



California Department of Water Resources
Urban Water Use Efficiency Unit
ATTN: Julie Saare-Edmonds, Senior Environmental Scientist
P.O. Box 942836
Sacramento, CA 94236-0001

June 26, 2015

Dear Ms. Saare-Edmonds,

Re: Public comment to the Draft Model Water Efficient Landscape Ordinance (MWELo)

TreePeople supports NRDC's comments and recommendations to the Model Ordinance. We have partnered with them on other policy issues and have found their insight and expertise to be commended.

We however, have further comments and recommendations to the proposed MWELo. Our additions are **red** and comments are **green**. Those of NRDC are highlighted in **yellow**. I've only included sections of the ordinance that were commented on.

§490 (b) Consistent with these legislative findings, the purpose of this model ordinance is to...
(6) strongly 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 require 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.

§ 490.1 Applicability

(a) After ~~January 1, 2010~~ November 1, 2015, this ordinance shall apply to all of the following landscape projects:

(1) new construction projects with a landscape area greater than 500 square feet requiring a building or landscape permit, plan check or design review;

(2) rehabilitated landscape projects with an aggregated landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review;

(3) existing landscapes with a landscape alteration greater than 500 square feet associated with any building additions

~~(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) (3) (4) existing landscapes limited to Sections 493, 493.1 and 493.2; and

(5) (4) (5) cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries are limited to Sections 492.4, 492.11 and 492.12; and existing cemeteries are limited to Sections 493, 493.1 and 493.2.

§ 491. Definitions. With the addition of 3 definitions, the lettering will change accordingly.

(a) ANSI A300 –American National Standards Institute standards are science-based for trees, shrubs and other woody plants guidelines. The standards cover Pruning, Fertilizing, Transplanting, Root Management and Management of Trees and Shrubs During Site Planning, Site Development and Construction. The ANSI A300 standards shall be the guidelines used for the installation and care of landscapes affected by MWEL0.

(k) “critical root zone”, “CRZ”, also known as the “tree protection zone”, is a circle of protection around trees during construction and the area where the majority of feeder roots (those taking in water and nutrients) are. No digging or disturbance should occur in the CRZ during construction and very little disturbance if plants are to be added. Amendment should not be incorporated in (dug into) the soil, but rather laid on top. The CRZ is calculated as thus – for every inch of trunk dbh, the radius of the circle is 1 foot for trees tolerant of root disturbance (generally young trees) and 1.5 feet for intolerant trees (generally older, stressed or heritage trees).

Example:

24” dbh *Quercus agrifolia*. 24×1.5 (it’s a larger, older tree) = 36’ radius, or 72’ wide circle of no disturbance.

4” dbh *Cercis occidentalis*. 4×1 (it’s a smaller, younger tree) = 4’ radius, or 8’ wide circle of no disturbance.

(l) “dbh” literally means diameter at breast height. It is the diameter of tree trunks measured 4.5 above the ground.

(r) (o) “establishment period of the plants” means the first year after installing the plant (excluding trees) 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. Trees require a three (3) to five (5) year establishment period.

(t) (q) “ET adjustment factor” (ETAF) means a factor of 0.75 for residential areas and 0.4 for non-residential areas, 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 0.425 for residential areas and 0.37 for other areas is the basis of the plant factor portion of this calculation. For purposes of the ETAF, the average irrigation efficiency is 0.7185 for residential and 0.92 for non-residential areas. Therefore, the ETAF Adjustment Factor for residential and non-residential is $(0.75) = (0.425 / 0.8571)$ and $(0.4) = (0.37 / 0.92)$, respectively. The ETAF for a new and existing Special Landscape Areas shall not exceed 1.0 0.8. The ETAF for existing non-rehabilitated landscapes is 0.8. Effective January 1, 2018, the ETAF shall mean a factor of 0.35 for both residential and non-residential areas.

§ 492.165-Stormwater Management and Rainwater Retention.

(d e) It is recommended that project also incorporate any of the following elements to improve on-site stormwater retention:

- Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas.
- Minimize the area of impervious surfaces such as paved areas, roof, ~~and~~ concrete driveways and artificial turf. Impervious areas, other than roof, cannot exceed 20% of the landscape.
- It is strongly recommended that artificial turf not be used. The soil compaction required for installation creates a runoff coefficient similar to concrete, which gives little to no ecosystem benefits.
- Incorporate pervious or porous surfaces (e.g., permeable pavers or blocks, pervious or porous concrete, etc.) that minimize runoff.
- Direct runoff from paved surfaces and roof areas into planting beds or landscaped areas to maximize site water retention.
- Incorporate rain gardens, cisterns, and other rain harvesting or catchment.
- Incorporate infiltration beds, swales, basins and drywells to retain stormwater and increase percolation into the soil.
- Consider constructed wetlands and retention ponds that retain water, handle excess flow, and filter pollutants.

~~(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.~~

(e) It is strongly recommended that Landscape areas shall be designed such that the retention and infiltration capacity is sufficient to prevent runoff from roof surfaces and the landscape area from either the one inch, 24-hour rain event or the 85th percentile, 24-hour rain event, and such additional capacity, if any, as may be required by any applicable local, ~~or~~ regional, or state regulation, shall be provided.

~~(qq) (mm)~~ “Maximum Applied Water Allowance” (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section 492.4. 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, including recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1.0-0.8.

§ 492.X Fees. A local agency may collect a fee for implementing and enforcing this ordinance.

§ 492.6 Landscape Design Plan.

(a) (1) Plant material

(H) ~~(F)~~ The use of invasive and/or noxious plant species is ~~strongly discouraged~~ prohibited. Invasive species for specific regions are found on the Cal-IPC website.

§ 492.6 Landscape Design Plan.

(a) (2) Water Features

(D) Pool and spa covers ~~are highly recommended~~ shall be provided.

§ 492.6 Landscape Design Plan.

(a) (3) Soil Preparation, Mulch and Amendments

(C) For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area (unless contra-indicated by soil test) shall be incorporated to a depth of six inches into the soil. Soils with greater than 25% organic matter in the top 6 inches of soil are exempt from adding compost.

1. Compost shall be added as a layer on top of the soil rather than incorporated into the soil in the Critical Root Zone of existing trees.

- If compost is added on top, then the total depth of compost plus the organic mulch (i.e. wood chips) on top shall not exceed 4”.

§ 492.6 Landscape Design Plan.(a) (3) Soil Preparation, Mulch and Amendments

(D) ~~(A)~~ A minimum ~~two~~ three inch (23”) layer of mulch, **up to 4”**, 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.

(E) ~~(B)~~ Stabilizing mulching products shall be used on slopes **3:1 or greater in accordance with CalTrans standards. (or if there are more current engineering standards for slopes.)**

(F) ~~(C)~~ The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement. **If area is adjacent to natural habitat, it is recommended that the seed mix shall consist solely of seed native to that area or watershed.**

(G) Organic mulch materials should take precedence over inorganic materials in instances where it is suitable, ecologically possible, and the material does not pose a fire hazard. **~~Composted organic material, in particular that which includes post-consumer material, should be considered over more compacted products such as bark, wood chips, etc. There seems to be confusion in the draft MWELo between compost/amendment and organic mulch. Amendment (compost/composted organic matter) is what is incorporated into the soil. It is fine, since it is broken down, composted. Mulch on the other hand, is used as a layer on top of the soil (3-4” thick) as an insulating layer. Mulch needs to be bigger pieces, perhaps 1” chunks of wood chips. It allows the passage of water and gases into the soil. A 4” layer of compost on top of the soil may very well smother the roots and is not recommended.~~**

§ 492.6 Landscape Design Plan.

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

(10) identify location, installation details, and 24-hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Stormwater best management practices are **encouraged required** in the landscape design plan and examples ~~include, but are not limited to:~~ are provided in Section 492.16.

~~(A) infiltration beds, swales, and basins that allow water to collect and soak into the ground;~~

~~(B) constructed wetlands and retention ponds that retain water, handle excess flow, and filter pollutants; and~~

~~(C) pervious or porous surfaces (e.g., permeable pavers or blocks, pervious or porous concrete, etc.) that minimize runoff.~~

§ 492.7 Irrigation Design Plan. (a)

(1) System

(A) Dedicated landscape water meters are highly recommended on landscape areas smaller than 5,000 square feet to facilitate water management shall be required for all non-residential irrigated landscapes of ~~1,000~~ 500 sq. ft. but not more than 5,000sq.ft. (the level at which *Water Code 535* applies)-and residential irrigated landscapes of ~~5,000~~ 500 sq. ft. or greater. A landscape water meter may be either:

(T) ~~(R) Narrow or irregularly shaped Areas of, including turf,~~ less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or low volume irrigation system. other technology that produces no runoff or overspray. **It doesn't matter if the planted area is turf or another groundcover...or shrubs, it should not be sprinkler irrigated if less than 10' wide. We understand that there are instances in the Ordinance where it is allowed if the water is being captured or drains directly to other planted areas.**

(2) Hydrozone

(C) ~~Where feasible, t~~Trees shall be placed on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation of trees. **Mature tree size, and the tree's Critical Root Zone shall be considered when designing the irrigation for the tree.**

§ 492.8 Grading Design Plan.

(a) (3) When existing trees are to remain in new or rehabilitated landscapes, a tree protection zone shall be established around each tree using fencing. The tree protection zone shall be the same at the "Critical Root Zone" (See Definitions).

(3 4) 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.

§ 492.11 Landscape and Irrigation Maintenance Schedule.

(e) Landscape installation and maintenance shall be in accordance with the ANSI A300 standards for Trees Shrubs and Woody Plants. Best Management practices for trees shall further be in accordance with the ISA (International Society of Arboriculture) best management practices.

(f) Trees shall be maintained to maximize shade and canopy coverage. Topping, heading, lion tailing and over thinning shall be prohibited.

Thank you for the opportunity to comment on this very important policy for the state.

With respect,



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