

**URGENCY ORDINANCE NO. 684
OF THE CITY COUNCIL OF THE TOWN OF COLMA**

**AN URGENCY ORDINANCE AMENDING CHAPTER 5.11 OF THE COLMA
MUNICIPAL CODE RELATING TO WATER EFFICIENT LANDSCAPE
REGULATIONS**

The City Council of the Town of Colma does hereby ordain as follows:

Article 1. COLMA MUNICIPAL CODE SECTION 5.11 AMENDED.

Subchapter 11 of Chapter 5 of the Colma Municipal Code, entitled "Water Efficient Landscape Regulations," shall be and hereby is amended to read as follows:

**CHAPTER 5: PLANNING, ZONING, USE, DEVELOPMENT OF LAND AND
IMPROVEMENTS**

Subchapter 11: Water Efficient Landscape Regulations

5.11.010 Findings and Purpose

(a) The City Council hereby finds:

- (1) California Constitution article X, section 2 and California Water Code section 100 provide that because of conditions prevailing in the state of California (the "State"), it is the declared policy of the State that the general welfare requires that the water resources of the State shall be put to beneficial use to the fullest extent of which they are capable, the waste or unreasonable use of water shall be prevented, and the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and the public welfare;
- (2) Pursuant to California Water Code section 106, it is the declared policy of the State that the use of water for domestic use is the highest use of water and that the next highest use is for irrigation;
- (3) California Assembly Bill 1881 ("AB 1881"), enacted into law on September 28, 2008, modifies and strengthens the existing "Water Conservation in Landscaping Act" (California Government Code section 65591, *et seq.*) (the "Act"). The Act's goal is to improve State water conservation efforts by establishing a model water efficient landscape ordinance for local agencies to adopt and use for the purpose of reducing water waste associated with irrigation of outdoor landscaping;
- (4) AB 1881 requires the State Department of Water Resources ("Department") to update the existing model water efficient landscape ordinance which provides

guidelines for cities and counties to adopt local landscape irrigation ordinances as required by the law;

- (5) All cities and counties are required to either adopt the updated model water efficient landscape ordinance (the "Model Ordinance") or adopt their own water efficient landscape ordinance that is as effective in conserving water as the Model Ordinance, by January 1, 2010;
 - (6) This ordinance, which shall be codified as Chapter 5-11 of the Colma Municipal Code, entitled "Efficient Landscape Regulations" is as effective in conserving water as the Model Ordinance because the Town has only made minor changes to the Model Ordinance to better reflect the Town's internal structure and existing requirements, procedures, and processes, and these changes do not impact or otherwise change the water efficient landscape regulations contained in the Model Ordinance;
 - (7) Landscapes are essential to the quality of life in Colma by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development; and
 - (8) Landscape design, installation, maintenance and management can and should be water efficient.
- (b) Consistent with these findings, the purposes of this ordinance are to:
- (1) Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
 - (2) Establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects;
 - (3) Establish provisions for water management practices and water waste prevention for existing landscapes;
 - (4) Use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount;
 - (5) Promote the benefits of consistent landscape ordinances with neighboring local and regional agencies;
 - (6) Encourage local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure; and

- (7) Encourage local agencies to designate the necessary authority that implements and enforces the provisions of the Model Water Efficient Landscape Ordinance or its local landscape ordinance.

5.11.020 Applicability

(a) After January 1, 2010, this ordinance shall apply to all of the following landscape projects:

- (1) New construction and rehabilitated landscapes for public agency projects and private development projects with a landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check or design review;
- (2) New construction and rehabilitated landscapes which are developer-installed in single-family and multi-family projects with a landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review;
- (3) New construction landscapes which are homeowner-provided and/or homeowner-hired in single-family and multi-family residential projects with a total project landscape area equal to or greater than 5,000 square feet requiring a building or landscape permit, plan check or design review;
- (4) Existing landscapes
 - (i) Existing landscapes must only comply with Sections 5.11.150 ("Irrigation Audit, Irrigation Survey And Irrigation Water Use Analysis"); 5.11.210 ("Waste Water Prevention"), and 5.11.180 ("Provisions for New Construction, Rehabilitated Landscapes or Existing Landscapes") of this subchapter; and
- (5) Cemeteries
 - (i) New and rehabilitated cemeteries must only comply with Sections 5.11.070 ("Water Efficient Landscape Worksheet"), 5.11.140 ("Post-Installation Landscape and Irrigation Maintenance Schedule") and 5.11.150 ("Irrigation Audit, Irrigation Survey And Irrigation Water Use Analysis") of this subchapter; and
 - (ii) Existing cemeteries must only comply with Sections 5.11.150 ("Irrigation Audit, Irrigation Survey And Irrigation Water Use Analysis"), 5.11.180 ("Provisions for New Construction, Rehabilitated Landscapes or Existing Landscapes"), and 5.11.210 ("Waste-Water Prevention") of this subchapter.

- (b) This ordinance 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; or
 - (4) Plant collections, as part of botanical gardens and arboretums open to the public.
- (c) A landscape design plan for projects in fire prone areas and fuel modification zones shall comply with requirements of the Colma Fire Protection District and the California Department of Forestry and Fire, where applicable.

5.11.030 Definitions.

The following definitions shall apply for the purposes of this chapter:

- (a) "applied water" means the portion of water supplied by the irrigation system to the landscape.
- (b) "automatic irrigation controller" means an automatic timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.
- (c) "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.
- (d) "Certificate of Completion" means the certificate required to be completed and submitted to the Town certifying that the landscape project has complied with the provisions of the water efficient landscape regulations contained in this ordinance.
- (e) "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 U.S. Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.
- (f) "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.
- (g) "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.

(h) "common interest developments" means community apartment projects, condominium projects, planned developments, and stock cooperatives pursuant to California Civil Code Section 1351.

(i) "conversion factor (0.62)" means the number that converts acre-inches per acre per year to gallons per square foot per year

(j) "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.

(k) "ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

(l) "effective precipitation" or "usable rainfall" or "Eppt" means the portion of total precipitation which becomes available for plant growth.

(m) "emitter" means a drip irrigation emission device that delivers water slowly from the system to the soil.

(n) "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.

(o) "establishment period of the plants" means the first year after installing the plant in the landscape or the first two years if irrigation will be terminated after establishment. Typically, most plants are established after one or two years of growth.

(p) "Estimated Total Water Use" or "ETWU" means the total water used for the landscape as described in Section 5.11.070.

(q) "ET adjustment factor" or "ETAF" means a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. For purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET Adjustment Factor is $(0.7) = (0.5/0.71)$. ETAF for a Special Landscape Area shall not exceed 1.0. ETAF for existing non-rehabilitated landscapes is 0.8.

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

(s) "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.

(t) "hardscapes" means any durable material (pervious and non-pervious).

(u) "homeowner-provided landscaping" 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 this ordinance, is a person who occupies the dwelling he or she owns or rents. This excludes speculative homes, which are not owner-occupied dwellings.

(v) "hydrozone" means a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.

(w) "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).

(x) "invasive plant species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive species may be regulated by county agricultural agencies as noxious species. "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 and USDA invasive and noxious weeds database.

(y) "irrigation audit" means an in-depth evaluation of the performance of an irrigation system conducted by a Certified Landscape Irrigation Auditor. An irrigation audit includes, 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.

(z) "irrigation efficiency" or "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.

(aa) "irrigation survey" means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test, and written recommendations to improve performance of the irrigation system.

(bb) "irrigation water use analysis" means an analysis of water use data based on meter readings and billing data.

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

(dd) "landscape area" means all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. 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).

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

(ff) "Landscape Documentation Package" means the documents required under Section 5.11.050.

(gg) "landscape project" means the total area of landscape in a project as defined in "landscape area" for the purposes of this ordinance, meeting requirements under Section 5.11.020.

(hh) "landscape professional" means a California-licensed landscape architect, landscape contractor, or any other person authorized to design a landscape pursuant to Sections 5500.1, 5615, 5641, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the California Building Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the California Food and Agriculture Code.

(ii) "lateral line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

(jj) "local agency" means a city or county, including a charter city or charter county, that is responsible for adopting and implementing the ordinance. The local agency is also responsible for the enforcement of this ordinance, including but not limited to, approval of a permit and plan check or design review of a project.

(kk) "local water purveyor" means any entity, including a public agency, city, county, or private water company that provides retail water service.

(ll) "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.

(mm) "main line" means the pressurized pipeline that delivers water from the water source to the valve or outlet.

(nn) "Maximum Applied Water Allowance" or "MAWA" means the upper limit of annual applied water for the established landscaped area as specified in Section 5.11.070. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. Special Landscape Areas are subject to the MAWA with an ETAF not to exceed 1.0.

(oo) "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.

(pp) "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.

(qq) "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 weeds, moderating soil temperature, and preventing soil erosion.

(rr) "new construction" means, for the purposes of this ordinance, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

(ss) "operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

(tt) "overhead sprinkler irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).

(uu) "overspray" means the irrigation water which is delivered beyond the target area.

(vv) "permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

(ww) "pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.

(xx) "plant factor" or "plant water use factor" is a factor, when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this ordinance, the plant factor range for low water use plants is 0 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".

(yy) "precipitation rate" means the rate of application of water measured in inches per hour.

(zz) "project applicant" means the individual or entity submitting a Landscape Documentation Package required under Section 5.11.060, to request a permit, plan check, or design review from the local agency. A project applicant may be the property owner or his or her designee.

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

(bbb) "record drawing" or "as-builts" means a set of reproducible drawings which show

significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

(ccc) "recreational area" means areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.

(ddd) "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.

(eee) "reference evapotranspiration" or "ET_o" means a standard measurement of environmental parameters which affect the water use of plants. ET_o is expressed in inches per day, month, 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.

(fff) "rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, or design review, meets the requirements of Section 5.11.020, and the modified landscape area is equal to or greater than 2,500 square feet, is 50% of the total landscape area, and the modifications are completed within one year.

(ggg) "runoff" 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.

(hhh) "smart controller" means an automatic timing device used to remotely control valves that operate an irrigation system and which schedules irrigation events using either evapotranspiration, weather-based, or soil moisture data.

(iii) "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.

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

(kkk) "Special Landscape Area" (SLA) means an area of the landscape dedicated solely to edible plants, areas 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.

(lll) "sprinkler head" means a device which delivers water through a nozzle.

(mmm) "static water pressure" means the pipeline or municipal water supply pressure when water is not flowing.

(nnn) "station" means an area served by one valve or by a set of valves that operate simultaneously. (mmm) "swing joint" means an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

(ooo) "turf" means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

(ppp) "valve" means a device used to control the flow of water in the irrigation system.

(qqq) "water conserving plant species" means a plant species identified as having a low plant factor. (qqq) "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.

(rrr) "watering window" means the time of day irrigation is allowed.

(sss) "WUCOLS" means the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation, 2000.

5.11.040 Enforcement and Administration.

(a) The City Engineer or designee is authorized to administer and enforce the provisions of this ordinance for the Town.

(b) The Town may delegate to, or enter into a contract with, a local agency, local water purveyor, or other person to implement and administer any or all of the requirements contained in this ordinance on behalf of the Town.

(c) All departments, officials, or public employees, vested with the duty or authority to issue licenses, permits, or certificates of occupancy where required by law, shall conform to the provisions of this ordinance. No such permit or license for buildings, uses, or purposes where the same would be in conflict with the provisions of this ordinance shall be issued. Any such permit or license, if issued in conflict with the provisions hereof, shall be null and void.

5.11.050 Compliance with Landscape Documentation Package.

(a) *Submission of Landscape Documentation Package.* Prior to the issuance of any permits or the approval of any plan check or design review for landscape projects subject to this

subchapter, a project applicant shall submit a Landscape Documentation Package that complies with all applicable provisions of this subchapter to the City Engineer for review and approval.

(b) *Certification of Compliance.* The Landscape Documentation Package shall include a certification by a landscape professional stating that the landscape design and water use calculations have been prepared by or under the supervision of the landscape professional and are certified to be in compliance with the provisions of this subchapter.

(c) *Review of Landscape Documentation Package.* The City Engineer shall review the Landscape Documentation Package submitted by the project applicant and shall approve or deny the Landscape Documentation Package. If the City Engineer denies the Landscape Documentation Package, he shall provide the applicant with written notice of denial and the reasons therefor, and information regarding reapplication, appeal, or other assistance. If the City Engineer approves the Landscape Documentation Package, he may direct the issuance of a permit, plan check approval, or design review for the project applicant, as applicable.

(d) *Action Upon Approval of Landscape Documentation Package.* Upon approval of the Landscape Documentation Package by the City Engineer, the project applicant shall:

- (1) record the date of the permit received, where applicable, in the Certificate of Completion;
- (2) submit a copy of the approved Landscape Documentation Package along with the record drawings, and any other information to the property owner or his/her designee; and
- (3) submit a copy of the Water Efficient Landscape Worksheet to the local water purveyor.

(e) Verification of compliance of the landscape installation with the approved plans, and all requirements set forth in this subchapter shall be obtained through a Certificate of Completion in conjunction with a certificate of occupancy or any other final approvals and/or permit required for the project.

5.11.060 Elements of the Landscape Documentation Package.

(a) The Landscape Documentation Package shall include the following six (6) elements:

- (1) project information, which shall include, without limitation:
 - (A) date;
 - (B) project applicant;
 - (C) project address (if available, parcel and/or lot number(s));

- (D) total landscape area (square feet);
 - (E) project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed);
 - (F) water supply type (e.g., potable, recycled, well) and identify the local retail water purveyor if the applicant is not served by a private well;
 - (G) checklist of all documents in Landscape Documentation Package;
 - (H) project contacts to include contact information for the project applicant and property owner;
 - (I) The following statement signed by the project applicant: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package";
- (2) Water Efficient Landscape Worksheet (see Section 5.11.070);
 - (3) soil management report (see Section 5.11.080);
 - (4) landscape design plan (see Section 5.11.090);
 - (5) irrigation design plan (see Section 5.11.100); and
 - (6) grading design plan (see Section 5.11.110).

5.11.070 Water Efficient Landscape Worksheet.

- (a) A project applicant shall complete a Water Efficient Landscape Worksheet, which he/she shall obtain from the City Engineer or City Clerk, containing the following two sections:
 - (1) a hydrozone information table for the landscape project; and
 - (2) a water budget calculation for the landscape project. For the calculation of the Maximum Applied Water Allowance and Estimated Total Water Use, a project applicant shall use the ETo values from current reference evapotranspiration data, such as from the California Irrigation Management System ("CIMIS") Reference Evapotranspiration Zones Map, Department of Water Resources.
- (b) Water budget calculations shall adhere to the following requirements:
 - (1) The plant factor used shall be from WUCOLS. The plant factor ranges from 0 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants.
 - (2) All water features shall be included in the high water use hydrozone and

temporarily irrigated areas shall be included in the low water use hydrozone.

- (3) All Special Landscape Areas shall be identified and their water use calculated as described below.
- (4) ETAF for Special Landscape Areas shall not exceed 1.0.

(c) *Maximum Applied Water Allowance.* The Maximum Applied Water Allowance shall be calculated using the equation: $MAWA = (ETo) (0.62) [(0.7 \times LA) + (0.3 \times SLA)]$ The example calculations below are hypothetical to demonstrate proper use of the equations and do not represent an existing and/or planned landscape project. The ETo values used in these calculations are for planning purposes only. For actual irrigation scheduling, automatic irrigation controllers are required and shall use current reference evapotranspiration data, such as from the California Irrigation Management Information System (CIMIS), other equivalent data, or soil moisture sensor data.

- (1) Example MAWA calculation: a hypothetical landscape project in Fresno, CA with an irrigated landscape area of 50,000 square feet without any Special Landscape Area (SLA= 0, no edible plants, recreational areas, or use of recycled water). To calculate MAWA, the annual reference evapotranspiration value for Fresno is 51.1 inches as listed in the Reference Evapotranspiration Table in Appendix A.

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

MAWA = Maximum Applied Water Allowance (gallons per year)

ETo = Reference Evapotranspiration (inches per year)

0.62 = Conversion Factor (to gallons)

0.7 = ET Adjustment Factor (ETAF)

LA = Landscape Area including SLA (square feet)

0.3 = Additional Water Allowance for SLA

SLA = Special Landscape Area (square feet)

$$MAWA = (51.1 \text{ inches}) (0.62) [(0.7 \times 50,000 \text{ square feet}) + (0.3 \times 0)] = 1,108,870 \text{ gallons per year}$$

To convert from gallons per year to hundred-cubic-feet per year: =

$$1,108,870 / 748 = 1,482 \text{ hundred-cubic-feet per year}$$

(100 cubic feet = 748 gallons)

- (2) In this next hypothetical example, the landscape project in Fresno, CA has the same ETo value of 51.1 inches and a total landscape area of 50,000 square feet. Within the 50,000 square foot project, there is now a 2,000 square foot area planted with edible plants. This 2,000 square foot area is considered to be a Special Landscape Area.

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

$$MAWA = (51.1 \text{ inches}) (0.62) [(0.7 \times 50,000 \text{ square feet}) + (0.3 \times 2,000 \text{ square feet})]$$

$$= 31.68 \times [35,000 + 600] \text{ gallons per year}$$

= 31.68 x 35,600 gallons per year
 =1,127,808 gallons per year or 1,508 hundred-cubic-feet per year

(d) *Estimated Total Water Use.* The Estimated Total Water Use shall be calculated using the equation below. The sum of the Estimated Total Water Use calculated for all hydrozones shall not exceed MAWA. $ETWU = (ETo)(0.62) ((PF \times HA)/IE) + SLA$, Where:

ETWU = Estimated Total Water Use per year (gallons) ETo = Reference Evapotranspiration (inches)
 PF= Plant Factor from WUCOLS (see Section 5.11.030)
 HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
 SLA = Special Landscape Area (square feet) 0.62 = Conversion Factor
 IE = Irrigation Efficiency (minimum 0.71)

- (1) Example ETWU calculation #1: landscape area is 50,000 square feet; plant water use type, plant factor, and hydrozone area are shown in the table below. The ETo value is 51.1 inches per year. There are no Special Landscape Areas (recreational area, area permanently and solely dedicated to edible plants, and area irrigated with recycled water) in this example.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	10,000	7,000
3	Medium	0.5	16,000	8,000
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	24,700

*Plant Factor from WUCOLS

$$ETWU = (51.1)(0.62)((24,700/0.71) + 0) = 1,102,116 \text{ gallons per year}$$

Compare ETWU with MAWA: For this example MAWA = (51.1) (0.62) [(0.7 x 50,000) + (0.3 x 0)] = 1,108,870 gallons per year. The ETWU (1,102,116 gallons per year) is less than MAWA (1,108,870 gallons per year). In this example, the water budget complies with the MAWA.

- (2) Example ETWU calculation #2: total landscape area is 50,000 square feet, 2,000 square feet of which is planted with edible plants. The edible plant area is considered a Special Landscape Area (SLA). The reference evapotranspiration value is 51.1 inches per year. The plant type, plant factor, and hydrozone area are shown in the table below.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	9,000	6,300
3	Medium	0.5	15,000	7,500
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	23,500
6	SLA	1.0	2,000	2,000

*Plant Factor from WUCOLS

$$ETWU = (51.1)(0.62)((23,500/0.71) + 0) = 1,111,936 \text{ gallons per year}$$

Compare ETWU with MAWA. For this example: MAWA = (51.1) (0.62) [(0.7 x 50,000) + (0.3 x 2,000)] = 31.68 x [35,000 + 600] = 31.68 x 35,600 = 1,127,808 gallons per year. The ETWU (1,111,936 gallons per year) is less than MAWA (1,127,808 gallons per year). For this example, the water budget complies with the MAWA.

5.11.080 Soil Management Report.

(a) In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant, or his/her designee, as follows:

- (1) Submit soil samples to a laboratory for analysis and recommendations.
 - (A) Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.
 - (B) The soil analysis may include:
 - (i) soil texture;
 - (ii) infiltration rate determined by laboratory test or soil texture infiltration rate table;
 - (iii) pH;
 - (iv) total soluble salts;
 - (v) sodium;
 - (vi) percent organic matter; and

- (vii) recommendations.
- (2) The project applicant, or his/her designee, shall comply with one of the following:
 - (A) If significant mass grading is not planned, the soil analysis report shall be submitted to the City Engineer as part of the Landscape Documentation Package; or
 - (B) If significant mass grading is planned, the soil analysis report shall be submitted to the City Engineer as part of the Certificate of Completion.
- (3) The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.
- (4) The project applicant, or his/her designee, shall submit documentation verifying implementation of the soil analysis report recommendations to the City Engineer with Certificate of Completion.

5.11.090 Landscape Design Plan.

(a) For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. A landscape design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

- (1) Plant Material
 - (A) Any plant may be selected for the landscape, provided the Estimated Total Water Use in the landscape area does not exceed the Maximum Applied Water Allowance. To encourage the efficient use of water, the following is highly recommended:
 - (i) protection and preservation of native species and natural vegetation;
 - (ii) selection of water-conserving plant and turf species;
 - (iii) selection of plants based on disease and pest resistance;
 - (iv) selection of trees based on applicable local tree ordinances or tree shading guidelines; and
 - (v) selection of plants from local and regional landscape program plant lists.

(B) Each hydrozone shall have plant materials with similar water use, with the exception of hydrozones with plants of mixed water use, as specified in Section 5.11.100(a)(1)(D).

(C) Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. To encourage the efficient use of water, the following is highly recommended:

- (i) use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
- (ii) recognize the horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure (e.g., buildings, sidewalks, power lines); and
- (iii) consider the solar orientation for plant placement to maximize summer shade and winter solar gain.

(D) Turf is not allowed on slopes greater than 25% where the toe of the slope is adjacent to an impermeable hardscape and where 25% means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent).

(E) A landscape design plan for projects in fire-prone areas shall address fire safety and prevention and shall comply with all requirements of the Colma Fire Protection District and the California Department of Forestry and Fire. A defensible space or zone around a building or structure is required per Public Resources Code Sections 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches.

(F) The use of invasive and/or noxious plant species is strongly discouraged.

(G) The architectural guidelines of a common interest development shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

(2) Water Features shall comply with the following:

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

(B) Where available, recycled water shall be used as a source for decorative water features.

- (C) Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.
 - (D) Pool and spa covers are highly recommended.
- (3) Mulch and amendments shall be required in the following circumstances and applied in compliance with the following:
- (A) A minimum two inch (2") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated.
 - (B) Stabilizing mulching products shall be used on slopes.
 - (C) The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.
 - (D) Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section 5.11.080).
- (4) The landscape design plan, at a minimum, shall:
- (A) delineate and label each hydrozone by number, letter, or other method;
 - (B) identify each hydrozone as low, moderate, high water, or mixed water use. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget calculation;
 - (C) identify recreational areas;
 - (D) identify areas permanently and solely dedicated to edible plants;
 - (E) identify areas irrigated with recycled water;
 - (F) identify type of mulch and application depth;
 - (G) identify soil amendments, type, and quantity;
 - (H) identify type and surface area of water features;
 - (I) identify hardscapes (pervious and non-pervious);
 - (J) identify location and installation details of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Stormwater best management practices are encouraged in the landscape design plan and examples include, but are not limited to:

- (i) infiltration beds, swales, and basins that allow water to collect and soak into the ground;
 - (ii) constructed wetlands and retention ponds that retain water, handle excess flow, and filter pollutants; and
 - (iii) pervious or porous surfaces (e.g., permeable pavers or blocks, pervious or porous concrete, etc.) that minimize runoff.
- (K) identify any applicable rain harvesting or catchment technologies (e.g., rain gardens, cisterns, etc.);
- (L) contain the following statement of certification signed by a landscape professional: "I have complied with the criteria of the subchapter and applied them for the efficient use of water in the landscape design plan."

5.11.100 Irrigation Design Plan.

(a) For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package:

(1) System

- (A) Dedicated landscape water meters are highly recommended on landscape areas smaller than 5,000 square feet to facilitate water management.
- (B) Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data shall be required for irrigation scheduling in all irrigation systems.
- (C) The irrigation system shall be designed to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.
 - (i) If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.
 - (ii) Static water pressure, dynamic or operating pressure, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be

conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

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

(E) Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency (such as a main line break) or routine repair.

(F) Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system. A project applicant shall refer to the applicable provisions of the Colma Municipal Code or County regulations (i.e., public health) for additional backflow prevention requirements.

(G) High flow sensors that detect and report high flow conditions created by system damage or malfunction are recommended.

(H) The irrigation system 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 property, non-irrigated areas, hardscapes, roadways, or structures.

(I) Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.

(J) The design of the irrigation system shall conform to the hydrozones of the landscape design plan.

(K) The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section 5.11.070 regarding the Maximum Applied Water Allowance.

(L) It is highly recommended that the project applicant or local agency inquire with the local water purveyor about peak water operating demands (on the water supply system) or water restrictions that may impact the effectiveness of the irrigation system.

(M) In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.

(N) Sprinkler heads and other emission devices shall have matched

precipitation rates, unless otherwise directed by the manufacturer's recommendations.

(O) Head to head coverage is recommended. However, sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.

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

(Q) Check valves or anti-drain valves are required for all irrigation systems.

(R) Narrow or irregularly shaped areas, including turf, less than eight (8) feet in width in any direction shall be irrigated with subsurface irrigation or low volume irrigation system.

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

(i) the landscape area is adjacent to permeable surfacing and no runoff occurs; or

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

(iii) the irrigation designer specifies an alternative design or technology, as part of the Landscape Documentation Package and clearly demonstrates strict adherence to irrigation system design criteria in this Section (5.11.100). Prevention of overspray and runoff must be confirmed during the irrigation audit.

(T) Slopes greater than 25% shall not be irrigated with an irrigation system with a precipitation rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.

(2) All new irrigation controllers installed within the Town after January 1, 2012 shall be smart controllers.

(3) In preparing an irrigation design plan it is highly recommended that the project applicant inquire with the local water purveyor about peak water operating

demands on the water supply system or water restrictions that may impact the effectiveness of the irrigation system.

(4) Hydrozone requirements:

(A) Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.

(B) Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.

(C) Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf.

(D) Individual hydrozones that mix plants of moderate and low water use, or moderate and high water use, may be allowed if:

(i) plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or

(ii) the plant factor of the higher water using plant is used for calculations.

(E) Individual hydrozones that mix high and low water use plants shall not be permitted.

(F) On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the hydrozone information table (see Section 5.11.070(a)(1)). This table can also assist with the irrigation audit and programming the controller.

(b) The irrigation design plan, at a minimum, shall contain:

(1) location and size of separate water meters for landscape;

(2) 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;

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

(4) flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;

- (5) irrigation schedule parameters necessary to program start timers as specified in the landscape design;
- (6) the following statement of certification signed by a landscape professional: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan".

5.11.110 Grading Design Plan.

(a) For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff, and water waste. A grading plan shall be submitted as part of the Landscape Documentation Package. A comprehensive grading plan prepared by a civil engineer for other permits required for this project satisfies this requirement. In addition to the provisions contained herein, the grading plan shall comply with all applicable provisions of the Colma Municipal Code, including, without limitation, Chapter 5.07.

- (1) The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:
 - (A) height of graded slopes;
 - (B) drainage patterns;
 - (C) pad elevations;
 - (D) finish grade; and
 - (E) stormwater retention improvements, if applicable.
- (2) To prevent excessive erosion and runoff, it is highly recommended that project applicants:
 - (A) grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes;
 - (B) avoid disruption of natural drainage patterns and undisturbed soil; and
 - (C) avoid soil compaction in landscape areas.
- (3) The grading design plan shall contain the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan" and shall bear the signature of a licensed professional as authorized by law.

5.11.120 Certificate of Completion and Landscape Installation.

- (a) Landscape project installation shall not proceed until: (1) the project applicant has

deposited all applicable permit and application processing fees with the Town in accordance with the Town's fee schedule; (2) the landscape documentation package has been approved by the City Engineer; and (3) all required permits have been issued.

(b) The project applicant shall notify the Town at the beginning of the installation work, and at intervals, as necessary, for the duration of the landscape project work to schedule all required inspections.

(c) The Certificate of Completion for the landscape project shall be obtained through the certificate of occupancy or other final project approval issued by the Town. The requirements for the final approval include submittal of:

- (1) project information sheet that contains:
 - (A) date;
 - (B) project name;
 - (C) project applicant name, telephone, and mailing address;
 - (D) project address and location; and
 - (E) property owner name, telephone, and mailing address;
- (2) a Certificate of Completion shall be completed using the form obtained from the City Engineer or City Clerk, and shall include: (i) certification by a landscape professional that the landscape project has been installed per the approved Landscape Documentation Package; and (ii) the following statement: "The landscaping has been installed in substantial conformance to the design plans, and complies with the provisions of the Water Efficient Landscape Regulations for the efficient use of water in the landscape."
- (3) certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape professional that the landscape project has been installed per the approved Landscape Documentation Package;
 - (A) where there have been significant changes made in the field during construction, these "as-built" or record drawings shall be included with the certification; and
- (4) irrigation scheduling parameters used to set the controller(s).

(d) At the option of the Town, the project applicant shall submit to the City Engineer one or more of the following: (a) an irrigation audit report from a certified irrigation auditor; (b) documentation of enrollment in regional or local water purveyor's water conservation and/or drought response programs; (c) soil analysis report, if not submitted with Landscape

Documentation Package, and documentation verifying implementation of soil report recommendations and/or (d) documentation that the MAWA and EAWU information for the landscape project has been submitted to the local water purveyor, may be required at the option of the Town.

- (e) The project applicant shall:
 - (1) submit the signed Certificate of Completion to the City Engineer for review;
 - (2) ensure that copies of the approved Certificate of Completion are submitted to the local water purveyor and property owner or his or her designee.

- (f) The City Engineer shall:
 - (1) receive the signed Certificate of Completion from the project applicant;
 - (2) approve or deny the Certificate of Completion. If the Certificate of Completion is denied, the City Engineer shall provide the applicant with a written notice of denial including the reasons therefore, and information regarding reapplication, appeal, or other assistance.

5.11.130 Post-Installation Irrigation Scheduling.

- (a) 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. Irrigation schedules shall meet the following criteria:
 - (1) Irrigation scheduling shall be regulated by automatic irrigation controllers.
 - (2) Overhead irrigation shall be scheduled and/or adjusted in compliance with any applicable Town, state, regional or local water purveyor water conservation and/or drought response laws, rules, policies, and regulations. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.
 - (3) For implementation of the irrigation schedule, particular attention must be paid to irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance (MAWA). Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.
 - (4) Parameters used to set the automatic controller shall be developed and submitted for each of the following:

- (A) the plant establishment period;
 - (B) the established landscape; and
 - (C) temporarily irrigated areas.
- (5) Each irrigation schedule shall consider for each station all of the following that apply:
- (A) irrigation interval (days between irrigation);
 - (B) irrigation run times (hours or minutes per irrigation event to avoid runoff);
 - (C) number of cycle starts required for each irrigation event to avoid runoff;
 - (D) amount of applied water scheduled to be applied on a monthly basis;
 - (E) application rate setting;
 - (F) root depth setting;
 - (G) plant type setting;
 - (H) soil type;
 - (I) slope factor setting;
 - (J) shade factor setting; and
 - (K) irrigation uniformity or efficiency setting.

5.11.140 Post-Installation Landscape and Irrigation Maintenance Schedule.

(a) Landscapes shall be maintained to ensure water use efficiency in accordance with this Code and any applicable Town, state, regional or local water purveyor water conservation and/or drought response laws, rules, policies, and regulations. A regular maintenance schedule shall be submitted with the Certificate of Completion.

(b) A regular maintenance schedule shall include, but not be limited to, routine inspection; adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing and obstruction to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

(c) Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.

(d) A project applicant is encouraged to implement sustainable or environmentally-friendly practices for overall landscape maintenance.

5.11.150 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

(a) All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

(b) For existing landscapes that were installed before January 1, 2010, and are over one acre in size.

- (1) For all landscapes that have a water meter, the Town shall administer programs that may include, but not be limited to, irrigation water use analyses, irrigation surveys, and irrigation audits to evaluate water use and provide recommendations as necessary to reduce landscape water use to a level that does not exceed the Maximum Applied Water Allowance for existing landscapes. The Maximum Applied Water Allowance for existing landscapes shall be calculated as: $MAWA = (0.8) (ET_o)(LA)(0.62)$.
- (2) For all landscapes that do not have a meter, the Town shall administer programs that may include, but not be limited to, irrigation surveys and irrigation audits to evaluate water use and provide recommendations as necessary in order to prevent water waste.

(c) For new construction and rehabilitated landscape projects installed after January 1, 2010, as described in Sections 5.11.220, 5.11.230 and 5.11.240:

- (1) the project applicant shall submit an irrigation audit report with the Certificate of Completion to the City Engineer that may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule;
- (2) the Town shall administer programs that may include, but not be limited to, irrigation water use analysis, irrigation audits, and irrigation surveys for compliance with the Maximum Applied Water Allowance.

5.11.160 Irrigation Efficiency.

For the purpose of determining Maximum Applied Water Allowance, average irrigation efficiency is assumed to be 0.71. Irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 0.71.

5.11.170 Recycled Water.

(a) 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 as described in subsection 5.11.070(b) below

(b) 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.

(c) All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and State laws.

(d) Landscapes using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for Special Landscape Areas shall not exceed 1.0.

5.11.180 Provisions for New Construction, Rehabilitated Landscapes or Existing Landscapes.

The Town may designate another agency, such as a water purveyor, to implement some or all of the requirements contained in this subchapter, and may define each entity's specific responsibilities relating to this subchapter.

5.11.190 Stormwater Management.

(a) Stormwater management practices minimize runoff and increase infiltration which recharges groundwater and improves water quality. It is strongly encouraged that all landscape and grading design plans implement stormwater best management practices in order to minimize runoff and to increase on-site retention and infiltration.

(b) Project applicants shall refer to the Colma Municipal Code Chapter 3.10, or to the Regional Water Quality Control Board for information on any applicable stormwater regulations and stormwater management plans.

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

5.11.200 Public Education.

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

- (1) The Building Department shall provide information to owners of new, single-family residential homes regarding the design, installation, management, and maintenance of water efficient landscapes.

(b) *Model Homes.* All model homes that are landscaped shall use signs and written information to demonstrate the principles of water efficient landscapes described in this ordinance.

- (1) Signs shall be used to identify the model as an example of a water efficient landscape featuring elements such as hydrozones, irrigation equipment, and others that contribute to the overall water efficient theme. All signs shall comply with Chapter 4.07 of this Code.
- (2) Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.

5.11.210 Environmental Review.

The project applicant shall comply with the California Environmental Quality Act (CEQA), as appropriate.

5.11.220 Water-Waste Prevention – Runoff Prohibited.

(a) No property owner or person responsible for overseeing a landscape irrigation plan shall allow runoff caused by inefficient landscape irrigation to occur on any parcel within the Town of Colma. Impermissible runoff, for purposes of this section, shall include, without limitation, 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.

(b) The City Engineer may modify restrictions regarding overspray and runoff if:

- (1) the landscape area is adjacent to permeable surfacing and no runoff occurs; or
- (2) the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping.

5.11.230 Effective Precipitation.

The City Engineer may consider Effective Precipitation (25% of annual precipitation) in tracking water use and may use the following equation to calculate Maximum Applied Water Allowance: $MAWA = (ET_o - E_{ppt}) (0.62) [(0.7 \times LA) + (0.3 \times SLA)]$.

5.11.240 Cost Recovery.

(a) In addition to the costs which may be recovered pursuant to the Colma Municipal Code, and in order to recover the costs of the water efficient landscape regulatory program set forth in this ordinance, the City Council may, from time to time, fix and impose by resolution fees and charges. The fees and charges may include, but are not limited to, fees and charges for:

- (1) any visits of an enforcement officer, or other city staff or authorized representative of the city for time incurred for inspections of property;
- (2) any monitoring, inspection, and surveillance procedures pertaining to enforcement of this ordinance;
- (3) enforcing compliance with any term or provision of this ordinance;
- (4) any other necessary and appropriate fees and charges to recover the cost of providing the Town's water efficient landscape regulatory program.

(b) The City Engineer or his or her designee shall serve an invoice for costs upon the person or responsible person who is subject to a notice of violation, a cease and desist order, or an administrative compliance order. An invoice for costs shall be immediately due and payable to the Town of Colma. If any person or responsible person fails to either pay the invoice for costs or appeal successfully the invoice for costs within 10 days of receiving the notice, then the Town may institute collection proceedings. The invoice for costs may include reasonable attorneys' fees.

5.11.250 Violations.

(a) Any person violating any of the provisions of this subchapter shall be guilty of a misdemeanor, which shall be punishable as set forth in section 1.05.010 *et seq.* of the Colma Municipal Code.

(b) Any action or inaction that violates this ordinance is declared to be a public nuisance, which may be abated pursuant to the procedures set forth in the Property Maintenance and Nuisance Abatement Ordinance of the Town of Colma (Colma Municipal Code, Chapter 2.01).

(c) The remedies for enforcement of a permit set forth in this ordinance are cumulative and in addition to all other remedies provided by law.

Article 2. SEVERABILITY.

Each of the provisions of this ordinance is severable from all other provisions. If any article, section, subsection, paragraph, sentence, clause or phrase of this ordinance is for any reason held by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance.

Article 3. NOT A CEQA PROJECT.

The City Council finds that this Ordinance is exempt from review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000, *et seq.*).

Pursuant to State CEQA Guidelines section 15307 (14 Cal. Code Regs., § 15307), this Ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for protection of the environment. The adoption of this Ordinance will result in the enhancement and protection of water resources, and will not result in cumulative adverse environment impacts or any other potentially significant impact described in State CEQA Guidelines section 15300.2. It is therefore exempt from the provisions of CEQA. The City Council hereby directs the City Clerk or designee to prepare and file a Notice of Exemption within five business days following adoption of this Ordinance.

Article 4. Urgency; EFFECTIVE Date.

This ordinance is necessary for the immediate preservation of the public peace, health or safety, and shall take effect immediately. The City Council finds that the facts constituting the urgency are as follows.

Landscapes are essential to the quality of life in the Town of Colma, and like all California cities and towns, Colma’s economic prosperity and environmental quality depend are on adequate supply of water for beneficial use. In California, approximately half of the urban water used is for landscape irrigation. Accordingly, ensuring efficient landscapes in new developments and reducing water waste in existing landscapes are critical, as the most cost-effective ways to stretch the limited water supply and ensure that California has sufficient water to prosper.

AB 1881 requires the Town to adopt the Model Ordinance, or a local ordinance that is at least as effective in conserving water as the Model Ordinance, by January 1, 2010. . If the Town fails to do so, the Model Ordinance will become effective as if the Town had adopted it. However, the Model Ordinance is not adequately tailored to the Town’s zoning procedures and processes so as to be workable within the Town’s current regulatory framework, and, if adopted, will not be effective in accomplishing the purposes of AB 1881, and may enable landscapes to be installed that do not comply with the new applicable water efficient landscape regulations. Accordingly, the Town has modified the Model Ordinance to fit within the Town’s procedures and processes, as Chapter 5.11 of the Municipal Code, “Water Efficient Landscape Regulations.” The adoption of this urgency ordinance will ensure that these local regulations, rather than the Model Ordinance, will govern water efficient landscape regulations within the Town, and thereby successfully implement the mandates of 1881 by January 1, 2010 and ensure that landscapes installed and maintained within the Town of Colma after January 1, 2010 adequately conserve water in the best interest of the public health, safety and welfare.

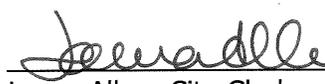
* * * * *

I certify that the foregoing Urgency Ordinance No. 684 was introduced and adopted at a regular meeting of the City Council of the Town of Colma held on December 9, 2009, by the following vote:

Name	Voting		Present, Not Voting		Absent
	Aye	No	Abstain	Not Participating	
Diana Colvin, Mayor	√				
Helen Fiscaro	√				
Raquel "Rae" Gonzalez	√				
Joanne F. del Rosario	√				
Joseph Silva	√				
<i>Voting Tally</i>	5	0			

Dated 3/11/10


 Diana Colvin, Mayor

Attest: 
 Laura Allen, City Clerk