may be used to calculate MAWA:

3. **Residential landscapes**:

   MAWA = (ETo - Eppt) x (0.62) x [0.55 x RLA + 1.0 x SLA]

4. **Non-Residential landscapes**:

   MAWA = (ETo - Eppt) x (0.62) x [0.45 x RLA + 1.0 x SLA]

5. **Calculate the Estimated Total Water Use (ETWU).**

   a. Column A – List each Hydrozone using the label corresponding to the Landscape Design Plan.

   b. Columns B and C – Complete the ETWU table for each Hydrozone based on the Plant Water Use Factor (PF) and the average Irrigation Efficiency (IE). The PF is found in Water Use Classification of Landscape Species (WUCOLS).

   c. Column D – calculate the ETAF for each Hydrozone by dividing the PF (Column B) by the IE (column C); write the result in column D.

   d. Column E – for each Hydrozone measure and report:

      i. Regular Landscape Area (RLA) as defined in MPWMD Rule 11.

      ii. Special Landscape Areas (SLA), as defined in MPWMD Rule 11, are not included in RLA measurements.

   e. Column F – calculate the Estimated Water Use (EWU) for each Hydrozone by multiplying columns D, E, ETo [a] and 0.62 (conversion factor) and write the result in column F.

   f. ETWU – is the sum of EWU for each Hydrozone and is expressed as gallons per year.

6. **Compare ETWU with MAWA.**

The ETWU (gallons per year) must be equal to or less than the MAWA (annual gallons allowed) to comply with WELO.

Rule 142.1-M
Sample Certificate of Completion Package

This certificate is filled out by the project Applicant to certify that the landscape project has been installed in accordance with the MPWMD Water Efficient Landscape Requirements (Rule 142.1).

(a) Prescriptive Compliance Option is limited to elements 1, 2, and 4.

(b) Performance Compliance Option shall include all six (6) elements.

ELEMENT 1. PROJECT INFORMATION SHEET

Applicant Information

Name of Project Applicant (or designee if applicable):

Project Name:

Name of Property Owner (if different):

Title:

Street Address:

Water Supply Type (Circle One):
Potable / Recycled / Well / Other (specify):

City:

Water Purveyor:

Email:

Phone No.:

Company:

Project Address and Location:

Street Address:
City:
Zip Code:

Parcel Number:
Meter number(s) (if available):

ELEMENT 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE DOCUMENTATION PACKAGE

Certification by the designer of record that the landscape project has been installed per the approved Landscape Documentation Package per Rule 142.1-G and the applicable documents:

(A) Where there have been significant changes made in the field during construction, these As-Built Drawings or Record Drawings shall be included.

(B) A diagram of the irrigation plan showing Hydrozones shall be kept with the Automatic Irrigation Controller for subsequent management processes.

"I/we certify that based upon periodic site observations, the work has been completed in accordance with MPWMD Water Efficient Landscape Requirements and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package."

Primary Designer of Record Signature

Date

Secondary Designer of Record Signature

Date

ELEMENT 3. SOIL MANAGEMENT REPORT

Attach Soil Management Report, if not previously submitted with the Landscape Documentation Package per MPWMD Rule 142.1-I-1.

Attach documentation verifying implementation of recommendations from the soil analysis management report.

ELEMENT 4. IRRIGATION SCHEDULING PARAMETERS

Attach irrigation scheduling parameters used to set the Automatic Irrigation Controller per MPWMD Rule 142.1-I-6.

ELEMENT 5. LANDSCAPE AND IRRIGATION MAINTENANCE SCHEDULE

Attach landscape and irrigation maintenance schedule per MPWMD Rule 142.1-I-7.

ELEMENT 6. IRRIGATION AUDIT REPORT

Attach Irrigation Audit report per MPWMD Rule 142.1-I-8.

PROJECT APPLICANT SIGNATURE:

"I/we certify that I/we have received copies of all the documents within the Certificate of Completion Package and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

Project Applicant (or designee) Signature Date

Please answer the questions below:

1. Date the Landscape Documentation Package was submitted to the local agency _____
2. Date the Landscape Documentation Package was approved by the local agency _____
3. Date that a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to MPWMD _____

Table 142.1-1. Monterey County Reference Evapotranspiration (ETo) Table[1]
(All values shown in inches)

Monterey County[2]	*Jan*	*Feb*	*Mar*	*April*	*May*	*Jun*	*July*	*Aug*	*Sept*	*Oct*	*Nov*	*Dec*	*Annual ETo*
Bradley	1.7	2.3	3.7	4.8	6.3	7.1	7.5	6.8	5.5	3.9	2.3	1.6	53.6
Carmel Valley Village	1.7	2.0	3.0	3.7	4.4	4.9	4.9	4.6	3.9	3.1	2.0	1.4	39.7
Carmel-by-the-Sea	1.7	2.0	2.9	3.5	3.9	4.0	3.9	3.7	3.4	2.9	2.0	1.5	35.4
Castroville	1.6	2.0	3.1	3.9	4.6	5.0	4.8	4.5	4.0	3.1	1.9	1.4	39.8
King City	1.7	2.2	3.5	4.7	6.0	6.7	6.9	6.3	5.2	3.8	2.3	1.5	50.9
Marina	1.6	2.0	3.1	3.8	4.4	4.7	4.5	4.3	3.8	3.1	2.0	1.4	38.7
Monterey	1.7	2.0	2.9	3.6	4.0	4.3	4.2	4.0	3.6	3.0	2.0	1.4	36.7
Moss Landing	1.6	2.0	3.1	3.9	4.6	4.8	4.6	4.3	3.9	3.1	1.9	1.4	39.1
Pacific Grove	1.7	1.9	2.9	3.5	3.9	4.1	3.8	3.6	3.4	2.9	1.9	1.4	35.1
Salinas	1.6	2.0	3.2	4.1	4.9	5.4	5.5	5.1	4.3	3.3	2.0	1.4	42.8
Seaside	1.7	2.0	3.0	3.7	4.3	4.6	4.5	4.2	3.8	3.1	2.0	1.4	38.2
Soledad	1.6	2.1	3.4	4.4	5.6	6.3	6.4	5.9	4.9	3.6	2.2	1.5	47.8

Table 142.1-1. Monterey County Reference Evapotranspiration (ETo) Table

[1] The defined boundaries of each city and place are from the California Open Data website. The shapefiles and description can be found at (https://data.ca.gov/dataset/ca-geographic-boundaries/resource/436fc714-831c-4070-b44b-b06dcde6bf18).

[2] The ETo values are monthly averages of Spatial California Irrigation Management Information System (CIMIS) for the 2004 to 2021 period. The Annual ETo is the sum of the monthly averages. ETo is expressed in inches.