Attachment E

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Before the Planning Commission in and for the County of Monterey, State of California

COUNTY OF MONTEREY (REF110056)
RESOLUTION NO. 15-027
Resolution by the Monterey County Planning Commission to recommend the Board of Supervisors:

1) Find the project exempt from CEQA pursuant to Sections 15307 and 15308 of the CEQA Guidelines;
2) Amend the Monterey County Code to:
   a. Add Chapter 16.64 – The Inland Water and Energy Efficient Landscape;
   b. Add Chapter 16.63 – The Coastal Water and Energy Efficient Landscape; and
3) Adopt a resolution approving the Monterey County Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation.

[REF150056, Water and Energy Efficient Landscape Ordinance, County-wide]

The Water and Energy Efficient Landscape Ordinance (REF110056) came on for public hearing before the Monterey County Planning Commission on March 25, 2015. Having considered all the written and documentary evidence, the administrative record, the staff report, oral testimony, and other evidence presented, the Planning Commission finds and decides as follows:

WHEREAS, water conservation is a primary concern locally and state-wide as it remains to be in limited supply while the demand for it continues to increase.

WHEREAS, Assembly Bill 1881 – Water Conservation in Landscaping Act (AB 1881) required the Department of Water Resources to develop and adopt an updated State Model Water Efficient Landscape Ordinance (State Model Ordinance). AB 1881 mandates local governments to either adopt the State Model Ordinance or an ordinance that is at least as effective in water conservation water by January 1, 2010. If neither has occurred by that date, the local agency is required to enforce the State Model Ordinance.

WHEREAS, consistent with the requirements of AB 1881, RMA-Planning staff initiated drafting the Water and Energy Efficient Landscape Ordinance and the Monterey County Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation.

WHEREAS, on November 8, 2012 and March 27, 2014, the concept of the Water and Energy Efficient Landscape Ordinance was brought before the Alternative Energy & Environment committee. No substantive comments were received and staff was directed to proceed as intended.

WHEREAS, on December 12, 2012 and April 9, 2014 the Planning Commission conducted public workshops to discuss AB 1881, compliance options for the County and provide comment on the proposed landscape regulations. Comments relative to the separation of inland and coastal regulations, existing landscapes, replanting, applicability differences, clarification of the definition for "developer installed" and "homeowner installed," and the requirement of using a certified professional were received. Following Planning Commission direction, regulations for inland and coastal areas have been separated and the remaining concerns are addressed in the proposed ordinances and landscape manual.

WHEREAS, on February 11, 2015, the Planning Commission held a public hearing to review the proposed landscape regulations and manual and make recommendation to the Board of Supervisors. Considering the drought conditions of Monterey County, the commission stressed the importance of water conservation and directed staff to re-analyze the proposed documents to ensure that the County strives to implement conservation measures beyond what is required by state law.

WHEREAS, the proposed landscape regulations meet the minimum requirement of state law. Pursuant to Section 65596 of the Government Code, specific elements within the State Model Ordinance have been incorporated in the inland and coastal regulations.

WHEREAS, the proposed Inland Water and Energy Efficient Landscape Ordinance is consistent with the existing regulations applicable to the inland areas of the County. Specifically, the proposed ordinance is consistent with Chapters 10.46 – Weed Control, 15.12 – Water Conservation, 15.16 – Waste Water Use, 16.12 – Erosion Control, 16.14 – Urban Stormwater Quality Management and Discharge Control, 18.44 – Residential and Commercial Water Conservation Measures, and 18.50 – Residential, Commercial and Industrial Water Conservation Measures of the Monterey County Code. The proposed ordinance is consistent with the 2010 General Plan, area plans, and the Monterey County Zoning Ordinance Title 21.

WHEREAS, On July 22, 1997, the Monterey County Water Resources Agency (WRA) adopted Ordinance No. 3932, addressing water efficiency in landscaping through the use of drought tolerant planting, encouraging the use of non-potable water for landscape irrigation, and limiting the use of turf grass. The proposed Inland Water and Energy Efficient Landscape Ordinance is consistent with WRA Ordinance No. 3932 as it requires drought tolerant planting, encourages the use of recycled water and stormwater for irrigation and limits turf area.

WHEREAS, the proposed Inland Water and Energy Efficient Landscape Ordinance is consistent with the water conservation measures required by the Monterey Peninsula Water Management District (MPWMD) and the Marina Coast Water District (MCWD). Certain inland areas of unincorporated Monterey County lie within the jurisdictional boundaries of the MPWMD and MCWD, and therefore are subject to their regulations. MPWMD Rule 142, Water Efficiency Standards, requires landscaping to be consistent with the State Model Ordinance. MCWD Ordinance No. 40 and Section 3.36.030S.2, Water Conservation, of the District Code requires new construction to conform to the requirements of the State Model Ordinance. The proposed inland ordinance is consistent with the State Model Ordinance and therefore is consistent with these regulations.

WHEREAS, adoption of the Inland Water and Energy Efficient Landscape ordinance implements the 2010 Monterey County General Plan. The conservation of potable water and maximizing ground water recharge are main principles of General Plan Policy Nos.

PS-2.8; PS-3.11; PS-3.12; and OD-5.6. The inland ordinance implements these policies as it requires low water use, drought tolerant, and native or native compatible landscape planting; water efficient irrigation systems; and incorporating landscape techniques to capture and maintain stormwater onsite. The inland ordinance and landscape manual implements General Plan Policy Nos. OS-5.14 and S-4.28 as they prohibit the use and encourages eradication of invasive plants, requires incorporation of fire-resistant planting, and a suggested plant list containing drought tolerant fire-resistant plants is provided.

WHEREAS, the proposed Coastal Water and Energy Efficient Landscape Ordinance is consistent with the 1982 Monterey County General Plan. The ordinance incorporates water conservation measures, drought resistant native and native compatible species and the encouragement of energy savings, consistent with 1982 General Plan Policy Nos. 6.1.2; 7.2; 13.1; 16.2.9; 26.1.7; 40.2.1; and 53.1.3.

WHEREAS, the proposed Coastal Water and Energy Efficient Landscape ordinance is consistent with the existing regulations applicable to the coastal areas of the County. Specifically, the proposed ordinance is consistent with Chapters 10.46 – Weed Control, 15.12 – Water Conservation, 15.16 – Waste Water Use, 16.12 – Erosion Control, 16.14 – Urban Stormwater Quality Management and Discharge Control, 18.44 – Residential and Commercial Water Conservation Measures, and 18.50 – Residential, Commercial and Industrial Water Conservation Measures of the Monterey County Code. In addition, the proposed ordinance is consistent with the coastal implementation plans and the Monterey County Zoning Ordinance (Title 20)..

WHEREAS, On July 22, 1997, the Monterey County Water Resources Agency (WRA) adopted Ordinance No. 3932, addressing water efficiency in landscaping through the use of drought tolerant planting, encouraging the use of non-potable water for landscape irrigation, and limiting the use of turf grass. The proposed Coastal Water and Energy Efficient Landscape Ordinance is consistent with WRA Ordinance No. 3932 as it requires drought tolerant planting, encourages the use of recycled water and stormwater for irrigation and limits turf area.

WHEREAS, the proposed Coastal Water and Energy Efficient Landscape Ordinance is consistent with the water conservation measures required by the Monterey Peninsula Water Management District (MPWMD) and the Marina Coast Water District (MCWD). Certain coastal areas of unincorporated Monterey County lie within the jurisdictional boundaries of the MPWMD and MCWD, and therefore are subject to their regulations. MPWMD Rule 142, Water Efficiency Standards, requires landscaping to be consistent with the State Model Ordinance. MCWD Ordinance No. 40 and Section 3.36.030S.2, Water Conservation, of the District Code requires new construction to conform to the requirements of the State Model Ordinance. The proposed coastal ordinance is consistent with the State Model Ordinance and therefore is consistent with these regulations.

WHEREAS, adoption of the Coastal Water and Energy Efficient Landscape Ordinance does not require an amendment to the Local Coastal Program and certification by the California Coastal Commission. Correspondence from the California Coastal Commission dated August 7, 2014 states that the "existing regulations of the LCP appear to adequately cover the issue of water conservation/water efficiency in landscaping without the need to add any references to this new ordinance" Therefore, the Planning Commission may recommend the Board of Supervisors approve the coastal ordinance without certification by the California Coastal Commission.

WHEREAS, on November 8, 2012 and March 27, 2014, the concept and approach for developing the landscape regulations was presented to the Alternative Energy & Environment committee (AEE) for input. No substantial comments were received and staff was directed to proceed as intended.

WHEREAS, on December 11, 2013, the landscape manual was submitted to local landscape architects, landscape contractors, and nurseries for review and comment. Comments were received and incorporated when and where appropriate.

WHEREAS, on August 7, 2014, the landscape manual was presented to the Monterey County Inter-Agency Review Committee for review and comment. Comments were received by the Office of the Agricultural Commissioner, the Environmental Health Bureau, the Monterey County Regional Fire District, and Cal Fire San Benito-Monterey. Comments relative to graywater, wastewater treatment, septic areas, grading, suggested plant lists, and fuel management were received. The manual was subsequently modified to incorporate these comments and clarified to address these issues.

WHEREAS, the Monterey County Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation is intended to assist applicants in understanding the technical requirements contained in the proposed ordinances as it contains detailed descriptions and examples to assist applicants and landscape designers in preparing landscape submittal packages, including recommended plant lists. The landscape manual is applicable county-wide and is intended to serve as a tool to provide property owners with a greater understanding of the benefits of efficient water and energy use in landscaping, whether their landscape project is applicable to the ordinance requirements or not.

WHEREAS, adoption of the Inland Water and Energy Efficient Landscape Ordinance, the Coastal Water and Energy Efficient Landscape Ordinance, and the Monterey County Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation is exempt from environmental review pursuant to Sections 15307 and 15308 of the CEQA Guidelines. Applying landscape requirements to projects will result in improving water and energy efficiency, thereby reducing water and energy consumption through landscape design. Consistent with Sections 15307 and 15308 of the CEQA Guidelines, adoption and implementation of the ordinances and manual is an action taken by the County, as authorized by state law (AB 1881), to assure the maintenance, restoration, or enhancement of a natural resource and the environment (water and energy) through a regulatory process involving procedures (landscape and irrigation design requirements and the submittal and required approval of a landscape package) for the protection of the environment.

WHEREAS, the provisions in Section 16.64.030.A of the Inland Water and Energy Efficient Landscape Ordinance and 16.63.030.A of the Coastal Water and Energy Efficient Landscape Ordinance do not apply to landscapes associated with grading or building permits issued prior to enactment of the ordinances but have not received final inspection.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Planning Commission does hereby recommend the Board of Supervisors:

1. Find the project categorically exempt from the provisions of CEQA pursuant to Sections 15307 and 15308 of the CEQA Guidelines;
2. Amend the Monterey County Code to:

a. Add Chapter 16.64 – The Inland Water and Energy Efficient Landscape ordinance, as shown in **Attachment 1**;
b. Add Chapter 16.63 – The Coastal Water and Energy Efficient Landscape ordinance, as shown in **Attachment 2**; and

3. Adopt a resolution approving the Monterey County Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation, as shown in **Attachment 3**.

PASSED AND ADOPTED this 25th day of March, 2015 upon motion of Commission Brown, seconded by Commission Rochester, by the following vote:

AYES: Brown, Getzelman, Rochester, Salazar, Diehl, Roberts, Hert, Padilla, Mendez
NOES: None
ABSENT: Vandevere
ABSTAIN: None

Laura M. Lawrence, Acting Secretary

ATTACHMENT 1

PROPOSED INLAND WATER AND ENERGY EFFICIENT LANDSCAPE ORDINANCE (16.64)

ORDINANCE No. _____

AN ORDINANCE OF THE COUNTY OF MONTEREY, STATE OF CALIFORNIA, ADDING CHAPTER 16.64 TO THE MONTEREY COUNTY CODE RELATING TO LANDSCAPE DESIGN, WATER CONSERVATION AND ENERGY EFFICIENCY PRACTICES FOR LANDSCAPING IN INLAND AREAS

County Counsel Summary

This ordinance adds Chapter 16.64 to Chapter 16 of the Monterey County Code to address Water and Energy Efficient Landscaping in the inland areas. This ordinance authorizes the promulgation of regulations for certain landscape projects within the inland areas of the County of Monterey. The regulations will require projects to install water efficient planting and irrigation, as well as energy efficient landscape components and design. This ordinance authorizes application fees for the processing of landscape projects, and provides for enforcement and penalties for violations of this ordinance.

The Board of Supervisors of the County of Monterey ordains as follows:

SECTION 1. FINDINGS AND DECLARATIONS.

A. Water supply in Monterey County continues to be the region's primary resource constraint. The potential exists that Monterey County may experience a threat to public health, safety, and welfare due to a dwindling available water supply to meet expanding development demands.

B. Water use and energy consumption are inherently linked. Implementation of water conservation measures in new and rehabilitated landscapes will result in secondary energy savings associated with the corresponding reduction in demand, production and transport of water resources.

C. 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.

D. 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 (State Model Ordinance). AB 1881 mandates that local governments either adopt the State Model Ordinance 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 local agency is required to enforce the State Model Ordinance.

E. On February 5, 2010, the County of Monterey notified the DWR that the County "intends to follow the Department of Water Resources' updated Model Efficient Landscape Ordinance."

F. In accordance with section 65595(c)(1) of the Government Code, Monterey County intends to adopt a local ordinance that meets the unique needs of the County and is at least as effective in conserving water as the State Model Ordinance. Pursuant to Section 65596 of the Government Code, specific elements were identified to be included within the State Model Ordinance and these elements have been incorporated in the proposed Inland Water and Energy Efficient Landscape ordinance (inland ordinance) as well as explained in the landscape manual; meeting the minimum requirement of state law.

G. The Monterey County Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation (landscape manual) has been developed to work in conjunction with and is referenced in the inland ordinance; providing a document explaining regulations and technical information. The landscape manual shall be approved separately by resolution of the Board of Supervisors, allowing modification without requiring amendment to the inland ordinance as new technology for water and energy efficiency becomes available, or if new plants were identified as invasive or fire resistant.

H. The inland ordinance shall apply to non-coastal areas of unincorporated Monterey County.

I. The inland ordinance is consistent with and supportive of water conservation measures codified in the 2010 General Plan, area plans, and the Monterey County Code.

1. Regulations contained within the Inland Landscape Ordinance are consistent with the 2010 General Plan. In addition, adoption of the Inland Landscape Ordinance implements specific policies of the general plan (see subsection J).

2. Regulations contained within the inland ordinance address water conservation, groundwater recharge, eradication of invasive plants and the retention and use of native and native compatible plants. This is consistent with supplemental policies of the seven (7) area plans and two (2) master plans adopted as part of the 2010 General Plan including: CACH-5.1; CV-3.10; CV-53; CSV-3.2; CSV-5.1; GMP-3.14; GS-3.2; NC-3.3; SC-5.1; Fort Ord Master Plan Hydrology and Water Quality Policy A-1; and Fort Ord Master Plan Biological Resource Policies B-1 and B-2.

3. Chapter 18.44 of the Monterey County Code (MCC) requires low water use landscape material (drought tolerant or native plant material and low precipitation sprinkler heads such as bubblers, drip irrigation systems and timing devices) as part of new construction in areas of the County served by California American Water Service Company. Regulations contained in the inland ordinance are consistent with this chapter. Furthermore, projects exempt from the inland ordinance, but subject to MCC Chapter 18.44, are not affected by the adoption of the ordinance or approval of the landscape manual.

4. Chapter 18.50 of the Monterey County Code is applicable to the Greater Salinas Planning Areas, Toro Planning Area, Greater Monterey Peninsula Planning Area, and a portion of the North County Planning Area. This chapter requires that landscape development for new construction include low water use or native plant material, low precipitation sprinkler heads, bubblers, drip irrigation systems and timing devices. Regulations contained in the Inland Landscape Ordinance are consistent with Monterey Code Chapter 18.50. Furthermore, projects exempt from the Inland Landscape Ordinance, but subject to Chapter 18.44, are not affected by adoption of the ordinance or approval of the Landscape Manual.

5. The Inland Landscape Ordinance is consistent with the existing regulations applicable to the inland areas of the County contained within Chapters: 10.46 – Weed Control; 15.12 – Water Conservation; 15.16 – Waste Water Use; 16.12 – Erosion Control; and 16.14 – Urban Stormwater Quality Management and Discharge Control of the Monterey County Code.

J. Adoption of the inland ordinance will result in implementation of the following 2010 Monterey County General Plan policies:

1. Policy No. OS-5.6 requires utilization of native, native compatible and drought resistant species in fulfilling landscaping requirements. The inland ordinance implements this policy as it requires incorporation of native and/or native compatible drought tolerant planting. As supplemental information, the landscape manual includes a recommended list of native and/or native compatible drought tolerant plants.

2. Policy Nos. OS-5.14 and S-4.28 encourages the exclusion of invasive plants and requires the County to provide a list of fire-resistant plants. The inland ordinance implements this policy as it prohibits the use and encourages the eradication of invasive plants. As supplemental information, the landscape manual includes a recommended list fire resistant plants as well as a list of prohibited known invasive plants.

3. Policy No. PS-2.8 requires all projects to be designed to increase runoff retention, protect water quality, and enhance groundwater recharge through water impoundments, protection and planting of vegetation, use of permeable paving materials, bioswales, water gardens, and cisterns. Techniques such as these and other Low Impact Development (LID) techniques are recommended in the inland ordinance and supplemental information is contained in the landscape manual.

4. Policy No. PS-3.11 requires the County to establish an ordinance identifying conservation measures that reduce potable water demand. The primary function of the inland ordinance is to increase water efficiency resulting in reducing the use of potable water.

5. Policy No. PS-3.12 requires the County to maximize the use of recycled water. The inland ordinance implements this policy as it requires landscape projects to incorporate recycled water for irrigation wherever recycle water is available. Furthermore, applicants are incentivized to irrigate with recycled water as it results in obtaining additional credit in the water budget calculation.

K. The County of Monterey has adopted the 2010 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, also known as CALGreen. The water and energy conservation measures contained in the inland ordinance and landscape manual are consistent with support implementation of the County's green building requirements.

SECTION 2. SECTION 16.64 OF THE MONTEREY COUNTY CODE IS ADDED AS FOLLOWS:

CHAPTER 16.64
STANDARDS FOR LANDSCAPING (INLAND)

Sections:

16.64.010 Purpose.

The purpose of this Chapter is to provide landscape standards that minimize water use, eliminate water waste, and maximize energy efficiency by requiring low water landscape plantings, irrigation methods, and low energy lighting and ornamental landscape features in the inlands areas of the unincorporated Monterey County.

16.64.020 Definitions.

The following definitions apply to this Chapter:

A. "Applied water" means the portion of water supplied by the irrigation system to the landscape.

B. "Backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

C. "California Invasive Plant Inventory" means the California Invasive Plant Inventory maintained by the California Invasive Plant Council.

D. "Certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

E. "Certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

F. "Check valve" or "anti-drain valve" means a valve located under a sprinkler head or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

G. "Controller" means 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 on-site sensor data (e.g., soil moisture) to adjust irrigation schedules.

H. "Developer installed" means a private development project where the developer has installed landscaping in conjunction with property improvements such as, but not limited to, construction of single family and multi-family dwellings and land divisions. For the purposes of this Chapter, a developer is a private entity undertaking speculative real estate such as tract subdivisions, master planned communities and condominium complexes resulting in the sale or lease of a residential product.

I. "Drip irrigation" means 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.

J. "Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

K. "Energy efficient landscape" means any new or rehabilitated landscape, public or private, that helps a project achieve a minimum 15% reduction in energy use when compared to the State's mandatory energy efficiency standards.

L. "Energy efficient lighting system" means any outdoor landscape lighting system consisting of at least 90 percent ENERGY STAR qualified hard-wired fixtures, solar powered lighting, and/or systems that employ programmable photocontrol or astronomical time-switch controls that automatically switch off when daylight is available.

M. "Established landscape" means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

N. "Estimated Total Water Use" (ETWU) means the total water used for the landscape.

O. "ET adjustment factor" means, except for Special Landscape Areas, a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency. A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. For the purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET Adjustment Factor is (0.7) = (0.5/0.71).

P. "Evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

Q. "Flow rate" means 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.

R. "Hardscapes" means any durable surface material (pervious or impervious).

S. "High water use plant" means any plant categorized as high water need by the water use classification of landscape species guide.

T. "Homeowner installed" means any landscaping installed by a private individual hired by a homeowner for a single family residence, accessory dwelling units and/or accessory structures. A homeowner, for purposes of this Chapter, is a person who occupies the dwelling he or she owns or leases the property to another individual or family. This excludes speculative homes, which are not owner-occupied dwellings.

U. "Hydrozone" means a portion of the landscaped area having plants with similar water needs and served by a valve or set of valves with the same schedule. A hydrozone may be irrigated or non-irrigated.

V. "Infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

W. "Invasive plant" means a species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. "Noxious weeds" means any weed designated by the Weed Control Regulations in the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are maintained at the California Invasive Plant Inventory, USDA invasive, noxious weeds database, and the Landscape Manual.

X. "Irrigation audit" means 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.

Y. "Irrigation efficiency" (IE) means 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 minimum average irrigation efficiency for purposes of this ordinance is 0.71. Greater irrigation efficiency can be expected from well-designed and maintained systems.

Z. "Irrigation meter" means a separate meter that measures the amount of water used for items such as lawns, washing exterior surfaces, washing vehicles, or filling pools.

AA. "Landscape architect" means a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615.

BB. "Landscape area" or "landscape project" means all the planting areas, turf areas, and water features in subject to the Maximum Applied Water Allowance calculation. Planted areas dedicated to agricultural cultivation and private vegetable gardens and orchards are not included. 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).

CC. "Landscape contractor" means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

DD. "Landscape Manual" means the County of Monterey Landscape Manual – Standards and Specified Performance Requirements for the Landscape Water Use and Irrigation prepared pursuant to Section 16.64.040 of this Chapter.

EE. "Landscape Package (application)" means the landscape materials required to be submitted for review and approval by the Director of the RMA-Planning pursuant to Section 16.64.050 of this Chapter.

FF. "Lateral Line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

GG. "Local Water Purveyor" means any entity, including a public agency, city, county or private water company that provides retail water service.

HH. "Low volume irrigation" means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

II. "Low water use plant" means any plant categorized as low water need by the water use classification of landscape species (WUCOLS) guide.

JJ. "Main line" means the pressurized pipeline that delivers water for the water sources to the valve or outlet.

KK. "Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area.

LL. "Microclimate" means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

MM. "Mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

NN. "Moderate water use plant" means any plant categorized as moderate water need by the water use classification of landscape species (WUCOLS) guide.

OO. "Mulch" means 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 weeks, moderating soil temperature, and preventing soil erosion.

PP. "New construction" means, for the purposes of this ordinance, a new public or private building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

QQ. "Operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

RR. "Overhead irrigation systems" means systems that deliver water through the air (e.g., pop-ups, impulse sprinklers, spray heads, rotors, micro-sprays, etc).

SS. "Overspray" means the irrigation water that is delivered beyond the landscape area, wetting pavements, walks, structures, or other non-landscaped areas.

TT. "Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

UU. "Pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.

VV. "Plant factor" or "plant water use factor" is a value, when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this ordinance, the plant factor range for very low water use plants is less than 0.1, the plant factor range for low water use plants is 0.1 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the Department of Water Resources 2000 publication "Water Use Classification of Landscape Species."

WW. "Planting Plan" is a plan that is consistent with the requirements outlined in Section 16.64.060 of this Chapter.

XX. "Precipitation rate" means the rate of application of water measured in inches per hour.

YY. "Rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.

ZZ. "Recycled water", "reclaimed water", or "treated sewage effluent water" means 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.

AAA. "Recreational Area" means public areas within residential development projects or recreational facilities dedicated to active play such as parks, sports fields and golf courses where natural turf provides a playing surface.

BBB. "Reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year, and is an estimate of the evapotranspiration of a large field of four- to seven-inch 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.

CCC. "Rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, or design review, and the modified landscape area is at least 50% of the total landscape area.

DDD. "Run off" means 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.

EEE. "Soil moisture sensing device" or "soil moisture sensor" means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

FFF. "Soil texture" means the classification of soil based on its percentage of sand, silt, and clay.

GGG. "Special Landscape Area" (SLA) means an area of the landscape irrigated with recycled water, water features using recycled water, and areas dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface.

HHH. "Stormwater Control Facility" means a stormwater management feature intended to improve the quality of runoff leaving the site. For the purposes of this ordinance, stormwater control facilities

III. "Sprinkler head" means a device which delivers water through a nozzle.

JJJ. "Station" means an area served by one valve or by a set of valves that operate simultaneously.

KKK. "Turf" means 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.

LLL. "Valve" means a device used to control the flow of water in the irrigation system.

MMM. "Water conserving plant species" means a plant species identified as having a low plant factor.

NNN. "Water feature" means 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. Constructed facilities used for on-site wastewater treatment or stormwater control measures that are not irrigated and used solely for water treatment or stormwater retention are not considered water features.

OOO. "Water use classification of landscape species guide" (WUCOLS) means the water use classification of landscape species guide published by the University of California Cooperative Extension, the California Department of Water Resources, and the United States Bureau of Reclamation, as it currently exists or may be amended in the future.

PPP. "Watering window" means the time of day irrigation is allowed.

QQQ. "Weather-based self-adjusting irrigation controller" means a system component that uses local weather and landscape conditions to automatically adjust irrigation schedules to actual conditions on the site or historical weather data.

RRR. "Xeriscape" means a landscaping method developed especially for arid and semiarid climates that utilizes water-conserving techniques (such as the use of drought-tolerant plants, mulch, and efficient irrigation) to balance hydrology at the parcel level.

16.64.030 Applicability.

A. The provisions of this Chapter shall apply to the following landscape projects:

1. New construction and rehabilitated landscape projects with landscape areas equal to or greater than 2,500 square feet for Public Agency developments in all zoning districts, requiring a grading permit, building permit, or design review.

2. New construction and rehabilitated landscape projects with landscape areas equal to or greater than 2,500 square feet for non-residential private developments in non-residential zoning districts, requiring a grading permit, building permit, or design review.

3. New construction and rehabilitated landscapes with landscape areas greater than 2,500 square feet for all residential projects in all zoning districts which allow residential uses that is developer installed, requiring a grading permit, building permit, or design review.

4. New construction and rehabilitated landscapes with landscape areas greater than 5,000 square feet for all residential projects in all zoning districts which allow residential uses that is homeowner installed, requiring a grading permit, building permit, or design review.

B. Landscaping for parking areas shall be consistent with the requirements of the designated zoning district and Sections16.64.060; 16.64.070; 16.64.080; and 16.64.090 of this Chapter.

C. Exceptions. This Chapter does not apply to:

1. Registered local, state or federal historical sites;
2. Ecological restoration projects that do not require a permanent irrigation system;
3. Mined-land reclamation projects that do not require a permanent irrigation system;
4. Plant collections, as part of botanical gardens and arboretums open to the public;
5. Agricultural cultivation activities;
6. Construction of structures that do not include changes in existing landscape;
7. Changes in use of an existing structure that does not include changes to existing landscape;
8. Private edible plant gardens and/or orchards for personal and individual consumption;
9. Constructed wetlands or other landscaped areas that are not irrigated and used solely for on-site wastewater treatment;
10. New, existing or rehabilitated stormwater quality projects that are not irrigated and used solely for the purpose of improving runoff quality and/or retaining runoff for onsite infiltration;
11. Natural areas including, but not limited to: open space, native vegetative areas, and pervious or non-pervious hardscapes that do on require a permanent irrigation system;
12. Erosion control activities that do not require permanent irrigation systems such as hydroseeding; and
13. Existing cemeteries.

D. Landscape projects exempt from this Chapter may be subject to existing regulations that address water conservation and landscaping for the inland areas of Monterey County. This ordinance does not supersede other ordinances pertaining to water conservation previously adopted by the Board of Supervisors.

16.64.040 Landscape Manual.

The Board of Supervisors shall adopt, and may from time to time amend, the County of Monterey Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation (Landscape Manual) establishing guidelines to explain and implement this Chapter. The Landscape Manual shall clearly explain the specific procedures and technical requirements of this Chapter. The Landscape Manual shall contain the elements of the Landscape Documentation Package, Water Efficient Landscape Worksheet, Soil Management Report, Landscape Design Plan, Irrigation Design Plan, Grading Design Plan, and

Certificate of Completion. Should any provisions of the Landscape Manual conflict with any provisions of this Chapter, the provisions of this Chapter shall prevail.

16.64.050 Submittal Requirements of Landscape Package.

Prior to the issuance of grading permit or building permits, and prior to construction, a Landscape Package shall be submitted for review to RMA-Planning. The Landscape Package shall contain all information and documentation, in sufficient detail, as specified in this Chapter and the Landscape Manual. The Director of RMA-Planning shall approve the package once it has been verified that the proposed landscape project complies with the provisions of this Chapter, the provisions of the Landscape Manual, other applicable requirements of the Monterey County Code, and the conditions of any applicable land use permit or other entitlement.

16.64.060 Planting Plans.

The Planting Plan shall be submitted by the applicant as part of the Landscape Package. For the efficient use of water, the plan shall meet all the requirements, shown in sufficient detail, listed in this Chapter, the Landscape Manual, applicable requirements of the Monterey County Code, and conditions of approval for related land use permits or other entitlements.

A. The planting plan shall meet the following requirements:

1. Planting plans shall be drawn by a licensed architect, a licensed contractor, or any other person authorized to design a landscape.

2. Include grading design that minimizes soil erosion, runoff, and water waste.

3. Turf shall be limited to 20% of the landscape area or up to 1,500 square feet (whichever is lower), unless the turf area is designated as a Special Landscape Area and is dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface. Planting of turf is prohibited in the following conditions:

a. Slopes exceeding ten (10) percent;

b. Planting areas eight (8) feet wide or less; and

c. Street medians, traffic islands, planter strips, or bulb-outs of any size.

4. All non-turf plants shall be selected, spaced, and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.

5. Invasive plants are strictly prohibited and eradication of invasive plants is highly encouraged.

6. Selected plants shall include the use of native and/or native compatible species.

7. Landscape planting shall include the use of drought resistant species.

8. Landscape planting shall include the use of fire resistant plant species and shall be consistent with fire safe landscaping required by the designated Fire District and/or Chapter 18.56 – Wildfire Protection Standards in State Responsibility Areas of the Monterey County Code.

9. Plants with similar water use needs shall be grouped together in distinct hydrozones. Where irrigation is required, the distinct hydrozones shall be irrigated with separate valves.

10. Plants with low and high water use shall not be included in the same hydrozone.

B. Verification. Planting plans shall contain the following statement: "I _____ certify that this planting plan complies with all Monterey County landscaping requirements including, but not limited to, the use of native drought tolerant, non-invasive species, and limited turf." The verification shall be signed by a licensed landscape architect, a licensed landscape contractor, or any other person authorized to design a landscape.

16.64.070 Irrigation Design Plans.

The Irrigation Design Plan shall be submitted by the applicant as part of the Landscape Package. For the efficient use of water, an automated irrigation system shall meet all the requirements, shown in sufficient detail, listed in this Chapter, the Landscape Manual, applicable requirements of the Monterey County Code, conditions of approval for related land use permits or other entitlements, and be in compliance with the manufacturer's recommendations.

A. All irrigation design and specifications included in the irrigation plans shall meet the following requirements:

1. Irrigation plans shall be drawn by a licensed architect, a licensed contractor, a certified irrigation designer, or any other person authorized to design a landscape.

2. All irrigation systems shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas such as adjacent properties, hardscapes, roadways, or structures.

3. The irrigation system and its related components shall be planned and designed to allow for proper installation, management and maintenance.

4. The design of the irrigation system shall conform to the hydrozones delineated on the planting plans.

a. Separate valves shall be used to irrigate hydrozones with high water use plants and moderate or low water use plants.

5. All irrigation systems shall be designed and installed to meet irrigation efficiency criteria as described in the Maximum Applied Water Allowance (MAWA) and subject to the requirements listed in 16.64.090 of this Chapter.

6. Irrigation system features and design shall be consistent with the Landscape Manual.

B. Verification. The following statement shall be included within the irrigation plans: "I _____ certify that this landscaping plan complies with all Monterey County landscaping requirements including, but not limited to, the use of low flow and water conserving irrigation fixtures." The verification shall be signed by a licensed landscape architect, a licensed landscape contractor, or any other person authorized to design an irrigation plan.

16.64.080 Water Efficient Landscape Requirements.

A Water Efficient Landscape Worksheet shall be submitted by the applicant as part of the Landscape Package. To ensure landscape projects conserve water to the maximum extent possible, information included within the Water Efficient Landscape Worksheet shall be consistent with the requirements listed in this Chapter, the Landscape Manual, applicable requirements of the Monterey County Code, and conditions of approval for related land use permits or other entitlements.

A. Water budget calculations shall meet the following requirements:

1. The surface area of all water features shall be calculated as high water use and incorporated within a high water use hydrozone.

2. Temporarily irrigated areas shall be calculated as low water use and incorporated within a low water use hydrozone.

3. Water budget calculations for the Maximum Applied Water Allowance (MAWA) shall be calculated using the formula found in Section 5.B or Appendix B of the Landscape Manual.

a. Special Landscape Areas, as defined in Section 16.64.020.HHH of this Chapter, and areas irrigated with recycled water, are subject to MAWA with an Evapotranspiration Adjustment Factor (ETAF) not to exceed 1.0.

4. The calculation of a project's Estimated Total Water Use (ETWU) shall be performed using the formula found in Section 5.D or Appendix B of the Landscape Manual.

B. For calculation of the MAWA and ETWU, the project applicant shall use the annual evapotranspiration (ETo) values contained within Appendix C of the Landscape Manual.

C. Landscape projects subject to approval of this Chapter shall not apply water to the landscape in excess of the maximum amount of water allowed. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance.

D. Inefficient landscape irrigation from conditions such as runoff leaving the target landscape due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures is strictly prohibited.

E. Rain gardens, cisterns and other landscapes features and practices that increase rainwater capture and create opportunities for infiltration and/or onsite storage are recommended.

F. Landscape projects subject to the provisions of this Chapter shall incorporate the use of recycled water for irrigation when, in the determination of the County, recycled water is available and connection to recycled water is feasible.

1. All recycled water irrigation systems shall be designed and operated in accordance with all State and County laws and regulations related to recycled water use.

2. The installation of recycled water irrigation systems shall allow for the current and future use of recycled water, unless a written exemption has been granted pursuant to this subdivision F.

3. Irrigation systems and decorative water features shall use recycled water unless a written exemption has been granted by the local water purveyor stating that recycled water meeting all public health codes and standards is not available and will not be available for the foreseeable future.

16.64.090 Energy Efficiency.

A. Energy use and conservation measures within the landscape component of a building project shall be calculated as part of the building's overall energy efficiency budget pursuant to Chapter 18.12 of the Monterey County Code, Green Building Standards Code.

B. Landscape lighting shall be designed for energy efficiency and utilize one or both of the following:

1. ENERGY STAR qualified hard-wired fixtures.

a. All hard-wired lighting shall employ programmable photocontrol or astronomical time-switch controls that automatically switch off when daylight is available.

2. Solar powered lighting systems.

C. Landscape lighting exceptions. The following exterior lighting is exempt from the requirements of this Chapter:

1. Lighting required by a health of life safety statute ordinance or regulation, including but not limited to emergency lighting.

2. Exterior lighting for permanent buildings, structures, security, and signs.

3. Lighting used in or around swimming pools, water features or other locations subject to Article 680 of Title 24, Part 3, *California Electrical Code*.

16.64.100 Soils Management Report.

A soils management report shall be completed by the project applicant or his/her designee and submitted as part of the Landscape Package. In order to promote healthy plant

growth and prevent excessive erosion and runoff, the soil management report shall be consistent with the required information outlined in this Section and the applicable sections of the Landscape Manual.

A. The soils management report shall be prepared by a certified lab to evaluate soils relative to horticulture.

B. Soils samples shall be from the site and analyzed to the extent that quality top soil, soil limitations, and soil composition information necessary for planting has been identified.

C. The soils management report shall include recommendations for soil amendments based on the conditions of the site and the intended planting.

D. The soils analysis report shall be used in conjunction with the preparation of the planting and irrigation plans.

16.64.110 Application Fees.

A. The Board of Supervisors shall establish a schedule of fees for the processing of Landscape Package applications.

B. No Landscape Package application shall be deemed complete and processing shall not commence on any landscape plan check application until all required fees and/or deposits have been paid.

16.64.120 Inspections, Scheduling, and Maintenance.

A. Inspections.

1. Prior to the final of grading or building permits, landscape projects subject to the provisions of this Chapter are required to pass a final inspection by the Director of RMA-Planning (Director) or his designee to verify compliance with the approved Landscape Package.

2. No landscape project applicant shall be deemed to have complied with the provisions of this Chapter until a final inspection of the work has been completed by the Director or his designee.

3. Inspections shall not be construed to approve a violation of the provisions of this code. Inspections presuming to give authority to violate or cancel the provisions of this Chapter or other provisions of this code shall not be valid.

B. Irrigation scheduling. For the efficient use of water, all irrigation schedules shall be developed, managed and evaluated to utilize the minimum amount of water required to maintain plant health. The irrigation schedule shall be consistent with the requirements of this Section, the applicable sections of the Landscape Manual, and include the following:

1. The irrigation schedule shall be developed by a landscape architect, landscape contractor, or any other person authorized to install irrigation equipment.

2. The irrigation schedule shall factor irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that the applied water meets the Estimated Total Water Use (ETWU).

3. The irrigation schedule shall be submitted with the landscape certificate of completion pursuant to Section 16.64.130 of this Chapter.

C. Landscape planting and irrigation maintenance. In order to maintain plant health and functioning irrigation equipment, a landscape planting and irrigation maintenance schedule shall be developed incorporating the requirements of this Section, the applicable sections of the Landscape Manual, and include the following:

1. A regular maintenance schedule shall be developed by a landscape architect, landscape contractor, or any other person authorized to design and maintain landscape planting and irrigation.

2. A regular maintenance schedule shall include, but is not limited to routine inspection, adjustment, and repair of the irrigation system and its components.

3. A note shall be included stating that any replacements plants shall not exceed the water use for the hydrozone.

4. A regular maintenance schedule shall make provisions for irrigation inspections, systems tune-up, and system tests with distribution uniformity preventing overspray or run off that causes overland flow.

5. A regular maintenance schedule shall be submitted with the landscape Certificate of Completion consistent with Section 16.64.130 of this Chapter.

D. Obligations of Assignees or Successors.

1. All required landscaping shall be maintained for the life of the project in healthy condition, free from disease, pests, weeds, and trash.

2. Plants lost due to disease, destruction, or lifecycle shall be replaced and shall comply with all adopted standards for size, species, and irrigation. Replacement with different species is acceptable provided that the water use is lower or remains the same as what was previously approved.

16.64.130 Certificate of Completion.

Upon completion of the landscape project, but prior to occupancy or final of grading or building permits, the applicant shall submit a Certificate of Completion to RMA-Planning. The Certificate of Completion shall be consistent with the requirements of this Section and all applicable sections of the Landscape Manual.

A. Certificate of Completion – Form and Content.

1. The certificate of completion shall include: project information, certification for installation of the landscape planting and irrigation, the proposed irrigation scheduling, an irrigation audit, the proposed schedule for landscape planting and irrigation maintenance, and verification of implementing recommendations of the soils management report.

2. A copy of the approved certificate of completion form can be found in Appendix D of the Landscape Manual.

B. Signature of Certificate of Completion; as-built plans.

1. The certificate of completion shall be signed by either the signer of the planting plan, the person signing the irrigation plan, or the licensed landscape contractor who installed the landscape.

2. If significant changes were made during installation, as-built plans shall be included with the certification. As-built plans must be in conformance with Sections 16.64.060, 16.64.070, 16.64.080 and 16.64.090 of this Chapter.

16.64.140 Public Education.

The purpose of this section is to encourage reduction of excessive water use in landscaping through public education.

A. Existing landscapes installed prior to the enactment of Chapter 16.64, are encouraged to reduce water consumption through participation in the following programs. "Existing landscapes" means landscapes installed in any development in the unincorporated County of Monterey prior to the effective date of Ordinance No. ___ enacting Chapter 16.64.

1. Existing landscapes located within the Monterey Peninsula Water Management District are encouraged to participate in applicable landscape rebate programs, landscape water audit/budget analysis and/or any other available water conservation programs to the greatest extent feasible.

2. Applicable landscape located within the Marina Coast Water District for the unincorporated areas of Monterey County shall participate in the Water-Wise Landscape Incentive Program to the greatest extent feasible.

3. Existing landscapes located within the jurisdictional boundaries of the Pajaro Valley Water Management Agency are encouraged to participate in the Local Residential Water Conservation rebate programs to the greatest extent feasible.

4. Existing landscapes served by a Small Water System shall be consistent with the conservation measures identified in the system's Urban Water Conservation Plan.

5. Existing landscapes served by private wells in the unincorporated areas of Monterey County shall participate in the water conservation measures found within this Chapter and the Landscape Manual to the greatest extent feasible.

B. The Landscape Manual shall contain information promoting the efficient use of water in landscapes, and the benefits of doing so. The Landscape Manual shall include information to owners of new, single-family residential homes regarding the design, installation, management, and maintenance of water efficient landscapes. Information for the available programs listed in Section 16.64.140.A shall be incorporated in the Landscape Manual to encourage participation.

16.64.150 Enforcement and Penalties.

A. It shall be the duty of the Director of RMA-Planning to enforce the provisions of this Chapter. All departments, officials and public employees vested with the duty or authority to issue permits or licenses shall not issue a permit or license for uses, buildings or purposes in conflict with the provisions of this Chapter and any such permit or license issued in conflict with the provisions of this Chapter shall be null and void. The Director of RMA-Planning may delegate enforcement responsibilities to other County employees.

B. Any landscaping that is installed, constructed, altered, enlarged, converted, moved, or maintained contrary to the provisions of this Chapter, or failure to comply with any of the conditions of a permit or variance granted to implement this Chapter is declared to be unlawful and shall be subject to enforcement under Chapters 1.20 (Enforcement of Code) and 1.22 (Administrative Remedies for Code Enforcement) of the Monterey County Code. The County may, in its discretion, in addition to all other remedies, take such enforcement action as is authorized under the Monterey County Code and/or any other action authorized by law.

SECTION 3. SEVERABILITY. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance. The Board of Supervisors hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared invalid.

SECTION 4. This ordinance shall become effective on the thirty-first day following its adoption.

PASSED AND ADOPTED on this ___ day of _____, 20__, by the following vote:

AYES: Supervisors
NOES:
ABSENT:
ABSTAIN:

Simon Salinas, Chair
Monterey County Board of Supervisors

ATTEST:

GAIL T. BORKOWSKI
Clerk of the Board of Supervisors

By: _____
Deputy

APPROVED AS TO FORM:

WENDY S. STRIMLING
Senior Deputy County Counsel

ATTACHMENT 2

PROPOSED COASTAL WATER AND ENERGY EFFICIENT LANDSCAPE ORDINANCE (16.63)

ORDINANCE No. _____

AN ORDINANCE OF THE COUNTY OF MONTEREY, STATE OF CALIFORNIA, ADDING CHAPTER 16.63 TO THE MONTEREY COUNTY CODE RELATING TO LANDSCAPE DESIGN, WATER CONSERVATION AND ENERGY EFFICIENCY PRACTICES FOR LANDSCAPING IN THE COASTAL ZONE

County Counsel Summary

This ordinance adds Chapter 16.63 to Chapter 16 of the Monterey County Code to address Water and Energy Efficient Landscaping in the coastal zone. This ordinance authorizes the promulgation of regulations for certain landscape projects within the coastal areas of the County of Monterey. The regulations will require projects to install water efficient planting and irrigation, as well as energy efficient landscape components and design. This ordinance authorizes application fees for the processing of landscape projects, and provides for enforcement and penalties for violations of this ordinance.

The Board of Supervisors of the County of Monterey ordains as follows:

SECTION 1. FINDINGS AND DECLARATIONS.

A. Water supply in Monterey County continues to be the region's primary resource constraint. The potential exists that Monterey County may experience a threat to public health, safety, and welfare due to a dwindling available water supply to meet expanding development demands.

B. Water use and energy consumption are inherently linked. Implementation of water conservation measures in new and rehabilitated landscapes will result in secondary energy savings associated with the corresponding reduction in demand, production and transport of water resources.

C. 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.

D. 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 (State Model Ordinance). AB 1881 mandates that local governments either adopt the State Model Ordinance 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 local agency is required to enforce the State Model Ordinance.

E. On February 5, 2010, the County of Monterey notified the DWR that the County "intends to follow the Department of Water Resources' updated Model Efficient Landscape Ordinance."

F. In accordance with section 65595(c)(1) of the Government Code, Monterey County intends to adopt a local ordinance that meets the unique needs of the County and is at least as effective in conserving water as the State Model Ordinance. Pursuant to Section 65596 of the Government Code, specific elements were identified to be included within the State Model Ordinance and these elements have been incorporated in the proposed Coastal Water and Energy Efficient Landscape ordinance (coastal ordinance) as well as explained in the landscape manual; meeting the minimum requirement of state law.

G. The Monterey County Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation (landscape manual) has been developed to work in conjunction with and is referenced in the coastal ordinance; providing a document explaining regulations and technical information. The landscape manual shall be approved separately by resolution of the Board of Supervisors, allowing modification without requiring amendment to the coastal ordinance as new technology for water and energy efficiency becomes available, or if new plants were identified as invasive or fire resistant.

H. The coastal ordinance shall apply to the coastal areas of unincorporated Monterey County.

I. The coastal ordinance is consistent with and supportive of water conservation measures codified in the Monterey County Code as they apply to the coastal zone.

1. Chapter 18.44 of the Monterey County Code (MCC) requires low water use landscape material (drought tolerant or native plant material and low precipitation sprinkler heads such as bubblers, drip irrigation systems and timing devices) as part of new construction in areas of the County served by California American Water Service Company. Regulations contained in the coastal ordinance are consistent with this chapter. Furthermore, projects exempt from the coastal ordinance, but subject to MCC Chapter 18.44, are not affected by the adoption of the ordinance or approval of the landscape manual.

2. Chapter 18.50 of the Monterey County Code (MCC) is applicable to the Greater Salinas Planning Areas, Toro Planning Area, Greater Monterey Peninsula Planning Area, and a portion of the North County Planning Area (including the coastal zone). This chapter requires that landscape development for new construction include drought tolerant or native plant material and low precipitation sprinkler heads such as bubblers, drip irrigation systems and timing devices. Regulations contained in the coastal ordinance are consistent with this chapter. Furthermore, projects exempt from the coastal ordinance, but subject to MCC Chapter 18.50, are not affected by the adoption of the ordinance or approval of the landscape manual.

3. Regulations contained in the coastal ordinance are consistent with regulations contained in Chapters: 10.46 – Weed Control; 15.12 – Water Conservation; 15.16 – Waste Water Use; 16.12 – Erosion Control; and 16.14 – Urban Stormwater Quality Management and Discharge Control of the Monterey County Code.

J. The coastal ordinance is consistent with and supportive of water conservation measures codified in the coastal regulations contained in the 1982 General Plan, land use plans, coastal implementation plans and the Monterey County Zoning Ordinance (Title 20).

1. The coastal ordinance incorporates water conservation measures, drought resistant native and native compatible species and the encouragement of energy savings; consistent with 1982 Monterey County General Plan Policy Nos. 6.1.2; 7.2; 13.1; 16.2.9; 26.1.7; 40.2.1; and 53.1.3.

2. The North County Land Use Plan and Coastal Implementation Plan contain policies and regulations requiring incorporation of water conserving landscape measures, planting of native and native compatible vegetation and the eradication of invasive plant species. Regulations contained in the coastal ordinance address these measures and are therefore consistent with the North County Land Use Plan and Coastal Implementation Plan. Furthermore, projects exempt from the coastal ordinance, but subject to North County Land Use Plan and Coastal Implementation Plan, are not affected by adoption of the ordinance or approval of the landscape manual.

3. The Big Sur Land Use Plan and Coastal Implementation Plan contain policies and regulations requiring incorporation of water conserving landscape measures and the use of native and native compatible planting in landscapes. Regulations contained in the coastal ordinance address these measures and therefore are consistent with the Big Sur Land Use Plan and Coastal Implementation Plan. Furthermore, projects exempt from the coastal ordinance, but subject to Big Sur Land Use Plan and Coastal Implementation Plan, are not affected by adoption of the ordinance or approval of the landscape manual.

4. The Carmel Area Land Use Plan and Coastal Implementation Plan contain policies and regulations requiring incorporation of water conserving landscape measures and the use of drought resistant native and native compatible planting in landscapes. Regulations contained in the coastal ordinance address these measures and therefore are consistent with the Carmel Area Land Use Plan and Coastal Implementation Plan. Furthermore, projects exempt from the coastal ordinance, but subject to Carmel Area Land Use Plan and Coastal Implementation Plan, are not affected by adoption of the ordinance or approval of the landscape manual.

5. The Del Monte Forest Land Use Plan and Coastal Implementation Plan contain policies and regulations requiring incorporation of water conserving landscape measures, the use of drought tolerant native and native compatible planting in landscapes, and the prohibition of use and eradication of invasive plant species. Regulations contained in the coastal ordinance address these measures and therefore are consistent the Del Monte Forest Land Use Plan and Coastal Implementation Plan. Furthermore, projects exempt from the coastal ordinance, but subject to Del Monte Forest Land Use Plan and Coastal Implementation Plan, will not be affected by adoption of the ordinance or approval of the landscape manual.

K. Adoption of the coastal ordinance does not require an amendment to the Local Coastal Program and certification by the California Coastal Commission. Correspondence from the California Coastal Commission dated August 7, 2014 states that the "...existing regulations of the LCP appear to adequately cover the issue of water conservation/water efficiency in landscaping without the need to add any references to this new ordinance..." Therefore, the Board of Supervisors may adopt the ordinance without certification by the California Coastal Commission.

L. The County of Monterey has adopted the 2010 California Green Building Standards Code, California Code of Regulations, Title 24, Part 11, also known as CALGreen. The water

and energy conservation measures contained in the coastal ordinance and the landscape manual are consistent with and support implementation the County's green building requirements.

SECTION 2. SECTION 16.63 OF THE MONTEREY COUNTY CODE IS ADDED AS FOLLOWS:

CHAPTER 16.63
STANDARDS FOR LANDSCAPING (COASTAL)

Sections:

16.63.010 Purpose.

The purpose of this Chapter is to provide landscape standards that minimize water use, eliminate water waste, and maximize energy efficiency by requiring low water landscape plantings, irrigation methods, and low energy lighting and ornamental landscape features in the coastal areas of unincorporated Monterey County.

16.63.020 Definitions.

The following definitions apply to this Chapter:

A. "Applied water" means the portion of water supplied by the irrigation system to the landscape.

B. "Backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

C. "California Invasive Plant Inventory" means the California Invasive Plant Inventory maintained by the California Invasive Plant Council.

D. "Certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

E. "Certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade

organization or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

F. "Check valve" or "anti-drain valve" means a valve located under a sprinkler head or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

G. "Controller" means 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 on-site sensor data (e.g., soil moisture) to adjust irrigation schedules.

H. "Developer installed" means a private development project where the developer has installed landscaping in conjunction with property improvements such as, but not limited to, construction of single family and multi-family dwellings and land divisions. For the purposes of this Chapter, a developer is a private entity undertaking speculative real estate such as tract subdivisions, master planned communities and condominium complexes resulting in the sale or lease of a residential product.

I. "Drip irrigation" means 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.

J. "Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

K. "Energy efficient landscape" means any new or rehabilitated landscape, public or private, that helps a project achieve a minimum 15% reduction in energy use when compared to the State's mandatory energy efficiency standards.

L. "Energy efficient lighting system" means any outdoor landscape lighting system consisting of at least 90 percent ENERGY STAR qualified hard-wired fixtures, solar powered lighting, and/or systems that employ programmable photocontrol or astronomical time-switch controls that automatically switch off when daylight is available.

M. "Established landscape" means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

N. "Estimated Total Water Use" (ETWU) means the total water used for the landscape.

O. "ET adjustment factor" means, except for Special Landscape Areas, a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency. A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. For the purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET Adjustment Factor is (0.7) = (0.5/0.71).

P. "Evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

Q. "Flow rate" means 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.

R. "Hardscapes" means any durable surface material (pervious or impervious).

S. "High water use plant" means any plant categorized as high water need by the water use classification of landscape species guide.

T. "Homeowner installed" means any landscaping installed by a private individual hired by a homeowner for a single family residence, accessory dwelling units and/or accessory

structures. A homeowner, for purposes of this Chapter, is a person who occupies the dwelling he or she owns or leases the property to another individual or family. This excludes speculative homes, which are not owner-occupied dwellings.

U. "Hydrozone" means a portion of the landscaped area having plants with similar water needs and served by a valve or set of valves with the same schedule. A hydrozone may be irrigated or non-irrigated.

V. "Infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

W. "Invasive plant" means a species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. "Noxious weeds" means any weed designated by the Weed Control Regulations in the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are maintained at the California Invasive Plant Inventory, USDA invasive, noxious weeds database, and the Landscape Manual.

X. "Irrigation audit" means 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.

Y. "Irrigation efficiency" (IE) means 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 minimum average irrigation efficiency for purposes of this ordinance is 0.71. Greater irrigation efficiency can be expected from well-designed and maintained systems.

Z. "Irrigation meter" means a separate meter that measures the amount of water used for items such as lawns, washing exterior surfaces, washing vehicles, or filling pools.

AA. "Landscape architect" means a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615.

BB. "Landscape area" or "landscape project" means all the planting areas, turf areas, and water features in subject to the Maximum Applied Water Allowance calculation. Planted areas dedicated to agricultural cultivation and private vegetable gardens and orchards are not included. 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).

CC. "Landscape contractor" means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

DD. "Landscape Manual" means the County of Monterey Landscape Manual – Standards and Specified Performance Requirements for the Landscape Water Use and Irrigation prepared pursuant to Section 16.63.040 of this Chapter.

EE. "Landscape Package (application)" means the landscape materials required to be submitted for review and approval by the Director of the RMA-Planning Department pursuant to Section 16.63.050 of this Chapter.

FF. "Lateral Line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

GG. "Local Water Purveyor" means any entity, including a public agency, city, county or private water company that provides retail water service.

HH. "Low volume irrigation" means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and

bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

II. "Low water use plant" means any plant categorized as low water need by the water use classification of landscape species (WUCOLS) guide.

JJ. "Main line" means the pressurized pipeline that delivers water for the water sources to the valve or outlet.

KK. "Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area.

LL. "Microclimate" means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

MM. "Mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

NN. "Moderate water use plant" means any plant categorized as moderate water need by the water use classification of landscape species (WUCOLS) guide.

OO. "Mulch" means 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 weeks, moderating soil temperature, and preventing soil erosion.

PP. "New construction" means, for the purposes of this ordinance, a new public or private building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

QQ. "Operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

RR. "Overhead irrigation systems" means systems that deliver water through the air (e.g., pop-ups, impulse sprinklers, spray heads, rotors, micro-sprays, etc).

SS. "Overspray" means the irrigation water that is delivered beyond the landscape area, wetting pavements, walks, structures, or other non-landscaped areas.

TT. "Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

UU. "Pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.

VV. "Plant factor" or "plant water use factor" is a value, when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this ordinance, the plant factor range for very low water use plants is less than 0.1, the plant factor range for low water use plants is 0.1 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the Department of Water Resources 2000 publication "Water Use Classification of Landscape Species."

WW. "Planting Plan" is a plan that is consistent with the requirements outlined in Section 16.63.060 of this Chapter.

XX. "Precipitation rate" means the rate of application of water measured in inches per hour.

YY. "Rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.

ZZ. "Recycled water", "reclaimed water", or "treated sewage effluent water" means 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.

AAA. "Recreational Area" means public areas within residential development projects or recreational facilities dedicated to active play such as parks, sports fields and golf courses where natural turf provides a playing surface.

BBB. "Reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year, and is an estimate of the evapotranspiration of a large field of four- to seven-inch 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.

CCC. "Rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, or design review, and the modified landscape area is at least 50% of the total landscape area.

DDD. "Run off" means 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.

EEE. "Soil moisture sensing device" or "soil moisture sensor" means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

FFF. "Soil texture" means the classification of soil based on its percentage of sand, silt, and clay.

GGG. "Special Landscape Area" (SLA) means an area of the landscape irrigated with recycled water, water features using recycled water, and areas dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface.

HHH. "Stormwater Control Facility" means a stormwater management feature intended to improve the quality of runoff leaving the site. For the purposes of this ordinance, stormwater control facilities

III. "Sprinkler head" means a device which delivers water through a nozzle.

JJJ. "Station" means an area served by one valve or by a set of valves that operate simultaneously.

KKK. "Turf" means 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.

LLL. "Valve" means a device used to control the flow of water in the irrigation system.

MMM. "Water conserving plant species" means a plant species identified as having a low plant factor.

NNN. "Water feature" means 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. Constructed facilities used for on-site wastewater treatment or stormwater control measures that are not irrigated and used solely for water treatment or stormwater retention are not considered water features.

OOO. "Water use classification of landscape species guide" (WUCOLS) means the water use classification of landscape species guide published by the University of California Cooperative Extension, the California Department of Water Resources, and the United States Bureau of Reclamation, as it currently exists or may be amended in the future.

PPP. "Watering window" means the time of day irrigation is allowed.

QQQ. "Weather-based self-adjusting irrigation controller" means a system component that uses local weather and landscape conditions to automatically adjust irrigation schedules to actual conditions on the site or historical weather data.

RRR. "Xeriscape" means a landscaping method developed especially for arid and semiarid climates that utilizes water-conserving techniques (such as the use of drought-tolerant plants, mulch, and efficient irrigation) to balance hydrology at the parcel level.

16.63.030 Applicability.

A. The provisions of this Chapter shall apply to the following landscape projects:

1. New construction and rehabilitated landscape projects with landscape areas equal to or greater than 2,500 square feet for Public Agency developments in all zoning districts, requiring a grading permit, building permit, or design review.

2. New construction and rehabilitated landscape projects with landscape areas equal to or greater than 2,500 square feet for non-residential private developments in non-residential zoning districts, requiring a grading permit, building permit, or design review.

3. New construction and rehabilitated landscapes with landscape areas greater than 2,500 square feet for all residential projects in all zoning districts which allow residential uses that is developer installed, requiring a grading permit, building permit, or design review.

4. New construction and rehabilitated landscapes with landscape areas greater than 5,000 square feet for all residential projects in all zoning districts which allow residential uses that is homeowner installed, requiring a grading permit, building permit, or design review.

B. Landscaping for parking areas shall be consistent with the requirements of the designated zoning district and Sections16.63.060; 16.63.070; 16.63.080; and 16.63.090 of this Chapter.

C. Exceptions. This Chapter does not apply to:

1. Registered local, state or federal historical sites;

2. Ecological restoration projects that do not require a permanent irrigation system;

3. Mined-land reclamation projects that do not require a permanent irrigation system;

4. Plant collections, as part of botanical gardens and arboretums open to the public;

5. Agricultural cultivation activities;

6. Construction of structures that do not include changes in existing landscape;

7. Changes in use of an existing structure that does not include changes to existing landscape;

8. Private edible plant gardens and/or orchards for personal and individual consumption;

9. Constructed wetlands or other landscaped areas that are not irrigated and used solely for on-site wastewater treatment;

10. New, existing or rehabilitated stormwater quality projects that are not irrigated and used solely for the purpose of improving runoff quality and/or retaining runoff for onsite infiltration;

11. Natural areas including, but not limited to: open space, native vegetative areas, and pervious or non-pervious hardscapes that do on require a permanent irrigation system;

12. Erosion control activities that do not require permanent irrigation systems such as hydroseeding; and

13. Existing cemeteries.

D. Landscape projects exempt from this Chapter may be subject to existing regulations that address water conservation and landscaping for the coastal areas of Monterey County. This ordinance does not supersede other ordinances pertaining to water conservation previously adopted by the Board of Supervisors.

16.63.040 Landscape Manual.

The Board of Supervisors shall adopt, and may from time to time amend, the County of Monterey Landscape Manual – Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation (Landscape Manual) establishing guidelines to explain and implement this Chapter. The Landscape Manual shall clearly explain the specific procedures and technical requirements of this Chapter. The Landscape Manual shall contain the elements of the Landscape Documentation Package, Water Efficient Landscape Worksheet, Soil Management Report, Landscape Design Plan, Irrigation Design Plan, Grading Design Plan, and Certificate of Completion. Should any provisions of the Landscape Manual conflict with any provisions of this Chapter, the provisions of this Chapter shall prevail.

16.63.050 Submittal Requirements of Landscape Package.

Prior to the issuance of grading permit or building permits, and prior to construction, a Landscape Package shall be submitted for review to RMA-Planning. The Landscape Package shall contain all information and documentation, in sufficient detail, as specified in this Chapter and the Landscape Manual. The Director of RMA-Planning shall approve the package once it has been verified that the proposed landscape project complies with the provisions of this Chapter, the provisions of the Landscape Manual, applicable requirements of the Monterey County Code, and conditions of any applicable land use permit or other entitlement.

16.63.060 Planting Plans.

The Planting Plan shall be submitted by the applicant as part of the Landscape Package. For the efficient use of water, the plan shall meet all the requirements, shown in sufficient detail, listed in this Chapter, the Landscape Manual, applicable requirements of the Monterey County Code, and conditions of approval for related land use permits or other entitlements.

A. The planting plan shall meet the following requirements:

1. Planting plans shall be drawn by a licensed architect, a licensed contractor, or any other person authorized to design a landscape.
2. Include grading design that minimizes soil erosion, runoff, and water waste.
3. Turf shall be limited to 20% of the landscape area or up to 1,500 square feet (whichever is lower), unless the turf area is designated as a Special Landscape Area and is dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface. Planting of turf is prohibited in the following conditions:
   a. Slopes exceeding ten (10) percent;
   b. Planting areas eight (8) feet wide or less; and
   c. Street medians, traffic islands, planter strips, or bulb-outs of any size.
4. All non-turf plants shall be selected, spaced, and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.
5. Invasive plants are strictly prohibited and eradication of invasive plants is highly encouraged.
6. Selected plants shall include the use of native and/or native compatible species.
7. Landscape planting shall include the use of drought resistant species.
8. Landscape planting shall include the use of fire resistant plant species and shall be consistent with fire safe landscaping required by the designated Fire District and/or Chapter 18.56 – Wildfire Protection Standards in State Responsibility Areas of the Monterey County Code.

9. Plants with similar water use needs shall be grouped together in distinct hydrozones. Where irrigation is required, the distinct hydrozones shall be irrigated with separate valves.

10. Plants with low and high water use shall not be included in the same hydrozone.

B. Verification. Planting plans shall contain the following statement: "I _____ certify that this planting plan complies with all Monterey County landscaping requirements including, but not limited to, the use of native drought tolerant, non-invasive species, and limited turf." The verification shall be signed by a licensed landscape architect, a licensed landscape contractor, or any other person authorized to design a landscape.

16.63.070 Irrigation Design Plans.

The Irrigation Design Plan shall be submitted by the applicant as part of the Landscape Package. For the efficient use of water, an automated irrigation system shall meet all the requirements, shown in sufficient detail, listed in this Chapter, the Landscape Manual, applicable requirements of the Monterey County Code, conditions of approval for related land use permits or other entitlements, and be in compliance with the manufacturer's recommendations.

A. All irrigation design and specifications included in the irrigation plans shall meet the following requirements:

1. Irrigation plans shall be drawn by a licensed architect, a licensed contractor, a certified irrigation designer, or any other person authorized to design a landscape.

2. All irrigation systems shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas such as adjacent properties, hardscapes, roadways, or structures.

3. The irrigation system and its related components shall be planned and designed to allow for proper installation, management and maintenance.

4. The design of the irrigation system shall conform to the hydrozones delineated on the planting plans.

a. Separate valves shall be used to irrigate hydrozones with high water use plants and moderate or low water use plants.

5. All irrigation systems shall be designed and installed to meet irrigation efficiency criteria as described in the Maximum Applied Water Allowance (MAWA) and subject to the requirements listed in 16.63.090 of this Chapter.

6. Irrigation system features and design shall be consistent with the Landscape Manual.

B. Verification. The following statement shall be included within the irrigation plans: "I _____ certify that this landscaping plan complies with all Monterey County landscaping requirements including, but not limited to, the use of low flow and water conserving irrigation fixtures." The verification shall be signed by a licensed landscape architect, a licensed landscape contractor, or any other person authorized to design an irrigation plan.

16.63.080 Water Efficient Landscape Requirements.

A Water Efficient Landscape Worksheet shall be submitted by the applicant as part of the Landscape Package. To ensure landscape projects conserve water to the maximum extent possible, information included within the Water Efficient Landscape Worksheet shall be consistent with the requirements listed in this Chapter, the Landscape Manual, applicable requirements of the Monterey County Code, and conditions of approval for related land use permits or other entitlements.

A. Water budget calculations shall meet the following requirements:

1. The surface area of all water features shall be calculated as high water use and incorporated within a high water use hydrozone.

2. Temporarily irrigated areas shall be calculated as low water use and incorporated within a low water use hydrozone.

3. Water budget calculations for the Maximum Applied Water Allowance (MAWA) shall be calculated using the formula found in Section 5.B or Appendix B of the Landscape Manual.

a. Special Landscape Areas, as defined in Section 16.63.020.HHH of this Chapter, and areas irrigated with recycled water, are subject to MAWA with an Evapotranspiration Adjustment Factor (ETAF) not to exceed 1.0.

4. The calculation of a project's Estimated Total Water Use (ETWU) shall be performed using the formula found in Section 5.D or Appendix B of the Landscape Manual.

B. For calculation of the MAWA and ETWU, the project applicant shall use the annual evapotranspiration (ETo) values contained within Appendix C of the Landscape Manual.

C. Landscape projects subject to approval of this Chapter shall not apply water to the landscape in excess of the maximum amount of water allowed. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance.

D. Inefficient landscape irrigation from conditions such as: runoff leaving the target landscape due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures is strictly prohibited.

E. Rain gardens, cisterns and other landscapes features and practices that increase rainwater capture and create opportunities for infiltration and/or onsite storage are recommended.

F. Landscape projects subject to the provisions of this Chapter shall incorporate the use of recycled water for irrigation when, in the determination of the County, recycled water is available and connection to recycled water is feasible.

1. All recycled water irrigation systems shall be designed and operated in accordance with all State and County laws and regulations related to recycled water use.

2. The installation of recycled water irrigation systems shall allow for the current and future use of recycled water, unless a written exemption has been granted pursuant to this subdivision F.

3. Irrigation systems and decorative water features shall use recycled water unless a written exemption has been granted by the local water purveyor stating that recycled water meeting all public health codes and standards is not available and will not be available for the foreseeable future.

16.63.090 Energy Efficiency.

A. Energy use and conservation measures within the landscape component of a building project shall be calculated as part of the building's overall energy efficiency budget pursuant to Chapter 18.12 of the Monterey County Code, Green Building Standards Code.

B. Landscape lighting shall be designed for energy efficiency and utilize one or both of the following:

1. ENERGY STAR qualified hard-wired fixtures.

a. All hard-wired lighting shall employ programmable photocontrol or astronomical time-switch controls that automatically switch off when daylight is available.

2. Solar powered lighting systems.

C. Landscape lighting exceptions. The following exterior lighting is exempt from the requirements of this Chapter:

1. Lighting required by a health of life safety statute ordinance or regulation, including but not limited to emergency lighting.

2. Exterior lighting for permanent buildings, structures, security, and signs.

3. Lighting used in or around swimming pools, water features or other locations subject to Article 680 of Title 24, Part 3, *California Electrical Code*

16.63.100 Soils Management Report.

A soils management report shall be completed by the project applicant or his/her designee and submitted as part of the Landscape Package. In order to promote healthy plant growth and prevent excessive erosion and runoff, the soil management report shall be consistent with the required information outlined in this Section and the applicable sections of the Landscape Manual.

A. The soils management report shall be prepared by a certified lab to evaluate soils relative to horticulture.

B. Soils samples shall be from the site and analyzed to the extent that quality top soil, soil limitations, and soil composition information necessary for planting has been identified.

C. The soils management report shall include recommendations for soil amendments based on the conditions of the site and the intended planting.

D. The soils analysis report shall be used in conjunction with the preparation of the planting and irrigation plans.

16.63.110 Application Fees.

A. The Board of Supervisors shall establish a schedule of fees for the processing of Landscape Package applications.

B. No Landscape Package application shall be deemed complete and processing shall not commence on any landscape plan check application until all required fees and/or deposits have been paid.

16.63.120 Inspections, Scheduling, and Maintenance.

A. Inspections.

1. Prior to the final of grading or building permits, landscape projects subject to the provisions of this Chapter are required to pass a final inspection by the Director of RMA-Planning (Director) or his designee to verify compliance with the approved Landscape Package.

2. No landscape project applicant shall be deemed to have complied with the provisions of this Chapter until a final inspection of the work has been completed by the Director or his designee.

3. Inspections shall not be construed to approve a violation of the provisions of this code. Inspections presuming to give authority to violate or cancel the provisions of this Chapter or other provisions of this code shall not be valid.

B. Irrigation scheduling. For the efficient use of water, all irrigation schedules shall be developed, managed and evaluated to utilize the minimum amount of water required to maintain plant health. The irrigation schedule shall be consistent with the requirements of this Section, the applicable sections of the Landscape Manual, and include the following:

1. The irrigation schedule shall be developed by a landscape architect, landscape contractor, or any other person authorized to install irrigation equipment.

2. The irrigation schedule shall factor irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that the applied water meets the Estimated Total Water Use (ETWU).

3. The irrigation schedule shall be submitted with the landscape Certificate of Completion pursuant to Section 16.63.130 of this Chapter.

C. Landscape planting and irrigation maintenance. In order to maintain plant health and functioning irrigation equipment, a landscape planting and irrigation maintenance schedule shall be developed incorporating the requirements of this Section, the applicable sections of the Landscape Manual, and include the following:

1. A regular maintenance schedule shall be developed by a landscape architect, landscape contractor, or any other person authorized to design and maintain landscape planting and irrigation.

2. A regular maintenance schedule shall include, but is not limited to routine inspection, adjustment, and repair of the irrigation system and its components.

3. A note shall be included stating that any replacements plants shall not exceed the water use for the hydrozone.

4. A regular maintenance schedule shall make provisions for irrigation inspections, systems tune-up, and system tests with distribution uniformity preventing overspray or run off that causes overland flow.

5. A regular maintenance schedule shall be submitted with the landscape Certificate of Completion consistent with Section 16.63.130 of this Chapter.

D. Obligations of Assignees or Successors.

1. All required landscaping shall be maintained for the life of the project in healthy condition, free from disease, pests, weeds, and trash.

2. Plants lost due to disease, destruction, or lifecycle shall be replaced and shall comply with all adopted standards for size, species, and irrigation. Replacement with different species is acceptable and amendment to the approved plan is not required provided that the water use is lower or remains the same as what was previously approved.

16.63.130 Certificate of Completion.

Upon completion of the landscape project, but prior to occupancy or final of grading or building permits, the applicant shall submit a Certificate of Completion to RMA-Planning. The Certificate of Completion shall be consistent with the requirements of this Section and all applicable sections of the Landscape Manual.

A. Certificate of Completion – Form and Content.

1. The certificate of completion shall include: project information, certification for installation of the landscape planting and irrigation, the proposed irrigation scheduling, an irrigation audit, the proposed schedule for landscape planting and irrigation maintenance, and verification of implementing recommendations of the soils management report.

2. A copy of the approved certificate of completion form can be found in Appendix D of the Landscape Manual.

B. Signature of Certificate of Completion; as-built plans.

1. The certificate of completion shall be signed by either the signer of the planting plan, the person signing the irrigation plan, or the licensed landscape contractor who installed the landscape.

2. If significant changes were made during installation, as-built plans shall be included with the certification. As-built plans must be in conformance with Sections 16.63.060, 16.63.070, 16.63.080 and 16.63.090 of this Chapter.

16.63.140 Public Education.

The purpose of this section is to encourage reduction of excessive water use in landscaping through public education.

A. Existing landscapes installed prior to the enactment of Chapter 16.63, are encouraged to reduce water consumption through participation in the following programs. "Existing landscapes" means landscapes installed in any development in the unincorporated County of Monterey prior to the effective date of Ordinance No. ___ enacting Chapter 16.63.

1. Existing landscapes located within the Monterey Peninsula Water Management District are encouraged to participate in applicable landscape rebate programs, landscape water audit/budget analysis and/or any other available water conservation programs to the greatest extent feasible.

2. Existing landscapes located within the jurisdictional boundaries of the Pajaro Valley Water Management Agency are encouraged to participate in the Local Residential Water Conservation rebate programs to the greatest extent feasible.

3. Existing landscapes served by a Small Water System shall be consistent with the conservation measures identified in the system's Urban Water Conservation Plan.

4. Existing landscapes served by private wells in the unincorporated areas of Monterey County shall participate in the water conservation measures found within this Chapter and the Landscape Manual to the greatest extent feasible.

B. The Landscape Manual shall contain information promoting the efficient use of water in landscapes, and the benefits of doing so. The Landscape Manual shall include information to owners of new, single-family residential homes regarding the design, installation, management, and maintenance of water efficient landscapes. Information for the available programs listed in Section 16.63.140.A shall be incorporated in the Landscape Manual to encourage participation.

16.63.150 Enforcement and Penalties.

A. It shall be the duty of the Director of RMA-Planning to enforce the provisions of this Chapter. All departments, officials and public employees vested with the duty or authority to issue permits or licenses shall not issue a permit or license for uses, buildings or purposes in conflict with the provisions of this Chapter and any such permit or license issued in conflict with the provisions of this Chapter shall be null and void. The Director of RMA-Planning may delegate enforcement responsibilities to other County employees.

B. Any landscaping that is installed, constructed, altered, enlarged, converted, moved, or maintained contrary to the provisions of this Chapter, or failure to comply with any of the conditions of a permit or variance granted to implement this Chapter is declared to be unlawful and shall be subject to enforcement under Chapters 1.20 (Enforcement of Code) and 1.22 (Administrative Remedies for Code Enforcement) of the Monterey County Code. The County may, in its discretion, in addition to all other remedies, take such enforcement action as is authorized under the Monterey County Code and/or any other action authorized by law.

SECTION 3. SEVERABILITY. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of

the remaining portions of this ordinance. The Board of Supervisors hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared invalid.

SECTION 4. This ordinance shall become effective on the thirty-first day following its adoption.

PASSED AND ADOPTED on this ___ day of _____, 20__, by the following vote:

AYES: Supervisors
NOES:
ABSENT:
ABSTAIN:

_____
Simon Salinas, Chair
Monterey County Board of Supervisors

ATTEST:

GAIL T. BORKOWSKI
Clerk of the Board of Supervisors

By:_____
Deputy

APPROVED AS TO FORM:

WENDY S. STRIMLING
Senior Deputy County Counsel

ATTACHMENT 3

PROPOSED MONTEREY COUNTY LANDSCAPE MANUAL – STANDARDS, GUIDELINES AND SPECIFIED PERFORMANCE REQUIREMENTS FOR LANDSCAPE WATER USE AND IRRIGATION

MONTEREY COUNTY LANDSCAPE MANUAL

Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation

Draft March 16, 2015

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List of Appendices

SECTION 1 – INTRODUCTION

A. Purpose

The *Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation* (Landscape Manual) was adopted by a separate resolution by the Monterey County Board of Supervisors and will be amended from time to time to address new requirements or technology, and to clarify and provide guidance related the County's process and procedures for landscaping. The landscape manual is specifically authorized as an informational and implementing tool in the inland and coastal landscape ordinances (County of Monterey's Ordinance Nos. ___) and Chapters 16.63 and 16.64 of the Monterey County Code. The information contained within this manual is applicable to both the inland and coastal areas of the County. Furthermore, any mention or reference to regulations set forth in the "Landscape Ordinance" within this manual means both ordinances for the coastal and inland areas.

The purpose of this manual is to provide applicants with comprehensive guidance to comply with the County's landscape requirements, including a clear explanation of specific procedures and related technical information for landscape and irrigation projects subject to the Landscape Ordinance. In addition, the manual shall serve as a tool to provide property owners a greater understanding of the importance and benefits in efficient use of water and energy in landscaping. Best management practices are identified as well as other situations that a property owner should keep in mind when designing a landscape plan (i.e. natural areas, critical habitat, flood-prone areas, etc.) even if the landscape project is exempt from any permit requirement.

B. Appendices

Appendices have been incorporated to provide applicants with additional information and the landscape package submittal documents required to comply with the water efficiency requirements of the Landscape Ordinance.

The appendices, which may be updated periodically include:

The *Landscape Package Application and Submittal Form*

This form will include important project information to be completed by the applicant and contains a checklist of the required submittal documents for the landscape package. This form will be submitted to RMA-Planning as part of the landscape package.

The *Water Efficient Landscape Worksheet*

This worksheet will be completed by the applicant in order to demonstrate how the project is consistent with the water efficient requirements of the Landscape Ordinance. The Water Efficient Landscape Worksheet includes four components:1) the Hydrozone Information Table used to itemize plants relative to water use, 2) the mathematical formula to be used to calculate a project's Maximum Applied Water Allowance (MAWA), which calculates the maximum water use allowed based on the landscape area and amount of water typically evaporated from soils and plants, 3) the Hydrozone/Plant Factor Calculation worksheet used to provide data needed to calculate the estimated water use, and 4) the mathematical formula used to calculate a project's Estimated Total Water Use (ETWU), preformed to calculate the total amount of water used in a landscape project.

Certificate of Completion

In order to ensure the landscape planting and irrigation installation has been completed per the approved plans, the applicant will be required to submit a Certificate of Completion. As part of the Certificate of Completion, the applicant will also be required to include an irrigation audit and a regular planting and irrigation maintenance schedule.

Glossary

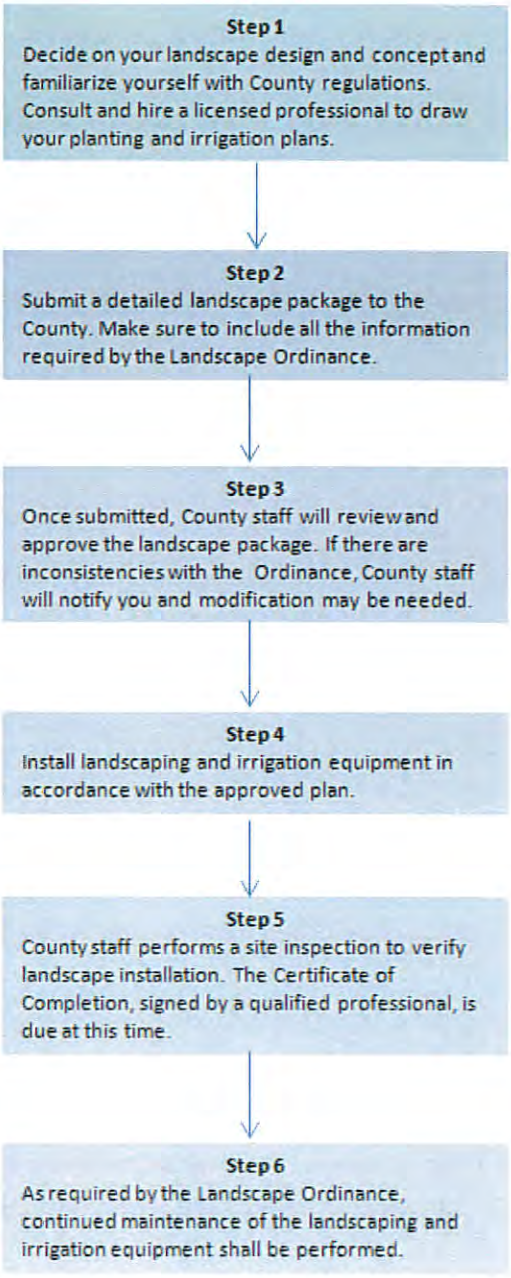
The definitions included in the Landscape Ordinance are also included in this manual.

C. Summary of Landscape Review and Process

The information below provides a general guideline for applicants, illustrating the process for submittal, review, approval, and maintenance of landscape projects subject to the Landscape Ordinance:

Step 1 – Landscape Design and Concept

Once you have determined that your proposed project is subject to the Landscape Ordinance (see Section 2 of this manual), certain factors should be taken into account prior to preparing a landscape design in order to address all requirements related to landscaping comprehensively. These factors may include requirements of the Landscape Ordinance, this manual, policies contained in the applicable Area or Land Use Plans, zoning and, conditions of approval for related discretionary permits for the project site, and additional requirements from other agencies. For example, water and energy conservations requirements must be aligned with fuel management and tree removal requirements. Selected plant species must be drought tolerant and invasive plants are to be avoided. Keep in mind if and how the landscape project would affect the existing environment of the site. Are there areas on



the property where landscape planting and irrigation should be avoided (flood-prone, landslide, and/or preserved natural areas)? Is the property located in an area where there is a wildlife corridor? If so, would the landscape project have a negative effect on this area or would the planted vegetation survive if the existing wildlife continuously consumed it? Are trees and shrubs spaced appropriately to allow for fire breaks?

Step 2 – Documents Required for Submittal

Projects subject to the Landscape Ordinance are required to submit a detailed landscape package to RMA-Planning for review and approval prior to installation. For discretionary permits (such as a Use Permit or other entitlement), submittal of a conceptual landscape plan is required with the discretionary application followed by submittal of a detailed landscape package prior to the issuance of the related grading or building permit.

The following is a list of the required documents that will need to be included in the landscape package (please refer to the specific Section or Appendix cited for further detail and explanation):

- Landscape Application Form (see Appendix A).
- Planting Plan (see Section 4).
- Irrigation Plan (see Section 6).
- Soils Management Report (see Section 7).
- Water Efficiency Landscape Worksheet (see Section 5 and Appendix B)
- Energy efficiency information (Section 8).

Step 3 – Approval of the Submitted Landscape Package

Prior to the issuance of a ministerial permit (such as a grading or building permit) or design review; the landscape package must be approved. Once the package has been reviewed by RMA-Planning, and any necessary corrections have been made by the applicant, the final landscape

and irrigation plans will be signed, stamped approved by the County, and a "Job Copy" returned to the applicant. Installation of the landscaping may not proceed until this approval is complete.

Step 4 – Landscape Installation

Landscaping and irrigation must be installed in conformance with the plans approved by RMA-Planning.

Step 5 – Verification of Installation and Certificate of Completion Submittal

Prior to granting of a "final" for any ministerial permit (such as a grading or building permit), the applicant shall submit a Certificate of Completion (see Section 10 and Appendix D) and schedule a site inspection with RMA-Planning to verify that the installed landscaping is in conformance with the approved plans. If during installation the applicant needs to modify the planting and/or irrigation beyond what can be considered consistent with what was approved, and the modification is found acceptable by the Landscape Architect/Designer of record, the applicant will be required to submit "as-built" plans to RMA-Planning along with a statement of why the modification was necessary.

Step 6 – Continued Maintenance

Landscape areas and irrigation equipment are required to be maintained in accordance with the Landscape Ordinance and this manual. As stated previously, the applicant will be required to submit a Certificate of Completion which will include information for long term maintenance of landscape planting and irrigation equipment. If the landscape and/or irrigation system is not properly maintained the project owner could be subject to a code violation by the County.

SECTION 2 – APPLICABILITY

The Landscape Ordinance applies to landscape areas for certain project types meeting specific applicability thresholds. The landscape area of a project is considered to be all the areas on a property that are dedicated to landscaping, unless otherwise found to be exempt (see subsection D). Project types are separated into three main categories: 1) public agency projects, 2) non-residential private development projects, and 3) residential private development projects, with residential private development projects further divided into sub-categories. Although the primary focus of this manual is to explain the requirements of the Landscape Ordinance, the information provided is still be helpful for applicants with smaller landscape undertaking and exempt projects.

A. Public Agency Projects

Public agency projects include any use or construction undertaken by public agencies (e.g., local municipalities, special districts and State agencies such as Caltrans) within any zoning district. These projects are financed and constructed by the public agency for recreation, employment, or health and safety for the community. Some examples of these types of projects include:

- Public and municipal buildings (Monterey County Government Center, Monterey County Emergency Center, Juvenile Hall), schools, libraries and hospitals (Natividad Medical Center).
- Infrastructure related to transportation such as the construction and maintenance of roads, bridges, and bikeways.
- Public outdoor spaces such as parks, public squares, and parking lots.

The applicability development thresholds that trigger the requirement to comply with the Landscape Ordinance for public agency projects are:

- The construction of a new building where the new landscaped area is 2,500 square feet or more and where the project requires a grading permit, building permit, or design review.
- New landscape areas that are 2,500 square feet or more not associated with any new buildings but require a grading permit, building permit, or design review.
- Rehabilitated landscape projects that 1) require a grading permit, building permit, or design review; 2) consist of a modified landscape area of 2,500 square feet or more; ***and*** 3) the new landscaping is at least 50% of the existing landscaped area.

B. Private Development Projects – Non-Residential

Non-residential private development projects include any use or construction undertaken by private citizens for non-residential type uses in commercial, industrial, and agricultural zoning districts. This development is typically privately funded and results in some personal or economical benefit to the owner or applicant. Some examples of these projects include:

- Commercial developments consistent with commercial designated zoning districts such as retails stores, convenience markets, restaurants, hotels and motels, and service centers.
- Industrial developments consistent with industrial designated zoning districts such as warehouses, contractor storage yards, manufacturing facilities, and processing plants.
- Developments consistent with agricultural zoning districts such as agricultural support facilities, agricultural processing plants, farm equipment storage facilities, fertilizer plants and yards, and trucking operations and facilities.
- Mixed use developments such as projects that include both commercial and residential uses on one project site.

The applicability development thresholds for private development projects consisting of non-residential uses are:

- Construction of a new building with a new landscaped area of 2,500 square feet or more and where the project requires a grading permit, building permit, or design review.

- New landscape areas that are 2,500 square feet or more not associated with any new buildings but require a grading permit, building permit, or design review.
- Rehabilitated landscape projects that 1) require a grading permit, building permit, or design review; 2) consist of a modified landscape area of 2,500 square feet or more; ***and*** 3) the new landscaping is at least 50% of the existing landscaped area.

C. Private Development Projects – Residential

Private residential development projects are residential developments within residential zoning districts and those districts which allow residential uses. This category of projects is further defined into two sub-categories: developer installed and homeowner installed.

1. Developer installed

Developer installed projects are financed and undertaken by a private entity or business within a residential zoning district, or those districts which allow residential uses, where the residential units/products will be sold or leased. Some examples of these projects include:

- Single family dwellings that are speculation homes or track homes, multifamily dwellings (condos, townhomes, and apartment complexes), and residential subdivisions.

The applicability development thresholds for developer installed private development projects consisting of residential uses are:

- Construction of a new building(s) with new landscape area(s) of 2,500 square feet or more and where the project requires a grading permit, building permit, or design review. This includes single family home developments in which the combined area of multiple or individual yards totals at least the threshold amount.
- New landscape areas that are 2,500 square feet or more not associated with any new buildings but require a grading permit, building permit, or design review.

Rehabilitated landscape projects that 1) require a grading permit, building permit, or design review; 2) consist of a modified landscape area of 2,500 square feet or more; ***and*** 3) the new landscaping is at least 50% of the existing landscaped area.

2. Homeowner installed

Homeowner installed projects are individual single family homes within a residential zoning district, or those districts which allow residential uses, where the project is financed and undertaken by the owner of the property. Some examples of these projects include:

- Single family dwellings, accessory dwelling units, and accessory structures where the owner resides on the property or rents or leases the property to another individual/family.

The applicability development thresholds for homeowner installed private development projects consisting of residential uses are:

- Construction of a new building(s) with a new landscape area(s) 5,000 square feet or more and require a grading permit, building permit, or design review;
- New landscape areas that are 5,000 square feet or more not associated with any new buildings but require a grading permit, building permit, or design review.
- Rehabilitated landscape projects that 1) require a grading permit, building permit, or design review; 2) consist of a modified landscape area of 5,000 square feet or more; ***and*** 3) the new landscaping is at least 50% of the existing landscaped area.

D. Exempt Landscaping

Projects exempt from the requirements of the Landscape Ordinance include:

- Landscaping projects on registered local, state, or federal historical sites;

- Ecological restoration projects (e.g. sites altered to establish a defined, indigenous, historic ecosystem) with no permanent irrigation system;
- Mined-land reclamation projects (surface mining operations with an approved reclamation plan) with no irrigation system;
- Plant collections, as part of botanical gardens and arboretums open to the public;
- Agricultural cultivation activities;
- Construction of structures that do not include changes in existing landscape;
- Changes in use of an existing structure with no changes to landscaping;
- Private edible plant gardens and/or orchards for personal and individual consumption;
- Construction of wetlands or areas that are not irrigated and used solely for on-site wastewater treatment;
- New, existing or rehabilitated stormwater quality projects that are not irrigated and used solely for the purpose of improving runoff quality and/or retaining runoff for onsite infiltration;
- Natural areas including, but not limited to: open space, native vegetative areas, and hardscapes with no permanent irrigation system;
- Erosion control activities with no permanent irrigation system such as hydroseeding; and
- Existing cemeteries.

E. Other Landscape Regulations

In addition to the Water and Energy Efficient Landscape Ordinance, there are additional County water conservation regulations that relate to landscaping such as Monterey County Code (Chapters 18.44 and 18.50) and the Monterey County Coastal Implementation Plans (Parts 2 through 5). Additional regulations related to water use are also enforced by the Monterey County Water Resources Agency, the Monterey Peninsula Water Management District, and the Marina Coast Water District for projects located within their jurisdictional areas.

Projects exempt from the Landscape Ordinance may still be subject to these additional regulations which would require submittal of a landscape and irrigation plan to either the County or other

agency. Many of these regulations call for the use of drought tolerant plants, native plants, and the use of and low precipitation sprinkler heads, bubblers, drip irrigation system and timing devices as part of the exterior landscape. Furthermore, existing County policies generally encourage the use of native plants, fire resistant plants and the eradication of invasive plant species.

1. Monterey County Code Chapter 18.44

Monterey County Code Chapter (MCC) 18.44 requires new construction, served by the California American Water Service Company, to incorporate low water use or native plants and low water use irrigation systems as part of the landscape design. Discretionary permits for projects in these areas are typically conditioned to require the submittal of landscape and irrigation plans to be reviewed and approved before the issuance of building permits. Then, prior to final of the building permit, County staff will verify that the landscaping and irrigation equipment was installed in accordance to the approved plans.

2. Monterey County Code Chapter 18.50

Similar to Monterey County Code Chapter (MCC) 18.44, MCC 18.50 also requires new construction to incorporate low water use or native plants and low water use irrigation systems as part of the landscape design. However, MCC 18.50 is only applicable to property located within the Greater Salinas, Toro, and Greater Monterey Peninsula planning areas as well as a portion of the North County Planning Area (including the Coastal Zone). Discretionary permits for projects in these areas are typically conditioned to require the submittal of landscape and irrigation plans to be reviewed and approved before the issuance of building permits. Then, prior to final of the building permit, County staff will verify that the landscaping and irrigation equipment was installed in accordance to the approved plans.

3. Monterey County Coastal Implementation Plans Parts 2-5

The North County, Big Sur, Carmel Area, and the Del Monte Forest Coastal Implementation Plans include policies that address water conservation relative to landscaping. Similar to other regulations described above, the 1982 General Plan, and state law; water conservation techniques in the coastal zone include planting using low water use (or drought tolerant) vegetation, water efficient irrigation systems, and incorporating recycled water where feasible. Discretionary permits for projects in these areas are typically conditioned to require the submittal of landscape and irrigation plans. The landscape and irrigation plans are reviewed and approved by RMA-Planning before the issuance of building permits. Then, prior to final of the building permit, County staff is required to verify that the landscaping and irrigation equipment was installed in accordance to the approved plans.

4. Monterey County Water Resources Agency

The Monterey County Water Resources Agency adopted Ordinance No. 3932, addressing water efficiency in landscaping through the use of drought tolerant planting, encouraging the use of non-potable water for landscape irrigation, and limiting the use of turf grass.

5. Monterey Peninsula Water Management District and the Marina Coast Water District

There are areas within unincorporated Monterey County that are located within the Monterey Peninsula Water Management District (MPWMD) or the Marina Coast Water District (MCWD) and therefore are subject to their regulations. MPWMD Rule 142, Water Efficiency Standards, requires landscaping to be consistent with the State Model Water Efficient Landscape Ordinance. In addition, MCWD Ordinance No. 40 and Section 3.36.030S.2, Water Conservation, of the District code requires new construction to conform to the requirements of the State Model Water Efficient Landscape Ordinance.

SECTION 3 – LANDSCAPE PACKAGE

A. General Requirements

Projects subject to the Landscape Ordinance are required to submit a Landscape Package to RMA-Planning. The Director of RMA-Planning will approve the package once staff has verified that the proposed project complies with the provisions of the Landscape Ordinance, Landscape Manual, other applicable provisions or codes, as well as the conditions of approval for any applicable land use permit or other discretionary approval related to the specific project.

B. Submittal Requirements

A complete Landscape Package includes the following components which are described in more detail in the referenced sections of this manual:

- Landscape Package Application and Submittal Form (see Appendix A) containing the following information:
    - Project Applicant/Property Owner and contact information
    - Project Address, Assessor's Parcel Number, and vicinity map
- Planting Plan (see Section 4)
- Irrigation Plan (see Section 6)
- Water Efficient Landscape Worksheet including water budget calculations for Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU) (see Section 5 and Appendix B)
- Soil Management Report (see Section 7)

SECTION 4 – PLANTING PLAN REQUIREMENTS

The planting plan is a site plan that depicts the existing and proposed conditions of the landscape area. The plan shows the locations of all proposed planting areas, identifies the species and sizes of the plant materials to be installed, and depicts existing vegetation to be retained and/or removed. If existing trees are to be removed, such removal must be in conformance with County tree removal requirements and any required tree removal permits must be obtained before tree removal takes place. In addition, the planting must be in conformance with Fuel Management/Fire Hazard requirements of the adopted California Fire Code and Section 18.09 (Fire Code) of the Monterey County Code.

Planting plans are required to be prepared by a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape and will be used in conjunction with approved irrigation plans, as the final landscape construction plans for the project.

A. General Requirements and Contents of the Planting Plan

The planting plan, drawn at a scale that is clearly legible, will need to include the following information:

- Project Information:
    - Project Applicant/Property Owner and contact information
    - Project Address, Assessor's Parcel Number, and vicinity map
    - Total square feet of the landscape area (new and existing)
    - Project type (e.g., new, rehabilitated, public, private, residential)
    - Water supply for the project. Identify the water purveyor if the applicant is not served by a private well and location of connection point.

- North arrow and scale.
- Existing conditions such as grades, existing vegetation including trees, property lines, right-of-ways, drainage easements, utilities and utility easements, streets, driveways, walkways, and other paved areas (pervious and/or impervious).
- Existing improvements located on the site including all buildings and structures that are to remain.
- Any proposed new structures such as buildings, accessory buildings, fences, and decks.
- Existing Onsite Wastewater Treatment System (OWTS) and future OWTS replacement areas.
- Stormwater control treatment measures.
- All hydrozones depicted as low, moderate, or high and each hydrozone identified by number, letter, or other method.
- Any required Fuel Management/Fire Hazard zones.
- Natural features to remain, including rock outcroppings, existing native and ornamental trees, shrubs, etc.
- Any proposed outdoor elements such as platforms, planting areas, recreational areas/features, walkways, patios, walls, and water features.
- Any parking areas that include existing or proposed landscaping.
- Other landscape design features listed within subsequent subsection D.
- Verification. Landscape plans shall contain the following statement: ***"I_____ certify that this landscaping plan complies with all Monterey County landscaping requirements including, but not limited to, the use of native drought tolerant, non-invasive species, and limited turf"*** which shall be signed by a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. This verification is required to ensure that the licensed professional who prepared the plans is certifying that the plans comply with the County's requirements.

B. Planting Areas and Palette

1. Planting Areas

Planting areas need to be depicted accurately on the planting plan and must identify the different plant types by utilizing a plant symbol and labeling system and a key or legend listing each plant used and its corresponding symbol. The applicant must also include information relative to the plants such as: plant species name (both scientific and common), container size (e.g., 1 gallon, 5 gallon, etc.), quantity of each plant type used, and the spacing needed for planting (e.g., plant at 3 feet on center). The planting plans must also include information on the existing vegetation of the site which should be shown clearly and quantified (in square feet). In order to gain a full understanding of the landscape project, areas where existing vegetation is to remain, areas that require new irrigation or where existing irrigation that will remain in place, and areas where existing vegetation will be removed should be clearly depicted on the plans with a corresponding note or table indicating their size in square footage. Proposed turf areas must be accurately depicted and the square footage indicated to document that the amount is under the threshold limitations. Trees to be removed must be clearly and accurately represented in conformance with requirements of any tree removal permit that will need to be issued.

Landscape areas that are exempt from the Landscape Ordinance (see Section 16.63.030.C of the coastal Landscape Ordinance, Section 16.64.030.C of the inland Landscape Ordinance and Section 2.D of this manual) should be clearly delineated. Examples of these include areas dedicated permanently and solely to edible plants, areas on the property to remain natural, and any other vegetated areas that do not have a permanent irrigation system. When designing the landscape, the applicant must also keep in mind that plants with similar water use needs are required to be grouped together in distinct hydrozones (see Section 5.C of this manual) and the mix of high and low water use plants is generally prohibited. In terms of energy efficiency, plant type and location should also be selected to avoid obstructing passive solar energy systems. In addition, planting that must meet fuel management/fire hazard requirements should be clearly noted as such.

2. Planting Palette

Selected plants used in landscape areas should generally be drought tolerant with emphasis on native and/or native compatible species when appropriate. Limiting high water use plants to special design areas of the landscape, such as entrances, courtyards, and Low Impact Development[1] (LID) areas is recommended. Plants should be carefully selected, giving attention to the survivability rate in your area and disease and pest resistance. This will keep costs and maintenance down as it limits the need to replant and add supplemental fertilizers. Turf uses a significant amount of water and should only be used for specific functional areas (playing areas, etc.) that require turf. The ordinance limits turf to either 20% of the landscape area or up to 1,500 square feet (whichever is lower) unless the turf area is designated as a Special Landscape Area and is solely dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface. However, in typical landscaped areas, avoiding the use of turf altogether or limiting it to an amount much less than the maximum allowed is strongly encouraged. In addition to turf square footage limitation, the Landscape Ordinance prohibits planting turf in areas with slopes that exceed 10%, areas that are eight feet wide or less, and on street medians, traffic islands, planter strips, or bulb-outs. These requirements reflect the concept of only using turf when it is required for a specific function. The use of drought tolerant shrubs and groundcovers instead of turf is strongly encouraged.

The use of invasive plants is strictly prohibited and the eradication of these species in the existing landscape is highly encouraged. Invasive plants have become a significant problem in both ornamental and natural landscapes. Incorporating eradication into new landscape projects and ongoing maintenance will help limit their spread.

Appropriate plant spacing must be carefully considered based upon their specific adaptability of the plant to the climatic, geologic, and topographical conditions of the project site. In addition,

[1] LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements.

careful attention must be given to incorporating fire safe landscaping and fuel management requirements into a proposed landscape. If a project requires fuel management due to its location in a fire hazard area, proper plant selection is critical. Section 9 of this manual guidance related to this issue.

3. Onsite Wastewater Treatment Systems and Repair Areas

Areas with installed Onsite Wastewater Treatment Systems (OWTS) or repair areas for future OWTS shall be maintained/planted to provide the best outcome for the wastewater treatment system. Landscaping the OWTS system will prevent erosion of the soils cover over the drain field. Additionally, plants aid in the function of the system by optimizing oxygen exchange and promoting necessary soil moisture removal trough transpiration. For ease of maintenance, plants in this area should be shallow rooted herbaceous plants that are well adapted to normal rainfall amounts for the area. Consequently, plants that have aggressive, woody, water-loving, deep roots can potentially clog or disrupt the pipes in the system, causing serious damage that can be very expensive. Additionally, the use of landscaping plastics is not allowed over areas with installed OWTS drain field(s). Alternatively, landscaping fabrics that allow moisture and oxygen transfer are acceptable.

C. Grading, Soil Amendments, and Mulching

When conceptualizing the required grading for a landscaping project, the design shall incorporate techniques that minimize soil erosion, artificial manipulation of natural topography, runoff, and water waste. In order to demonstrate this, grading information shall depicted on the plans and include the height of graded slopes, drainage patterns, pad elevations, and finished elevations. It is recommended that the natural topography of the site shall be retained wherever feasible such that all irrigation and normal rainfall remain within the property lines and avoid disruption of natural drainage patterns. In addition, the planting plan should clearly denote (either as notes and/or details and specifications, whichever is appropriate) all soil amendments consistent with the recommendations of the soil management report (see Section 7).

D. Other Landscape Design Features

In addition to planting, landscapes typically incorporate the use of other design features for aesthetic and/or multi-functional purposes such as:

- Water features such as fountains, spas, ponds, etc.
- Ornamental features such as windmills, statuary, monuments, public art, flagpoles, etc.
- Stormwater management facilities and Low Impact Development that control runoff and increase on-site retention and infiltration into the landscape design, such as vegetated filter strips, bio-filtration and bio-retention facilities, swales, infiltration basins, etc.
- Rain harvesting or catchment technologies such as rain gardens, cisterns, etc.
- Energy efficient landscape techniques (see Section 8).
- Landscape planting located within parking areas or lots.

These features should also be depicted on the planting plans. For those areas that are not subject to water budget calculations, a note of explanation must be included.

E. Landscape Maintenance Schedule

The regular maintenance of landscape planting promotes plant health, ensures water use efficiency, and lowers costs to the owner. The Landscape Ordinance requires submittal of a regular maintenance schedule with a Certificate of Completion (see Section 9) and at a minimum, should include the following:

- Routine inspection of planting areas and individual plants to remove dead vegetation and adjust fertilization, watering, etc.
- Aerating and dethatching turf areas.
- Replenishing mulch as needed.
- Fertilizing, pruning and weeding in all landscape areas.

SECTION 5 – WATER EFFICIENT LANDSCAPE REQUIREMENTS

The water efficient landscape requirements are a key component to the overall landscape design and strict adherence can be achieved by incorporating water management practices and water waste prevention through planting and irrigation design. When designing a planting plan, the effective use of hydrozones is critical. Strategic placement and groupings of plants in each area will not only reduce the need for water use, but also result in minimizing costs for maintenance and upkeep of the landscape.

In order for the County to determine if a project complies with the Landscape Ordinance (applicable state laws), a series of calculations will need to be prepared and submitted by the applicant. First, the maximum water allowance for a site must be established. This is done by setting the Maximum Applied Water Allowance (MAWA) limit for water use (see subsection B below). Once that is established, the estimated total water use (ETWU) for the proposed landscaping is calculated, using the water use information included the Hydrozone Table. If the amount of water calculated from the ETWU is lower than the amount of water calculated from the MAWA, it is assumed that the landscape project has reduced its water use to the lowest amount practical. This section will walk through each step in determining if the landscape project is water efficient.

A. Water Budget Calculations – Water Efficient Landscape Worksheet

In order to document a project's efficient use of water use, the applicant is required to submit a Water Efficient Landscape Worksheet (see Appendix B) to the County as part of the Landscape Package. The worksheet includes the calculation of a project site's MAWA, the proposed planting's water use depicted in a Hydrozone Table, and the project's ETWU.

B. Establishing the MAWA

The calculation of the Maximum Applied Water Allowance (MAWA) is used to determine the maximum amount of the annual applied water that can be used to irrigate the landscape area. The MAWA is determined by multiplying the annual evapotranspiration or ETo value (the annual amount of water evaporated from the earth and the water lost through plants) by the total landscape area. ETo values vary between regions and areas due to differences in climate. Therefore, to determine a project site's ETo value, a Referenced Evapotranspiration Table has been included as Appendix C of this manual. The following equation is used to determine the MAWA and the calculation will be submitted with the landscape package as a worksheet.

$$\mathbf{MAWA= (ETo)(0.62)\ [(0.7 \times LA) + (0.3 \times SLA)]}$$

Where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ETo = Reference Evapotranspiration from Appendix B.2 of this manual (inches per year)

0.7 = ET Adjustment Factor or ETAF (except for special landscape areas, a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency)

LA = Square feet of the total landscaped area (including Special Landscape Area)

0.62 = Conversion factor (to gallons per square foot)

SLA = Square feet of the Special Landscape Area (area of the landscape irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface)

0.3 = The additional ET Adjustment Factor/water allowance for Special Landscape Area (1.0 – 0.7 = 0.3)

Example 1. *Isabel has a landscape project (2,500 square feet total) in the Central Salinas Valley planning area, located near Arroyo Seco. She intends on planting low and moderate use plants but does not wish to include planting that can be considered as a Special Landscape Area (SLA). The MAWA calculation would be performed as follows:*

MAWA= (ETo)(0.62) [(0.7x LA) + (0.3xSLA)]
MAWA= (52.6)(0.62)[1,750 + 0]
MAWA= (32.61)(1,750)
MAWA= 57,068 gallons per year

C. Hydrozones – Hydrozone Information Table

The proper establishment of hydrozones in a landscape improves water conservation. Establishing hydrozones is done by grouping vegetation that requires similar water uses, as described in Example 2. This allows the amount of water needed to irrigate the plants to be used efficiently. Proper design of hydrozones will also allow applicants to take advantage of microclimates on the specific site; planting vegetation that will tolerate heat and wind can be placed closer to the street while more sensitive plants placed in shaded areas closer to structures where they are more protected. Once the applicant has determined the distinct hydrozones, they will then need to make the appropriate plant selection. In order to do this, the applicant will have to determine what the general water use is for each plant selected. The plant water use shall be determined using the Water Use Classification of Landscape Species guide or WUCOLS (see Appendix E, Glossary).

Example 2. *Isabel decides to place three different plants in one hydrozone: Anigozanthos flavidus* (kangaroo paw), *hypericum olympicum* (Olympic hypericum), *and leucanthemum X superbum* (Shasta Daisy). *Using the Species Evaluation List (1999) found in the WUCOLS to determine water use, she found that both Kangaroo paw and Olympic hypericum are listed as low water use plans but the Shasta Daisy is listed as a moderate use plant. Therefore, the hydrozone for this planting would be identified as a moderate water use area.*

When designing the landscape and identifying the placement of hydrozones, the applicant will also need to consider the specific requirements of the Landscape Ordinance, such as:

- The surface area of water features shall be classified as a high water use hydrozone area.
- Low and moderate water use plants can be mixed, but the entire hydrozone shall be classified as moderate water use (as shown in Example 2.).
- High water use plants cannot be mixed with low or moderate water use plants.
- Temporarily irrigated areas are classified as a low water use hydrozones.
- Special Landscape Areas using recycled water are classified as low water use hydrozone.

Hydrozone Information Table.

Not only does the landscape ordinance require landscapes to be designed utilizing hydrozones, it also requires applicants to take the hydrozone data and place it into a Hydrozone Information Table (see Appendix B) . For each hydrozone listed, the applicant must list the plant type and/or water feature, the irrigation method used, the square footage of the hydrozone, and the percentage of the total landscape area of the project that the hydrozone represents. This table will be used to calculate ETWU in Section D.3.

Example 3. *After careful thought, Isabel decides to plant the Kangaroo paw and Olympic hypericum in one 1,800 square foot hydrozone and the Shasta Daisy in a different 700 square foot hydrozone. This information would be shown in the Hydrozone Information Table as follows:*

Hydrozone	Zone or Value	Irrigation Method	Areas (sq. ft.)	% of Landscape Area
1	Low	Bubbler	1,800	72%
2	Moderate	Drip	700	28%
			Total	100%

D. Calculating the Estimated Total Water Use

The estimated total water use (ETWU) is calculated using they hydrozone information from previous Section C, plant factor range, and plant factor.

1. Plant Factor Range

The plant factor is the estimated amount of water needed by plants. This is determined by first identifying the plant factor range established by WUCOLS. The table below represents the Plant Factor Range:

Plant Factor Range Table	
Very Low Water Use	< 0.1
Low Water Use	0.1 to 0.3
Moderate Water Use	0.4 to 0.6
High Water Use	0.7 to 1.0

Example 4. *Now that Isabel has decided what and where she would like to plant, she must then determine their water use based on the Species Evaluation List (1999) found in the WUCOLS. Both Kangaroo paw and Olympic hypericum are listed as low water use plants and the Shasta Daisy is listed as a moderate use plant. Utilizing the Plant Factor Range table, the low water use plants would fall into the range of 0.1 to 0.3 and the moderate water use plant would fall in the 0.4 to 0.6 range.*

2. Plant Factor

The plant factor range(s) used to determine the plant factor. The typical practice for selecting the plant factor uses the mid value of the given range (e.g., the plant factor range for low water use plants is 0.1 to 0.3; therefore, the mid value would be 0.2). In order to assist applicants with calculating the total plant factor for the proposed landscaping, especially those that may have a wider range of plants, the County has provided and additional worksheet: the Hydrozone/Plant Factor Calculation worksheet found in Appendix B. The data found in the Hydrozone Information Table and the determined plant factor range will be needed to complete the Hydrozone/Plan Factor Calculation worksheet as shown below.

Example 5. *Based on the Hydrozone Information Table in Example 3 and using the mid-value given for each respective hydrozone identified in Example 4, the completed Hydrozone/Plant Factor Calculation worksheet would be as follows:*

Hydrozone	Zone or Value	Plant Factor (PF)	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	Low	0.2	1,800	360 sq. ft.
2	Moderate	0.5	700	350 sq. ft.
			Sum	710 sq. ft.
N/A	SLA	N/A	0	0

3. Calculating the Estimated Total Water Use (ETWU)

The calculation of the ETWU is used to determine the total amount of water required for the landscape area. The formula below uses data from previous sections and variables for the specific landscape site.

$$ETWU = (ETo)(0.62)\left[\frac{PF \times HA}{IE} + SLA\right]$$

Where:

ETWU = Estimated Total Water Use per year (gallons)

ETo = Reference Evapotranspiration from Appendix C of this manual (inches)

PF = Plant Factor from WUCOLS or Hydrozone/Plant Factor Calculation worksheet (Appendix B)

HA = Square feet of Hydrozone Area from Hydrozone/Plant Factor Calculation worksheet (Appendix B)

0.62 = Conversion factor (to gallons per square foot)

SLA = Square feet of the portion of the landscape area identified as Special Landscape Area (areas of the landscape irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface)

IE = Irrigation Efficiency (minimum 0.71)

Example 6. *Based on the data found in the Hydrozone/Plant Factor Calculation worksheet in Example 5 and the known ETo factor for the project area, calculation of the ETWU can be performed as follows:*

ETWU= (ETo)(0.62) [((PF x LA) / (IE)) + SLA]

ETWU= (52.6)(0.62)[(710/.71) + 0]

ETWU= (32.61)(1,000)

ETWU= 32,610 gallons per year

E. Determining if the Proposed Landscaping Project is Water Efficient

If the calculated ETWU is less than the established MAWA, the project is considered to be water efficient.

Example 7. *Based on the information below, Isabel's landscape project is assumed to be water efficient.*

MAWA limit from Example 1 = 57,068 gallons per year

ETWU from Example 6 = 32,610 gallons per year

ETWU is below the MAWA by 24,458 gallons per year

SECTION 6 – IRRIGATION REQUIREMENTS

For the efficient use of water, an automated irrigation system must be designed to meet all the requirements listed in this section and the equipment manufacturer's recommendations. The irrigation system and its related components must be planned and designed to allow for proper installation and maintenance. Consistent with the requirements of the Landscape Ordinance, irrigation plans will need to be prepared by a licensed landscape architect, a licensed landscape contractor, a certified irrigation designer, or any other person authorized to design a landscape and will be used in conjunction with approved planting plans, as the final landscape construction plans for the project. The irrigation plan is typically a site plan prepared to depict the locations of the irrigation system equipment. In order to provide applicants with a simplistic format, the information to be included in the irrigation plan has been broken up into four separate content sections: general contents and requirements; system standards; irrigation design standards; and irrigation scheduling and maintenance.

A. General Contents and Requirements

The irrigation plan, drawn at a clear and legible scale, should include the following information:

- Location and size of water meters for landscape planting.
- Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators and backflow prevention devices.
- Static water pressure at the point of connection to the public water supply.
- Flow rate (gallons per minute), application rate (inches per hour) and design operating pressure (pressure per square inch) for each station.
- Any recycled water irrigations systems.
- Verification. Irrigation plans shall contain the following statement: ***"I_____ certify that this irrigation plan complies with all Monterey County landscaping requirements including, but not limited to, the use of low flow and water conserving***

irrigation fixtures" which shall be signed by a licensed landscape architect, licensed landscape contractor, a certified irrigation designer, or any other person authorized to design an irrigation plan.

B. Irrigation System Standards

In order to ensure irrigation systems use water efficiently, the Landscape Ordinance requires applicants to incorporate certain standards within the design of their system. The irrigation system should integrate specific structural components that have been identified to meet these standards. The following is a list of those components:

1. Irrigation Efficiency

- The irrigation system is required to be designed to ensure that the dynamic pressure at each emission device is within the manufacturer's recommendation pressure range for optimal performance. For the purpose of determining ETWU, average irrigation efficiency is assumed to be 0.71. Therefore, irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 0.71.
- Pressure regulation and/or booster pumps shall be installed so that all components of the irrigation system operate at the manufacturer's recommended optimal pressure.
- 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 emergency (such as a main line break) or routine repair.
- Isolation valves shall be installed at the point of connection and before each valve or valve manifold.
- Backflow prevention devices shall be provided to protect the water supply from contamination by the irrigation system.
- Point source irrigation is required where plant height at maturity will affect the uniformity of an overhead irrigation system.

2. Irrigation Sensors

- In order to prevent irrigating during wet weather, weather-based self-adjusting irrigation controllers with rain sensors are required for both residential and non-residential irrigation systems.
- High flow sensors that detect and report high flow conditions created by system damage or malfunction are recommended.
- Irrigation systems with meters one and one-half (1.5) inches or greater shall have a high-flow sensor that can detect high flow conditions and have the capability to shut off the irrigation system automatically.

C. Irrigation Design Standards

The actual design of an irrigation system (placement and location of irrigation system components) is just as essential as the irrigation itself when trying to achieve maximum water efficiency. Therefore, the Landscape Ordinance requires applicants to incorporate the following standards when designing irrigation systems:

1. Preventing Water Waste

- All irrigation systems shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent properties, hardscapes, roadways, or structures.
- Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems. This will allow water to be distributed efficiently and prevent overflow in areas with poor water infiltration.
- Low volume irrigation, such as drip irrigation and the use of bubblers, shall be used in mulched planting areas to maximize water infiltration into the root zone.
- Sprinkler heads, rotors, and other emission devices on one valve shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations

- Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
- Narrow or irregularly shaped landscape areas, including turf less than eight (8) feet in width in any direction, shall be irrigated with subsurface irrigation or low volume irrigation technology in order to prevent water waste due to overspraying of the area.
- Overhead irrigation shall require a twenty-four (24) inch setback from any non-permeable surface that does not drain toward the landscape area.
- Slopes greater than 15% shall be irrigated with point source or other low-volume irrigation technology.
- Swing joints or other riser protection components, which allow flexibility between sprinkler heads and the irrigation system, shall be required on all risers. This will prevent large amounts of water waste by preventing the connections from breaking.
- Check valves shall be installed to prevent low-head drainage.
- Slopes greater than 25% shall not be irrigated with an irrigation system with a precipitation rate exceeding 0.75 inches per hour.

2. Use of Recycled Water

- Irrigation systems shall be designed and constructed to allow the use of recycled water where such recycled water is available or may become available in the future. Landscaping using recycled water shall be considered a Special Landscape Area.
- Use of alternative landscape features that increase the capture and use of rainwater to irrigate (i.e. rain gardens, cisterns) or create opportunities for infiltration and/or onsite storage are recommended and encouraged.

3. Hydrozones

- The design of the irrigation system shall conform to the hydrozones delineated on the approved planting plans. Separate valves shall be used to irrigate hydrozones with high water use plants and moderate or low water use plants

- Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions and plant materials with similar water use
- Sprinkler heads and other emission devices shall be selected based on its appropriateness for the plant type within that hydrozone. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf

D. Irrigation Scheduling and Maintenance

The regular scheduling and maintenance of an irrigation system will result in efficient water use. All irrigation schedules shall be developed, managed and evaluated to utilize the minimum amount of water required to maintain plant health. To ensure functioning equipment, the irrigation system must be also be properly maintained. A regular maintenance schedule shall include routine inspection and the adjustment and repair of the irrigation system and its component . The irrigation schedule shall factor irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use. Consistent with the requirements of the Landscape Ordinance, a regular maintenance schedule shall be submitted with the landscape Certificate of Completion, and when applicable, it shall incorporate the following:

- Irrigation interval (days between irrigation).
- Irrigation run times (hours or minutes per irrigation event to avoid runoff).
- Number of cycle starts required for each irrigation event to avoid runoff.
- Amount of applied water scheduled to be applied on a monthly basis.
- Application rate setting.
- Root depth setting.
- Plant type setting.
- Slope factor setting shade factor setting.
- Irrigation uniformity or efficiency setting.

SECTION 7 – SOILS MANAGEMENT REPORT REQUIREMENTS

In order to promote healthy plant growth and prevent excessive erosion and runoff, the Landscape Ordinance requires that a soil management report be completed by either the project applicant or his/her designee. The purpose of the report is to obtain an analysis of the existing soil conditions from a lab qualified to evaluate soils relative to horticulture (verses agriculture or structural integrity), resulting in recommendations of appropriate soil amendments for which then the applicant incorporates into the planting and irrigation plans.

The soils analysis can be conducted by a soils laboratory that will analyze soil as it specifically relates to horticulture. Typically, an applicant will package a soil sample and send it directly to a qualifying lab. Once the analysis is complete, the lab will then provide the applicant with an analysis report and recommendations for soils amendments based off the results of the reports.

At home soils analysis kits are also available and are relatively inexpensive. However, to be consistent with the requirements of the Landscape Ordinance, one must make sure that the test has the capability for a complete soils analysis and submit this information, along with the recommended soils amendments as part of the landscape package.

For those landscape projects that are not subject to the Landscape Ordinance, submitting for a soils analysis or the use of at home soils test kits is encouraged as it promotes a healthy and thriving garden.

Submittal of the report will be required as part of the landscape package, and the landscape architect or landscape contractor who prepared the planting and irrigation plans is required to verify that the report recommendations were used in conjunction with the preparation of those plans. Furthermore, as part of the Certificate of Completion, the applicant is required to submit documentation that the installation of landscaping was done in accordance with the report. Based

on the requirements of the landscape ordinance, the report should contain a laboratory analysis of soil samples that includes the following:

- Soil texture;
- Infiltration rates determined by laboratory test or soil texture infiltration rate table;
- Soil pH;
- Total soluble salts;
- Sodium;
- Percent of organic matter; and
- Recommendations for appropriate soil amendments.

SECTION 8 – ENERGY EFFICIENCY

Improving energy efficiency adds to the sustainability of all residents in the County of Monterey by reducing air pollutants and greenhouse gas emissions from fossil fuels. In addition, energy efficiency also provides many benefits to the project applicant. For instance, by reducing the need for energy resources, applicants will benefit economically through lowering expenses on energy bills.

In order to promote energy efficiency in developments, the County has incorporated energy efficiency regulations within Chapter 18.12 of the Monterey County Code (Green Building Standards Code) and the Landscape Ordinance. For example, when calculating an overall building's energy efficiency budget, project applicants are required to include the energy use and conservation measures incorporated within the landscape component of building project.

The Landscape Ordinance also makes provisions for landscape lighting, requiring that it is designed for energy efficiency and utilizes one or both of the following:

- ENERGY STAR qualified hard-wired fixtures. All hard-wired lighting shall employ programmable photocontrol or astronomical time-switch controls that automatically switch off when daylight is available.
- Solar powered lighting systems.

However, due to health and safety regulations, energy light efficiency requirements are **not** applicable to:

- Exterior lighting for permanent buildings, structures, security, and signs.
- Lighting required by a health of life safety statute ordinance or regulation, including but not limited to emergency lighting.
- Lighting used in or around swimming pools, water features or other locations subject to Article 680 of Title 24, Part 3, *California Electrical Code*.

To further promote energy efficiency, the Landscape Ordinance also encourages the incorporation of additional energy efficiency measures into the landscape design. These measures/ techniques include the following:

- Use strategic shading techniques, plant selection, location and deciduous tree species in the landscape as appropriate to reduce solar heat gain in the summer and maximize passive solar warming in winter months. For example, planting of deciduous trees in front of a large window would provide shade during warmer months when the leaves are full and allow infiltration of sunlight and warmth during the autumn and winter months when the leaves fall.
- Reduce local heat island effects through planting of shade trees or installation of high-albedo (highly reflective) hardscapes.
- Select and place landscaping to provide wind protection or windbreaks.
- Use solar power and/or other renewable energy (such as wind) in the landscape design.
- Use salvaged, refurbished, renewable, local and recycled landscape and planting materials to reduce the energy requirements of new manufacture and transport.

SECTION 9 – FUEL MANAGEMENT

There are many benefits to a well designed landscape that go beyond creating areas that are pleasing to the senses and water and energy efficient. With proper forethought, designing landscapes that incorporate fire safety and fuel management can result in the protection of structures and the immediate surrounding areas from wildfires.

The Landscape Ordinance requires landscape projects to be consistent with all applicable fire safe landscaping regulations imposed by a property's designated Fire District and/or Chapter 18.56, Wildfire Protection Standards in State Responsibility Areas, of the Monterey County Code. Property owners are encouraged to discuss their landscape concept with the appropriate Fire District and consider the following recommended fire safe methods in designing their landscape:

- Establishing a greenbelt – A greenbelt is an area of irrigated landscaping which includes fire resistant and/or retardant planting strategically located to separate structures and wildland fuels. Establishment of a greenbelt results in creating a buffer zone between structures and any surrounding vegetation, which slows or prevents the advancement of ground or surface fires.
- Eliminate "fire-ladders" – A fire ladder is an arrangement of plants that provide fuel for a fire to climb from ground covers or grasses to shrubs and up into tree tops or structures. The landscape design should increase the vertical separation of fuels which could effectively reduce and/or eliminate fire-ladders.
- Eliminate continuous fuel beds – fires can spread quickly if areas in the landscape which contain fuel (patches of vegetation) are too close or continuous. The landscape design should reduce the amount of horizontal continuity through the incorporation of hard and/or non-flammable surfaces such as bare ground, pavement, or other landscape design features.

- Maintenance of vegetation – Proper maintenance of the landscape area can reduce the fire load by removing dead branches from shrubs and trees, clearing leaf litter from the ground, and pruning lower branches to increase clearance above the ground.
- Plant selection – Incorporating fire resistant vegetation and plants with deep roots within the landscape will enhance fire protection and erosion control if a fire does occur. Furthermore, fire-prone plant materials and highly flammable mulches should be avoided. For additional information, the suggested plant list included within Appendix E of this manual contains fire resistant plants.

SECTION 10 – CERTIFICATE OF COMPLETION

Prior to occupancy or final of a grading or building permit, a signed landscape Certificate of Completion shall be submitted to the RMA-Planning (see Appendix D) with information and documentation that the landscape planting and irrigation has been installed in accordance with the approved plans and soils management report. If significant changes were required during installation of the landscape and irrigation system, the applicant will be required to submit "as-built" plans along with the landscape certificate of completion. In addition, the landscape architect or landscape contractor must verify that the as-built landscape plans are in accordance with the planting, irrigation, water efficiency, and energy efficiency requirements of the landscape ordinance.

The Certificate of Completion includes six parts which contains the following information:

- Project information.
- A signed statement verifying that the landscape install is consistent with the approved plans.
- An irrigation audit demonstrating that an inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule has occurred.
- An irrigation schedule that includes the parameter setting and schedule for controllers.
- A schedule of landscape and irrigation maintenance.
- Documentation verifying recommendations from the soils analysis were implemented in the landscape installation.

SECTION 11 – PUBLIC EDUCATION

Water conservation is a high priority for the County as potable water is a precious resource and drought conditions continue to worsen. Reduction of water use in landscaping is the primary object of the Landscape Ordinance and this manual. Educating the public on design and techniques incorporated in this manual, as well as available programs that are offered; provide additional efforts in water conservation. Although strict regulations and enforcement are not included within these provisions, the hope is to achieve additional water conservation through encouragement of "doing your part" and providing available resources and programs for the public.

A. Monterey Peninsula Water Management District.

Several programs for water conservation in landscaping are available through the Monterey Peninsula Water Management District (MPWMD). Landscapes located within the district maybe participate in rebate programs for turf removal, the use of cisterns, graywater and weather based irrigation controllers. Rebates for landscapes associated with non-residential uses are also available. Service providing a water use analysis and water budget is available, free of charge, for large (over three acres) irrigated landscapes, landscapes with a dedicated water meter and residential water users located within the district and are served by California American Water. In addition, information for Water-wise Landscaping Techniques and drought tolerant planting is available. To encourage water conservation for the general public in the MPWMD area, the Landscape Ordinance encourages participation in these programs to the greatest extent feasible.

For more information, you may contact MPWMD at:

5 Harris Court, Building G
Monterey, CA 93940
(831) 658-5601

www.mpwmd.dst.ca.us/wdd/default.html

B. Marina Coast Water District.

A Water-Wise Landscape Incentive Program is available for areas served by the Marina Coast Water District (MCWD) which promotes water conservation through incentives for retrofitting inefficient irrigation equipment and turf replacement. To further reduce water use, information for Water-Wise Landscaping is also available. To encourage water conservation for the general public in the MCWD area, the Landscape Ordinance requires encourages participation in these programs to the greatest extent feasible.

For more information, you may contact MCWD at:

11 Reservation Road
Marina, CA 93933
(831) 384-6131
www.mcwd.org/conserve.html

C. Pajaro Valley Water Management Agency.

A graywater rebate program through the Pajaro Valley Water Management Agency (PVWMA) is available for local residents within its boundaries. Information, tips and suggested resources are also available. To encourage water conservation for the general public in the PVWMA area, the Landscape Ordinance encourages participation in these programs to the greatest extent feasible.

For more information, you may contact PVWMA at:

36 Brennan Street
Watsonville, CA 95076
(831) 722-9292
www.pvwma.dst.ca.us

D. Small Water Systems.

Small water systems (between 15 to 200 connections) located within the unincorporated areas of Monterey County are required to establish an Urban Water Conservation Plan by the Monterey County Water Resources Agency (MCWRA). This plan requires identification of water conservation goals and the measures to achieve such goals. To support attainment of these goals and further water conservation, the Landscape Ordinance requires existing landscapes in these areas to be consistent with the system's Urban Water Conservation Plan.

For more information, you may contact MCWRA at:

893 Blanco Circle
Salinas, CA 93901
(831) 755-4860
www.mcwra.co.monterey.ca.us/index.php

E. Areas Served by Private Wells.

Properties served by private wells make up the majority of land area for unincorporated Monterey County. Although these areas are large rural parcels that do not typically contain complex urban-type landscaping, participation in conserving water should be in any type of landscape. Therefore, the Landscape Ordinance encourages implementing the water conservation measures contained in the ordinance and this manual to the greatest extent feasible.

APPENDIX A

LANDSCAPE PACKAGE APPLICATION AND SUBMITTAL FORM

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

LANDSCAPE PACKAGE APPLICATION AND SUBMITTAL FORM

RMA – PLANNING
MIKE NOVO, DIRECTOR
168 W. Alisal St. 2nd Flr.
Salinas, CA 93901
(831) 755-5025
www.co.monterey.ca.us/rma

Landscape applications shall be submitted to the RMA-Planning for review and approval. The following is a checklist of materials required for submittal of your landscape package. Please feel free to contact your assigned project planner at any point in the development process regarding questions you may have about your application. Two (2) hardcopies of all materials are required. Plans shall be drawn on a sheet sized large enough to have legible fonts and lineweights. An electronic copy (pdf.) of all submitted materials is also required to be submitted on CD or flash-drive.

PROJECT INFORMATION		**PERMIT NO.**	
SITE ADDRESS	CITY/STATE		ZIP
NEAREST CROSS-STREET	ASSESSOR'S PARCEL NUMBER(S)		

OWNER(S) INFORMATION			
NAME		PHONE	
MAILING ADDRESS	CITY/STATE		ZIP
FAX	EMAIL		

APPLICANT INFORMATION			
NAME		PHONE	
MAILING ADDRESS	CITY/STATE		ZIP
FAX	EMAIL		

Submit the following information and materials in accordance with the requirement of the Water and Energy Efficient Landscape Ordinance and the Landscape Manual:			
☐	**Planting Plan**	☐	**Water Budget Calculations**
☐	**Irrigation Plan**	☐	**A Plumbing/Irrigation Permit has been applied for.**
☐	**Soils Management Report**	☐	**The landscape review fee has been paid.**

Owner/Applicant Signature: _____ Date: _____

FOR DEPARTMENT USE ONLY		
RECEIVED BY:	DATE STAMP:	ALL THE REQUIRED MATERIAL WERE SUBMITTED: __ YES __ NO

APPENDIX B

WATER EFFICIENT LANDSCAPE WORKSHEET

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

WATER EFFICENT LANDSCAPE WORKSHEET

RMA – PLANNING
MIKE NOVO, DIRECTOR
168 W. Alisal St. 2nd Flr.
Salinas, CA 93901
(831) 755-5025
www.co.monterey.ca.us/rma

The water efficient landscape worksheet shall be filled out by the project applicant and submitted with the Landscape Package Application to the RMA-Planning Department for review and approval.

SECTION 1. HYDROZONE INFORMATION TABLE

Please complete the hydrozone table(s) for each hydrozone. Use as many tables as necessary to provide the square footage of landscape area per hydrozone.

Hydrozone*	Zone or Value	Irrigation Method**	Areas (sq. ft.)	% of Landscape Area
			Total	

* Hydrozone
HW = High Water Use Plants
MW= Moderate Water Use Plants
LW = Low Water Use Plants

**Irrigation Method
MS = Micro-spray
S = Spray
R = Rotor
B = Bubbler
D = Drip
O = Other

SECTION 2. MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

The project's Maximum Applied Water Allowance shall be calculated using this equation:

$$\mathbf{MAWA= (ETo)(0.62)\ [(0.7 \times LA) + (0.3 \times SLA)]}$$

Where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ETo = Reference Evapotranspiration from Appendix C (inches per year)

0.7 = ET Adjustment Factor (ETAF)

LA = Landscaped Area includes Special Landscape Area (square feet)

0.62 = Conversion factor (to gallons per square foot)

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

0.3 = Additional ET Adjustment Factor for Special Landscape Area (1.0 – 0.7 = 0.3)

Maximum Applied Water Allowance = _____ gallons per year

Show calculations:

SECTION C. HYDROZONE/PLANT FACTOR CALCULATION WORKSHEET

Please complete the hydrozone table(s). Use as many tables as necessary

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)	Area (HA) (square feet)	PF x HA (square feet)
			Sum	
	SLA			

SECTION D. ESTIMATED TOTAL WATER USE (ETWU)

The project's Estimated Total Water Use is calculated using the following formula:

$$ETWU = (ETo)(0.62)\left[\frac{PF \times HA}{IE} + SLA\right]$$

Where:

ETWU = Estimated Total Water Use per year (gallons)

ETo = Reference Evapotranspiration from Appendix C (inches)

PF = Plant Factor from WUCOLS

HA = Hydrozone Area [high, medium, and low water use areas] (square feet)

0.62 = Conversion factor (to gallons per square foot)

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

IE = Irrigation Efficiency (minimum 0.71)

Estimated Total Water Use = _____ gallons

Show calculations:

APPENDIX C

REFERENCE EVAPOTRANSPIRATION (ETo) TABLE

REFERENCE EVAPOTRANSPIRATION (ETo) TABLE

For calculation of the MAWA and ETWU, the project applicant shall use the following annual evapotranspiration (ETo) values

Nearest City/Town	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
Arroyo Seco	1.5	2.0	3.7	5.4	6.3	7.3	7.2	6.7	5.0	3.9	2.0	1.6	52.6
Castroville	1.4	1.7	3.0	4.2	4.6	4.8	4.0	3.8	3.0	2.6	1.6	1.4	36.2
Gonzales	1.3	1.7	3.4	4.7	5.4	6.3	6.3	5.9	4.4	3.4	1.9	1.3	45.7
Greenfield	1.8	2.2	3.4	4.8	5.6	6.3	6.5	6.2	4.8	3.7	2.4	1.8	49.5
King City	1.7	2.0	3.4	4.4	4.4	5.6	6.1	6.7	6.5	5.2	2.2	1.3	49.6
King City-Oasis Rd.	1.4	1.9	3.6	5.3	6.5	7.3	7.4	6.8	5.1	4.0	2.0	1.5	52.7
Long Valley	1.5	1.9	3.2	4.1	5.8	6.5	7.3	6.7	5.3	3.6	2.0	1.2	49.1
Monterey	1.7	1.8	2.7	3.5	4.0	4.1	4.3	4.2	3.5	2.8	1.9	1.5	36.0
Pajaro	1.8	2.2	3.7	4.8	5.3	5.7	5.6	5.3	4.3	3.4	2.4	1.8	46.1
Salinas	1.6	1.9	2.7	3.8	4.8	4.7	5.0	4.5	4.0	2.9	1.9	1.3	39.1
Salinas North	1.2	1.5	2.9	4.1	4.6	5.2	4.5	4.3	3.2	2.8	1.5	1.2	36.9
San Ardo	1.0	1.7	3.1	4.5	5.9	7.2	8.1	7.1	5.1	3.1	1.5	1.0	49.0
San Juan	1.8	2.1	3.4	4.6	5.3	5.7	5.5	4.9	3.8	3.2	2.2	1.9	44.2
Soledad	1.7	2.0	3.4	4.4	5.5	5.4	6.5	6.2	5.2	3.7	2.2	1.5	47.7

Sources: * The values in this table were derived from:

1) California Irrigation Management Information System (CIMIS);

2) Reference EvapoTranspiration Zones Map, UC Dept. of Land, Air & Water Resources and California Dept of Water Resources 1999; and

3) Reference Evapotranspiration for California, University of California, Department of Agriculture and Natural Resources (1987) Bulletin 1922,

4) Determining Daily Reference Evapotranspiration, Cooperative Extension UC Division of Agriculture and Natural Resources (1987), Publication Leaflet 21426

APPENDIX D

CERTIFICATE OF COMPLETION

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY
CERTIFICATE OF COMPLETION

RMA – PLANNING
MIKE NOVO, DIRECTOR
168 W. Alisal St. 2nd Flr.
Salinas, CA 93901
(831) 755-5025
www.co.monterey.ca.us/rma

Prior to the final of grading or building permits, the applicant shall submit a Certificate of Completion to the RMA-Planning for review and approval.

PART 1. PROJECT INFORMATION

SITE INFORMATION		PERMIT NO.	
SITE ADDRESS	CITY/STATE		ZIP
NEAREST CROSS-STREET	ASSESSOR'S PARCEL NUMBER(S)		

OWNER(S) INFORMATION			
NAME		PHONE	
MAILING ADDRESS	CITY/STATE		ZIP
FAX	EMAIL		

APPLICANT INFORMATION			
NAME		PHONE	
MAILING ADDRESS	CITY/STATE		ZIP
FAX	EMAIL		

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

Owner Signature: _____ Date: _____

PART 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE PACKAGE

"I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the ordinance and that the landscape planting and irrigation installation conforms to the criteria and specification of the approved Landscape Package."

Signature*	Date	
Name and Title (print)	Telephone No.	
	Fax No.	
License or Certification No.	Email Address	
Company	Street Address	
City	State	Zip Code

*Signer of the planting plan, signer of the irrigation plan, or the licensed contractor who installed the landscaping.

PART 3. IRRIGATION AUDIT

An irrigation audit demonstrating that an inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule has occurred.

PART 4. IRRIGATION SCHEDULING

Attach parameters for setting the irrigation schedule on controller per Section No. 16.61.130 of the Water and Energy Efficient Landscape Ordinance.

PART 5. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE

Attached schedule of Landscape and Irrigation Maintenance per Section No. 16.61.130 of the Water and Energy Efficient Landscape Ordinance.

PART 6. SOIL MANAGEMENT REPORT

Attach documentation verifying implementation of recommendation from soils analysis report per Section No. 16.61.130 of the Water and Energy Efficient Landscape Ordinance.

APPENDIX E

PLANT LISTS

Harmful and Invasive Plants that are Prohibited or Discouraged from Being Planted in Monterey County

Scientific Name	Common Name
Acacia dealbata	Acacia
Acacia melanoxylon	Blackwood Acacia
Agerata adenophora	Sticky Eupatorium
*Ailianthus alitissima*****	Tree of Heaven
Arundo donax	Giant Reed
Carpobrotus edulis	Highway Iceplant
*Centauria stoebe ssp. micranthos***	Spotted Knapweed
Cortaderia jubata	Purple Pampas Grass, Jubata Grass
Cortaderia selloana	Pampas Grass
Cotoneaster lacteus	Cotoneaster
Cotoneaster pannosus	Cotoneaster
*Cystisus scoparius*****	Scotch Broom
Delairia odorata	Cape Ivy
*Eichornia crasipes*****	Water Hyacinth
Elaeagnus angustifolia	Russian Olive
Eucalyptus globulus	Blue Gum Eucalyptus
*Euphorbia oblongata****	Egg Leafed Spurge
*Genista monspessulana*****	French Broom
Hedera caneriensis	English Ivy
Hedera helix	Algerian Ivy
Iris pseudocomus	Yellow Flag Iris
*Linaria genistifolia ssp. dalmatica***	Dalmation Toadflax
*Lythrum salicaria***	Purple Loosetrife
Maytens boaria	Mayten
Mesembryanthemum crystallinum	Crystalline Iceplant
Myoporum laetum	Myoporum
*Nassella tenuissima (Stipa tenuissima)***	Mexican Feathergrass
*Onopordum acanthium***	Scotch Thistle
Pennisetum setaceum	Green Fountain Grass
*Populus nigra 'Italica'**	Lombardy Poplar
*Retama monosperma***	Bridal Veil Broom
Ricinis communis	Castor Bean
Robinia pseudoacacia	Black Locust
*Sesbania punicea***	Scarlet Wisteria
Spartium junceum	Spanish Broom
*Tamarix ramosissima****	Saltcedar
Triadica (Sapium) sebifera	Chinese Tallow Tree
Vinca major	Periwinkle

*Prohibited by California Code of Regulation, Section 3597 in Pajaro Valley and Salinas Valley.

**CDFA 'A' rated weed ***CDFA 'B' rated weed ****CDFA 'C' rated weed

Suggested Plants for Use in Landscaping in Monterey County

Scientific Name	Common Name
Achillea millefolium	Yarrow
Achillea taygeta	Moonshine' Yarrow
Achillea tomentosa	Woolly Yarrow
Alnus rhombifolia	White Alder
Arbutus unedo	Strawberry Tree
Arctostaphylos endumdsii	Woods red' Manzanita
Arctostaphylos sp.	Emerald Carpet' Manzanita
Arctostaphylos sp.	Dr. Hurd' Manzanita
Arctostaphylos sp.	Sunset' Manzanita
Baccharis pilularis	Twin Peaks' Dwarf Coyote Brush
Ceanothus gloriosus	Mountain Lilac
Ceanothus griseus horizontalis	Mountain Lilac
Ceanothus sp.	Frosty Blue' Mountain Lilac
Ceanothus sp.	Joyce Coulter' Mountain Lilac
Ceanothus sp.	Ray Hartman' Mountain Lilac
Ceanothus sp.	Snow Flurry' Mountian Lilac
Ceanothus sp.	Wheeler Canyon' Mountian Lilac
Ceanothus sp.	Yankee Point' Mountian Lilac
Ceanothus sp.	Point Reyes' Mountian Lilac
Cercis occidentalis	Western Redbud
Cercocarpus betuloides	Mountain Mahogany
Eriogonum fasciculatum (low growing cultivars)	California Buckwheat
Festuca rubra	Creeping Red' Red Fescue
Fragaria chiloensis	Wild Strawberry
Garrya elliptica	Evie' Coast Silktassel
Hesperoyucca whipplei	Yucca
Heteromeles arbutifolia	Toyon
Heuchera maxima	Coral Bells
Prunus lyonii	Catalina Cherry
Quercus agrifolia	Coast Live Oak
Rhamnus californica	Eve Case' Coffee Berry
Rhamnus crocea	Redberry
Ribes viburnifolium	Evergreen Currant
Romneya coulteri	Matilija Poppy
Sedum spathulifolium	Purpureum' Stonecrop

APPENDIX F

GLOSSARY

"Applied water" means the portion of water supplied by the irrigation system to the landscape.

"Backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

"California Invasive Plant Inventory" means the California Invasive Plant Inventory maintained by the California Invasive Plant Council.

"Certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

"Certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

"Check valve" or "anti-drain valve" means a valve located under a sprinkler head or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

"Controller" means 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 on-site sensor data (e.g., soil moisture) to adjust irrigation schedules.

"Developer Installed" means landscaping provided by a developer in conjunction with property improvements such as, but not limited to, remodels/additions, new construction, and land divisions. For the purposes of the landscape ordiance, a developer is a private entity undertaking real estate or property development resulting in the sale or lease of a residential product.

"Drip irrigation" means 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.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"Energy efficient landscape" means any new or rehabilitated landscape, public or private, that helps a project achieve a minimum 15% reduction in energy use when compared to the State's mandatory energy efficiency standards.

"Energy efficient lighting system" means any outdoor landscape lighting system consisting of at least 90 percent ENERGY STAR qualified hard-wired fixtures, solar powered lighting, and/or systems that employ programmable photocontrol or astronomical time-switch controls that automatically switch off when daylight is available.

"Established landscape" means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

"Estimated Total Water Use" (ETWU) means the total water used for the landscape.

"ET adjustment factor" means, except for special landscape areas, a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency. A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. For the purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET Adjustment Factor is (0.7) = (0.5/0.71).

"Evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

"Flow rate" means 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.

"Hardscapes" means any durable material (pervious or impervious).

"High water use plant" mean any plant categorized as high water need by the water use classification of landscape species guide.

"Homeowner-installed" means any landscaping either installed by a private individual for a single family residence or installed by a licensed contractor hired by a homeowner. A homeowner, for purposes of the landscape ordinance, is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.

"Hydrozone" means a portion of the landscaped area having plants with similar water needs *that are served by a valve or set of valves with the same schedule.* A hydrozone may be irrigated or non-irrigated.

"Infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

"Invasive plant" means a species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. "Noxious weeds" means any weed designated by the Weed Control Regulations in the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are

maintained at the California Invasive Plant Inventory, USDA invasive, noxious weeds database, and the Landscape Manual.

"Irrigation audit" means 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.

"Irrigation efficiency" (IE) means 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 minimum average irrigation efficiency for purposes of this ordinance is 0.71. Greater irrigation efficiency can be expected from well designed and maintained systems.

"Irrigation meter" means a separate meter that measures the amount of water used for items such as lawns, washing exterior surfaces, washing vehicles, or filling pools.

"Landscape architect" means a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615.

"Landscape area" or "landscape project" means the total dedicated landscape area on a property. Water features are included in the calculation of the landscape area. Areas dedicated to agricultural cultivation are not included. 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 contractor" means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

"Landscape Manual" means the manual prepared to assist applicants with the implementation of the requirements of the Water and Energy Efficient Landscape Ordinance (see Section 16.61.040.)

"Landscape package (application)" means the landscape materials required to be submitted for review and approval by the Director of the RMA-Planning Department. The landscape package shall include: project information, planting plan, irrigation plan, soils management report, and the water efficient landscape worksheet.

"Lateral Line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

"Licensed Professionals" includes licensed landscape architects, licensed landscape contractors,

"Local Water Purveyor" means any entity, including a public agency, city, county or private water company that provides retail water service.

"Low volume irrigation" means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

"Low water use plant" means any plant categorized as low water need by the water use classification of landscape species (WUCOLS) guide.

"Main line" means the pressurized pipeline that delivers water for the water sources to the valve or outlet.

"Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area.

"Microclimate" means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

"Mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

"Moderate water use plant" means any plant categorized as moderate water need by the water use classification of landscape species (WUCOLS) guide.

"Mulch" means 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 weeks, moderating soil temperature, and preventing soil erosion.

"New construction" means, for the purposes of the Water and Energy Efficient Landscape ordinance, a new public or private building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

"Operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

"Overhead irrigation systems" means systems that deliver water through the air (e.g., pop-ups, impulse sprinklers, spray heads, rotors, micro-sprays, etc).

"Overspray" means the irrigation water that is delivered beyond the landscape area, wetting pavements, walks, structures, or other non-landscaped areas.

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

"Pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.

"Plant Factor" or "plant water use factor" is a value when multiplied by ETo, estimates the total amount of water needed by plants. For purposes of the Water and Energy Efficient Landscape ordinance, the plant factor range for very low water use plants is less than 0.1, the plant factor for low water use plants is 0.1 to 0.3, the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the Department of Water Resources 2000 publication "Water Use Classification of Landscape Species."

"Planting Plan" means plans consistent with the requirements outlined in Section 16.61.060 of the Landscape Ordinance.

"Rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.

"Recycled water", "reclaimed water", or "treated sewage effluent water" means 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.

"Recreational Area" means public areas dedicated to active play such as parks, sports fields and golf courses where turf provides a playing surface.

"Reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year, and is an estimate of the evapotranspiration of a large field of four- to seven-inch 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.

"Rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, or design review, and the modified landscape area is equal to or greater than 2,500 square feet, is 50% of the total landscape area.

"Run off' means 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 moisture sensing device" or "soil moisture sensor" means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

"Soil texture" means the classification of soil based on its percentage of sand, silt, and clay.

"Stormwater control facility" means a stormwater management feature intended to improve the quality of runoff leaving a site.

"Special Landscape Area" (SLA) means an area of the landscape irrigated with recycled water, water features using recycled water, and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

"Sprinkler head" means a device which delivers water through a nozzle.
"Station" means an area served by one valve or by a set of valves that operate simultaneously.

"Turf" means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermuda grass, Kikuyu grass, Seashore Paspalum, St. Augustine grass, Zoysia grass, and Buffalo grass are warm-season grasses.

"Valve" means a device used to control the flow of water in the irrigation system.

"Water conserving plant species" means a plant species identified as having a low plant factor.

"Water feature" means 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 wetlands used for on-site wastewater treatment or stormwater best management practices that are not irrigated and used solely for water treatment or stormwater retention are not water features and, therefore, are not subject to the water budget calculation.

"Water use classification of landscape species guide" (WUCOLS) means the water use classification of landscape species guide published by the University of California Cooperative Extension, the department of water resources, and the bureau of reclamation, as it currently exists or may be amended in the future.

"Watering window" means the time of day irrigation is allowed.

"Weather-based self-adjusting irrigation controller" means a system component that uses local weather and landscape conditions to automatically adjust irrigation schedules to actual conditions on the site or historical weather data.

"Xeriscape" means a landscaping method developed especially for arid and semiarid climates that utilizes water-conserving techniques (such as the use of drought-tolerant plants, mulch, and efficient irrigation) to balance hydrology at the parcel level.

EXHIBIT C

CALIFORNIAL COASTAL COMMISSION LETTER DATED AUGUST 7, 2014

STATE OF CALIFORNIA – NATURAL RESOURCES AGENCY
EDMUND G. BROWN JR., GOVERNOR

CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

August 7, 2014

Anna Quenga
Associate Planner
Monterey County Resource Management Agency, Planning Department
168 W. Alisal Street, 2nd Floor
Salinas, CA 93901

Subject: Water and Energy Efficiency Landscape Ordinance

Dear Ms. Quenga:

Coastal Commission staff has reviewed the County's draft Water and Energy Efficiency Landscape Ordinance that was developed consistent with the requirements of Assembly Bill (AB) 1881. In sum, the ordinance includes new submittal requirements for planting, irrigation, lighting, and soils plans in order to reduce water and energy consumption through landscape design techniques. The County intends to apply this ordinance countywide, as required by AB 1881. As discussed previously with County staff, we do not believe that this ordinance needs to be added to the LCP. The existing regulations in the LCP appear to adequately cover the issue of water conservation/water efficiency in landscaping without the need to add any references to this new ordinance, and the County is not precluded from applying this new ordinance in the Coastal Zone by any existing LCP regulations. That being said, Commission staff is also not opposed to adding the ordinance to the LCP if the County sees the need.

Thank you for the opportunity to provide guidance on this issue and please let us know if you have any questions.

Sincerely,

Katie Butler
Coastal Planner
Central Coast District Office

MONTEREY COUNTY LANDSCAPE MANUAL

Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation

Draft March 16, 2015

Table of Contents

List of Appendices

SECTION 1 – INTRODUCTION

A. Purpose

The *Standards, Guidelines and Specified Performance Requirements for Landscape Water Use and Irrigation* (Landscape Manual) was adopted by a separate resolution by the Monterey County Board of Supervisors and will be amended from time to time to address new requirements or technology, and to clarify and provide guidance related the County's process and procedures for landscaping. The landscape manual is specifically authorized as an informational and implementing tool in the inland and coastal landscape ordinances (County of Monterey's Ordinance Nos. ___) and Chapters 16.63 and 16.64 of the Monterey County Code. The information contained within this manual is applicable to both the inland and coastal areas of the County. Furthermore, any mention or reference to regulations set forth in the "Landscape Ordinance" within this manual means both ordinances for the coastal and inland areas.

The purpose of this manual is to provide applicants with comprehensive guidance to comply with the County's landscape requirements, including a clear explanation of specific procedures and related technical information for landscape and irrigation projects subject to the Landscape Ordinance. In addition, the manual shall serve as a tool to provide property owners a greater understanding of the importance and benefits in efficient use of water and energy in landscaping. Best management practices are identified as well as other situations that a property owner should keep in mind when designing a landscape plan (i.e. natural areas, critical habitat, flood-prone areas, etc.) even if the landscape project is exempt from any permit requirement.

B. Appendices

Appendices have been incorporated to provide applicants with additional information and the landscape package submittal documents required to comply with the water efficiency requirements of the Landscape Ordinance.

The appendices, which may be updated periodically include:

The *Landscape Package Application and Submittal Form*

This form will include important project information to be completed by the applicant and contains a checklist of the required submittal documents for the landscape package. This form will be submitted to RMA-Planning as part of the landscape package.

The *Water Efficient Landscape Worksheet*

This worksheet will be completed by the applicant in order to demonstrate how the project is consistent with the water efficient requirements of the Landscape Ordinance. The Water Efficient Landscape Worksheet includes four components:1) the Hydrozone Information Table used to itemize plants relative to water use, 2) the mathematical formula to be used to calculate a project's Maximum Applied Water Allowance (MAWA), which calculates the maximum water use allowed based on the landscape area and amount of water typically evaporated from soils and plants, 3) the Hydrozone/Plant Factor Calculation worksheet used to provide data needed to calculate the estimated water use, and 4) the mathematical formula used to calculate a project's Estimated Total Water Use (ETWU), preformed to calculate the total amount of water used in a landscape project.

Certificate of Completion

In order to ensure the landscape planting and irrigation installation has been completed per the approved plans, the applicant will be required to submit a Certificate of Completion. As part of the Certificate of Completion, the applicant will also be required to include an irrigation audit and a regular planting and irrigation maintenance schedule.

Glossary

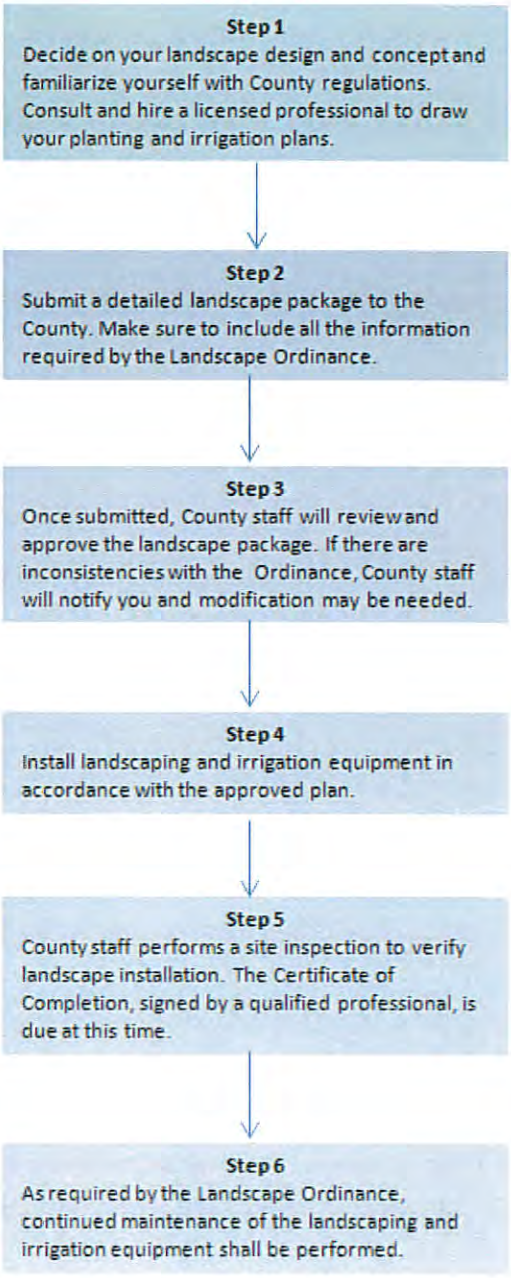
The definitions included in the Landscape Ordinance are also included in this manual.

C. Summary of Landscape Review and Process

The information below provides a general guideline for applicants, illustrating the process for submittal, review, approval, and maintenance of landscape projects subject to the Landscape Ordinance:

Step 1 – Landscape Design and Concept

Once you have determined that your proposed project is subject to the Landscape Ordinance (see Section 2 of this manual), certain factors should be taken into account prior to preparing a landscape design in order to address all requirements related to landscaping comprehensively. These factors may include requirements of the Landscape Ordinance, this manual, policies contained in the applicable Area or Land Use Plans, zoning and, conditions of approval for related discretionary permits for the project site, and additional requirements from other agencies. For example, water and energy conservations requirements must be aligned with fuel management and tree removal requirements. Selected plant species must be drought tolerant and invasive plants are to be avoided. Keep in mind if and how the landscape project would affect the existing environment of the site. Are there areas on



the property where landscape planting and irrigation should be avoided (flood-prone, landslide, and/or preserved natural areas)? Is the property located in an area where there is a wildlife corridor? If so, would the landscape project have a negative effect on this area or would the planted vegetation survive if the existing wildlife continuously consumed it? Are trees and shrubs spaced appropriately to allow for fire breaks?

Step 2 – Documents Required for Submittal

Projects subject to the Landscape Ordinance are required to submit a detailed landscape package to RMA-Planning for review and approval prior to installation. For discretionary permits (such as a Use Permit or other entitlement), submittal of a conceptual landscape plan is required with the discretionary application followed by submittal of a detailed landscape package prior to the issuance of the related grading or building permit.

The following is a list of the required documents that will need to be included in the landscape package (please refer to the specific Section or Appendix cited for further detail and explanation):

- Landscape Application Form (see Appendix A).
- Planting Plan (see Section 4).
- Irrigation Plan (see Section 6).
- Soils Management Report (see Section 7).
- Water Efficiency Landscape Worksheet (see Section 5 and Appendix B)
- Energy efficiency information (Section 8).

Step 3 – Approval of the Submitted Landscape Package

Prior to the issuance of a ministerial permit (such as a grading or building permit) or design review; the landscape package must be approved. Once the package has been reviewed by RMA-Planning, and any necessary corrections have been made by the applicant, the final landscape

and irrigation plans will be signed, stamped approved by the County, and a "Job Copy" returned to the applicant. Installation of the landscaping may not proceed until this approval is complete.

Step 4 – Landscape Installation

Landscaping and irrigation must be installed in conformance with the plans approved by RMA-Planning.

Step 5 – Verification of Installation and Certificate of Completion Submittal

Prior to granting of a "final" for any ministerial permit (such as a grading or building permit), the applicant shall submit a Certificate of Completion (see Section 10 and Appendix D) and schedule a site inspection with RMA-Planning to verify that the installed landscaping is in conformance with the approved plans. If during installation the applicant needs to modify the planting and/or irrigation beyond what can be considered consistent with what was approved, and the modification is found acceptable by the Landscape Architect/Designer of record, the applicant will be required to submit "as-built" plans to RMA-Planning along with a statement of why the modification was necessary.

Step 6 – Continued Maintenance

Landscape areas and irrigation equipment are required to be maintained in accordance with the Landscape Ordinance and this manual. As stated previously, the applicant will be required to submit a Certificate of Completion which will include information for long term maintenance of landscape planting and irrigation equipment. If the landscape and/or irrigation system is not properly maintained the project owner could be subject to a code violation by the County.

SECTION 2 – APPLICABILITY

The Landscape Ordinance applies to landscape areas for certain project types meeting specific applicability thresholds. The landscape area of a project is considered to be all the areas on a property that are dedicated to landscaping, unless otherwise found to be exempt (see subsection D). Project types are separated into three main categories: 1) public agency projects, 2) non-residential private development projects, and 3) residential private development projects, with residential private development projects further divided into sub-categories. Although the primary focus of this manual is to explain the requirements of the Landscape Ordinance, the information provided is still be helpful for applicants with smaller landscape undertaking and exempt projects.

A. Public Agency Projects

Public agency projects include any use or construction undertaken by public agencies (e.g., local municipalities, special districts and State agencies such as Caltrans) within any zoning district. These projects are financed and constructed by the public agency for recreation, employment, or health and safety for the community. Some examples of these types of projects include:

- Public and municipal buildings (Monterey County Government Center, Monterey County Emergency Center, Juvenile Hall), schools, libraries and hospitals (Natividad Medical Center).
- Infrastructure related to transportation such as the construction and maintenance of roads, bridges, and bikeways.
- Public outdoor spaces such as parks, public squares, and parking lots.

The applicability development thresholds that trigger the requirement to comply with the Landscape Ordinance for public agency projects are:

- The construction of a new building where the new landscaped area is 2,500 square feet or more and where the project requires a grading permit, building permit, or design review.
- New landscape areas that are 2,500 square feet or more not associated with any new buildings but require a grading permit, building permit, or design review.
- Rehabilitated landscape projects that 1) require a grading permit, building permit, or design review; 2) consist of a modified landscape area of 2,500 square feet or more; ***and*** 3) the new landscaping is at least 50% of the existing landscaped area.

B. Private Development Projects – Non-Residential

Non-residential private development projects include any use or construction undertaken by private citizens for non-residential type uses in commercial, industrial, and agricultural zoning districts. This development is typically privately funded and results in some personal or economical benefit to the owner or applicant. Some examples of these projects include:

- Commercial developments consistent with commercial designated zoning districts such as retails stores, convenience markets, restaurants, hotels and motels, and service centers.
- Industrial developments consistent with industrial designated zoning districts such as warehouses, contractor storage yards, manufacturing facilities, and processing plants.
- Developments consistent with agricultural zoning districts such as agricultural support facilities, agricultural processing plants, farm equipment storage facilities, fertilizer plants and yards, and trucking operations and facilities.
- Mixed use developments such as projects that include both commercial and residential uses on one project site.

The applicability development thresholds for private development projects consisting of non-residential uses are:

- Construction of a new building with a new landscaped area of 2,500 square feet or more and where the project requires a grading permit, building permit, or design review.

- New landscape areas that are 2,500 square feet or more not associated with any new buildings but require a grading permit, building permit, or design review.
- Rehabilitated landscape projects that 1) require a grading permit, building permit, or design review; 2) consist of a modified landscape area of 2,500 square feet or more; ***and*** 3) the new landscaping is at least 50% of the existing landscaped area.

C. Private Development Projects – Residential

Private residential development projects are residential developments within residential zoning districts and those districts which allow residential uses. This category of projects is further defined into two sub-categories: developer installed and homeowner installed.

1. Developer installed

Developer installed projects are financed and undertaken by a private entity or business within a residential zoning district, or those districts which allow residential uses, where the residential units/products will be sold or leased. Some examples of these projects include:

- Single family dwellings that are speculation homes or track homes, multifamily dwellings (condos, townhomes, and apartment complexes), and residential subdivisions.

The applicability development thresholds for developer installed private development projects consisting of residential uses are:

- Construction of a new building(s) with new landscape area(s) of 2,500 square feet or more and where the project requires a grading permit, building permit, or design review. This includes single family home developments in which the combined area of multiple or individual yards totals at least the threshold amount.
- New landscape areas that are 2,500 square feet or more not associated with any new buildings but require a grading permit, building permit, or design review.

Rehabilitated landscape projects that 1) require a grading permit, building permit, or design review; 2) consist of a modified landscape area of 2,500 square feet or more; ***and*** 3) the new landscaping is at least 50% of the existing landscaped area.

2. Homeowner installed

Homeowner installed projects are individual single family homes within a residential zoning district, or those districts which allow residential uses, where the project is financed and undertaken by the owner of the property. Some examples of these projects include:

- Single family dwellings, accessory dwelling units, and accessory structures where the owner resides on the property or rents or leases the property to another individual/family.

The applicability development thresholds for homeowner installed private development projects consisting of residential uses are:

- Construction of a new building(s) with a new landscape area(s) 5,000 square feet or more and require a grading permit, building permit, or design review;
- New landscape areas that are 5,000 square feet or more not associated with any new buildings but require a grading permit, building permit, or design review.
- Rehabilitated landscape projects that 1) require a grading permit, building permit, or design review; 2) consist of a modified landscape area of 5,000 square feet or more; ***and*** 3) the new landscaping is at least 50% of the existing landscaped area.

D. Exempt Landscaping

Projects exempt from the requirements of the Landscape Ordinance include:

- Landscaping projects on registered local, state, or federal historical sites;

- Ecological restoration projects (e.g. sites altered to establish a defined, indigenous, historic ecosystem) with no permanent irrigation system;
- Mined-land reclamation projects (surface mining operations with an approved reclamation plan) with no irrigation system;
- Plant collections, as part of botanical gardens and arboretums open to the public;
- Agricultural cultivation activities;
- Construction of structures that do not include changes in existing landscape;
- Changes in use of an existing structure with no changes to landscaping;
- Private edible plant gardens and/or orchards for personal and individual consumption;
- Construction of wetlands or areas that are not irrigated and used solely for on-site wastewater treatment;
- New, existing or rehabilitated stormwater quality projects that are not irrigated and used solely for the purpose of improving runoff quality and/or retaining runoff for onsite infiltration;
- Natural areas including, but not limited to: open space, native vegetative areas, and hardscapes with no permanent irrigation system;
- Erosion control activities with no permanent irrigation system such as hydroseeding; and
- Existing cemeteries.

E. Other Landscape Regulations

In addition to the Water and Energy Efficient Landscape Ordinance, there are additional County water conservation regulations that relate to landscaping such as Monterey County Code (Chapters 18.44 and 18.50) and the Monterey County Coastal Implementation Plans (Parts 2 through 5). Additional regulations related to water use are also enforced by the Monterey County Water Resources Agency, the Monterey Peninsula Water Management District, and the Marina Coast Water District for projects located within their jurisdictional areas.

Projects exempt from the Landscape Ordinance may still be subject to these additional regulations which would require submittal of a landscape and irrigation plan to either the County or other

agency. Many of these regulations call for the use of drought tolerant plants, native plants, and the use of and low precipitation sprinkler heads, bubblers, drip irrigation system and timing devices as part of the exterior landscape. Furthermore, existing County policies generally encourage the use of native plants, fire resistant plants and the eradication of invasive plant species.

1. Monterey County Code Chapter 18.44

Monterey County Code Chapter (MCC) 18.44 requires new construction, served by the California American Water Service Company, to incorporate low water use or native plants and low water use irrigation systems as part of the landscape design. Discretionary permits for projects in these areas are typically conditioned to require the submittal of landscape and irrigation plans to be reviewed and approved before the issuance of building permits. Then, prior to final of the building permit, County staff will verify that the landscaping and irrigation equipment was installed in accordance to the approved plans.

2. Monterey County Code Chapter 18.50

Similar to Monterey County Code Chapter (MCC) 18.44, MCC 18.50 also requires new construction to incorporate low water use or native plants and low water use irrigation systems as part of the landscape design. However, MCC 18.50 is only applicable to property located within the Greater Salinas, Toro, and Greater Monterey Peninsula planning areas as well as a portion of the North County Planning Area (including the Coastal Zone). Discretionary permits for projects in these areas are typically conditioned to require the submittal of landscape and irrigation plans to be reviewed and approved before the issuance of building permits. Then, prior to final of the building permit, County staff will verify that the landscaping and irrigation equipment was installed in accordance to the approved plans.

3. Monterey County Coastal Implementation Plans Parts 2-5

The North County, Big Sur, Carmel Area, and the Del Monte Forest Coastal Implementation Plans include policies that address water conservation relative to landscaping. Similar to other regulations described above, the 1982 General Plan, and state law; water conservation techniques in the coastal zone include planting using low water use (or drought tolerant) vegetation, water efficient irrigation systems, and incorporating recycled water where feasible. Discretionary permits for projects in these areas are typically conditioned to require the submittal of landscape and irrigation plans. The landscape and irrigation plans are reviewed and approved by RMA-Planning before the issuance of building permits. Then, prior to final of the building permit, County staff is required to verify that the landscaping and irrigation equipment was installed in accordance to the approved plans.

4. Monterey County Water Resources Agency

The Monterey County Water Resources Agency adopted Ordinance No. 3932, addressing water efficiency in landscaping through the use of drought tolerant planting, encouraging the use of non-potable water for landscape irrigation, and limiting the use of turf grass.

5. Monterey Peninsula Water Management District and the Marina Coast Water District

There are areas within unincorporated Monterey County that are located within the Monterey Peninsula Water Management District (MPWMD) or the Marina Coast Water District (MCWD) and therefore are subject to their regulations. MPWMD Rule 142, Water Efficiency Standards, requires landscaping to be consistent with the State Model Water Efficient Landscape Ordinance. In addition, MCWD Ordinance No. 40 and Section 3.36.030S.2, Water Conservation, of the District code requires new construction to conform to the requirements of the State Model Water Efficient Landscape Ordinance.

SECTION 3 – LANDSCAPE PACKAGE

A. General Requirements

Projects subject to the Landscape Ordinance are required to submit a Landscape Package to RMA-Planning. The Director of RMA-Planning will approve the package once staff has verified that the proposed project complies with the provisions of the Landscape Ordinance, Landscape Manual, other applicable provisions or codes, as well as the conditions of approval for any applicable land use permit or other discretionary approval related to the specific project.

B. Submittal Requirements

A complete Landscape Package includes the following components which are described in more detail in the referenced sections of this manual:

- Landscape Package Application and Submittal Form (see Appendix A) containing the following information:
    - Project Applicant/Property Owner and contact information
    - Project Address, Assessor's Parcel Number, and vicinity map
- Planting Plan (see Section 4)
- Irrigation Plan (see Section 6)
- Water Efficient Landscape Worksheet including water budget calculations for Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU) (see Section 5 and Appendix B)
- Soil Management Report (see Section 7)

SECTION 4 – PLANTING PLAN REQUIREMENTS

The planting plan is a site plan that depicts the existing and proposed conditions of the landscape area. The plan shows the locations of all proposed planting areas, identifies the species and sizes of the plant materials to be installed, and depicts existing vegetation to be retained and/or removed. If existing trees are to be removed, such removal must be in conformance with County tree removal requirements and any required tree removal permits must be obtained before tree removal takes place. In addition, the planting must be in conformance with Fuel Management/Fire Hazard requirements of the adopted California Fire Code and Section 18.09 (Fire Code) of the Monterey County Code.

Planting plans are required to be prepared by a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape and will be used in conjunction with approved irrigation plans, as the final landscape construction plans for the project.

A. General Requirements and Contents of the Planting Plan

The planting plan, drawn at a scale that is clearly legible, will need to include the following information:

- Project Information:
    - Project Applicant/Property Owner and contact information
    - Project Address, Assessor's Parcel Number, and vicinity map
    - Total square feet of the landscape area (new and existing)
    - Project type (e.g., new, rehabilitated, public, private, residential)
    - Water supply for the project. Identify the water purveyor if the applicant is not served by a private well and location of connection point.

- North arrow and scale.
- Existing conditions such as grades, existing vegetation including trees, property lines, right-of-ways, drainage easements, utilities and utility easements, streets, driveways, walkways, and other paved areas (pervious and/or impervious).
- Existing improvements located on the site including all buildings and structures that are to remain.
- Any proposed new structures such as buildings, accessory buildings, fences, and decks.
- Existing Onsite Wastewater Treatment System (OWTS) and future OWTS replacement areas.
- Stormwater control treatment measures.
- All hydrozones depicted as low, moderate, or high and each hydrozone identified by number, letter, or other method.
- Any required Fuel Management/Fire Hazard zones.
- Natural features to remain, including rock outcroppings, existing native and ornamental trees, shrubs, etc.
- Any proposed outdoor elements such as platforms, planting areas, recreational areas/features, walkways, patios, walls, and water features.
- Any parking areas that include existing or proposed landscaping.
- Other landscape design features listed within subsequent subsection D.
- Verification. Landscape plans shall contain the following statement: ***"I_____ certify that this landscaping plan complies with all Monterey County landscaping requirements including, but not limited to, the use of native drought tolerant, non-invasive species, and limited turf"*** which shall be signed by a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape. This verification is required to ensure that the licensed professional who prepared the plans is certifying that the plans comply with the County's requirements.

B. Planting Areas and Palette

1. Planting Areas

Planting areas need to be depicted accurately on the planting plan and must identify the different plant types by utilizing a plant symbol and labeling system and a key or legend listing each plant used and its corresponding symbol. The applicant must also include information relative to the plants such as: plant species name (both scientific and common), container size (e.g., 1 gallon, 5 gallon, etc.), quantity of each plant type used, and the spacing needed for planting (e.g., plant at 3 feet on center). The planting plans must also include information on the existing vegetation of the site which should be shown clearly and quantified (in square feet). In order to gain a full understanding of the landscape project, areas where existing vegetation is to remain, areas that require new irrigation or where existing irrigation that will remain in place, and areas where existing vegetation will be removed should be clearly depicted on the plans with a corresponding note or table indicating their size in square footage. Proposed turf areas must be accurately depicted and the square footage indicated to document that the amount is under the threshold limitations. Trees to be removed must be clearly and accurately represented in conformance with requirements of any tree removal permit that will need to be issued.

Landscape areas that are exempt from the Landscape Ordinance (see Section 16.63.030.C of the coastal Landscape Ordinance, Section 16.64.030.C of the inland Landscape Ordinance and Section 2.D of this manual) should be clearly delineated. Examples of these include areas dedicated permanently and solely to edible plants, areas on the property to remain natural, and any other vegetated areas that do not have a permanent irrigation system. When designing the landscape, the applicant must also keep in mind that plants with similar water use needs are required to be grouped together in distinct hydrozones (see Section 5.C of this manual) and the mix of high and low water use plants is generally prohibited. In terms of energy efficiency, plant type and location should also be selected to avoid obstructing passive solar energy systems. In addition, planting that must meet fuel management/fire hazard requirements should be clearly noted as such.

2. Planting Palette

Selected plants used in landscape areas should generally be drought tolerant with emphasis on native and/or native compatible species when appropriate. Limiting high water use plants to special design areas of the landscape, such as entrances, courtyards, and Low Impact Development[1] (LID) areas is recommended. Plants should be carefully selected, giving attention to the survivability rate in your area and disease and pest resistance. This will keep costs and maintenance down as it limits the need to replant and add supplemental fertilizers. Turf uses a significant amount of water and should only be used for specific functional areas (playing areas, etc.) that require turf. The ordinance limits turf to either 20% of the landscape area or up to 1,500 square feet (whichever is lower) unless the turf area is designated as a Special Landscape Area and is solely dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface. However, in typical landscaped areas, avoiding the use of turf altogether or limiting it to an amount much less than the maximum allowed is strongly encouraged. In addition to turf square footage limitation, the Landscape Ordinance prohibits planting turf in areas with slopes that exceed 10%, areas that are eight feet wide or less, and on street medians, traffic islands, planter strips, or bulb-outs. These requirements reflect the concept of only using turf when it is required for a specific function. The use of drought tolerant shrubs and groundcovers instead of turf is strongly encouraged.

The use of invasive plants is strictly prohibited and the eradication of these species in the existing landscape is highly encouraged. Invasive plants have become a significant problem in both ornamental and natural landscapes. Incorporating eradication into new landscape projects and ongoing maintenance will help limit their spread.

Appropriate plant spacing must be carefully considered based upon their specific adaptability of the plant to the climatic, geologic, and topographical conditions of the project site. In addition,

[1] LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements.

careful attention must be given to incorporating fire safe landscaping and fuel management requirements into a proposed landscape. If a project requires fuel management due to its location in a fire hazard area, proper plant selection is critical. Section 9 of this manual guidance related to this issue.

3. Onsite Wastewater Treatment Systems and Repair Areas

Areas with installed Onsite Wastewater Treatment Systems (OWTS) or repair areas for future OWTS shall be maintained/planted to provide the best outcome for the wastewater treatment system. Landscaping the OWTS system will prevent erosion of the soils cover over the drain field. Additionally, plants aid in the function of the system by optimizing oxygen exchange and promoting necessary soil moisture removal trough transpiration. For ease of maintenance, plants in this area should be shallow rooted herbaceous plants that are well adapted to normal rainfall amounts for the area. Consequently, plants that have aggressive, woody, water-loving, deep roots can potentially clog or disrupt the pipes in the system, causing serious damage that can be very expensive. Additionally, the use of landscaping plastics is not allowed over areas with installed OWTS drain field(s). Alternatively, landscaping fabrics that allow moisture and oxygen transfer are acceptable.

C. Grading, Soil Amendments, and Mulching

When conceptualizing the required grading for a landscaping project, the design shall incorporate techniques that minimize soil erosion, artificial manipulation of natural topography, runoff, and water waste. In order to demonstrate this, grading information shall depicted on the plans and include the height of graded slopes, drainage patterns, pad elevations, and finished elevations. It is recommended that the natural topography of the site shall be retained wherever feasible such that all irrigation and normal rainfall remain within the property lines and avoid disruption of natural drainage patterns. In addition, the planting plan should clearly denote (either as notes and/or details and specifications, whichever is appropriate) all soil amendments consistent with the recommendations of the soil management report (see Section 7).

D. Other Landscape Design Features

In addition to planting, landscapes typically incorporate the use of other design features for aesthetic and/or multi-functional purposes such as:

- Water features such as fountains, spas, ponds, etc.
- Ornamental features such as windmills, statuary, monuments, public art, flagpoles, etc.
- Stormwater management facilities and Low Impact Development that control runoff and increase on-site retention and infiltration into the landscape design, such as vegetated filter strips, bio-filtration and bio-retention facilities, swales, infiltration basins, etc.
- Rain harvesting or catchment technologies such as rain gardens, cisterns, etc.
- Energy efficient landscape techniques (see Section 8).
- Landscape planting located within parking areas or lots.

These features should also be depicted on the planting plans. For those areas that are not subject to water budget calculations, a note of explanation must be included.

E. Landscape Maintenance Schedule

The regular maintenance of landscape planting promotes plant health, ensures water use efficiency, and lowers costs to the owner. The Landscape Ordinance requires submittal of a regular maintenance schedule with a Certificate of Completion (see Section 9) and at a minimum, should include the following:

- Routine inspection of planting areas and individual plants to remove dead vegetation and adjust fertilization, watering, etc.
- Aerating and dethatching turf areas.
- Replenishing mulch as needed.
- Fertilizing, pruning and weeding in all landscape areas.

SECTION 5 – WATER EFFICIENT LANDSCAPE REQUIREMENTS

The water efficient landscape requirements are a key component to the overall landscape design and strict adherence can be achieved by incorporating water management practices and water waste prevention through planting and irrigation design. When designing a planting plan, the effective use of hydrozones is critical. Strategic placement and groupings of plants in each area will not only reduce the need for water use, but also result in minimizing costs for maintenance and upkeep of the landscape.

In order for the County to determine if a project complies with the Landscape Ordinance (applicable state laws), a series of calculations will need to be prepared and submitted by the applicant. First, the maximum water allowance for a site must be established. This is done by setting the Maximum Applied Water Allowance (MAWA) limit for water use (see subsection B below). Once that is established, the estimated total water use (ETWU) for the proposed landscaping is calculated, using the water use information included the Hydrozone Table. If the amount of water calculated from the ETWU is lower than the amount of water calculated from the MAWA, it is assumed that the landscape project has reduced its water use to the lowest amount practical. This section will walk through each step in determining if the landscape project is water efficient.

A. Water Budget Calculations – Water Efficient Landscape Worksheet

In order to document a project's efficient use of water use, the applicant is required to submit a Water Efficient Landscape Worksheet (see Appendix B) to the County as part of the Landscape Package. The worksheet includes the calculation of a project site's MAWA, the proposed planting's water use depicted in a Hydrozone Table, and the project's ETWU.

B. Establishing the MAWA

The calculation of the Maximum Applied Water Allowance (MAWA) is used to determine the maximum amount of the annual applied water that can be used to irrigate the landscape area. The MAWA is determined by multiplying the annual evapotranspiration or ETo value (the annual amount of water evaporated from the earth and the water lost through plants) by the total landscape area. ETo values vary between regions and areas due to differences in climate. Therefore, to determine a project site's ETo value, a Referenced Evapotranspiration Table has been included as Appendix C of this manual. The following equation is used to determine the MAWA and the calculation will be submitted with the landscape package as a worksheet.

$$\mathbf{MAWA= (ETo)(0.62)\ [(0.7 \times LA) + (0.3 \times SLA)]}$$

Where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ETo = Reference Evapotranspiration from Appendix B.2 of this manual (inches per year)

0.7 = ET Adjustment Factor or ETAF (except for special landscape areas, a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency)

LA = Square feet of the total landscaped area (including Special Landscape Area)

0.62 = Conversion factor (to gallons per square foot)

SLA = Square feet of the Special Landscape Area (area of the landscape irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface)

0.3 = The additional ET Adjustment Factor/water allowance for Special Landscape Area (1.0 – 0.7 = 0.3)

Example 1. *Isabel has a landscape project (2,500 square feet total) in the Central Salinas Valley planning area, located near Arroyo Seco. She intends on planting low and moderate use plants but does not wish to include planting that can be considered as a Special Landscape Area (SLA). The MAWA calculation would be performed as follows:*

MAWA= (ETo)(0.62) [(0.7x LA) + (0.3xSLA)]
MAWA= (52.6)(0.62)[1,750 + 0]
MAWA= (32.61)(1,750)
MAWA= 57,068 gallons per year

C. Hydrozones – Hydrozone Information Table

The proper establishment of hydrozones in a landscape improves water conservation. Establishing hydrozones is done by grouping vegetation that requires similar water uses, as described in Example 2. This allows the amount of water needed to irrigate the plants to be used efficiently. Proper design of hydrozones will also allow applicants to take advantage of microclimates on the specific site; planting vegetation that will tolerate heat and wind can be placed closer to the street while more sensitive plants placed in shaded areas closer to structures where they are more protected. Once the applicant has determined the distinct hydrozones, they will then need to make the appropriate plant selection. In order to do this, the applicant will have to determine what the general water use is for each plant selected. The plant water use shall be determined using the Water Use Classification of Landscape Species guide or WUCOLS (see Appendix E, Glossary).

Example 2. *Isabel decides to place three different plants in one hydrozone: Anigozanthos flavidus* (kangaroo paw), *hypericum olympicum* (Olympic hypericum), *and leucanthemum X superbum* (Shasta Daisy). *Using the Species Evaluation List (1999) found in the WUCOLS to determine water use, she found that both Kangaroo paw and Olympic hypericum are listed as low water use plans but the Shasta Daisy is listed as a moderate use plant. Therefore, the hydrozone for this planting would be identified as a moderate water use area.*

When designing the landscape and identifying the placement of hydrozones, the applicant will also need to consider the specific requirements of the Landscape Ordinance, such as:

- The surface area of water features shall be classified as a high water use hydrozone area.
- Low and moderate water use plants can be mixed, but the entire hydrozone shall be classified as moderate water use (as shown in Example 2.).
- High water use plants cannot be mixed with low or moderate water use plants.
- Temporarily irrigated areas are classified as a low water use hydrozones.
- Special Landscape Areas using recycled water are classified as low water use hydrozone.

Hydrozone Information Table.

Not only does the landscape ordinance require landscapes to be designed utilizing hydrozones, it also requires applicants to take the hydrozone data and place it into a Hydrozone Information Table (see Appendix B) . For each hydrozone listed, the applicant must list the plant type and/or water feature, the irrigation method used, the square footage of the hydrozone, and the percentage of the total landscape area of the project that the hydrozone represents. This table will be used to calculate ETWU in Section D.3.

Example 3. *After careful thought, Isabel decides to plant the Kangaroo paw and Olympic hypericum in one 1,800 square foot hydrozone and the Shasta Daisy in a different 700 square foot hydrozone. This information would be shown in the Hydrozone Information Table as follows:*

Hydrozone	Zone or Value	Irrigation Method	Areas (sq. ft.)	% of Landscape Area
1	Low	Bubbler	1,800	72%
2	Moderate	Drip	700	28%
			Total	100%

D. Calculating the Estimated Total Water Use

The estimated total water use (ETWU) is calculated using they hydrozone information from previous Section C, plant factor range, and plant factor.

1. Plant Factor Range

The plant factor is the estimated amount of water needed by plants. This is determined by first identifying the plant factor range established by WUCOLS. The table below represents the Plant Factor Range:

Plant Factor Range Table	
Very Low Water Use	< 0.1
Low Water Use	0.1 to 0.3
Moderate Water Use	0.4 to 0.6
High Water Use	0.7 to 1.0

Example 4. *Now that Isabel has decided what and where she would like to plant, she must then determine their water use based on the Species Evaluation List (1999) found in the WUCOLS. Both Kangaroo paw and Olympic hypericum are listed as low water use plants and the Shasta Daisy is listed as a moderate use plant. Utilizing the Plant Factor Range table, the low water use plants would fall into the range of 0.1 to 0.3 and the moderate water use plant would fall in the 0.4 to 0.6 range.*

2. Plant Factor

The plant factor range(s) used to determine the plant factor. The typical practice for selecting the plant factor uses the mid value of the given range (e.g., the plant factor range for low water use plants is 0.1 to 0.3; therefore, the mid value would be 0.2). In order to assist applicants with calculating the total plant factor for the proposed landscaping, especially those that may have a wider range of plants, the County has provided and additional worksheet: the Hydrozone/Plant Factor Calculation worksheet found in Appendix B. The data found in the Hydrozone Information Table and the determined plant factor range will be needed to complete the Hydrozone/Plan Factor Calculation worksheet as shown below.

Example 5. *Based on the Hydrozone Information Table in Example 3 and using the mid-value given for each respective hydrozone identified in Example 4, the completed Hydrozone/Plant Factor Calculation worksheet would be as follows:*

Hydrozone	Zone or Value	Plant Factor (PF)	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	Low	0.2	1,800	360 sq. ft.
2	Moderate	0.5	700	350 sq. ft.
			Sum	710 sq. ft.
N/A	SLA	N/A	0	0

3. Calculating the Estimated Total Water Use (ETWU)

The calculation of the ETWU is used to determine the total amount of water required for the landscape area. The formula below uses data from previous sections and variables for the specific landscape site.

$$ETWU = (ETo)(0.62)\left[\frac{PF \times HA}{IE} + SLA\right]$$

Where:

ETWU = Estimated Total Water Use per year (gallons)

ETo = Reference Evapotranspiration from Appendix C of this manual (inches)

PF = Plant Factor from WUCOLS or Hydrozone/Plant Factor Calculation worksheet (Appendix B)

HA = Square feet of Hydrozone Area from Hydrozone/Plant Factor Calculation worksheet (Appendix B)

0.62 = Conversion factor (to gallons per square foot)

SLA = Square feet of the portion of the landscape area identified as Special Landscape Area (areas of the landscape irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where natural turf provides a playing surface)

IE = Irrigation Efficiency (minimum 0.71)

Example 6. *Based on the data found in the Hydrozone/Plant Factor Calculation worksheet in Example 5 and the known ETo factor for the project area, calculation of the ETWU can be performed as follows:*

ETWU= (ETo)(0.62) [((PF x LA) / (IE)) + SLA]

ETWU= (52.6)(0.62)[(710/.71) + 0]

ETWU= (32.61)(1,000)

ETWU= 32,610 gallons per year

E. Determining if the Proposed Landscaping Project is Water Efficient

If the calculated ETWU is less than the established MAWA, the project is considered to be water efficient.

Example 7. *Based on the information below, Isabel's landscape project is assumed to be water efficient.*

MAWA limit from Example 1 = 57,068 gallons per year

ETWU from Example 6 = 32,610 gallons per year

ETWU is below the MAWA by 24,458 gallons per year

SECTION 6 – IRRIGATION REQUIREMENTS

For the efficient use of water, an automated irrigation system must be designed to meet all the requirements listed in this section and the equipment manufacturer's recommendations. The irrigation system and its related components must be planned and designed to allow for proper installation and maintenance. Consistent with the requirements of the Landscape Ordinance, irrigation plans will need to be prepared by a licensed landscape architect, a licensed landscape contractor, a certified irrigation designer, or any other person authorized to design a landscape and will be used in conjunction with approved planting plans, as the final landscape construction plans for the project. The irrigation plan is typically a site plan prepared to depict the locations of the irrigation system equipment. In order to provide applicants with a simplistic format, the information to be included in the irrigation plan has been broken up into four separate content sections: general contents and requirements; system standards; irrigation design standards; and irrigation scheduling and maintenance.

A. General Contents and Requirements

The irrigation plan, drawn at a clear and legible scale, should include the following information:

- Location and size of water meters for landscape planting.
- Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators and backflow prevention devices.
- Static water pressure at the point of connection to the public water supply.
- Flow rate (gallons per minute), application rate (inches per hour) and design operating pressure (pressure per square inch) for each station.
- Any recycled water irrigations systems.
- Verification. Irrigation plans shall contain the following statement: ***"I_____ certify that this irrigation plan complies with all Monterey County landscaping requirements including, but not limited to, the use of low flow and water conserving***

irrigation fixtures" which shall be signed by a licensed landscape architect, licensed landscape contractor, a certified irrigation designer, or any other person authorized to design an irrigation plan.

B. Irrigation System Standards

In order to ensure irrigation systems use water efficiently, the Landscape Ordinance requires applicants to incorporate certain standards within the design of their system. The irrigation system should integrate specific structural components that have been identified to meet these standards. The following is a list of those components:

1. Irrigation Efficiency

- The irrigation system is required to be designed to ensure that the dynamic pressure at each emission device is within the manufacturer's recommendation pressure range for optimal performance. For the purpose of determining ETWU, average irrigation efficiency is assumed to be 0.71. Therefore, irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 0.71.
- Pressure regulation and/or booster pumps shall be installed so that all components of the irrigation system operate at the manufacturer's recommended optimal pressure.
- 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 emergency (such as a main line break) or routine repair.
- Isolation valves shall be installed at the point of connection and before each valve or valve manifold.
- Backflow prevention devices shall be provided to protect the water supply from contamination by the irrigation system.
- Point source irrigation is required where plant height at maturity will affect the uniformity of an overhead irrigation system.

2. Irrigation Sensors

- In order to prevent irrigating during wet weather, weather-based self-adjusting irrigation controllers with rain sensors are required for both residential and non-residential irrigation systems.
- High flow sensors that detect and report high flow conditions created by system damage or malfunction are recommended.
- Irrigation systems with meters one and one-half (1.5) inches or greater shall have a high-flow sensor that can detect high flow conditions and have the capability to shut off the irrigation system automatically.

C. Irrigation Design Standards

The actual design of an irrigation system (placement and location of irrigation system components) is just as essential as the irrigation itself when trying to achieve maximum water efficiency. Therefore, the Landscape Ordinance requires applicants to incorporate the following standards when designing irrigation systems:

1. Preventing Water Waste

- All irrigation systems shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent properties, hardscapes, roadways, or structures.
- Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems. This will allow water to be distributed efficiently and prevent overflow in areas with poor water infiltration.
- Low volume irrigation, such as drip irrigation and the use of bubblers, shall be used in mulched planting areas to maximize water infiltration into the root zone.
- Sprinkler heads, rotors, and other emission devices on one valve shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations

- Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
- Narrow or irregularly shaped landscape areas, including turf less than eight (8) feet in width in any direction, shall be irrigated with subsurface irrigation or low volume irrigation technology in order to prevent water waste due to overspraying of the area.
- Overhead irrigation shall require a twenty-four (24) inch setback from any non-permeable surface that does not drain toward the landscape area.
- Slopes greater than 15% shall be irrigated with point source or other low-volume irrigation technology.
- Swing joints or other riser protection components, which allow flexibility between sprinkler heads and the irrigation system, shall be required on all risers. This will prevent large amounts of water waste by preventing the connections from breaking.
- Check valves shall be installed to prevent low-head drainage.
- Slopes greater than 25% shall not be irrigated with an irrigation system with a precipitation rate exceeding 0.75 inches per hour.

2. Use of Recycled Water

- Irrigation systems shall be designed and constructed to allow the use of recycled water where such recycled water is available or may become available in the future. Landscaping using recycled water shall be considered a Special Landscape Area.
- Use of alternative landscape features that increase the capture and use of rainwater to irrigate (i.e. rain gardens, cisterns) or create opportunities for infiltration and/or onsite storage are recommended and encouraged.

3. Hydrozones

- The design of the irrigation system shall conform to the hydrozones delineated on the approved planting plans. Separate valves shall be used to irrigate hydrozones with high water use plants and moderate or low water use plants

- Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions and plant materials with similar water use
- Sprinkler heads and other emission devices shall be selected based on its appropriateness for the plant type within that hydrozone. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf

D. Irrigation Scheduling and Maintenance

The regular scheduling and maintenance of an irrigation system will result in efficient water use. All irrigation schedules shall be developed, managed and evaluated to utilize the minimum amount of water required to maintain plant health. To ensure functioning equipment, the irrigation system must be also be properly maintained. A regular maintenance schedule shall include routine inspection and the adjustment and repair of the irrigation system and its component . The irrigation schedule shall factor irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use. Consistent with the requirements of the Landscape Ordinance, a regular maintenance schedule shall be submitted with the landscape Certificate of Completion, and when applicable, it shall incorporate the following:

- Irrigation interval (days between irrigation).
- Irrigation run times (hours or minutes per irrigation event to avoid runoff).
- Number of cycle starts required for each irrigation event to avoid runoff.
- Amount of applied water scheduled to be applied on a monthly basis.
- Application rate setting.
- Root depth setting.
- Plant type setting.
- Slope factor setting shade factor setting.
- Irrigation uniformity or efficiency setting.

SECTION 7 – SOILS MANAGEMENT REPORT REQUIREMENTS

In order to promote healthy plant growth and prevent excessive erosion and runoff, the Landscape Ordinance requires that a soil management report be completed by either the project applicant or his/her designee. The purpose of the report is to obtain an analysis of the existing soil conditions from a lab qualified to evaluate soils relative to horticulture (verses agriculture or structural integrity), resulting in recommendations of appropriate soil amendments for which then the applicant incorporates into the planting and irrigation plans.

The soils analysis can be conducted by a soils laboratory that will analyze soil as it specifically relates to horticulture. Typically, an applicant will package a soil sample and send it directly to a qualifying lab. Once the analysis is complete, the lab will then provide the applicant with an analysis report and recommendations for soils amendments based off the results of the reports.

At home soils analysis kits are also available and are relatively inexpensive. However, to be consistent with the requirements of the Landscape Ordinance, one must make sure that the test has the capability for a complete soils analysis and submit this information, along with the recommended soils amendments as part of the landscape package.

For those landscape projects that are not subject to the Landscape Ordinance, submitting for a soils analysis or the use of at home soils test kits is encouraged as it promotes a healthy and thriving garden.

Submittal of the report will be required as part of the landscape package, and the landscape architect or landscape contractor who prepared the planting and irrigation plans is required to verify that the report recommendations were used in conjunction with the preparation of those plans. Furthermore, as part of the Certificate of Completion, the applicant is required to submit documentation that the installation of landscaping was done in accordance with the report. Based

on the requirements of the landscape ordinance, the report should contain a laboratory analysis of soil samples that includes the following:

- Soil texture;
- Infiltration rates determined by laboratory test or soil texture infiltration rate table;
- Soil pH;
- Total soluble salts;
- Sodium;
- Percent of organic matter; and
- Recommendations for appropriate soil amendments.

SECTION 8 – ENERGY EFFICIENCY

Improving energy efficiency adds to the sustainability of all residents in the County of Monterey by reducing air pollutants and greenhouse gas emissions from fossil fuels. In addition, energy efficiency also provides many benefits to the project applicant. For instance, by reducing the need for energy resources, applicants will benefit economically through lowering expenses on energy bills.

In order to promote energy efficiency in developments, the County has incorporated energy efficiency regulations within Chapter 18.12 of the Monterey County Code (Green Building Standards Code) and the Landscape Ordinance. For example, when calculating an overall building's energy efficiency budget, project applicants are required to include the energy use and conservation measures incorporated within the landscape component of building project.

The Landscape Ordinance also makes provisions for landscape lighting, requiring that it is designed for energy efficiency and utilizes one or both of the following:

- ENERGY STAR qualified hard-wired fixtures. All hard-wired lighting shall employ programmable photocontrol or astronomical time-switch controls that automatically switch off when daylight is available.
- Solar powered lighting systems.

However, due to health and safety regulations, energy light efficiency requirements are **not** applicable to:

- Exterior lighting for permanent buildings, structures, security, and signs.
- Lighting required by a health of life safety statute ordinance or regulation, including but not limited to emergency lighting.
- Lighting used in or around swimming pools, water features or other locations subject to Article 680 of Title 24, Part 3, *California Electrical Code*.

To further promote energy efficiency, the Landscape Ordinance also encourages the incorporation of additional energy efficiency measures into the landscape design. These measures/ techniques include the following:

- Use strategic shading techniques, plant selection, location and deciduous tree species in the landscape as appropriate to reduce solar heat gain in the summer and maximize passive solar warming in winter months. For example, planting of deciduous trees in front of a large window would provide shade during warmer months when the leaves are full and allow infiltration of sunlight and warmth during the autumn and winter months when the leaves fall.
- Reduce local heat island effects through planting of shade trees or installation of high-albedo (highly reflective) hardscapes.
- Select and place landscaping to provide wind protection or windbreaks.
- Use solar power and/or other renewable energy (such as wind) in the landscape design.
- Use salvaged, refurbished, renewable, local and recycled landscape and planting materials to reduce the energy requirements of new manufacture and transport.

SECTION 9 – FUEL MANAGEMENT

There are many benefits to a well designed landscape that go beyond creating areas that are pleasing to the senses and water and energy efficient. With proper forethought, designing landscapes that incorporate fire safety and fuel management can result in the protection of structures and the immediate surrounding areas from wildfires.

The Landscape Ordinance requires landscape projects to be consistent with all applicable fire safe landscaping regulations imposed by a property's designated Fire District and/or Chapter 18.56, Wildfire Protection Standards in State Responsibility Areas, of the Monterey County Code. Property owners are encouraged to discuss their landscape concept with the appropriate Fire District and consider the following recommended fire safe methods in designing their landscape:

- Establishing a greenbelt – A greenbelt is an area of irrigated landscaping which includes fire resistant and/or retardant planting strategically located to separate structures and wildland fuels. Establishment of a greenbelt results in creating a buffer zone between structures and any surrounding vegetation, which slows or prevents the advancement of ground or surface fires.
- Eliminate "fire-ladders" – A fire ladder is an arrangement of plants that provide fuel for a fire to climb from ground covers or grasses to shrubs and up into tree tops or structures. The landscape design should increase the vertical separation of fuels which could effectively reduce and/or eliminate fire-ladders.
- Eliminate continuous fuel beds – fires can spread quickly if areas in the landscape which contain fuel (patches of vegetation) are too close or continuous. The landscape design should reduce the amount of horizontal continuity through the incorporation of hard and/or non-flammable surfaces such as bare ground, pavement, or other landscape design features.

- Maintenance of vegetation – Proper maintenance of the landscape area can reduce the fire load by removing dead branches from shrubs and trees, clearing leaf litter from the ground, and pruning lower branches to increase clearance above the ground.
- Plant selection – Incorporating fire resistant vegetation and plants with deep roots within the landscape will enhance fire protection and erosion control if a fire does occur. Furthermore, fire-prone plant materials and highly flammable mulches should be avoided. For additional information, the suggested plant list included within Appendix E of this manual contains fire resistant plants.

SECTION 10 – CERTIFICATE OF COMPLETION

Prior to occupancy or final of a grading or building permit, a signed landscape Certificate of Completion shall be submitted to the RMA-Planning (see Appendix D) with information and documentation that the landscape planting and irrigation has been installed in accordance with the approved plans and soils management report. If significant changes were required during installation of the landscape and irrigation system, the applicant will be required to submit "as-built" plans along with the landscape certificate of completion. In addition, the landscape architect or landscape contractor must verify that the as-built landscape plans are in accordance with the planting, irrigation, water efficiency, and energy efficiency requirements of the landscape ordinance.

The Certificate of Completion includes six parts which contains the following information:

- Project information.
- A signed statement verifying that the landscape install is consistent with the approved plans.
- An irrigation audit demonstrating that an inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule has occurred.
- An irrigation schedule that includes the parameter setting and schedule for controllers.
- A schedule of landscape and irrigation maintenance.
- Documentation verifying recommendations from the soils analysis were implemented in the landscape installation.

SECTION 11 – PUBLIC EDUCATION

Water conservation is a high priority for the County as potable water is a precious resource and drought conditions continue to worsen. Reduction of water use in landscaping is the primary object of the Landscape Ordinance and this manual. Educating the public on design and techniques incorporated in this manual, as well as available programs that are offered; provide additional efforts in water conservation. Although strict regulations and enforcement are not included within these provisions, the hope is to achieve additional water conservation through encouragement of "doing your part" and providing available resources and programs for the public.

A. Monterey Peninsula Water Management District.

Several programs for water conservation in landscaping are available through the Monterey Peninsula Water Management District (MPWMD). Landscapes located within the district maybe participate in rebate programs for turf removal, the use of cisterns, graywater and weather based irrigation controllers. Rebates for landscapes associated with non-residential uses are also available. Service providing a water use analysis and water budget is available, free of charge, for large (over three acres) irrigated landscapes, landscapes with a dedicated water meter and residential water users located within the district and are served by California American Water. In addition, information for Water-wise Landscaping Techniques and drought tolerant planting is available. To encourage water conservation for the general public in the MPWMD area, the Landscape Ordinance encourages participation in these programs to the greatest extent feasible.

For more information, you may contact MPWMD at:

5 Harris Court, Building G
Monterey, CA 93940
(831) 658-5601

www.mpwmd.dst.ca.us/wdd/default.html

B. Marina Coast Water District.

A Water-Wise Landscape Incentive Program is available for areas served by the Marina Coast Water District (MCWD) which promotes water conservation through incentives for retrofitting inefficient irrigation equipment and turf replacement. To further reduce water use, information for Water-Wise Landscaping is also available. To encourage water conservation for the general public in the MCWD area, the Landscape Ordinance requires encourages participation in these programs to the greatest extent feasible.

For more information, you may contact MCWD at:

11 Reservation Road
Marina, CA 93933
(831) 384-6131
www.mcwd.org/conserve.html

C. Pajaro Valley Water Management Agency.

A graywater rebate program through the Pajaro Valley Water Management Agency (PVWMA) is available for local residents within its boundaries. Information, tips and suggested resources are also available. To encourage water conservation for the general public in the PVWMA area, the Landscape Ordinance encourages participation in these programs to the greatest extent feasible.

For more information, you may contact PVWMA at:

36 Brennan Street
Watsonville, CA 95076
(831) 722-9292
www.pvwma.dst.ca.us

D. Small Water Systems.

Small water systems (between 15 to 200 connections) located within the unincorporated areas of Monterey County are required to establish an Urban Water Conservation Plan by the Monterey County Water Resources Agency (MCWRA). This plan requires identification of water conservation goals and the measures to achieve such goals. To support attainment of these goals and further water conservation, the Landscape Ordinance requires existing landscapes in these areas to be consistent with the system's Urban Water Conservation Plan.

For more information, you may contact MCWRA at:

893 Blanco Circle
Salinas, CA 93901
(831) 755-4860
www.mcwra.co.monterey.ca.us/index.php

E. Areas Served by Private Wells.

Properties served by private wells make up the majority of land area for unincorporated Monterey County. Although these areas are large rural parcels that do not typically contain complex urban-type landscaping, participation in conserving water should be in any type of landscape. Therefore, the Landscape Ordinance encourages implementing the water conservation measures contained in the ordinance and this manual to the greatest extent feasible.

APPENDIX A

LANDSCAPE PACKAGE APPLICATION AND SUBMITTAL FORM

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

LANDSCAPE PACKAGE APPLICATION AND SUBMITTAL FORM

RMA – PLANNING
MIKE NOVO, DIRECTOR
168 W. Alisal St. 2nd Flr.
Salinas, CA 93901
(831) 755-5025
www.co.monterey.ca.us/rma

Landscape applications shall be submitted to the RMA-Planning for review and approval. The following is a checklist of materials required for submittal of your landscape package. Please feel free to contact your assigned project planner at any point in the development process regarding questions you may have about your application. Two (2) hardcopies of all materials are required. Plans shall be drawn on a sheet sized large enough to have legible fonts and lineweights. An electronic copy (pdf.) of all submitted materials is also required to be submitted on CD or flash-drive.

PROJECT INFORMATION		**PERMIT NO.**	
SITE ADDRESS	CITY/STATE		ZIP
NEAREST CROSS-STREET	ASSESSOR'S PARCEL NUMBER(S)		

OWNER(S) INFORMATION			
NAME		PHONE	
MAILING ADDRESS	CITY/STATE		ZIP
FAX	EMAIL		

APPLICANT INFORMATION			
NAME		PHONE	
MAILING ADDRESS	CITY/STATE		ZIP
FAX	EMAIL		

Submit the following information and materials in accordance with the requirement of the Water and Energy Efficient Landscape Ordinance and the Landscape Manual:			
☐	**Planting Plan**	☐	**Water Budget Calculations**
☐	**Irrigation Plan**	☐	**A Plumbing/Irrigation Permit has been applied for.**
☐	**Soils Management Report**	☐	**The landscape review fee has been paid.**

Owner/Applicant Signature: _____ Date: _____

FOR DEPARTMENT USE ONLY		
RECEIVED BY:	DATE STAMP:	ALL THE REQUIRED MATERIAL WERE SUBMITTED: __ YES __ NO

APPENDIX B

WATER EFFICIENT LANDSCAPE WORKSHEET

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY

WATER EFFICENT LANDSCAPE WORKSHEET

RMA – PLANNING
MIKE NOVO, DIRECTOR
168 W. Alisal St. 2nd Flr.
Salinas, CA 93901
(831) 755-5025
www.co.monterey.ca.us/rma

The water efficient landscape worksheet shall be filled out by the project applicant and submitted with the Landscape Package Application to the RMA-Planning Department for review and approval.

SECTION 1. HYDROZONE INFORMATION TABLE

Please complete the hydrozone table(s) for each hydrozone. Use as many tables as necessary to provide the square footage of landscape area per hydrozone.

Hydrozone*	Zone or Value	Irrigation Method**	Areas (sq. ft.)	% of Landscape Area
			Total	

* Hydrozone
HW = High Water Use Plants
MW= Moderate Water Use Plants
LW = Low Water Use Plants

**Irrigation Method
MS = Micro-spray
S = Spray
R = Rotor
B = Bubbler
D = Drip
O = Other

SECTION 2. MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

The project's Maximum Applied Water Allowance shall be calculated using this equation:

$$\mathbf{MAWA= (ETo)(0.62)\ [(0.7 \times LA) + (0.3 \times SLA)]}$$

Where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ETo = Reference Evapotranspiration from Appendix C (inches per year)

0.7 = ET Adjustment Factor (ETAF)

LA = Landscaped Area includes Special Landscape Area (square feet)

0.62 = Conversion factor (to gallons per square foot)

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

0.3 = Additional ET Adjustment Factor for Special Landscape Area (1.0 – 0.7 = 0.3)

Maximum Applied Water Allowance = _____ gallons per year

Show calculations:

SECTION C. HYDROZONE/PLANT FACTOR CALCULATION WORKSHEET

Please complete the hydrozone table(s). Use as many tables as necessary

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)	Area (HA) (square feet)	PF x HA (square feet)
			Sum	
	SLA			

SECTION D. ESTIMATED TOTAL WATER USE (ETWU)

The project's Estimated Total Water Use is calculated using the following formula:

$$ETWU = (ETo)(0.62)\left[\frac{PF \times HA}{IE} + SLA\right]$$

Where:

ETWU = Estimated Total Water Use per year (gallons)

ETo = Reference Evapotranspiration from Appendix C (inches)

PF = Plant Factor from WUCOLS

HA = Hydrozone Area [high, medium, and low water use areas] (square feet)

0.62 = Conversion factor (to gallons per square foot)

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

IE = Irrigation Efficiency (minimum 0.71)

Estimated Total Water Use = _____ gallons

Show calculations:

APPENDIX C

REFERENCE EVAPOTRANSPIRATION (ETo) TABLE

REFERENCE EVAPOTRANSPIRATION (ETo) TABLE

For calculation of the MAWA and ETWU, the project applicant shall use the following annual evapotranspiration (ETo) values

Nearest City/Town	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
Arroyo Seco	1.5	2.0	3.7	5.4	6.3	7.3	7.2	6.7	5.0	3.9	2.0	1.6	52.6
Castroville	1.4	1.7	3.0	4.2	4.6	4.8	4.0	3.8	3.0	2.6	1.6	1.4	36.2
Gonzales	1.3	1.7	3.4	4.7	5.4	6.3	6.3	5.9	4.4	3.4	1.9	1.3	45.7
Greenfield	1.8	2.2	3.4	4.8	5.6	6.3	6.5	6.2	4.8	3.7	2.4	1.8	49.5
King City	1.7	2.0	3.4	4.4	4.4	5.6	6.1	6.7	6.5	5.2	2.2	1.3	49.6
King City-Oasis Rd.	1.4	1.9	3.6	5.3	6.5	7.3	7.4	6.8	5.1	4.0	2.0	1.5	52.7
Long Valley	1.5	1.9	3.2	4.1	5.8	6.5	7.3	6.7	5.3	3.6	2.0	1.2	49.1
Monterey	1.7	1.8	2.7	3.5	4.0	4.1	4.3	4.2	3.5	2.8	1.9	1.5	36.0
Pajaro	1.8	2.2	3.7	4.8	5.3	5.7	5.6	5.3	4.3	3.4	2.4	1.8	46.1
Salinas	1.6	1.9	2.7	3.8	4.8	4.7	5.0	4.5	4.0	2.9	1.9	1.3	39.1
Salinas North	1.2	1.5	2.9	4.1	4.6	5.2	4.5	4.3	3.2	2.8	1.5	1.2	36.9
San Ardo	1.0	1.7	3.1	4.5	5.9	7.2	8.1	7.1	5.1	3.1	1.5	1.0	49.0
San Juan	1.8	2.1	3.4	4.6	5.3	5.7	5.5	4.9	3.8	3.2	2.2	1.9	44.2
Soledad	1.7	2.0	3.4	4.4	5.5	5.4	6.5	6.2	5.2	3.7	2.2	1.5	47.7

Sources: * The values in this table were derived from:

1) California Irrigation Management Information System (CIMIS);

2) Reference EvapoTranspiration Zones Map, UC Dept. of Land, Air & Water Resources and California Dept of Water Resources 1999; and

3) Reference Evapotranspiration for California, University of California, Department of Agriculture and Natural Resources (1987) Bulletin 1922,

4) Determining Daily Reference Evapotranspiration, Cooperative Extension UC Division of Agriculture and Natural Resources (1987), Publication Leaflet 21426

APPENDIX D

CERTIFICATE OF COMPLETION

MONTEREY COUNTY
RESOURCE MANAGEMENT AGENCY
CERTIFICATE OF COMPLETION

RMA – PLANNING
MIKE NOVO, DIRECTOR
168 W. Alisal St. 2nd Flr.
Salinas, CA 93901
(831) 755-5025
www.co.monterey.ca.us/rma

Prior to the final of grading or building permits, the applicant shall submit a Certificate of Completion to the RMA-Planning for review and approval.

PART 1. PROJECT INFORMATION

SITE INFORMATION		PERMIT NO.	
SITE ADDRESS	CITY/STATE		ZIP
NEAREST CROSS-STREET	ASSESSOR'S PARCEL NUMBER(S)		

OWNER(S) INFORMATION			
NAME		PHONE	
MAILING ADDRESS	CITY/STATE		ZIP
FAX	EMAIL		

APPLICANT INFORMATION			
NAME		PHONE	
MAILING ADDRESS	CITY/STATE		ZIP
FAX	EMAIL		

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

Owner Signature: _____ Date: _____

PART 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE PACKAGE

"I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the ordinance and that the landscape planting and irrigation installation conforms to the criteria and specification of the approved Landscape Package."

Signature*	Date	
Name and Title (print)	Telephone No.	
	Fax No.	
License or Certification No.	Email Address	
Company	Street Address	
City	State	Zip Code

*Signer of the planting plan, signer of the irrigation plan, or the licensed contractor who installed the landscaping.

PART 3. IRRIGATION AUDIT

An irrigation audit demonstrating that an inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule has occurred.

PART 4. IRRIGATION SCHEDULING

Attach parameters for setting the irrigation schedule on controller per Section No. 16.61.130 of the Water and Energy Efficient Landscape Ordinance.

PART 5. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE

Attached schedule of Landscape and Irrigation Maintenance per Section No. 16.61.130 of the Water and Energy Efficient Landscape Ordinance.

PART 6. SOIL MANAGEMENT REPORT

Attach documentation verifying implementation of recommendation from soils analysis report per Section No. 16.61.130 of the Water and Energy Efficient Landscape Ordinance.

APPENDIX E

PLANT LISTS

Harmful and Invasive Plants that are Prohibited or Discouraged from Being Planted in Monterey County

Scientific Name	Common Name
Acacia dealbata	Acacia
Acacia melanoxylon	Blackwood Acacia
Agerata adenophora	Sticky Eupatorium
*Ailianthus alitissima*****	Tree of Heaven
Arundo donax	Giant Reed
Carpobrotus edulis	Highway Iceplant
*Centauria stoebe ssp. micranthos***	Spotted Knapweed
Cortaderia jubata	Purple Pampas Grass, Jubata Grass
Cortaderia selloana	Pampas Grass
Cotoneaster lacteus	Cotoneaster
Cotoneaster pannosus	Cotoneaster
*Cystisus scoparius*****	Scotch Broom
Delairia odorata	Cape Ivy
*Eichornia crasipes*****	Water Hyacinth
Elaeagnus angustifolia	Russian Olive
Eucalyptus globulus	Blue Gum Eucalyptus
*Euphorbia oblongata****	Egg Leafed Spurge
*Genista monspessulana*****	French Broom
Hedera caneriensis	English Ivy
Hedera helix	Algerian Ivy
Iris pseudocomus	Yellow Flag Iris
*Linaria genistifolia ssp. dalmatica***	Dalmation Toadflax
*Lythrum salicaria***	Purple Loosetrife
Maytens boaria	Mayten
Mesembryanthemum crystallinum	Crystalline Iceplant
Myoporum laetum	Myoporum
*Nassella tenuissima (Stipa tenuissima)***	Mexican Feathergrass
*Onopordum acanthium***	Scotch Thistle
Pennisetum setaceum	Green Fountain Grass
*Populus nigra 'Italica'**	Lombardy Poplar
*Retama monosperma***	Bridal Veil Broom
Ricinis communis	Castor Bean
Robinia pseudoacacia	Black Locust
*Sesbania punicea***	Scarlet Wisteria
Spartium junceum	Spanish Broom
*Tamarix ramosissima****	Saltcedar
Triadica (Sapium) sebifera	Chinese Tallow Tree
Vinca major	Periwinkle

*Prohibited by California Code of Regulation, Section 3597 in Pajaro Valley and Salinas Valley.

**CDFA 'A' rated weed ***CDFA 'B' rated weed ****CDFA 'C' rated weed

Suggested Plants for Use in Landscaping in Monterey County

Scientific Name	Common Name
Achillea millefolium	Yarrow
Achillea taygeta	Moonshine' Yarrow
Achillea tomentosa	Woolly Yarrow
Alnus rhombifolia	White Alder
Arbutus unedo	Strawberry Tree
Arctostaphylos endumdsii	Woods red' Manzanita
Arctostaphylos sp.	Emerald Carpet' Manzanita
Arctostaphylos sp.	Dr. Hurd' Manzanita
Arctostaphylos sp.	Sunset' Manzanita
Baccharis pilularis	Twin Peaks' Dwarf Coyote Brush
Ceanothus gloriosus	Mountain Lilac
Ceanothus griseus horizontalis	Mountain Lilac
Ceanothus sp.	Frosty Blue' Mountain Lilac
Ceanothus sp.	Joyce Coulter' Mountain Lilac
Ceanothus sp.	Ray Hartman' Mountain Lilac
Ceanothus sp.	Snow Flurry' Mountian Lilac
Ceanothus sp.	Wheeler Canyon' Mountian Lilac
Ceanothus sp.	Yankee Point' Mountian Lilac
Ceanothus sp.	Point Reyes' Mountian Lilac
Cercis occidentalis	Western Redbud
Cercocarpus betuloides	Mountain Mahogany
Eriogonum fasciculatum (low growing cultivars)	California Buckwheat
Festuca rubra	Creeping Red' Red Fescue
Fragaria chiloensis	Wild Strawberry
Garrya elliptica	Evie' Coast Silktassel
Hesperoyucca whipplei	Yucca
Heteromeles arbutifolia	Toyon
Heuchera maxima	Coral Bells
Prunus lyonii	Catalina Cherry
Quercus agrifolia	Coast Live Oak
Rhamnus californica	Eve Case' Coffee Berry
Rhamnus crocea	Redberry
Ribes viburnifolium	Evergreen Currant
Romneya coulteri	Matilija Poppy
Sedum spathulifolium	Purpureum' Stonecrop

APPENDIX F

GLOSSARY

"Applied water" means the portion of water supplied by the irrigation system to the landscape.

"Backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

"California Invasive Plant Inventory" means the California Invasive Plant Inventory maintained by the California Invasive Plant Council.

"Certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

"Certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

"Check valve" or "anti-drain valve" means a valve located under a sprinkler head or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.

"Controller" means 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 on-site sensor data (e.g., soil moisture) to adjust irrigation schedules.

"Developer Installed" means landscaping provided by a developer in conjunction with property improvements such as, but not limited to, remodels/additions, new construction, and land divisions. For the purposes of the landscape ordiance, a developer is a private entity undertaking real estate or property development resulting in the sale or lease of a residential product.

"Drip irrigation" means 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.

"Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"Energy efficient landscape" means any new or rehabilitated landscape, public or private, that helps a project achieve a minimum 15% reduction in energy use when compared to the State's mandatory energy efficiency standards.

"Energy efficient lighting system" means any outdoor landscape lighting system consisting of at least 90 percent ENERGY STAR qualified hard-wired fixtures, solar powered lighting, and/or systems that employ programmable photocontrol or astronomical time-switch controls that automatically switch off when daylight is available.

"Established landscape" means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.

"Estimated Total Water Use" (ETWU) means the total water used for the landscape.

"ET adjustment factor" means, except for special landscape areas, a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency. A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. For the purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET Adjustment Factor is (0.7) = (0.5/0.71).

"Evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

"Flow rate" means 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.

"Hardscapes" means any durable material (pervious or impervious).

"High water use plant" mean any plant categorized as high water need by the water use classification of landscape species guide.

"Homeowner-installed" means any landscaping either installed by a private individual for a single family residence or installed by a licensed contractor hired by a homeowner. A homeowner, for purposes of the landscape ordinance, is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.

"Hydrozone" means a portion of the landscaped area having plants with similar water needs *that are served by a valve or set of valves with the same schedule.* A hydrozone may be irrigated or non-irrigated.

"Infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

"Invasive plant" means a species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. "Noxious weeds" means any weed designated by the Weed Control Regulations in the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are

maintained at the California Invasive Plant Inventory, USDA invasive, noxious weeds database, and the Landscape Manual.

"Irrigation audit" means 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.

"Irrigation efficiency" (IE) means 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 minimum average irrigation efficiency for purposes of this ordinance is 0.71. Greater irrigation efficiency can be expected from well designed and maintained systems.

"Irrigation meter" means a separate meter that measures the amount of water used for items such as lawns, washing exterior surfaces, washing vehicles, or filling pools.

"Landscape architect" means a person who holds a license to practice landscape architecture in the state of California Business and Professions Code, Section 5615.

"Landscape area" or "landscape project" means the total dedicated landscape area on a property. Water features are included in the calculation of the landscape area. Areas dedicated to agricultural cultivation are not included. 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 contractor" means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

"Landscape Manual" means the manual prepared to assist applicants with the implementation of the requirements of the Water and Energy Efficient Landscape Ordinance (see Section 16.61.040.)

"Landscape package (application)" means the landscape materials required to be submitted for review and approval by the Director of the RMA-Planning Department. The landscape package shall include: project information, planting plan, irrigation plan, soils management report, and the water efficient landscape worksheet.

"Lateral Line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

"Licensed Professionals" includes licensed landscape architects, licensed landscape contractors,

"Local Water Purveyor" means any entity, including a public agency, city, county or private water company that provides retail water service.

"Low volume irrigation" means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

"Low water use plant" means any plant categorized as low water need by the water use classification of landscape species (WUCOLS) guide.

"Main line" means the pressurized pipeline that delivers water for the water sources to the valve or outlet.

"Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area.

"Microclimate" means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density, or proximity to reflective surfaces.

"Mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

"Moderate water use plant" means any plant categorized as moderate water need by the water use classification of landscape species (WUCOLS) guide.

"Mulch" means 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 weeks, moderating soil temperature, and preventing soil erosion.

"New construction" means, for the purposes of the Water and Energy Efficient Landscape ordinance, a new public or private building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

"Operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

"Overhead irrigation systems" means systems that deliver water through the air (e.g., pop-ups, impulse sprinklers, spray heads, rotors, micro-sprays, etc).

"Overspray" means the irrigation water that is delivered beyond the landscape area, wetting pavements, walks, structures, or other non-landscaped areas.

"Permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

"Pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.

"Plant Factor" or "plant water use factor" is a value when multiplied by ETo, estimates the total amount of water needed by plants. For purposes of the Water and Energy Efficient Landscape ordinance, the plant factor range for very low water use plants is less than 0.1, the plant factor for low water use plants is 0.1 to 0.3, the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the Department of Water Resources 2000 publication "Water Use Classification of Landscape Species."

"Planting Plan" means plans consistent with the requirements outlined in Section 16.61.060 of the Landscape Ordinance.

"Rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.

"Recycled water", "reclaimed water", or "treated sewage effluent water" means 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.

"Recreational Area" means public areas dedicated to active play such as parks, sports fields and golf courses where turf provides a playing surface.

"Reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants. ETo is expressed in inches per day, month, or year, and is an estimate of the evapotranspiration of a large field of four- to seven-inch 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.

"Rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, or design review, and the modified landscape area is equal to or greater than 2,500 square feet, is 50% of the total landscape area.

"Run off' means 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 moisture sensing device" or "soil moisture sensor" means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

"Soil texture" means the classification of soil based on its percentage of sand, silt, and clay.

"Stormwater control facility" means a stormwater management feature intended to improve the quality of runoff leaving a site.

"Special Landscape Area" (SLA) means an area of the landscape irrigated with recycled water, water features using recycled water, and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

"Sprinkler head" means a device which delivers water through a nozzle.
"Station" means an area served by one valve or by a set of valves that operate simultaneously.

"Turf" means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermuda grass, Kikuyu grass, Seashore Paspalum, St. Augustine grass, Zoysia grass, and Buffalo grass are warm-season grasses.

"Valve" means a device used to control the flow of water in the irrigation system.

"Water conserving plant species" means a plant species identified as having a low plant factor.

"Water feature" means 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 wetlands used for on-site wastewater treatment or stormwater best management practices that are not irrigated and used solely for water treatment or stormwater retention are not water features and, therefore, are not subject to the water budget calculation.

"Water use classification of landscape species guide" (WUCOLS) means the water use classification of landscape species guide published by the University of California Cooperative Extension, the department of water resources, and the bureau of reclamation, as it currently exists or may be amended in the future.

"Watering window" means the time of day irrigation is allowed.

"Weather-based self-adjusting irrigation controller" means a system component that uses local weather and landscape conditions to automatically adjust irrigation schedules to actual conditions on the site or historical weather data.

"Xeriscape" means a landscaping method developed especially for arid and semiarid climates that utilizes water-conserving techniques (such as the use of drought-tolerant plants, mulch, and efficient irrigation) to balance hydrology at the parcel level.

EXHIBIT C

CALIFORNIAL COASTAL COMMISSION LETTER DATED AUGUST 7, 2014

STATE OF CALIFORNIA – NATURAL RESOURCES AGENCY
EDMUND G. BROWN JR., GOVERNOR

CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
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August 7, 2014

Anna Quenga
Associate Planner
Monterey County Resource Management Agency, Planning Department
168 W. Alisal Street, 2nd Floor
Salinas, CA 93901

Subject: Water and Energy Efficiency Landscape Ordinance

Dear Ms. Quenga:

Coastal Commission staff has reviewed the County's draft Water and Energy Efficiency Landscape Ordinance that was developed consistent with the requirements of Assembly Bill (AB) 1881. In sum, the ordinance includes new submittal requirements for planting, irrigation, lighting, and soils plans in order to reduce water and energy consumption through landscape design techniques. The County intends to apply this ordinance countywide, as required by AB 1881. As discussed previously with County staff, we do not believe that this ordinance needs to be added to the LCP. The existing regulations in the LCP appear to adequately cover the issue of water conservation/water efficiency in landscaping without the need to add any references to this new ordinance, and the County is not precluded from applying this new ordinance in the Coastal Zone by any existing LCP regulations. That being said, Commission staff is also not opposed to adding the ordinance to the LCP if the County sees the need.

Thank you for the opportunity to provide guidance on this issue and please let us know if you have any questions.

Sincerely,

Katie Butler
Coastal Planner
Central Coast District Office