



May 21, 2010

Mr. Simon Eching  
California Department of Water Resources  
Office of Water Use Efficiency  
901 P Street, Third Floor  
P. O. Box 942836  
Sacramento, CA 94236-0001

**Subject: Notification of City of Sunnyvale Adoption of a Water-Efficient Landscape Ordinance**

Dear Mr. Eching,

Pursuant to AB 1881, Section 65597, on or before January 31, 2010 each City and County within California is obligated to notify the California Department of Water Resources (DWR) as to whether that City or County is subject to the DWR updated model water-efficient landscape ordinance (DWR Model Ordinance), or whether that City or County has adopted its own water-efficient landscape ordinance.

As described in our letter dated January 14, 2010, the City of Sunnyvale has been in the process of developing a local water-efficient landscape ordinance. The City of Sunnyvale is writing to inform you that we adopted our own water-efficient landscape ordinance (Sunnyvale Ordinance), which will be effective June 10, 2010. A copy of our Ordinance and the Report to Council (RTC 10-104) are attached.

Based on the following findings, we have concluded that our Ordinance addresses the needs of our local community and is at least as effective as the DWR Model Ordinance in conserving water:

- (1) **The Sunnyvale Ordinance applies to more accounts in our service area than the DWR Model Ordinance would.** The Sunnyvale Ordinance applies to the following landscaping projects:
- Individual single-family or duplex residential projects – New landscaping installations equal to or greater than 1,000 square feet in connection with construction of a new dwelling unit.
  - Multi-family residential, developer-installed residential and non-residential projects – New landscaping installations or landscaping rehabilitation projects equal to or greater than 1,000 square feet.

The thresholds specified in the Sunnyvale Ordinance are lower than the DWR Model Ordinance thresholds of 2,500 square feet for non-residential accounts

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and developer-installed residential projects, and 5,000 square feet for homeowner-installed new construction projects. The impact of lowering the landscape size thresholds is that more landscapes will be subject to the Sunnyvale Ordinance and therefore, will be designed to be more water-efficient than they may otherwise have been pursuant to the DWR Model Ordinance, with the result of increased water savings.

- (2) **The Sunnyvale Ordinance limits the allowable turf area to 25% of the irrigated area and requires that 80% of non-turf areas is planted with native or low water use plants, unless the project applicant chooses to develop a water budget.** The Sunnyvale Ordinance provides the applicant two options in designing a landscaping project. One option is a water-budget based approach (the DWR Model Ordinance approach) to design a landscape and the other option is to limit turf areas to 25% of the landscaped area and that 80% of non-turf areas are planted with native or low water use plants. The latter may limit design flexibility, but may be a simpler approach for those homeowners who may not want to do the water budget calculations. Turf area restrictions result in lower water use landscape designs than a water budget based approach. By having a turf restriction as an option, the Sunnyvale Ordinance has been designed to minimize the use of turf in landscaping and result in increased water savings.
- (3) **The Sunnyvale Ordinance includes water budget parameters and values that are consistent with the DWR Model Ordinance.** By using the same parameters as the DWR Model Ordinance for purposes of developing the water budgets (e.g., plant factors, irrigation efficiency, etc), the Sunnyvale Ordinance will be at least effective as the DWR Model Ordinance in terms of developing landscape water budgets and achieving water savings.
- (4) **The Sunnyvale Ordinance includes landscape parameters that are consistent with the DWR Model Ordinance.** The Sunnyvale Ordinance includes the same, if not more restrictive values as the DWR Model Ordinance such as restrictions on where turf may be placed (i.e. slopes), limiting irrigation times, and irrigation system design requirements. By adopting the same requirements as the DWR Model Ordinance, the Sunnyvale Ordinance will be at least as effective as the DWR Model Ordinance in terms of achieving water savings.
- (5) **The Sunnyvale Ordinance has been simplified relative to the DWR ordinance.** The Sunnyvale Ordinance is more simple and streamlined than the DWR Model Ordinance, and is consistent with the City's established review processes. As such, it will be easier for applicants to comply with the Sunnyvale

Ordinance and easier for the City to implement and enforce the Ordinance. The Sunnyvale Ordinance will therefore be at least as effective as the DWR Model Ordinance in terms of achieving water savings.

Our community has a strong commitment to sustainability in general and to conserving water in particular. We will be working with project applicants to ensure that they install and maintain water-efficient landscaping that also coincides with our storm water management requirements and other goals.

Please contact Rosemarie Zulueta, Assistant Planner, with any questions at 408-730-7437 or [rzulueta@ci.sunnyvale.ca.us](mailto:rzulueta@ci.sunnyvale.ca.us).

Sincerely,



Trudi Ryan  
Planning Officer  
City of Sunnyvale  
Community Development Department

CC: Bay Area Water Supply Conservation Agency  
Gary Luebbers, *City Manager*  
Hanson Hom, *Director of Community Development*  
Marvin Rose, *Director of Public Works*  
Jim Craig, *Superintendent of Field Services*  
Kathryn Berry, *Senior Assistant City Attorney*

Attachments:

RTC 10-104: Water-Efficient Landscape Ordinance  
Sunnyvale Water-Efficient Landscape Ordinance, effective June 10, 2010



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Attachments:

RTC 10-104: Water-Efficient Landscape Ordinance  
Sunnyvale Water-Efficient Landscape Ordinance, effective June 10, 2010

**Council Meeting: April 27, 2010****SUBJECT: 2009-0710 Water-Efficient Landscape Ordinance****REPORT IN BRIEF**

In 2006, the State Legislature passed a bill (AB 1881) requiring local agencies to adopt stricter water conserving standards for homes and businesses. The law tasked the State Department of Water Resources (DWR) to develop a model ordinance by January 1, 2009 that jurisdictions could use to meet the stated goal of 20% reduction in water usage. DWR issued the Model Water-Efficient Landscape Ordinance (MWELo) in September 2009. The State bill's original expected time frame for local jurisdiction adoption of a new ordinance was by January 1, 2010, but that has been made difficult due to the delay in issuing the MWELo. Sunnyvale is required to adopt either the MWELo or its own water-efficient landscape ordinance that substantially complies with the MWELo. Staff has been working with the Bay Area Water Supply Conservation Agency (BAWSCA) on an alternative model ordinance (than the MWELo) for the region. The Planning Commission and staff recommend introduction of an ordinance for water-efficient landscapes (Attachment A) that is similar to the BAWSCA model ordinance, tailored for Sunnyvale.

**BACKGROUND****Water Conservation in Landscaping Act of 2006**

In an effort to protect the state's increasingly limited water supply, the state legislature passed the Water Conservation in Landscaping Act of 2006 (AB 1881, Laird) which applies to all local agencies in California (see Attachment B). AB 1881 supersedes the Water Conservation in Landscaping Act of 1990 (AB 325-1990), which led to the creation of a Model Water-Efficient Landscape Ordinance (MWELo) for local agencies in 1992. AB 1881 was also enacted to meet the goals of SB 7 (Steinberg, 7<sup>th</sup> Extraordinary Session), which calls for a 20% reduction in per capita water use by the year 2020.

The State law requires each city to adopt a landscaping ordinance by January 1, 2010, or the MWELo would be automatically adopted by statute. Staff sent a notification letter to DWR on January 14, 2010 that explains that the City is in the process of developing its own ordinance in lieu of adopting the MWELo (see Attachment D). Many other cities throughout the region are also late in adopting the new regulations, mainly because DWR did not issue the draft ordinance until September 2009, rather than early 2009, as expected.

The MWELO was designed to ensure smart, water-efficient landscape design in new developments and reduce water waste in existing landscapes. Its provisions apply to public agency projects and all private development, including single-family residential landscape projects that are tied to new construction and meet certain size thresholds.

### **Current Landscape Regulations**

From 1989-1990, the City evaluated its landscaping requirements for multi-family residential and commercial developments to improve the appearance of the City and to establish water-efficient landscaping regulations (RTC 89-757, RTC 90-202 and RTC 90-206). At that time, the City adopted its current water-efficient planting and irrigation requirements, which apply to new multi-family residential and non-residential development and major redevelopment projects that include landscape project areas in excess of 500 square feet.

### **Bay Area Water Supply Conservation Agency's Regional Ordinance**

The Bay Area Water Supply Conservation Agency (BAWSCA) produced a regional template water-efficient landscape ordinance (see Attachment B) in an attempt to simplify the requirements of the MWELO and to have consistent regulations throughout the jurisdictions of its member agencies. The BAWSCA ordinance was also designed to achieve 25% in water savings (rather than the State mandated 20% reduction) and contains a lower size threshold for applicability to capture more landscapes. Staff was engaged in the development of the BAWSCA ordinance, which was finalized in December 2009.

## **EXISTING POLICY**

### **WATER RESOURCES SUB-ELEMENT**

**Goal B, Water Conservation:** Promote more efficient use of the City's water resources to reduce the demands placed on the City's water supplies

Policy B.1: Lower overall water demand through the effective use of water conservation programs designed to increase water use efficiency in the residential, commercial, industrial and landscaping arenas, partnering with our wholesalers.

*Action Strategy B.1b:* Keep the community regularly advised as to the status of the City's water supply, how they can achieve conservation goals, and how the community is progressing toward those goals.

*Action Strategy B.1c:* Develop partnerships with other agencies and participate in their programs to achieve regional water conservation goals.

## **DISCUSSION**

In order to comply with the requirements of AB 1881, the City shall either enforce the MWELO or adopt an ordinance that is at least as effective as the MWELO. Staff has evaluated the MWELO and BAWSCA's regional template ordinance to prepare an ordinance that is tailored to fit local conditions and is consistent with the City's established review process.

### **Proposed Water-Efficient Landscape Ordinance**

Staff has prepared an ordinance (Attachment A) that exceeds the basic requirements of the MWELO and takes elements from the BAWSCA regional template ordinance. Staff has prepared a chart (Attachment C) which compares the key requirements of the MWELO to the BAWSCA ordinance, and to both current and proposed City requirements.

Modeling the staff-proposed ordinance after the BAWSCA template also helps establish some consistency throughout the region, further easing the implementation of new regulations. A letter in support of the adoption of the BAWSCA template ordinance was sent to the City from various organizations (Attachment E).

After considering both the format and content of the MWELO and BAWSCA ordinances, staff modeled the proposed ordinance after the BAWSCA template. Described below are the main ways the BAWSCA ordinance differs from the MWELO and the reasons staff chose to use the BAWSCA ordinance as a template.

- Size threshold: The BAWSCA ordinance would apply to all new and rehabilitated landscaped areas of 1,000 square feet or more to capture smaller infill developments (which is characteristic of the nature of development in the bay area). The BAWSCA ordinance was specifically designed to achieve 25% water savings whereas the MWELO was designed to achieve 20%.

Staff proposes the applicability threshold of 1,000 square feet of landscaped area for multi-family residential and non-residential projects to be consistent with the regional model. Council may choose to maintain the existing applicability threshold of 500 square feet, but smaller projects may still be subject to water-efficient landscape requirements under the City's green building requirements.

Staff proposes the applicability threshold of 2,500 square feet of landscaped area for individual single-family and duplex projects that is tied to new construction of a new home (does not include an addition to the structure or if it is a landscaping-only project). This threshold will

better align with the City's green building requirements for new individual single-family and duplex homes.

Staff has spoken with BAWSCA and staff of other local agencies, and found that the proposed thresholds are consistent with what other communities are considering.

The City has implemented numerous water conservation practices for public properties including parks, golf courses and landscape medians. City staff will continue to use, encourage, and support conservation oriented techniques and irrigation fixtures to comply with state regulations.

- Documentation Requirements: Because the applicability threshold has been lowered in order to capture more projects, the BAWSCA ordinance reduces the documentation requirements to reduce the burden on the applicant. Projects with landscaped areas that are less than a certain threshold are not required to have a certified professional to prepare the landscape and irrigation plans. Staff proposes documentation requirements similar to those of the BAWSCA ordinance.
- Option of Water Budget or Turf Limitation/Planting Requirements: While the MWELo requires a water budget approach to landscape design, the BAWSCA ordinance includes the option of either:
  - A water budget approach to design a proposed landscape; OR,
  - Limit landscaping such that turf areas do not exceed 25% and that 80% of non-turf areas is planted with native or low water-use plants.

Staff proposes adopting the described options for landscape design. The turf limitation and low-water use planting requirement may limit design flexibility, but it is a simpler approach for those homeowners who may not want to do the water budget calculations. If a project includes landscaped areas dedicated to edible plants, areas irrigated with recycled water, recreational fields, golf courses or other areas dedicated to active play where turf provides a playing surface, the option of a water budget approach in landscape design would be more appropriate. These areas are considered "special landscaped areas", which, when used in a water budget calculation, is allowed as much water as needed to sustain these areas.

### **Required Permits for Landscape Projects**

A staff-level permit (Miscellaneous Plan Permit) is currently required for any modifications to landscaping on multi-family and non-residential property, but no permit is required for landscaping at single-family homes. Landscape projects for new single-family homes could be reviewed as part of the existing

Design Review process; therefore, no new permit processes would have to be created to implement the adopted regulations.

### **Audits**

The MWELO and proposed ordinance requires a landscape irrigation system audit to ensure the project was completed according to the approved plans. For most projects, irrigation audits must be conducted by a certified professional. Compliance with the approved landscape and irrigation plans will be ensured prior to approval of occupancy and as part of subsequent reviews of completed projects.

### **Impact to the Community**

Although the new regulations would mainly affect multi-family residential and non-residential properties, the most significant change would be that some landscape projects on single-family and duplex properties would now have to be reviewed and approved by the City. That review, however, would only be triggered when the project is tied to new home construction. Staff anticipates one or two homeowner-initiated single-family landscape projects would trigger the regulations per year; and, one or two developer-initiated single-family subdivisions (2-50 housing units) per year.

For projects that would be affected by the ordinance, the main economic impact would be the added costs for the development of the application, the participation from consultants (if required), and potentially from the installation of the landscaping and irrigation system. Whether the actual cost savings to customers from the reduced water use through implementation of the ordinance would be equal to or greater than the additional incurred cost is difficult to quantify.

Although landscape professionals are familiar with the water-efficient practices that are required by the MWELO (including the water budget approach to landscape design) many homeowners are not. To assist applicants in complying with the new regulations, DWR, BAWSCA, water districts and other agencies have prepared educational materials and resources for water-efficient landscape design (see Attachment F). Attachment G contains sample checklists, worksheets, landscaping plan and water budget calculations. Staff will develop similar supplemental materials to aid the public in complying with regulations.

### **Water Conservation and Public Education**

One of the goals of AB 1881 is to educate the public about water conservation in landscaping, especially those with existing landscapes. The MWELO requires local agencies to administer programs that may include irrigation water use analyses, audits and evaluations for existing landscapes over one acre in size. The MWELO encourages local agencies to collaborate with water purveyors to

implement the provisions of the MWELO. Sunnyvale partners with the Santa Clara Valley Water District (SCVWD) to provide multiple water conservation programs. These programs include the Landscape Survey Program for businesses and Water-Wise House Calls for residents, where trained water surveyors evaluate water use and make water-wise recommendations, including irrigation schedules for landscapes. The City also helps promote SCVWD's Landscape Rebate Programs to assist homeowners and commercial, industrial and institutional property owners in reducing their outdoor water use by replacing high water use landscape and/or upgrading to high efficiency irrigation equipment. Sunnyvale also hosts a series of water-efficient landscaping workshops offered by the SCVWD and BAWSCA (for residents and businesses). More information about these programs and resources for water-efficient landscaping can be found in Attachment F.

Other outreach and education efforts by the City include:

- Water conservation information on City website;
- Periodic direct mailing of water conservation educational materials to the top 40% water users in the City;
- Utility bill inserts about water conservation;
- Sustainable Sunnyvale E-Newsletter;
- Outreach to schools, homeowners associations, mobile home communities and businesses; and
- Outreach at Sunnyvale Farmer's Market.

These existing programs contribute towards achieving state-wide water conservation goals, and can increase water efficiency in landscapes on properties that may not be subject to the proposed ordinance.

### **FISCAL IMPACT**

Additional staff time may be required to educate applicants and to review applications to ensure compliance with the new regulations. Review time will lessen over time as staff becomes more familiar with new requirements. It is not anticipated that there would be an increase in projects requiring permit review because of the following reasons:

- Staff is not proposing a significant change in the triggers for review for multi-family and non-residential projects; and
- Only landscape projects tied to new construction on single-family and duplex lots are subject to the new regulations, and all new construction projects are currently required to go through the Design Review process.

Staff is not recommending any changes to the budget at this time due to fewer projects during this slowed economy. This can be reviewed again as applications increase.

Since this effort is a state mandated local program, AB 1881 states that if the Commission on State Mandates determines that this act contains costs mandated by state, reimbursement to local agencies for those costs shall be made.

### **PUBLIC CONTACT**

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's Web site. Public hearing notices and outreach meeting flyers were also sent to the City's Neighborhood Associations, local developers, nurseries, home improvement stores and landscape professionals. Staff received letters from the public which are included in this report as Attachment H.

*Outreach Meeting:* Staff held an outreach meeting on February 11, 2010 to inform the public of the upcoming modifications to the landscape regulations. Staff also took the opportunity to educate attendees about water conservation and informed them of the various water conservation programs and resources that are available, especially those that could assist residents and businesses in creating water-efficient landscapes. Attendees were comprised of residents, businesses, a landscape professional and a representative of *Acterra*, an environmental nonprofit organization that the City partners with to give free home energy audits to Sunnyvale residents.

Members of the audience had concerns regarding water waste in landscapes that may not be subject to the ordinance. When a complaint regarding water waste (overspray of sprinklers, runoff, etc.) is received, and it is determined that no actual code violation is made, staff practice is to notify and advise the property owner regarding water conservation. There was a suggestion that perhaps the Council should consider issuing notices or imposing citations on those properties exceeding certain thresholds of water use.

Outreach meeting attendees expressed that the City's recycled water system should be expanded. Currently only the northern third of the City has recycled water available. That area has had tremendous success in providing recycled water for landscaping irrigation purposes in the heavily industrialized part of the City. Requiring dual plumbing (for non single-family properties) for future use of reclaimed water is a study issue that Council ranked number one for the Community Development Department (CDD) for 2010. The City's recycled water Master Plan is scheduled to be updated in the next year. The next update will investigate potential benefits of dual plumbing where feasible, additional markets for recycled water, and facility sizing and estimated costs to extend the recycled water system.

**ALTERNATIVES**

1. Introduce the proposed ordinance in Attachment A.
2. Introduce the proposed ordinance with modifications.
3. Take no action and enforce the state's Model Water-Efficient Landscape Ordinance which automatically goes into effect by statute.

**RECOMMENDATION**

The Planning Commission considered this item at the public hearing held on April 12, 2010 (see Attachment I, Minutes of Planning Commission Public Hearing of April 12, 2010). The Commission recommended introducing the ordinance with the following considerations:

- Tree-staking: The Commission expressed some concern regarding provisions in the current code that were not included in the proposed ordinance, more specifically section 19.38.070 (b)(3) regarding which areas are required to be landscaped, and the tree-staking requirements (19.38.070(c)(10)). Staff has included a provision under 19.37.040 (a) in the proposed ordinance which states that areas not used for buildings, driveways, pedestrian walkways or other paving shall be landscaped. Item 19.37.060(a) in the proposed ordinance retains many of the requirements for trees, including size at time of planting, but states that plant selection and installation shall be done in accordance with accepted horticultural industry practices. Since there may be other industry standards or accepted methods (which may also be evolving) to ensure that newly planted trees become established, staff felt that a performance-based standard in the proposed ordinance would better address this issue. Staff will include the tree-staking provisions, along with other guidelines and examples to ensure plant establishment, in the application supplemental materials/brochures.
- Reclaimed water: The Commission recommended considering the requirement for a separate service line for the use of reclaimed water on new nonresidential development with this study, so that the infrastructure would be in place to easily connect to the reclaimed water system when it becomes available. Currently, new multi-family development with common areas and new nonresidential development are required to have a separate irrigation line (with separate water meter) to connect to the main reclaimed water line if it is available. If a reclaimed water line is not available, new developments are strongly encouraged to have a separate irrigation line connected to the main domestic water system. The incentive to have a separate irrigation line is a lower rate and no sewage fees. If reclaimed water does become available, that separate irrigation service line will be required to connect to the reclaimed water line when there is a modification to the property that would trigger the requirement.

As stated earlier in the report, the Reclaimed Water Master Plan is scheduled to be updated next year and will further investigate the potential benefits of dual plumbing including for irrigation use. Also, CDD staff will complete a study issue this year for Council's consideration regarding requiring dual plumbing for the use of reclaimed water.

- Water conservation: The Commission emphasized the importance of water conservation and urged the public to remember that water efficiency in landscaping is one of the ways to be more "green." The Commissioners expressed a desire for this message to be articulated further in the proposed ordinance. Staff has included a statement under 19.37.010 (Purpose) in the proposed ordinance (Attachment A) that emphasizes water conservation in landscaping as a sustainable building practice.

Staff recommends Alternative 1, Introduce the ordinance in Attachment A. The proposed ordinance complies with state requirements and contains similar provisions in the regional ordinance developed by BAWSCA, but tailored to fit local conditions.

Reviewed by:

Hanson Hom, Director, Community Development Department  
Reviewed by Trudi Ryan, Planning Officer  
Prepared by: Rosemarie Zulueta, Assistant Planner

Reviewed by:

Marvin Rose, Director, Department of Public Works  
Reviewed by Jim Craig, Superintendent of Field Services

Approved by:

Gary M. Luebbers  
City Manager

**Attachments**

- A. Proposed Water-Efficient Landscape Ordinance
- B. AB 1881, State's MWELo and BAWSCA Template Ordinance
- C. Matrix Comparison of Requirements in MWELo, BAWSCA Ordinance, Current City Code and Proposed Ordinance
- D. Notification Letter to the Department of Water Resources
- E. Letter of Support for from Various Associations
- F. Water Conservation Programs and Water-Efficient Landscape Design Resources
- G. Sample Checklists and Landscape Plan with Water Budget Calculation
- H. Letters from the Public
- I. Minutes of Planning Commission Public Hearing of April 12, 2010

**ORDINANCE NO. \_\_\_\_\_**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SUNNYVALE AMENDING SECTIONS 19.12.130 (“L”) OF CHAPTER 19.12 (DEFINITIONS), 19.28.110 (LANDSCAPING AND OPEN SPACE) OF CHAPTER 19.28 (DOWNTOWN SPECIFIC PLAN DISTRICT), AND 19.98.020 (APPLICATIONS) OF CHAPTER 19.98 (GENERAL PROCEDURES); ADDING CHAPTER 19.37 (LANDSCAPING, IRRIGATION AND USEABLE OPEN SPACE) TO ARTICLE 4 (GENERAL DEVELOPMENT STANDARDS) OF TITLE 19 (ZONING); AND REPEALING SECTION 19.38.070 (LANDSCAPING, IRRIGATION AND USABLE OPEN SPACE) OF CHAPTER 19.38 OF ARTICLE 4 (GENERAL DEVELOPMENT STANDARDS) OF TITLE 19 (ZONING) OF THE SUNNYVALE MUNICIPAL CODE TO CLARIFY REQUIREMENTS AND ESTABLISH WATER-EFFICIENT LANDSCAPE REGULATIONS PURSUANT TO STATE LAW**

WHEREAS, the adoption and enforcement of this Ordinance is necessary to manage the City of Sunnyvale’s potable water supply in the short and long-term and to avoid or minimize the effects of drought and shortage within the City. This Ordinance is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare.

WHEREAS, the California Water Conservation in Landscaping Act has been implemented by a statewide Landscape Task Force, which was overseen by the California Urban Water Conservation Council, to create a Model Water-Efficient Landscape Ordinance (Model Ordinance) that local agencies may adopt. The Water Conservation in Landscaping Act was amended pursuant to AB 2717 (Chapter 682, Stats. 2004) and AB 1881 (Chapter 559, Stats. 2006) to update the Model Ordinance;

WHEREAS, AB 1881 requires cities and counties to adopt the updated Model Ordinance or an equivalent document which is “at least as effective as” the Model Ordinance in conserving water. In the event cities and counties do not take such action, the State’s Model Ordinance will be deemed to be automatically adopted by statute;

WHEREAS, the City of Sunnyvale has developed this Landscaping, Irrigation and Useable Open Space Ordinance to meet the requirements and guidelines of the Model Ordinance and to address the unique physical characteristics, including average landscaped areas, within the City of Sunnyvale’s jurisdiction, in order to ensure that this Ordinance will be “at least as effective as” the Model Ordinance in conserving water;

WHEREAS, although this Landscaping, Irrigation and Useable Open Space Ordinance is more streamlined and simplified than the Model Ordinance, the Council finds that it is “at least as effective as” the Model Ordinance for the following reasons: this Ordinance applies to more accounts than the Model Ordinance does because it lowers the size threshold for applicable landscaped areas from 2,500 square feet to 1,000 square feet for multi-family residential and non-residential projects, and, in the case of single-family residences, from 5,000 square feet to 2,500 square feet, to better reflect the typical landscaped areas located within the region; and (2)

this Ordinance includes a default turf restriction of 25% of the irrigated area and requires that at least 80% of the non-turf landscape areas be native plants, low-water using plants, or no-water using plants (unless the applicant elects to perform a water budget). The Model Ordinance does not contain any such default turf restrictions or specified plant requirements;

WHEREAS, although this Ordinance is more streamlined and simplified than the Model Ordinance, the Council further finds that it is “at least as effective as” the Model Ordinance because this Ordinance includes water budget parameters and values and landscaping requirements that are consistent with the Model Ordinance. By using the same water budget parameters as the Model Ordinance (e.g., plant factors, irrigation efficiency), this Ordinance will be as effective as the Model Ordinance in developing landscaping water budgets. By using the same landscaping parameters as the Model Ordinance for, among other things, slope restrictions and width restrictions for turf, irrigation times, and minimum mulch requirements, this Ordinance will be at least as effective as the Model Ordinance in achieving water savings;

WHEREAS, Article X, Section 2 of the California Constitution and Section 100 of the California Water Code declare that the general welfare requires water resources be put to beneficial use, waste or unreasonable use or unreasonable method of use of water be prevented, and conservation of water be fully exercised with a view to the reasonable and beneficial use thereof;

WHEREAS, current supply and demand projections for the Bay Area Water Supply and Conservation Agency (“BAWSCA”) member agencies indicate that, in the absence of increased water conservation, water demands will exceed available water supplies in 2015 and implementation of water conserving ordinances is one mechanism by which agencies can reduce future water demands and remain within existing supplies;

WHEREAS, The Council finds and determines that this Ordinance is consistent with the provisions requiring reductions in outdoor water use for landscaping in the California Green Building Standards Code, as such provisions will be implemented in the coming years. Such requirements include the development of a water budget for landscaping irrigation in accordance with methodology outlined in either the Model Ordinance or pursuant to a locally adopted ordinance; and

WHEREAS, the State Legislature has identified the provision of a more reliable water supply and the protection, restoration and enhancement of the Delta ecosystem as a high priority for the state. Pursuant to this, in November 2009, the State Legislature passed Senate Bill 7 (7<sup>th</sup> Extraordinary Session) requiring certain urban water suppliers to reduce per capita urban water use by 20% by the year 2020. Accordingly, the Council finds that implementation of this Ordinance is consistent with the policies and goals established by the State Legislature in enacting SB 7 (7<sup>th</sup> Extraordinary Session).

**NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF SUNNYVALE DOES ORDAIN AS FOLLOWS:**

SECTION 1. SECTION 19.12.130 AMENDED. Section 19.12.130 of Chapter 19.12 (Definitions) of Title 19 (Zoning) of the Sunnyvale Municipal Code is hereby amended to read as follows:

**19.12.130. “L”**

(1) “Landscaping” means the planting and maintenance of trees, ground cover, shrubs, vines, flowers, lawns or a combination thereof. The combination or design, in addition to natural plant materials, may include rock or stone and structural or decorative features including, but not limited to, fountains, reflecting pools, art work and benches, pedestrian walkways, bicycle parking, recreation facilities and outdoor eating areas. ~~For purposes of computation of landscaped area as that term is used in this title, automobile parking areas, storage areas, vehicular ways and specifically permitted unenclosed uses shall not be considered as landscaping.~~

(2) “Landscaped area” means a portion of a site planted with vegetation utilized for screening or ornamentation. Landscaped areas may include decorative rock or stone, provided that such materials are incidental and do not comprise more than thirty percent of the area. For purposes of computation of landscaped area as that term is used in this title, automobile parking areas, storage areas, vehicular ways and specifically permitted unenclosed uses shall not be considered as landscaping.

(3) – (16) [Text unchanged.]

SECTION 2. SECTION 19.28.110 AMENDED. Section 19.28.110 of Chapter 19.28 (Downtown Specific Plan District) of Title 19 (Zoning) of the Sunnyvale Municipal Code is hereby amended to read as follows:

**19.28.110. Downtown Specific Plan—Landscaping and useable open space areas.**

(a) Landscaping and useable open space standards apply whenever landscaping is installed on any unlandscaped lot or in connection with new construction, replacement or expansion in floor area of any structure in the downtown specific plan area.

(b) All public rights-of-way, private streets or driveways, easements, building and structure setbacks, plazas, pedestrian walkways and parking facilities shall provide landscaping as required and described in the downtown specific plan and shall meet the ~~minimum standards~~ landscaping design requirements set forth in ~~Section 19.38.070~~ Chapter 19.37.

(c) Project landscaping shall be designed and planted to be consistent with the streetscape design themes and landscaping provisions set forth in the downtown specific plan streetscape design standards.

(d) Residential uses are required to provide useable open space, as defined in ~~Section 19.38.070(h)~~ Chapter 19.37, with the following exceptions:

(1) Useable open space may be located in the front yard between the face of the building and the street for ~~multiple family~~ multi-family uses.

(2) Balconies with a minimum of six (6) feet in any dimension and a total of at least fifty (50) square feet qualify as useable open space.

(e) ~~At a minimum, landscaping and~~ Minimum landscaped areas and usable open space areas shall meet the requirements set forth in Table 19.28.110.

**Table 19.28.110**  
**Landscaping and Open Space**  
**Minimum Landscaped Areas and Useable Open Space Requirements for DSP**

<b>Type of Use</b>	<b><u>Minimum Landscaping Landscaped Areas</u></b>	<b><u>Minimum Useable Open Space</u></b>
Commercial Uses (Retail, Retail Service, Restaurant, Entertainment, etc.) or Office Uses	All areas not devoted to driveways and surface access zones such as aisles, parking and ramps shall be landscaped.	<del>No requirement</del> <u>N/A</u>
Office Uses	All areas not devoted to driveways and surface access zones such as aisles, parking and ramps shall be landscaped.	<del>No requirement</del> <u>N/A</u>
Low and Low-Medium Density Residential Uses	20% of lot area	500 sq. ft./unit. <u>Lots with accessory units in DSP Blocks 8, 9, 10, 11, 12, and 17 are required to provide one thousand (1,000) sq. ft. of useable open space.</u>
Medium, High and Very High Density Residential Uses	20% of lot area	50 sq. ft./unit
Surface Parking Lots	20% of the parking lot area	<del>No requirement</del> <u>N/A</u>
Other uses not listed above	To be determined by the Director of Community Development	To be determined by the Director of Community Development

SECTION 3. CHAPTER 19.37 ADDED. Chapter 19.37 (Landscaping, Irrigation and Useable Open Space) is hereby added to Title 19 (Zoning), Article 4 (General Development Standards) of the Sunnyvale Municipal Code to read as follows:

**Chapter 19.37.**

**LANDSCAPING, IRRIGATION AND USEABLE OPEN SPACE**

**19.37.010. Purpose.**

**19.37.020. Applicability.**

**19.37.030. Definitions.**

**19.37.040. Minimum landscaped area and useable open space.**

**19.37.050. Water efficiency design requirements.**

**19.37.060. General planting, soil management and water feature design requirements.**

- 19.37.070. Parking lot landscaping design requirements.
- 19.37.080. Buffer landscaping design requirements.
- 19.37.090. Frontage strip landscaping strip design requirements.
- 19.37.100. Useable open space design requirements.
- 19.37.110. Irrigation system design requirements.
- 19.37.120. Landscaping and irrigation approval and maintenance.
- 19.37.130. Landscaping irrigation audit and maintenance.

**19.37.010. Purpose.**

The purpose of this chapter is to ensure that adequate landscaped areas and useable open space are provided where applicable for all zoning districts; to promote the conservation and efficient use of water and to prevent the waste of this valuable resource; and to promote water conservation as one component of sustainable building practices. This chapter shall be construed to assure consistency with the requirements of the Water Conservation in Landscaping Act of the California Government Code, or any successor statute, and any applicable implementing regulations, as they exist at the time of enactment or as later amended. In addition to compliance with the provisions in this chapter, projects shall comply with storm water management requirements set forth in Chapter 12.60.

**19.37.020. Applicability.**

All provisions of this chapter shall apply to the following landscaping projects:

(a) Individual Single-Family or Duplex Residential Projects. New landscaping installations equal to or greater than 2,500 square feet in connection with construction of a new dwelling unit.

(b) All Other Projects. New landscaping installations or landscaping rehabilitation projects equal to or greater than 1,000 square feet.

(c) Exemptions. Landscaping and irrigation requirements shall not apply to:

(1) Projects that fall below the square footage thresholds stated in subsections (a) and (b);

(2) Individual single-family or duplex residential projects that are not in connection with construction of a new dwelling unit;

(3) Registered local, state or federal historical sites where landscaping establishes a historical landscaping style, as determined by the Heritage Preservation Commission, Planning Commission, or by any applicable public board or commission responsible for architectural review or historic preservation;

(4) Ecological restoration or mined-land reclamation projects that do not require a permanent irrigation system; or

(5) Community gardens, plant collections (as part of botanical gardens and arboretums open to the public), non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation), agricultural uses, commercial nurseries and sod farms.

### **19.37.030. Definitions.**

The following terms and definitions pertain to the water-efficiency sections of this chapter:

(a) “Applied water” means the portion of water supplied by the irrigation system to the landscaped area.

(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) “Certified professional” means a licensed landscape architect, a licensed landscape contractor, a licensed professional engineer, certified irrigation designer, or any other person authorized by the state to design a landscape or irrigation system, or a certified landscape irrigation auditor.

(d) “Conversion factor (0.62)” means the number that converts acres-inches per acre per year to gallons per square foot per year.

(e) “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.

(f) “Estimated Total Water Use” (ETWU) means the total water used for the landscaped area as described in Section 19.37.050.

(g) “ET adjustment factor” (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 landscaped area. ETAF for a Special Landscaped Area shall not exceed 1.0.

(h) “Evapotranspiration rate” means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

(i) “Hardscape” means any durable material (pervious and non-pervious) in a landscaped area, such as decks, patios or pedestrian walkways, and other non-irrigated elements which may include art work, benches, and bicycle parking.

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

(k) “Irrigation audit” means an in-depth evaluation of the performance of an irrigation system. An irrigation audit includes, but is not limited to: inspection, system tune-up, system test with distribution uniformity or emission uniformity, correction of any overspray or runoff that causes overland flow, and preparation of an irrigation schedule.

(l) “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. Required irrigation efficiency is described in Section 19.37.070.

(m) “Low-water use plant” means a plant species whose water needs are compatible with local climate and soil conditions. Species classified as “very low water use” and “low water use” by WUCOLS, having a regionally adjusted plant factor of 0.0 through 0.3, shall be considered low water use plants.

(n) “Maximum Applied Water Allowance” (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section 19.37.050.

(o) “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.

(p) “Native plant” means a plant indigenous to a specific area of consideration. For the purposes of these guidelines, the term shall refer to plants indigenous to the coastal ranges of Central and Northern California, and more specifically to such plants that are suited to the ecology of the present or historic natural community(ies) of the project’s vicinity.

(q) “No-water using plant” means a plant species with water needs that are compatible with local climate and soil conditions such that regular supplemental irrigation is not required to sustain the plant after it has become established.

(r) “Plant factor” or “plant water use factor” is a factor, when multiplied by ETo (reference evapotranspiration), estimates the amount of water needed by plants. For purpose of calculation of the ETWU, use values from WUCOLS, or equivalent reference subject to approval by the director of community development.

(s) “Precipitation rate” means the rate of application of water measured in inches per hour.

(t) “Recreational area” means areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.

(u) “Reference evapotranspiration” or “ETo” means a standard measurement of environmental parameters which affect the water use of plants. For purposes of calculation of the MAWA and ETWU, as described in Section 19.37.050, use current reference evapotranspiration data, such as from the California Irrigation Management Information System (CIMIS), or other equivalent data, or soil moisture sensor data.

(v) “Runoff” means water which is not absorbed by the soil or landscaping to which it is applied and flows from the landscaped area.

(w) “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.

(x) “Special Landscaped Area” (SLA) means an area of the landscaping 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.

(y) “Turf” means a ground cover surface of mowed grass.

(z) “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).

(aa) “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.

**19.37.040. Minimum landscaped area and useable open space.**

(a) Minimum Landscaped Area. Table 19.37.040 describes the minimum landscaped area and useable open space required by zoning district. In addition to the minimum landscaped area, areas not used for buildings, parking lot areas, driveways or pedestrian walkways shall be landscaped unless the review authority determines that landscaping is not necessary to achieve the purposes of this chapter. For requirements specific to single family uses, see subsection (f).

(b) Landscaped Buffer Required. A landscaped buffer is required for any property with a non-residential use in a residential zoning district that abuts a residential use. It is also required for properties of any use in a nonresidential zoning district which abuts a residential zoning district. See Section 19.37.080 for buffer landscaping design requirements.

(c) Landscaped Frontage Strip Required. A fifteen-foot (15') wide landscaped frontage strip is required for all properties except those noted below in subsection (f). The frontage strip is measured from the inside edge of the public sidewalk, or if no sidewalk exists, from the curb. See Section 19.37.090 for frontage strip landscaping design requirements.

(d) Useable Open Space Required. Useable open space is required for all duplex and multifamily residential properties as described in Table 19.37.040. Useable open space areas that meet the definition of landscaping may contribute towards the minimum landscaped area of the site. See Section 19.37.100 for useable open space design requirements.

(e) Specific Plan, Precise Plan and other specialized plan areas. Minimum landscaped area and useable open space for properties within a specialized plan's prescribed area are described in their individual plans.

(f) Allowances and Limitations for Single-Family Uses and Single-Family Zoning Districts.

(1) Allowances for Single-Family Zoning Districts. Yards are not required to be landscaped in single-family zoning districts; however other provisions in Title 19 may apply.

(2) Limitation on Paved Areas in the R-0 and R-1 Zoning Districts. Not more than fifty (50) percent of the required front yard of any lot within an R-0 or R-1 zoning district shall be paved with asphalt, concrete cement, or any other impervious surface, except as may be required to meet off-street parking and access requirements of Chapter 19.46.

(3) Landscaped Frontage Strip for Single-Family Uses. A landscaped frontage strip is not required in any zoning district for single-family residential uses which have a frontage on a public street.

**TABLE 19.37.040**

**Minimum Landscaped Area and Useable Open Space by Zoning District**

<b><u>Zoning District</u></b>	<b><u>Useable Open Space</u></b>	<b><u>Other Landscaped Area</u></b>	<b><u>Parking Lot Landscaped Area</u></b>	<b><u>Total Landscaped Area</u></b>
<b><u>R-0</u></b>	<b><u>N/A</u></b>	<b><u>N/A</u></b>	<b><u>N/A</u></b>	<b><u>N/A</u></b>
<b><u>R-1</u></b>	<b><u>N/A</u></b>	<b><u>N/A</u></b>	<b><u>N/A</u></b>	<b><u>N/A</u></b>

<u>Zoning District</u>	<u>Useable Open Space</u>	<u>Other Landscaped Area</u>	<u>Parking Lot Landscaped Area</u>	<u>Total Landscaped Area</u>
<u>R-1.5</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>R-1.7/PD</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>R-2</u>	<u>500 sq. ft./unit<sup>1</sup></u>	<u>850 sq. ft./ unit</u>	<u>20% of the parking lot area</u>	<u>Total minimum landscaped area is the combination of the minimum parking lot landscaped area and other landscaped area. In no case shall this total be less than 20% of the lot area.</u>
<u>R-3</u>	<u>400 sq. ft./unit</u>	<u>425 sq. ft./unit</u>		
<u>R-4</u>	<u>380 sq. ft./unit</u>	<u>375 sq. ft./unit</u>		
<u>R-5</u>	<u>380 sq. ft./unit</u>	<u>375 sq. ft./ unit</u>		
<u>C-1</u>	<u>N/A</u>	<u>12.5% of floor area</u>		
<u>C-2</u>	<u>N/A</u>	<u>12.5% of floor area</u>		
<u>C-3</u>	<u>N/A</u>	<u>12.5% of floor area</u>		
<u>C-4</u>	<u>N/A</u>	<u>12.5% of floor area</u>		
<u>O</u>	<u>N/A</u>	<u>10% of lot area</u>		
<u>P-F</u>	<u>N/A</u>	<u>10% of lot area</u>		
<u>M-S</u>	<u>N/A</u>	<u>10% of floor area</u>		
<u>M-3</u>	<u>N/A</u>	<u>10% of floor area</u>		

<sup>1</sup> One thousand (1,000) sq. ft. of usable open space is required for a property with an accessory living unit.

#### **19.37.050. Water efficiency design requirements.**

Water Efficiency in Design. Landscaped areas shall be designed to achieve water efficiency. Landscaping design and plant selection may be based on one of two options. Regardless of which option is selected, all other criteria described in this chapter shall apply. The options include:

(a) Option 1 – Turf Limitation and Minimum Area with Water-Conserving Plants. Turf area shall not be more than twenty-five (25) percent of the landscaped area, and native, low-water use or no-water use plants shall be installed in at least eighty (80) percent of all non-turf landscaped areas.

(b) Option 2 – Water Budget Calculations. If the turf limitation option is not selected, a water budget calculation shall be prepared and shall adhere to the following requirements:

(1) The plant factor shall be obtained from WUCOLS or an equivalent reference subject to approval by the director of community development. For areas that mix plants with different water uses, the plant factor calculation is based on the proportion of the respective plant factors, or based on the plant factor of the higher-water using plant. The plant factor ranges from 0.0 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.

(3) All Special Landscaped Areas (SLA) shall be identified and their water use included in the water budget calculations.

(4) The reference evapotranspiration adjustment factor (ETAF) for SLAs shall not exceed 1.0. The ETAF for all other landscaped areas shall not exceed 0.7.

(5) Maximum Applied Water Allowance (MAWA) shall be calculated using the equation below:

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

Where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ETo = Reference Evapotranspiration (inches per year)

0.62 = Conversion Factor (to gallons)

0.7 = Reference Evapotranspiration Adjustment Factor (ETAF)

LA = Planted landscaped area including SLA and not including hardscapes (square feet)

0.3 = Additional Water Allowance for SLA

SLA = Special Landscaped Area (square feet)

(6) Estimated Total Water Use (ETWU) will be calculated using the equation below. The sum of the ETWU calculated for all hydrozones shall not exceed the MAWA.

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

Where:

ETWU = Estimated Total Water Use per year (gallons)

ETo = Reference Evapotranspiration (inches)

PF = Plant Factor from WUCOLS

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

SLA = Special Landscaped Area (square feet)

0.62 = Conversion Factor

IE = Irrigation Efficiency (minimum 0.70)

**19.37.060. General planting, soil management and water feature design requirements.**

(a) Plant Material. In addition to the requirements below, plant selection and installation shall be done in accordance with accepted horticultural industry practices.

(1) Variety. Landscaping shall include trees, shrubs, vines, flowers ground covers or a combination thereof.

(2) Size at Time of Planting. Plant materials shall be sized and spaced to achieve immediate effect, in accordance with horticultural industry practices and at the discretion of the director of community development. Trees shall be of minimum fifteen (15) gallon size. Twenty-four (24) or thirty-six (36) inch box trees may be required at the discretion of the director of community development.

(3) Number of Trees. There shall be one (1) tree per one thousand (1,000) square feet of required landscaped area in addition to required street trees and parking lot trees.

(4) Turf. All turf areas shall be planted with tall fescue or similar turf requiring less water. Turf shall not be planted on slopes greater than

ten (10) percent where the toe of the slope is adjacent to an impermeable hardscape.

(b) Grouping of Plants. Plants with similar water needs shall be grouped (also described as a hydrozone). Areas that mix plants with different water uses may be allowed if a water budget is performed.

(c) Soil Management.

(1) Mulch. A minimum two (2) inch layer of mulch shall be applied on all non-turf soil areas.

(2) Soil Amendments. Soil amendments, such as compost, shall be incorporated according to the soil conditions at the project site and based on what is appropriate for selected plans.

(3) Grading. If the project includes grading, the grading shall be designed to minimize soil erosion, runoff and water waste. The grading shall avoid soil compaction in planted landscaped areas.

(d) Water Features. Recirculating water systems shall be used for water features. Where available, recycled water shall be used for water features.

#### **19.37.070. Parking lot landscaping design requirements.**

(a) Parking Lot Shading. Trees shall be planted and maintained throughout the lot to ensure that at least fifty (50) percent of the parking area will be shaded within fifteen (15) years after the establishment of the lot.

(1) Solar Energy Systems as Shading. Up to twenty-five (25) percent of the fifty (50) percent parking lot shading requirement (twelve and one-half (12.5) percent of the total parking lot area) may be met with installation of solar energy systems rather than trees.

(2) Calculation of Shading. Shading shall be calculated by using the diameter of the tree crown at fifteen (15) years or the dimensions of any roofed area supporting the solar energy system within the parking lot area.

(3) Surfaces Subject to Shading Calculation. All surfacing on which a vehicle can drive is subject to shade calculation, including all parking stalls, vehicular drives within the property regardless of length, drive-through lanes, and all maneuvering areas regardless of depth. The following surface areas are exempt from shading requirements: truck loading areas in front of overhead doors, truck maneuvering and parking areas unconnected to and exclusive of any vehicle parking, surfaced areas not to be used for vehicle parking, driving or maneuvering, provided they are made inaccessible to vehicles by a barrier such as bollards or fencing, display, sales, service, or vehicular storage areas for automobile dealerships (required parking for auto dealerships is still subject to shading requirements), or surfaced areas existing prior to January 1, 2002.

(b) Ground Cover and Shrubs on Parking Islands. Parking islands shall contain living ground cover or shrubs with the trees, unless it can be shown that ground cover is incompatible with the tree. Where living ground cover is unsuitable, the director of community development may allow porous, nonliving ground cover such as pebbles or tanbark.

(c) Drainage Design. Landscaping islands and parking islands shall be designed to integrate parking lot and site drainage in order to reduce storm water runoff velocities and minimize non-point source pollution. When six-inch concrete curbs are installed, they shall have drainage “weep holes.”

(d) Wheel Stops. Concrete wheel stops shall be installed when landscaped areas are not adequately protected.

**19.37.080. Buffer landscaping design requirements.**

The following is a list of design requirements for buffer landscaping.

(a) Width. The buffer shall maintain a width of at least ten (10) feet.

(b) Landscaping. The buffer shall include a planted screen of approved trees and shrubs which shall be placed along the length of the buffer at intervals not to exceed twenty (20) feet, provided, however, that the director of community development may grant exceptions through a miscellaneous plan permit when warranted by conditions on the property.

(c) Wall Design. The buffer shall include a decorative masonry wall six (6) feet in height measured from the highest adjoining grade. When the adjacent non-residential building is two (2) stories or more in height, the decorative masonry wall shall be eight (8) feet measured from the highest adjoining grade. Where a residential use is permitted in a nonresidential zoning district, the wall shall be required on the residential property, unless a wall already exists.

(d) Specific Plan, Precise Plan and other specialized plan areas. Properties within a specialized plan's prescribed area may be subject to additional buffer landscaping design requirements, as described in their individual plans.

**19.37.090. Frontage strip landscaping design requirements.**

(a) Width. The frontage strip shall be fifteen (15) feet wide along the entire street frontage measured from the inside edge of the public sidewalk, or if no sidewalk exists, from the curb.

(b) Landscaping allowances. Frontage strip landscaping may be crossed by walkways and access drives.

(c) Specific Plan, Precise Plan and other specialized plan areas. Properties within a specialized plan's prescribed area may vary from these frontage strip design requirements, as described in their individual plans.

**19.37.100. Useable open space design requirements.**

(a) Function. Usable open space must be designed to be accessible to, and usable for outdoor living, recreation or utility use.

(b) Location. Useable open space may not be located in any required front yard area.

(c) Minimum Useable Open Space Dimensions and Area. Each useable open space area shall have at least a twelve (12) foot dimension in any direction and a minimum area of two hundred (200) sq. ft. except for:

(1) Private balconies must have a minimum of seven (7) feet in any direction and a minimum area of eighty (80) square feet.

(2) Roofs, decks or porches must have a minimum of ten (10) feet in any direction and a total of one hundred twenty (120) square feet.

(d) Private Open Space Required. In the R-4 and R-5 Zoning Districts, a minimum of eighty (80) sq. ft. per unit shall be designed as private usable open space.

(e) Specific Plan, Precise Plan and other specialized plan areas. Properties within a specialized plan's prescribed area may vary from these useable open space design requirements, as described in their individual plans.

**19.37.110. Irrigation system design requirements.**

(a) Irrigation System Required. All landscaped areas shall have a permanent irrigation system, except for single-family detached and duplex dwellings.

(b) Irrigation Efficiency. Irrigation systems shall be designed and maintained to meet or exceed an average landscaping irrigation efficiency of seventy (70) percent.

(c) Water Waste Prohibited. Water waste resulting from an inefficient irrigation system leading to runoff, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas such as walkways, roadways or structures is prohibited.

(d) Hydrozone Irrigation. Systems shall be designed to meet the individual needs of each plant group. Valves and control circuits shall be separated based on the required rate and quantity of water used.

(1) Valves. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions and plant materials with similar water use. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf.

(2) Sprinkler Heads. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone. Sprinkler heads must have matched precipitation rates within each circuit.

(e) Low Volume Irrigation. Bubbler or drip-type irrigation, or other low-flow, non-spray technology shall be provided for:

(1) Trees and shrubs.

(2) Mulched areas.

(3) Areas with slope greater than 10%, unless it can be demonstrated that no runoff or erosion will occur if other types of irrigation is used.

(4) Areas that are less than eight (8) feet wide in any direction.

(f) Overhead Sprinkler Irrigation. Overhead irrigation systems may be used for clustered shrub plantings. Areas within two (2) feet of a non-permeable surface may not be irrigated using overhead sprinkler irrigation unless it can be demonstrated that no runoff would occur, or the adjacent non-permeable surface is designed and constructed to drain entirely to landscaping.

(g) Irrigation Controllers and Sensors. All irrigation controllers must utilize either evapotranspiration or soil moisture sensor data and be capable of dual or multiple programming. Irrigation systems shall also incorporate sensors (rain, freeze, wind, etc.) that suspend or alter irrigation operation during unfavorable weather conditions.

(h) Screening of Devices. Irrigation controllers and backflow devices shall be screened from public view.

(i) Scheduling. Irrigation must be scheduled between 8:00 p.m. and 10:00 a.m.

**19.37.120. Landscaping and irrigation approval.**

(a) Permit Required. Except as otherwise provided in this chapter, no person shall install or modify any landscaped area described in Section 19.37.020 without first obtaining a miscellaneous plan permit for each such action, in accordance with the procedure described in Chapter 19.82.

(b) Landscaping and Irrigation Plans Required. Landscaping and irrigation plans shall be required for any modification or installation of new landscaping that falls within the thresholds stated in this chapter. The plans shall meet the information requirements determined by the director of community development to comply with the provisions of this chapter.

(1) Preparation by Certified Professional. Landscaping and irrigation plans shall be prepared by, and bear the signature of, a certified professional, except for new landscaping installations or landscaping rehabilitation projects with less than 2,500 square feet of landscaped area.

**19.37.130. Landscaping irrigation audit and maintenance.**

(a) Irrigation Audit Required. Prior to approval of occupancy by a building official, a landscaping irrigation audit shall be conducted and an irrigation audit report shall be submitted for projects with landscaping and irrigation plans approved after (adoption date).

(1) Audit by Certified Professional. The landscaping irrigation audit shall be conducted and the report shall be prepared by a certified professional, except for new landscaping installations or landscaping rehabilitation projects with less than 2,500 square feet of landscaped area.

(2) Audit Report Content. The irrigation audit report shall include, but not be limited to: inspection, system tune-up, system test with distribution uniformity, correction of any overspray or runoff that causes overland flow, and preparation of an irrigation schedule.

(b) Submittal of Landscaping Maintenance Schedule. Prior to the final inspection by the building official, a regular maintenance schedule shall be submitted to the director of community development for review and approval. The 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 landscaped areas; and removing obstructions to irrigation spray heads or other emission devices. Landscaping shall be maintained in accordance with the approved maintenance schedule.

(c) General Maintenance. Landscaping shall be maintained in compliance with the approved landscaping plan, and shall be maintained in a neat, clean and healthful condition. Removed landscaping shall be replaced with specimen plants to match the approved landscaping plan.

**SECTION 3. SECTION 19.38.070 REPEALED.** Section 19.38.070 of Chapter 19.38 (Required Facilities) of Article 4 (General Development Standards) of Title 19 (Zoning) of the Sunnyvale Municipal Code is hereby repealed as follows:

**19.38.070. Landscaping, irrigation and usable open space.**

~~(a) Table 19.38.070 establishes landscape and usable open space requirements by zoning district.~~

~~(b) General requirements for landscaping and irrigation.~~

~~(1) Landscape/irrigation requirements apply whenever landscaping is installed on any unlandscaped lot, landscaping is installed in connection with new construction, replacement or expansion in floor area of any structure, or with the addition or replacement of landscape area in excess of five hundred square feet.~~

~~(2) After landscaping is installed, it shall be maintained in a neat, clean and healthful condition.~~

~~(A) Landscaping removed due to disease or death of plants shall be replaced to match the approved landscape plan.~~

~~(B) Landscaping installed per approved plan which is removed without approval of the city, and which cannot be demonstrated to have been diseased or dead, shall be replaced with specimen plants to match the approved plan.~~

~~(3) All undeveloped areas shall be landscaped except:~~

~~(A) Lots in the DSP zoning district;~~

~~(B) Rear yards in all single-family residential zoning districts;~~

~~(C) Parking areas, walks or drives;~~

~~(D) Activities specifically permitted as an unenclosed use.~~

~~(4) All required landscape areas shall be provided with a permanent irrigation system except for single family detached and duplex dwellings.~~

~~(5) In all single-family residential zoning districts where landscape plans are not required, a wide variety of plant and landscape materials, including unplanted areas are acceptable as long as the area between the house and the curb is maintained in a neat, clean and healthful condition.~~

~~(6) Water conserving plants shall be installed in seventy percent of all landscaped areas except:~~

~~(A) Single-family;~~

~~(B) Duplexes;~~

~~(C) Turf areas of public parks;~~

~~(D) Golf courses;~~

~~(E) Cemeteries;~~

~~(F) School grounds.~~

~~(7) A list of water conserving plant material shall be maintained, and modified as needed, by the director of community development. The director may approve deviations from the list if certified by:~~

~~(A) A landscape architect registered in the state of California;~~

~~(B) A California-certified nurseryman;~~

~~(C) City of Sunnyvale superintendent of parks;~~

~~(D) City of Sunnyvale superintendent of street trees and landscape.~~

~~(8) — Landscape and irrigation plans shall be prepared by a registered architect, landscape architect, licensed landscape contractor, licensed nurseryman or other similarly qualified person.~~

~~(c) — Minimum planting requirements, unless otherwise authorized by the director of community development, are:~~

~~(1) — At least twenty percent of the net lot area shall be landscaped.~~

~~(2) — Trees shall be of minimum fifteen gallon size.~~

~~(3) — Shrubs shall be at minimum five gallon size; accent or ground cover shrubs may be one gallon size.~~

~~(4) — Living ground cover shall be installed twelve inches on center.~~

~~(5) — Trees at twenty four inches or thirty six inches box may be required by staff to meet part of the tree requirements.~~

~~(6) — There shall be one tree per thousand square feet of required landscape area in addition to required street trees and parking lot trees.~~

~~(7) — There shall be two shrubs per three hundred square feet of required landscape area excluding the required parking lot landscape area.~~

~~(8) — There shall be mulch at two inches in depth added to all nonturf soil areas.~~

~~(9) — Nonporous materials shall not be placed under plants or mulched areas.~~

~~(10) — Installed trees shall have two stakes that are:~~

~~(A) — At least 2.5 inches in diameter;~~

~~(B) — Same height as the tree prior to installation;~~

~~(C) — Installed at least 2.5 feet into the ground;~~

~~(D) — Attached to the tree in at least two places.~~

~~(11) — Annual color or water intensive landscaping shall be confined to high visibility and/or high pedestrian use areas.~~

~~(12) — Non water conserving plants shall be grouped to allow more effective irrigation.~~

~~(13) — All turf areas shall be planted with fescue or similar turf requiring less water.~~

~~(14) — No turf shall be on mounding with slopes greater than ten percent.~~

~~(d) — Minimum parking lot landscaping requirements.~~

~~(1) — At least twenty percent of the parking lot area shall be landscaped.~~

~~(2) — Trees shall be planted and maintained throughout the lot to ensure that at least fifty percent of the parking area will be shaded within fifteen years after the establishment of the lot. Up to twenty five percent of the fifty percent parking lot shading requirement (twelve and one half percent of the total parking lot area) may be met with installation of solar energy systems rather than trees. Shading shall be calculated by using the diameter of the tree crown at fifteen years or the dimensions of any roofed area supporting the solar energy system within the parking lot area. All surfacing on which a vehicle can drive is subject to shade calculation, including all parking stalls; all drives within the property, regardless of length, and including drive-through lanes; and all~~

~~maneuvering area, regardless of depth. The following surfaced areas are exempt from shade requirements:~~

~~(A) Truck loading area in front of overhead doors;~~

~~(B) Truck maneuvering and parking areas unconnected to and exclusive of any vehicle parking;~~

~~(C) Surfaced areas not to be used for vehicle parking, driving or maneuvering, provided they are made inaccessible to vehicles by a barrier such as bollards or fencing;~~

~~(D) Automobile dealerships, display/sales/service/vehicle storage areas (required parking for auto dealerships is still subject to shading);~~

~~(E) surfaced areas existing prior to January 1, 2002.~~

~~(3) Landscape areas and parking islands, with or without trees, shall contain living ground cover or shrubs, unless it can be shown that ground cover is incompatible with the tree. Where living ground cover is unsuitable, the director of community development may allow porous, nonliving ground cover such as pebbles or tanbark. Landscape areas and parking islands shall be designed to integrate parking lot and site drainage in order to reduce storm water runoff velocities and minimize non-point source pollution.~~

~~(4) A six inch poured in place concrete curb with drainage “weep holes” shall separate landscaping from parking areas.~~

~~(5) A poured in place concrete header with drainage “weep holes” shall separate landscaping from parking areas.~~

~~(6) Concrete wheel stops, properly installed with epoxy and metal dowels, are required when landscape areas are not adequately protected.~~

~~(7) Parking lot design and landscaping guidelines shall be maintained, and modified as needed, by the director of community development; the director may approve deviations from the guidelines if certified by:~~

~~(A) A landscape architect registered in the state of California;~~

~~(B) A California certified nurseryman;~~

~~(C) City of Sunnyvale superintendent of parks;~~

~~(D) City of Sunnyvale superintendent of street trees and landscape.~~

~~(e) Minimum buffer landscaping requirements.~~

~~(1) Buffer shall maintain a width of at least ten feet.~~

~~(2) Buffer shall include a decorative masonry wall six feet in height measured from the highest adjoining grade. When the adjacent non-residential building is two stories or more in height, the decorative masonry wall shall be eight feet measured from the highest adjoining grade. Where a residential use is permitted in a nonresidential zoning district, the wall shall be required on the residential property, unless a wall is already existing.~~

~~(3) Buffer shall include a planted screen of approved trees and shrubs which shall be placed along the length of the buffer at intervals not to exceed twenty feet, provided, however, that the director of community development may grant exceptions through a miscellaneous plan permit when warranted by conditions on the property.~~

~~(f) — Minimum frontage strip landscape requirements.~~

~~(1) — There shall be a fifteen foot strip along the entire frontage measured from the inside edge of the public sidewalk, or if no sidewalk exist, from the curb.~~

~~(2) — The landscape strip may contain sidewalks and may be crossed by access drives and parking areas as permitted by Section 19.46.310.~~

~~(3) — Where the area inside the walk is less than six feet in width, a hedge, wall, berm, or raised planter or combination thereof at least thirty inches in height must be provided.~~

~~(g) — Irrigation Requirements.~~

~~(1) — Bubbler or drip type irrigation shall be provided for trees and shrubs. Overhead irrigation systems may be used for clustered shrub plantings.~~

~~(2) — Valves and control circuits shall be separated based on required rate and quantity of water used.~~

~~(3) — Serviceable check valves are required where differences in elevation may cause drainage to low elevation sprinklers.~~

~~(4) — Plans submitted shall indicate the monthly irrigation schedule for each irrigation circuit for one year following the plant establishment period.~~

~~(5) — Sprinkler heads must have matched precipitation rates within each circuit.~~

~~(6) — All new systems must have automatic controllers capable of dual or multiple programming.~~

~~(7) — Controllers and backflow devices shall be screened from public view.~~

~~(8) — Systems shall be designed to meet the individual needs of each plant group.~~

~~(9) — Systems shall incorporate a rain shutoff device and battery backup.~~

~~(h) — Minimum usable open space requirements.~~

~~(1) — Usable open space must be designed to be accessible to, and usable for outdoor living, recreation or utility use. Usable open space does not include parking facilities, driveways or any required front yard area.~~

~~(2) — There shall be at least a twelve foot dimension in any one direction except a minimum of:~~

~~(A) — Seven feet is permissible for private balconies;~~

~~(B) — Ten feet is permissible for roofs, decks or porches.~~

~~(3) — There shall be at least a two hundred square feet area except a minimum of:~~

~~(A) — Eighty square feet is permissible for private balconies;~~

~~(B) — One hundred twenty square feet is permissible for roofs, decks, or porches.~~

(Repealed effective April \_\_\_\_, 2010.)

**TABLE 19.38.070  
Summary of Landscape Standards by Zoning District**

<b>Zoning District</b>	<b>Landscape Area Required(1)</b>	<b>Parking Lot Landscaping Required(1)</b>	<b>Usable Open Space Required</b>	<b>15' Frontage Strip Required(2)</b>	<b>10' Buffer Landscaping Strip Required?</b>
<b>R-0</b>	None	No	No	No	(3)
<b>R-1</b>	None	No	No	No	(3)
<b>R-1.5</b>	None	No	No	No	(3)
<b>R-1.7/PD</b>	None	No	No	No	(3)
<b>R-2</b>	850 sq. ft./du.	(20% of parking lot and drives)	500 sq. ft./du.(7)	Yes	(3)
<b>R-3</b>	425 sq. ft./du.		400 sq. ft./du.	Yes	(3)
<b>R-4</b>	375 sq. ft./du.		380 sq. ft./du.(6)	Yes	(3)
<b>R-5</b>	375 sq. ft./du.		380 sq. ft./du.(6)	Yes	(3)
<b>C-1</b>	12.5% of floor area	(20% of parking lot and drives): (5)	No	Yes	(4)
<b>C-2</b>	12.5% of floor area		No	Yes	(4)
<b>C-3</b>	12.5% of floor area		No	Yes	(4)
<b>C-4</b>	12.5% of floor area		No	Yes	(4)
<b>DSP</b>	(5)		(5)(7)	(5)	(5)
<b>O</b>	10% of lot area	-	No	Yes	(4)
<b>P-F</b>	10% of lot area	(20% of parking lot and drives)	No	Yes	(4)
<b>M-S</b>	10% of floor area		No	Yes	(4)
<b>M-3</b>	10% of floor area		No	Yes	(4)

<sup>1</sup>—Minimum landscape area and parking lot landscape requirements must be combined to determine the minimum landscape area required, however, in no case shall the landscape area of a lot be less than 20% of the net lot area, although it may be more.

<sup>2</sup>—The 15 foot frontage strip is not required in any zoning district for owner-occupied, single family residential uses which have a frontage on a public street.

<sup>3</sup>—The 10 foot buffer strip is required for any property with a non-residential use that abuts a residential use.

<sup>4</sup>—The 10 foot buffer strip is required for properties of any use which abuts a residential zoning district.

<sup>5</sup>—Minimum landscape area requirements in the DSP zoning district are governed by the downtown specific plan.

<sup>6</sup>—A minimum of 80 sq. ft. total shall be designed as private usable open space.

<sup>7</sup>—R-2 and DSP Blocks 8, 9, 10, 11 and 12 require one thousand sq. ft. of usable open space for an accessory living unit.

SECTION 5. SECTION 19.98.020 AMENDED. Section 19.98.020 of Chapter 19.98 (General Procedures) of Title 19 (Zoning) of the Sunnyvale Municipal Code is hereby amended to read as follows:

**19.98.020. Applications.**

(a) Consideration of a permit or process is initiated by the filing of an application signed by the owner of the land to which the permit or process would be applicable. The application shall be filed with the director of community development on forms furnished for this purpose. The application shall be accompanied by the required fee, plans, elevations and other supporting data set forth in this section, or determined necessary by the director of community development.

(b) Design review and miscellaneous plan permit ~~filings~~ applications shall include:

(1) Written explanation of project;

(2) Site plan; ~~except that a site plan is not required for landscape/irrigation for single-family, duplexes, triplexes or fourplexes. Nothing shall prohibit the~~ All site plans shall show street and sidewalk locations (if applicable) in addition to property lines. The director of community development ~~from requiring~~ may require site plans with certified site elevation data ~~and shall show street and sidewalk locations (if applicable) in addition to property lines. Single-family design review site plans shall include certified elevation data to establish property grades;~~

(3) Architectural elevations of all sides of all buildings indicating exterior materials and colors. Where appropriate, a color and material board may be required. ~~Nothing shall prohibit the director of community development from requiring site plans. Single-family design review architectural elevations shall include~~ The director of community development may require a streetscape view showing the proposed home and one adjacent home on each side ~~Single-family design review architectural elevations shall also include certified elevation data to establish property grades;~~

(4) Landscaping and irrigation plans for projects that include construction of a new single-family or duplex dwelling unit, or any modification or installation of new landscaping that falls within the thresholds stated in Chapter 19.37. The plans shall meet the information requirements determined by the director of community development to comply with the standards set forth in Chapter 19.37;

(5) Floor plans of all buildings.

(c) – (k) [Text unchanged.]

SECTION 6. CEQA EXEMPTION. The City Council finds, pursuant to Title 14 of the California Code of Regulations, Section 15061(b)(3), that this ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA) in that it is not a Project which has the potential for causing a significant effect on the environment. In addition, this ordinance is an action being taken for enhanced protection of the environment that does not have the potential to cause significant effects on the environment. Consequently, it is categorically exempt in accordance with CEQA Guidelines Section 15307 as an action taken by a regulatory agency as authorized by California law to assure maintenance or protection of natural resources; and in accordance with CEQA Guidelines Section 15308 as an action taken by a regulatory

agency as authorized by California law to assure maintenance or protection of the environment. The Council therefore directs that the Planning Division may file a Notice of Exemption with the Santa Clara County Clerk in accordance with the Sunnyvale Guidelines for the implementation of CEQA adopted by Resolution No. 118-04.

SECTION 7. CONSTITUTIONALITY; SEVERABILITY. If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council 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 8. POSTING AND PUBLICATION. The City Clerk is directed to cause copies of this ordinance to be posted in three (3) prominent places in the City of Sunnyvale and to cause publication once in *The Sun*, the official newspaper for publication of legal notices of the City of Sunnyvale, of a notice setting forth the date of adoption, the title of this ordinance, and a list of places where copies of this ordinance are posted, within fifteen (15) days after adoption of this ordinance.

SECTION 9. EFFECTIVE DATE. This ordinance shall be in full force and effect thirty (30) days from and after the date of its adoption.

Introduced at a regular meeting of the City Council held on \_\_\_\_\_, 2010, and adopted as an ordinance of the City of Sunnyvale at a regular meeting of the City Council held on \_\_\_\_\_, 2010, by the following vote:

AYES:  
NOES:  
ABSTAIN:  
ABSENT:

ATTEST:

APPROVED:

\_\_\_\_\_  
City Clerk  
Date of Attestation: \_\_\_\_\_

\_\_\_\_\_  
Mayor

(SEAL)

APPROVED AS TO FORM AND LEGALITY:

\_\_\_\_\_  
David E. Kahn, City Attorney

**AB 1881 and Model Ordinances**

The resources below contain the full text of the Water Conservation in Landscaping Act of 2006 (AB 1881), the state's Model Water-Efficient Landscape Ordinance and the Bay Area Water Supply Conservation Agency's (BAWSCA) template ordinance.

**1. Water Conservation in Landscaping Act of 2006 (AB 1881, Laird)**

<http://www.water.ca.gov/wateruseefficiency/landscapeordinance/>

AB 1881 requires the updated State Model Water-Efficient Landscape Ordinance to include the following provisions in order to reduce water use:

- Include a landscape water budget component that establishes the maximum amount of water to be applied through the irrigation system, based on climate, landscape size, irrigation efficiency and plant needs.
- Minimize irrigation overspray and runoff.
- Include provisions for water conservation and the appropriate use and groupings of plants. The model ordinance shall not prohibit or require specific plant species, but may encourage water conserving plants.
- Promote the benefits of consistent local ordinances in neighboring areas, i.e. a regional ordinance.
- Encourage the capture and retention of stormwater on site.
- Include provisions on use of automatic irrigation systems and schedules based on climatic conditions.
- Include provisions for onsite soil assessment and soil management plans to promote healthy plant growth and prevent excessive erosion and runoff, and use of mulches in shrub areas, garden beds and landscaped areas.
- Include provisions for landscape maintenance practices, which may include performing routine irrigation system repair and adjustments, water audits and prescribing the amount of water applied per landscaped acre.
- Promote the use of recycled water.
- Encourage the use of economic incentives to promote the efficient use of water.
- Educate water users on the efficient use of water and benefits of doing so.

**2. Updated Model Water-Efficient Landscape Ordinance and Educational Materials**

<http://www.water.ca.gov/wateruseefficiency/landscapeordinance/technical.cfm>

**3. BAWSCA Regional Template Ordinance**

<http://bawasca.org/water-conservation/>

**COMPARISON OF WATER-EFFICIENT LANDSCAPE REQUIREMENTS**

		STATE MWEL <sup>1</sup>	BAWSCA <sup>2</sup>	CURRENT CITY LANDSCAPE REGULATIONS (§19.38.070)	PROPOSED WATER-EFFICIENT LANDSCAPE ORDINANCE
<b>APPLICABILITY<sup>3</sup></b>	<b>DEVELOPER-INSTALLED SINGLE-FAMILY, MULTI-FAMILY AND NON-RESIDENTIAL</b>	<b>2,500 sq. ft. or more new and rehabilitated landscape area</b>  (requiring a building or landscape permit, plan check or design review)	<b>1,000 sq. ft. or more new and rehabilitated landscape area</b>  (requiring a building or landscape permit, plan check or design review)	<b>500 sq. ft. or more new and rehabilitated landscape area</b>	<b>1,000 sq. ft. or more new and rehabilitated landscape area</b>
	<b>SINGLE-FAMILY AND DUPLEX</b>	<b>5,000 sq. ft. or more new landscape area</b>  (in connection with a new dwelling unit)	<b>1,000 sq. ft. or more new and rehabilitated landscape area</b>  (requiring a building or landscape permit, plan check or design review)	<b>Exempt</b>	<b>2,500 sq. ft. or more new landscape area</b>  (in connection with a new dwelling unit)
<b>LANDSCAPE DESIGN</b>	<b>WATER BUDGET</b>	Water Budget calculations required to determine landscape design: Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU)	1) Water Budget, OR 2) 25% turf limitation with required 80% of non-turf landscaped area planted with native, low or no water use plants	No water budget requirement	Same as BAWSCA
	<b>TURF AREA</b>	No turf on slopes > 25%	No turf on slopes > 25%  Maximum 25% of landscaped area if water budget option is not selected	No turf on slopes > 10%  Maximum 30% of landscaped area  Turf shall be fescue or similar turf requiring less water	Retain existing City regulation on slope and turf type, PLUS BAWSCA's maximum 25% of landscaped area if water budget option is not selected

**COMPARISON OF WATER-EFFICIENT LANDSCAPE REQUIREMENTS**

		STATE MWELO <sup>1</sup>	BAWSCA <sup>2</sup>	CURRENT CITY LANDSCAPE REGULATIONS (§19.38.070)	PROPOSED WATER-EFFICIENT LANDSCAPE ORDINANCE
<b>LANDSCAPE DESIGN</b>	<b>NON-TURF LANDSCAPED AREA</b>	----	80% of non-turf area must be native, low or no water use if water budget option is not selected	70% of landscaped area planted with water conserving plants	Same as BAWSCA
	<b>HYDROZONES</b>	Plants with similar water needs shall be grouped	Same as MWELO	Non-water-conserving plants shall be grouped	Same as BAWSCA
	<b>MULCH &amp; SOIL AMENDMENTS</b>	At least 2 in. of mulch required on all exposed soil surfaces	Same as MWELO	At least 2 in. of mulch on non-turf soil areas	Same as BAWSCA
		Soil amendments shall be made for plants selected	Same as MWELO	----	Same as BAWSCA
	<b>WATER FEATURES</b>	Recirculating water system required	Same as MWELO	----	Same as BAWSCA
		Recycled water shall be used if available	Same as MWELO		Same as BAWSCA
		Surface area of water feature considered high water use in water budget calculation if not using recycled water	Same as MWELO		Same as BAWSCA

**COMPARISON OF WATER-EFFICIENT LANDSCAPE REQUIREMENTS**

		STATE MWELO <sup>1</sup>	BAWSCA <sup>2</sup>	CURRENT CITY LANDSCAPE REGULATIONS (§19.38.070)	PROPOSED WATER-EFFICIENT LANDSCAPE ORDINANCE
<b>IRRIGATION</b>	<b>OVERALL IRRIGATION EFFICIENCY</b>	70% reference evapotranspiration and no overspray or runoff	Same as MWELO	----	Same as BAWSCA
	<b>IRRIGATION SYSTEMS</b>	----	----	Permanent irrigation system required, except for single-family and duplex lots	Retain current City regs.
		Irrigation system efficiency ≥ 70%	Same as MWELO	----	Same as BAWSCA
		Moisture sensors and/or rain sensors and manual shutoffs	Same as MWELO	Rain sensor shutoffs and battery backup	Retain current City regs.
		Sprayheads not allowed in ≤ 8 ft wide area	Same as MWELO	----	Same as BAWSCA
		Automatic, self-adjusting irrigation controllers required in all irrigation systems	Same as MWELO	----	Same as BAWSCA
		No overhead irrigation within 2 ft of any non-permeable surface	Same as MWELO	Bubbler or drip type irrigation for trees and shrubs; Overhead irrigation systems may be used for clustered shrubs	Retain current City regs. on irrigation type plus BAWSCA requirement
		Separated valves and control circuits based on required rate and quantity of water used; Sprinkler heads match precipitation rates within each circuit	----	Same as MWELO	Retain current City regs.
<b>OVERHEAD IRRIGATION TIMES</b>	8 PM to 10 AM	Same as MWELO	----	Same as BAWSCA	

**COMPARISON OF WATER-EFFICIENT LANDSCAPE REQUIREMENTS**

		STATE MWELO <sup>1</sup>	BAWSCA <sup>2</sup>	CURRENT CITY LANDSCAPE REGULATIONS (§19.38.070)	PROPOSED WATER-EFFICIENT LANDSCAPE ORDINANCE
<b>APPLICATION SUBMITTAL</b>	<b>APPLICATION SUBMITTAL/ DOCUMENTATION</b>	Project Information, Water Budget Calculation Worksheets, Hydrozone Information table, Soil Management Report, Landscape and Irrigation Design Plans, Grading Design Plan, Irrigation Scheduling, Irrigation Audit Report	Landscape and Irrigation Design Plans, Checklist and/or Water Budget Calculation Worksheets, Irrigation Maintenance Schedule and Irrigation Audit Report	Landscape and irrigation plans and irrigation plans shall indicate monthly irrigation schedule for each circuit for one year following plant establishment period	Same as BAWSCA
	<b>CERTIFIED PROFESSIONAL<sup>5</sup> SHALL PREPARE LANDSCAPE AND IRRIGATION PLANS AND CONDUCT IRRIGATION AUDIT</b>	<p>Developer-installed Single-family, Multi-family and Non-residential projects with landscape area ≥ 2,500 sq. ft.</p> <p>Single-family and Duplex projects with landscape area ≥ 5,000 sq. ft.</p>	All projects with landscape area ≥ 2,500 sq. ft.	Developer-installed Single-family, Multi-family and Non-residential projects with landscape area > 500 sq. ft.	Same as BAWSCA

1. MWELO – Model Water-Efficient Landscape Ordinance
2. BAWSCA – Bay Area Water Supply Conservation Agency
3. The following landscapes are exempted: cemeteries, ecological restoration projects without a permanent irrigation system, registered historical sites, mine reclamation projects without a permanent irrigation system, and plant collections that are open to the public.
4. “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 the homeowner. A homeowner is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.
5. Certified professional means a certified irrigation designer, a certified landscape irrigation auditor, a licensed landscape architect or a licensed landscape contractor, or any other person authorized to design a landscape.



January 14, 2010

Mr. Simon Eching  
California Department of Water Resources  
Office of Water Use Efficiency  
901 P Street, Third Floor  
P. O. Box 942836  
Sacramento, CA 94236-0001

**Subject: Notification of City of Sunnyvale Plans to Implement a Water-Efficient Landscape Ordinance**

Dear Mr. Eching,

Pursuant to AB 1881, Section 65597, on or before January 31, 2010 each City and County within California is obligated to notify the California Department of Water Resources (DWR) as to whether that City or County is subject to the DWR updated model water-efficient landscape ordinance (DWR Model Ordinance), or whether that City or County has adopted its own water-efficient landscape ordinance.

The City of Sunnyvale is writing to inform you that we are in the process of developing our own Water-Efficient Landscape Ordinance (Ordinance). At this time we anticipate that our Ordinance will be adopted in April 2010 and that it will be at least as effective as the DWR Model Ordinance in terms of conserving water. Once our Ordinance has been adopted, we will send DWR a copy for your records.

Our community has a strong commitment to conserving water and we are actively working on the development of our own Ordinance. We have been advising future applicants on upcoming changes to landscape regulations and the need for additional water conservation measures.

Please contact Rosemarie Zulueta, Assistant Planner, with any questions at 408-730-7437 or [rzulueta@ci.sunnyvale.ca.us](mailto:rzulueta@ci.sunnyvale.ca.us).

Sincerely,

A handwritten signature in black ink, appearing to read "Trudi Ryan", is written over a horizontal line.

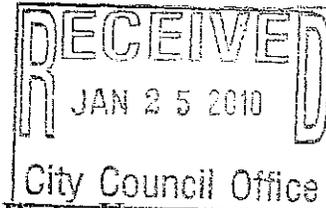
Trudi Ryan  
Planning Officer  
City of Sunnyvale  
Community Development Department

CC: Bay Area Water Supply Conservation Agency  
Gary Luebbers, *City Manager*  
Hanson Hom, *Community Development Director*  
Jim Craig, *Superintendent of Field Services*  
Tim Kirby, *Revenue Systems Coordinator*

ATTACHMENT   D    
Page   2   of   2

California Native Plant Society • Clean Water A  
Venture: Silicon Valley Network • Santa Clara C  
Coalition • Sierra Club, Loma Prieta Chapter •  
Leadership Group • Sustainable San Mateo County • Sustainable  
Silicon Valley • Tuolumne River Trust

ATTACHMENT E  
Page 1 of 1



January 21, 2010

**SUBJECT: SUPPORT for Adoption of Template Indoor and Outdoor Water Use Efficiency Ordinances**

Dear Mayor Hamilton:

As organizations concerned about water supply and the need for increased conservation, we are writing to encourage the City of Sunnyvale to adopt the BAWSCA Template Indoor and Outdoor Water Use Efficiency Ordinances you recently received from the Bay Area Water Supply and Conservation Agency (BAWSCA). The ordinances also are available at <http://bawasca.org/water-conservation>.

The Indoor and Outdoor Water Use Efficiency Ordinances developed by BAWSCA are a prime example of the best thinking of our region. Working with a large number of stakeholders, BAWSCA developed the template ordinances for both indoor and outdoor water conservation. These ordinances, in clear concise language, provide a framework for achieving significant reductions in water use while maintaining and improving the uniqueness of our Bay Area lifestyle.

Our organizations strongly support the adoption of ordinances such as these. Climate change and increasing population will continue to put a stress on our water supply, and require that we become more efficient in the way we use our finite resources.

We are proud of the leadership displayed by the communities of the Bay Area in addressing the challenges of the 21<sup>st</sup> Century. Thank you for doing your part.

Sincerely,

*Libby Lucas*  
California Native Plant Society

*Mike Mielke*  
Silicon Valley Leadership Group

*Jennifer Clary*  
Clean Water Action

*Kari Binley*  
Sustainable San Mateo County

*Kara LaPierre*  
Joint Venture: Silicon Valley Network

*Marianna Grossman*  
Sustainable Silicon Valley

*Mondy Lariz*  
Santa Clara County Creeks Coalition

*Jessie Raeder*  
Tuolumne River Trust

*Bill Collins*  
Sierra Club, Loma Prieta Chapter

## **WATER CONSERVATION PROGRAMS AND WATER-EFFICIENT LANDSCAPE DESIGN RESOURCES**

### **More Information on City Programs**

- **Direct mailing outreach to residents and businesses:** The City of Sunnyvale, in collaboration with the Santa Clara Valley Water District, periodically sends out letters to the city's top 40% residential and commercial water users. Letters include information on water conservation.
- **Utility bill inserts:** The City of Sunnyvale in collaboration with the Santa Clara Valley Water District periodically sends out bill inserts to residents promoting various water conservation programs and measures.
- **Sustainable Sunnyvale E-Newsletter:** This newsletter is a new effort by the City to keep residents and businesses updated about various sustainability topics. It is launching at the end of February 2010. The E-Newsletter will be sent to those who sign up for the mailing list. Those who would like to sign up for the mailing list should visit: <http://sunnyvale.ca.gov/Departments/Public+Works/Solid+Waste+and+Recycling/>.
- **Water Conservation Pages on the City's website:** Water conservation tips and programs that are available for Sunnyvale residents and businesses are posted on the website. Also, the Santa Clara Valley Water District's hotline number is listed on the City website for questions and requests for more information about their programs. The direct link to these resources is: [www.waterconservation.InSunnyvale.com](http://www.waterconservation.InSunnyvale.com)
- **Community Outreach Programs:** The City educates schools, homeowner associations, mobile homes communities, and businesses about water conservation topics and programs. City staff gives presentations and participates in corporate events where people can learn about water conservation tips and resources.
- **Sunnyvale's Farmers Market Outreach:** The City maintains its presence at the farmers market on Saturdays where staff promotes water conservation programs and educates the public about water pollution and conservation topics.
- **Water Conservation Employee Outreach:** The City holds periodic meetings where staff educates employees about water supply issues, and conservation tips and programs.
- **Water Conservation and Landscaping Workshops:** The City periodically hosts landscaping workshops where residents can learn how to reduce water use in their gardening practices. Workshop topics include gardening with low-water use or native plants, water efficient irrigation hardware, mulching and other water-wise gardening tips. Also, every year the City promotes the Santa Clara Valley Water District and the Bay Area Water Supply and Conservancy Agency's landscape workshop series. More information about the workshops, including the schedule, can be found here: [www.bawasca.org](http://www.bawasca.org), or call, 650-349-3000 | [www.valleywater.org](http://www.valleywater.org), or call, 408-265-2607 ext. 2554 (water conservation hotline)

## Water Conservation

- Calif. Urban Water Conservation Council – [www.cuwcc.org](http://www.cuwcc.org)
- Best Management Practices – [www.cuwcc.org/m\\_bmp.lasso](http://www.cuwcc.org/m_bmp.lasso)
- Water Wiser AWWA – [www.waterwiser.org](http://www.waterwiser.org)
- Water Education Foundation – [www.water-ed.org](http://www.water-ed.org)
- Bay Friendly gardening practices: [www.StopWaste.org](http://www.StopWaste.org)
- Santa Clara Valley Water District– [www.valleywater.org](http://www.valleywater.org)
- Bay Area Water Supply and Conservation Agency: [www.bawsca.org](http://www.bawsca.org)

## Landscaping Reference Websites

- Santa Clara Valley Water District Landscape Programs
  - <http://valleywater.org/Programs/Landscaping.aspx>
- BAWSCA's Water Wise Gardening information:
  - <http://bawsca.org/water-conservation/residential-outdoor>
- General information on water-efficient landscapes:  
[http://www.water.ca.gov/wateruseefficiency/docs/water\\_efficient\\_landscapes.pdf](http://www.water.ca.gov/wateruseefficiency/docs/water_efficient_landscapes.pdf)
- Guide for estimating the water needs of plants:  
<http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf>
- Residential landscapes:  
<http://www.water.ca.gov/wateruseefficiency/docs/ResidentialLandscapes-2005.pdf>
- <http://www.water.ca.gov/wateruseefficiency/docs/toolkit.pdf>
- Parks and Commercial landscapes:  
<http://www.water.ca.gov/wateruseefficiency/docs/parkscomm.pdf>
- Reference evapotranspiration information: <http://www.cimis.water.ca.gov/cimis/welcome.jsp>
- Irrigation controller information:  
[http://www.water.ca.gov/wateruseefficiency/docs/irrigation\\_controllers\\_0903.pdf](http://www.water.ca.gov/wateruseefficiency/docs/irrigation_controllers_0903.pdf)

## Other Online References

- San Francisco Public Utilities Commission (SFPUC) – [www.sfwater.org](http://www.sfwater.org)
- Department of Water Resources (DWR) – [www.water.ca.gov](http://www.water.ca.gov)
- American Water Works Association (AWWA)- [www.awwa.org](http://www.awwa.org)
- CA Chapter, AWWA – [www.ca-nv-awwa.org](http://www.ca-nv-awwa.org)
- US Dept of the Interior – [www.watershare.mp.usbr.gov](http://www.watershare.mp.usbr.gov)
- Association of California Water Agencies (ACWA) – [www.acwanet.org](http://www.acwanet.org)
- Zone 7 – [www.zone7water.com](http://www.zone7water.com)
- East Bay MUD – [www.ebmud.com](http://www.ebmud.com)
- CalFed Bay-Delta Program – [calwater.ca.gov](http://calwater.ca.gov)
- Association of Bay Area Governments – [www.abag.ca.gov](http://www.abag.ca.gov)

## OUTDOOR WATER USE EFFICIENCY CHECKLIST

**To Be Completed by Applicant** Page 1 of 2

I certify that the subject project meets the specified requirements of the Outdoor Water Use Efficiency Ordinance.

Signature \_\_\_\_\_ Date \_\_\_\_\_

**Project Information**

Single Family  Multi-Family  Commercial  Institutional  Irrigation only  Industrial  Other:

Applicant Name (print): \_\_\_\_\_ Contact Phone #: \_\_\_\_\_

Project Site Address: \_\_\_\_\_ Agency Review

Project Area (sq. ft. or acre): \_\_\_\_\_ # of Units: \_\_\_\_\_ # of Meters: \_\_\_\_\_ (Pass) (Fail)

For single family projects or single family developments, enter the information on a per-lot basis. For all other projects, enter an aggregate value for the entire project.	Total Landscape Area (sq. ft.):	<input type="checkbox"/> Tier 1 (> 1,000 sq. ft.) <input type="checkbox"/> Tier 2 (> 2,500 sq. ft.)	<input type="checkbox"/>	<input type="checkbox"/>
	Turf Irrigated Area (sq. ft.):		<input type="checkbox"/>	<input type="checkbox"/>
	Non-Turf Irrigated Area (sq. ft.):		<input type="checkbox"/>	<input type="checkbox"/>
	Special Landscape Area (SLA) (sq. ft.):		<input type="checkbox"/>	<input type="checkbox"/>
	Water Feature Surface Area (sq. ft.):			

Landscaping Parameter	Requirements	Project Compliance	(Pass)	(Fail)
<b>Turf</b>	Less than 25% of the landscape area is turf	<input type="checkbox"/> Yes <input type="checkbox"/> No, See Water Budget	<input type="checkbox"/>	<input type="checkbox"/>
	All turf areas are > 8 feet wide	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	All turf is planted on slopes < 25%	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
<b>Non-Turf</b>	At least 80% of non-turf area is native or low water use plants	<input type="checkbox"/> Yes <input type="checkbox"/> No, See Water Budget	<input type="checkbox"/>	<input type="checkbox"/>
<b>Hydrozones</b>	Plants are grouped by Hydrozones	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
<b>Mulch</b>	At least 2-inches on exposed soil surfaces	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
<b>Irrigation System Efficiency</b>	70% ETo (100% Eto for SLAs)	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	No overspray or runoff	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
<b>Irrigation System Design</b>	System efficiency > 70%	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	Automatic, self-adjusting irrigation controllers	<input type="checkbox"/> No, not required for Tier 1 <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	Moisture sensor/rain sensor shutoff	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	No sprayheads in < 8-ft wide area	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
<b>Irrigation Time</b>	System only operates between 8 PM and 10 AM	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
<b>Metering</b>	Separate irrigation meter	<input type="checkbox"/> No, not required for < 5,000 sq. ft. <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	<b>Swimming Pools / Spas</b>	Cover required	<input type="checkbox"/> Yes	<input type="checkbox"/>
<b>Water Features</b>	Recirculating	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	Less than 10% of landscape area	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
<b>Documentation</b>	Checklist	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	Water Budget	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>
	Landscape Plan	<input type="checkbox"/> Prepared by applicant <input type="checkbox"/> Prepared by certified professional	<input type="checkbox"/>	<input type="checkbox"/>
<b>Audit</b>	Post-installation audit required	<input type="checkbox"/> Completed by applicant <input type="checkbox"/> Completed by certified professional	<input type="checkbox"/>	<input type="checkbox"/>

OUTDOOR WATER USE EFFICIENCY CHECKLIST

**To Be Completed by Agency** Page 2 of 2

<p><b>Auditor:</b></p> <p><b>Materials Received and Reviewed:</b></p> <p><input type="checkbox"/> Water Efficiency Checklist</p> <p><input type="checkbox"/> Water Budget</p> <p><input type="checkbox"/> Landscape Plan</p> <p><input type="checkbox"/> Post-Installation Audit</p> <p><b>Date Reviewed:</b></p> <p><input type="checkbox"/> Follow up required (explain):</p> <p><b>Date Resubmitted:</b></p> <p><b>Date Approved:</b></p> <p><b>Dedicated Irrigation Meter Required:</b></p> <p><b>Meter sizing:</b></p>	<p style="text-align: center; background-color: #cccccc;"><b>Material Distributed to Applicant</b></p> <p><input type="checkbox"/> Outdoor Water Use Efficiency Ordinance</p> <p><input type="checkbox"/> Water Efficiency Checklist</p> <p><input type="checkbox"/> Water Budget Calculation Worksheets</p> <p><input type="checkbox"/> Plant List</p> <p><input type="checkbox"/> Other:</p> <hr/> <p style="text-align: center; background-color: #cccccc;"><b>Measures Recommended to Applicant</b></p> <p><input type="checkbox"/> Drip irrigation</p> <p><input type="checkbox"/> Self-adjusting Irrigation Controller</p> <p><input type="checkbox"/> Plant palate</p> <p><input type="checkbox"/> Mulching</p> <p><input type="checkbox"/> Soil amendment (e.g., compost)</p> <p><input type="checkbox"/> Grading</p> <p><input type="checkbox"/> Dedicated irrigaton meter</p> <p><input type="checkbox"/> Other:</p>
---	--

**Comments:**

**Selected Definitons:**

Tier 1	New construction and rehabilitated landscapes with irrigated landscape areas between 1,000 and 2,500 square feet requiring a building or landscape permit, plan check or design review.
Tier 2	New construction and rehabilitated landscapes with irrigated landscape areas greater than 2,500 square feet requiring a building or landscape permit, plan check or design review.
Eto	Reference evapotranspiration means the quantity of water evaporated from a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of estimating the water budgets so that regional differences in climate can be accommodated.
SLA	Special Landscaped Area. Includes edible plants, areas irrigated with recycled water, surface 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.
Water Feature	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).

## LANDSCAPE WATER-EFFICIENCY CHECKLIST

Applicant Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Project Site Address: \_\_\_\_\_

Total Landscape Area (square feet):	<p><b>Landscape area:</b> All the planting areas, turf areas, and water features in a landscape installation. 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 wildland vegetation).</p> <p><b>Turf:</b> A ground cover surface consisting of non-native grass species that is customarily mowed. Annual bluegrass, Kentucky bluegrass, perennial ryegrass, red fescue, and tall fescue are examples of cool-season turf grasses. Bermuda grass, kikuyu grass, seashore paspalum, St. Augustine grass, zoysia grass, and buffalo grass are warm-season turf grasses.</p> <p style="text-align: center;">See reverse side for other definitions.</p>
Turf Area:	
Non-Turf Plant Area:	
Special Landscape Area:	
Water Feature Wet Surface Area:	

**NOTE:** If landscape area exceeds 2,500 sq. ft., a landscape and irrigation design plan (and supporting documents) shall be required. If no landscaping is proposed, enter "0" for "Total Landscape Area," and proceed directly to the signature block at the bottom of this form.

Landscape Parameter	Requirements	Project Compliance
<b>Turf</b>	Total turf area shall not exceed 25% of the landscape area, or 1,250 square feet, whichever is lesser in area.	<input type="checkbox"/> Yes <input type="checkbox"/> No [Water budget calculation required with landscape project submittal]
	All turf areas shall be wider than eight (8) feet.	<input type="checkbox"/> Yes
	Turf (if utilized) is limited to slopes not exceeding 25%.	<input type="checkbox"/> Yes
<b>Non-Turf</b>	At least 80% of non-turf area shall consist of native or low water use plants.	<input type="checkbox"/> Yes <input type="checkbox"/> No [Water budget calculation required with landscape project submittal]
<b>Hydrozones</b>	Plants with similar water needs shall be grouped within hydrozones. Each hydrozone shall be controlled by a separate valve.	<input type="checkbox"/> Yes <input type="checkbox"/> No [Provide explanation on back]
<b>Irrigation System</b>	Systems shall be designed and maintained to minimize water waste (e.g., runoff, low head drainage, overspray). Low-volume irrigation shall be utilized in non-turf areas. Irrigation shall only occur between the hours of 8:00 pm and 10:00 am.	<input type="checkbox"/> Yes <input type="checkbox"/> No [Provide explanation on back]
<b>Soil</b>	A minimum of eight (8) inches of non-compacted topsoil shall be available in planted areas.	<input type="checkbox"/> Yes <input type="checkbox"/> No [Provide explanation on back]
	Soil amendments, such as compost or fertilizer, shall be appropriately added according to the soil conditions at the project site and based on what is appropriate for the selected plants.	<input type="checkbox"/> Yes <input type="checkbox"/> No [Provide explanation on back]
<b>Mulch</b>	A minimum two (2)-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas, except in areas of direct seeding application (e.g. hydro-seed).	<input type="checkbox"/> Yes <input type="checkbox"/> No [Provide explanation on back]

I am aware of available informational resources regarding native and low water use plants, irrigation efficiency, and other aspects of water-efficient landscaping. I certify that the information provided on this checklist is correct, and I understand that any changes to the project will necessitate a new checklist.

\_\_\_\_\_  
Signature of property owner or authorized representative \_\_\_\_\_  
Date

This checklist implements the requirements of the Water Conservation in Landscaping Ordinance. The responses provided will be evaluated to determine whether the proposed landscape is generally consistent with the ordinance's water-efficiency goals.

**Applicant Comments**

Use additional paper if necessary

**Staff Evaluation**

- Approved
- Not Approved

**Staff Comments**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Select Definitions**

**Hydrozone:** A portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.

**Low water use plant:** A plant species whose demonstrated water needs are compatible with local climate and soil conditions such that regular supplemental irrigation is not required to sustain the plant after it has become established. Species classified as "very low water use" and "low water use" by WUCOLS, having a regionally adjusted plant factor of 0.0 through 0.3, shall be considered low water use plants.

**Low-volume irrigation:** 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.

**Native plant:** A plant indigenous to a specific area of consideration. For the purpose of this division, the term will refer to plants indigenous to the coastal ranges of Central and Northern California, and more specifically to such plants that are suited to the ecology of the present or historic natural community of the project's vicinity.

**Special landscape area:** 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.

**Water feature:** A landscape design element where open water performs an aesthetic or recreational function. Water features include ponds, fountains, waterfalls and artificial streams. Also includes spas and swimming pools that are ancillary to single-family, two-family and multi-family residential uses.

**Wet surface area:** The surface area of that portion of a water feature that functions to contain water, such as the water surface of a swimming pool, spa, or garden pond. For a fountain or other feature with flowing water, wet surface area shall be measured as a two dimensional plane bounded by the perimeter of the area where water has been designed to flow.



Appendix A - Reference Evapotranspiration (ETo) Table\*

County and City	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual ETo
<b>SAN JOAQUIN</b>													
Lodi West	1.0	1.6	3.3	4.3	6.3	6.9	7.3	6.4	4.5	3.0	1.4	0.8	46.7
Manteca	0.9	1.7	3.4	5.0	6.5	7.5	8.0	7.1	5.2	3.3	1.6	0.9	51.2
Stockton	0.8	1.5	2.9	4.7	6.2	7.4	8.1	6.8	5.3	3.2	1.4	0.6	49.1
Tracy	1.0	1.5	2.9	4.5	6.1	7.3	7.9	6.7	5.3	3.2	1.3	0.7	48.5
<b>SAN LUIS OBISPO</b>													
Arroyo Grande	2.0	2.2	3.2	3.8	4.3	4.7	4.3	4.6	3.8	3.2	2.4	1.7	40.0
Atascadero	1.2	1.5	2.8	3.9	4.5	6.0	6.7	6.2	5.0	3.2	1.7	1.0	43.7
Morro Bay	2.0	2.2	3.1	3.5	4.3	4.5	4.6	4.6	3.8	3.5	2.1	1.7	39.9
Nipomo	2.2	2.5	3.8	5.1	5.7	6.2	6.4	6.1	4.9	4.1	2.9	2.3	52.1
Paso Robles	1.6	2.0	3.2	4.3	5.5	6.3	7.3	6.7	5.1	3.7	2.1	1.4	49.0
San Luis Obispo	2.0	2.2	3.2	4.1	4.9	5.3	4.6	5.5	4.4	3.5	2.4	1.7	43.8
San Miguel	1.6	2.0	3.2	4.3	5.0	6.4	7.4	6.8	5.1	3.7	2.1	1.4	49.0
San Simeon	2.0	2.0	2.9	3.5	4.2	4.4	4.6	4.3	3.5	3.1	2.0	1.7	38.1
<b>SAN MATEO</b>													
Hal Moon Bay	1.5	1.7	2.4	3.0	3.9	4.3	4.3	4.2	3.5	2.8	1.3	1.0	33.7
Redwood City	1.5	1.8	2.9	3.8	5.2	5.3	6.2	5.6	4.8	3.1	1.7	1.0	42.8
Woodside	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
<b>SANTA BARBARA</b>													
Betteravia	2.1	2.6	4.0	5.2	6.0	5.9	5.8	5.4	4.1	3.3	2.7	2.1	49.1
Carpenteria	2.0	2.4	3.2	3.9	4.8	5.2	5.5	5.7	4.5	3.4	2.4	2.0	44.9
Cuyama	2.1	2.4	3.8	5.4	6.9	7.9	8.5	7.7	5.9	4.5	2.6	2.0	59.7
Goleta	2.1	2.5	3.9	5.1	5.7	5.7	5.4	5.4	4.2	3.2	2.8	2.2	48.1
Goleta Foothills	2.3	2.6	3.7	5.4	5.3	5.6	5.5	5.7	4.5	3.9	2.8	2.3	49.6
Guadalupe	2.0	2.2	3.2	3.7	4.9	4.6	4.5	4.6	4.1	3.3	2.4	1.7	41.1
Lompoc	2.0	2.2	3.2	3.7	4.8	4.6	4.9	4.8	3.9	3.2	2.4	1.7	41.1
Los Alamos	1.8	2.0	3.2	4.1	4.9	5.3	5.7	5.5	4.4	3.7	2.4	1.6	44.6
Santa Barbara	2.0	2.5	3.2	3.8	4.6	5.1	5.5	4.5	3.4	2.4	1.8	1.8	40.6
Santa Maria	1.8	2.3	3.7	5.1	5.7	5.8	5.6	5.3	4.2	3.5	2.4	1.9	47.4
Santa Ynez	1.7	2.2	3.5	5.0	5.8	6.2	6.4	6.0	4.5	3.6	2.2	1.7	48.7
Sisquoc	2.1	2.5	3.8	4.1	6.1	6.3	6.4	5.8	4.7	3.4	2.3	1.8	49.2
Solvang	2.0	2.0	3.3	4.3	5.0	5.6	6.1	5.6	4.4	3.7	2.2	1.6	45.6
<b>SANTA CLARA</b>													
Gilroy	1.3	1.8	3.1	4.1	5.3	5.6	6.1	5.5	4.7	3.4	1.7	1.1	43.6
Los Gatos	1.5	1.8	2.8	3.9	5.0	5.6	6.2	5.5	4.7	3.2	1.7	1.1	42.9
Morgan Hill	1.5	1.8	3.4	4.2	6.3	7.0	7.1	6.0	5.1	3.7	1.9	1.4	49.5
Palo Alto	1.5	1.8	2.8	3.8	5.2	5.3	6.2	5.6	5.0	3.2	1.7	1.0	43.0
San Jose	1.5	1.8	3.1	4.1	5.5	5.8	6.5	5.9	5.2	3.3	1.8	1.0	45.3
<b>SANTA CRUZ</b>													
De Laveaga	1.4	1.9	3.3	4.7	4.9	5.3	5.0	4.8	3.6	3.0	1.6	1.3	40.8
Green Valley Rd	1.2	1.8	3.2	4.5	4.6	5.4	5.2	5.0	3.7	3.1	1.6	1.3	40.6
Santa Cruz	1.5	1.8	2.6	3.5	4.3	4.4	4.8	4.4	3.8	2.8	1.7	1.2	36.6
Watsonville	1.5	1.8	2.7	3.7	4.6	4.5	4.9	4.2	4.0	2.9	1.8	1.2	37.7
Webb	1.8	2.2	3.7	4.8	5.3	5.7	5.6	5.3	4.3	3.4	2.4	1.8	46.2
<b>SHASTA</b>													
Burney	0.7	1.0	2.1	3.5	4.9	5.9	7.4	6.4	4.4	2.9	0.9	0.6	40.9
Fall River Mills	0.6	1.0	2.1	3.7	5.0	6.1	7.8	6.7	4.6	2.8	0.9	0.5	41.8
Glenburn	0.6	1.0	2.1	3.7	5.0	6.3	7.8	6.7	4.7	2.8	0.9	0.6	42.1
McArthur	0.7	1.4	2.9	4.2	5.6	6.9	8.2	7.2	5.0	3.0	1.1	0.6	46.8
Redding	1.2	1.4	2.6	4.1	5.6	7.1	8.5	7.3	5.3	3.2	1.4	0.9	48.8

**SECTION B. WATER BUDGET CALCULATIONS**

**Section B1. Maximum Applied Water Allowance (MAWA)**

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

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

where:

- MAWA = Maximum Applied Water Allowance (gallons per year)
- ET<sub>o</sub> = Reference Evapotranspiration (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 = the additional ET Adjustment Factor for Special Landscape Area (1.0 - 0.7 = 0.3)

Maximum Applied Water Allowance = \_\_\_\_\_ gallons per year

Show calculations.

**Effective Precipitation (Eppt)**

If considering Effective Precipitation, use 25% of annual precipitation. Use the following equation to calculate Maximum Applied Water Allowance:

$$MAWA = (ET_o - Eppt) (0.62) [(0.7 \times LA) + (0.3 \times SLA)]$$

Maximum Applied Water Allowance = \_\_\_\_\_ gallons per year

Show calculations.

**Section B2. Estimated Total Water Use (ETWU)**

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

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

where:

- ETWU = Estimated total water use per year (gallons per year)
- ET<sub>o</sub> = Reference Evapotranspiration (inches per year)
- PF = Plant Factor from WUCOLS
- HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
- SLA = Special Landscape Area (square feet)
- 0.62 = Conversion Factor (to gallons per square foot)
- IE = Irrigation Efficiency (minimum 0.71)

**Hydrozone Table for Calculating ETWU**

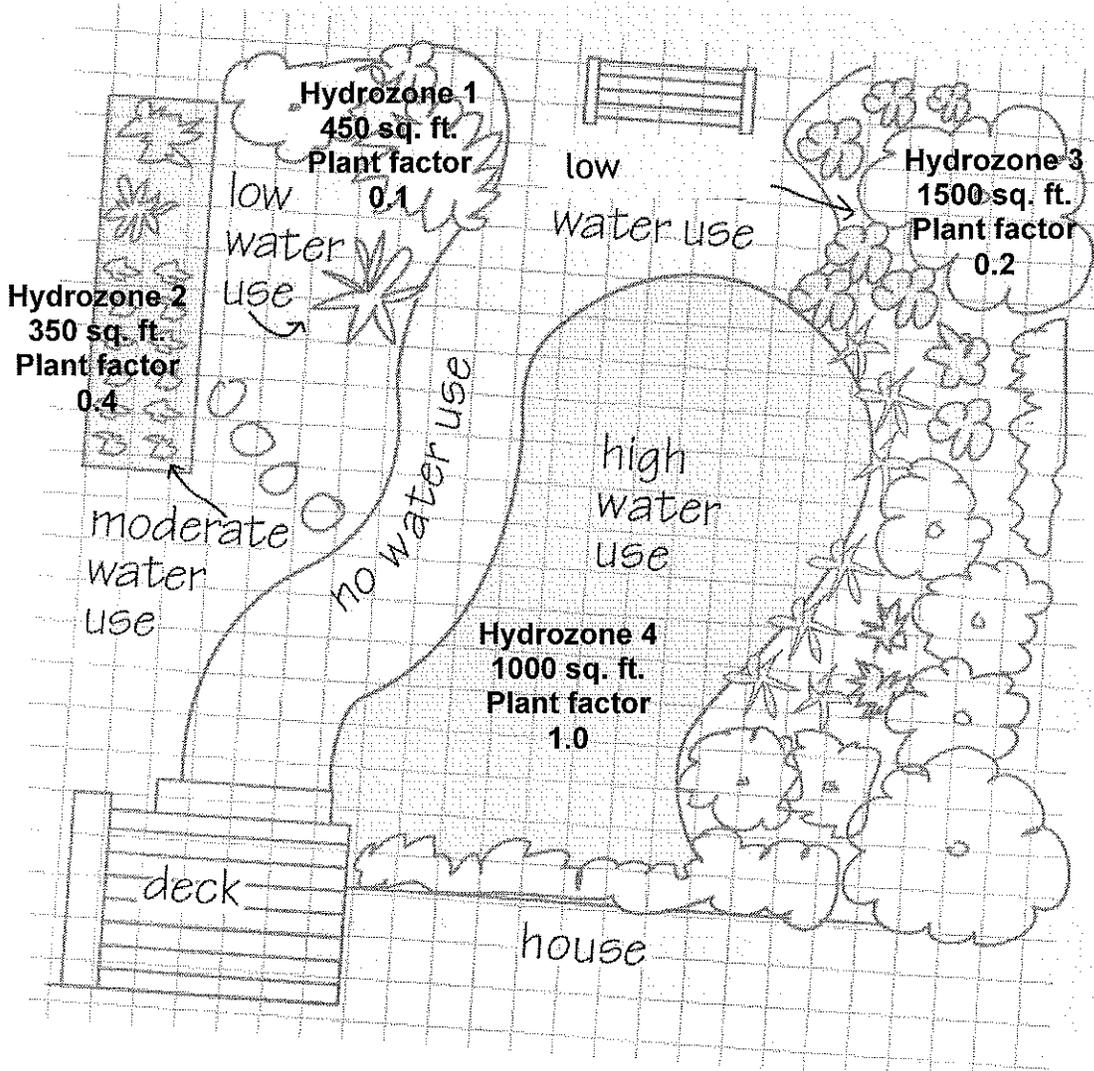
Please complete the hydrozone table(s). Use as many tables as necessary.

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

Estimated Total Water Use = \_\_\_\_\_ gallons

Show calculations.

Example of a simple landscape plan and water budget calculations



Graphic obtained from GardenSoft CD software, "Water-Wise Gardening for Santa Clara County" and slightly modified

Total Landscaped Area = 3,300 square feet

**Estimated Total Water Use CANNOT EXCEED Maximum Applied Water Allowance**

**Maximum Applied Water Allowance (MAWA):**

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

where:

- MAWA = Maximum Applied Water Allowance (gallons per year)
- ET<sub>o</sub> = Reference Evapotranspiration from Appendix A (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 = the additional ET Adjustment Factor for Special Landscape Area (1.0 - 0.7 = 0.3)

$$MAWA = (45.3) (0.62) [(0.7 \times 3300) + (0.3 \times 0)]$$

Maximum Applied Water Allowance = **64,879 gallons per year**

**Estimated Total Water Use (ETWU):**

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

where:

- ETWU = Estimated total water use per year (gallons per year)
- ET<sub>o</sub> = Reference Evapotranspiration (inches per year)
- PF = Plant Factor from WUCOLS (see Definitions)
- HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
- SLA = Special Landscape Area (square feet)
- 0.62 = Conversion Factor (to gallons per square foot)
- IE = Irrigation Efficiency (minimum 0.71)

**Hydrozone Table for Calculating ETWU**

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)	Area (HA) (square feet)	PF x HA (square feet)
1	Low water use	0.1	450	45
2	Moderate water use	0.4	350	140
3	Low water use	0.2	1500	300
4	Pool	1.0	1000	1000
			Sum	1485

$$ETWU = (45.3)(0.62)(1485/0.7)$$

Estimated Total Water Use = **59,582 gallons per year**

ETWU 59,582 is less than MAWA 64,879

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 from the Reference Evapotranspiration Table in Appendix A, 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.

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

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

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

$$= 31.68 \times 35,600 \text{ gallons per year}$$

$$= 1,127,808 \text{ gallons per year or } 1,508 \text{ hundred-cubic-feet per year}$$

(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.

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

Where:

ETWU = Estimated Total Water Use per year (gallons)

ETo = Reference Evapotranspiration (inches)

PF = Plant Factor from WUCOLS (see Section 491)

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: 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

$$ETWU = (51.1)(0.62) \left( \frac{24,700}{0.71} + 0 \right)$$

= 1,102,116 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: 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

$$ETWU = (51.1)(0.62) \left( \frac{23,500}{0.71} + 2,000 \right)$$

= (31.68) (33,099 + 2,000)

= 1,111,936 gallons per year

Compare ETWU with MAWA. For this example:

$$\begin{aligned} \text{MAWA} &= (51.1) (0.62) [(0.7 \times 50,000) + (0.3 \times 2,000)] \\ &= 31.68 \times [35,000 + 600] \\ &= 31.68 \times 35,600 \\ &= 1,127,808 \text{ gallons per year} \end{aligned}$$

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.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

## Rosemarie Zulueta - Re: Water-efficient landscape ordinance

---

**From:** Andrew Miner  
**To:** Dewey, Julie  
**Date:** 2/25/2010 8:06 AM  
**Subject:** Re: Water-efficient landscape ordinance  
**CC:** Zulueta, Rosemarie

ATTACHMENT H  
Page 1 of 8

Hi-

Thank you for your input. We will include your comments with our staff report to the Planning Commission and City Council.

I am including Rosemarie Zulueta in the e-mail since she is the project planner for the issue.

Sincerely-

Andy Miner

Please know that the proposed changes have been mandated

Andrew Miner, AICP  
Principal Planner  
City of Sunnyvale  
408 730-7707

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On 2/24/2010 at 8:49 PM, Julie Dewey <[REDACTED]> wrote:

The new draconian regulations being considered to restrict landscaping and irrigation choices appear to be a complete invasion of privacy and Big Brother telling us exactly what we can or cannot grow!  
I am totally against this going any further.

**Rosemarie Zulueta - Re: New garden ordinance**

ATTACHMENT

Page 2 of 8

**From:** Rosemarie Zulueta  
**To:** Salans, Josh  
**Date:** 3/1/2010 2:09 PM  
**Subject:** Re: New garden ordinance  
**Attachments:** Landscape Ord Outreach Mtg Handout.pdf

Hello Josh,

Thank you for your comments. I will include this email in the staff report to the Planning Commission and City Council. I'll be sure to place you on the mailing list for this project and send/email you a copy of the staff report once it is available.

Attached to this email is a handout that was provided at the outreach meeting held on February 11, 2010. The handout includes a summary of the state law and links to more information about the state's Model Water-Efficient Landscape Ordinance, a regional template ordinance developed by the Bay Area Water Conservation Agency and resources on water-efficient landscaping. To clarify, it is not the intent of the ordinance to discourage fruit and vegetable gardens. The goal of the ordinance is to ensure smart, water-efficient landscape design. The state law requires all agencies to adopt a water budget approach in landscape design. Projects with fruit/vegetable gardens would actually be allocated more water in the water budget calculation. Also, staff recommends that the new regulations only affect those single-family home projects that include new landscape installations equal to or greater than 2,500 square feet in connection with construction of a new dwelling unit. So if a project includes a new addition to an existing home and update of a garden, or if no construction is involved but the property owner updates the garden, the new water-efficient landscape regulations would not apply. Community gardens, commercial nurseries, agricultural uses, etc. would be also exempt.

Please let me know if you have additional questions. Thank you for your interest.

Sincerely,

Rosemarie Zulueta, Assistant Planner  
 Community Development Department  
 City of Sunnyvale  
 Phone: (408) 730-7437  
[rzulueta@ci.sunnyvale.ca.us](mailto:rzulueta@ci.sunnyvale.ca.us)

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>>> Josh Salans <[j.salans@ci.sunnyvale.ca.us](mailto:j.salans@ci.sunnyvale.ca.us)> 2/24/2010 11:30 AM >>>

Dear Rosemarie,

I am concerned about the new ordinance going into effect that would force families who are updating their gardens to get city approval. First I was never informed of any meeting that I could attend on this issue, and second and most important I fear that any "water-wise" planting enforcement would mean single family residents would be encouraged to stay away from planting their own food gardens and fruit orchards (all which use water unlike xerascapes). I am very concerned that we not discourage families from planting their own food gardens. Please advise how the new ordinance would effect this.

Thank you,

Josh Salans

ATTACHMENT H  
Page 3 of 8**Rosemarie Zulueta - Re: Sunnyvale Sun -- Water**

**From:** Rosemarie Zulueta  
**To:** burke, steve; [REDACTED]  
**Date:** 3/2/2010 12:33 PM  
**Subject:** Re: Sunnyvale Sun -- Water  
**CC:** Ryan, Trudi  
**Attachments:** Water Conserving Plants.pdf; Landscape Ord Outreach Mtg Handout.pdf; Water Conserving Trees.pdf

Hello Steve,

Thank you for your suggestions and for notifying us about your difficulty in finding information regarding water-efficient landscaping. We appreciate your dedication to water conservation. I have attached some available resources for your reference. Included are lists of water-conserving plants and trees that are appropriate for Sunnyvale's climate and a handout that was provided at the outreach meeting held on February 11, 2010. The handout includes a summary of the state law and links to more information about the state's Model Water-Efficient Landscape Ordinance, a regional template ordinance developed by the Bay Area Water Conservation Agency (BAWSCA) and resources on water-efficient landscaping. If you are unable to access the attached files, please let me know, or visit [www.sunnyvaleplanning.com](http://www.sunnyvaleplanning.com) and <http://sunnyvale.ca.gov/Departments/Community+Development/Planning+Division/Commercial-Industrial+Planning/Planning+--+Landscaping.htm>.

Staff provided a software CD at the outreach meeting called "Water-Wise Gardening for Santa Clara County" by GardenSoft in partnership with the Santa Clara Valley Water District. This CD is free for all Santa Clara Valley Water District customers. I have a few copies left and would be glad to arrange for you to pick one up at the One-Stop Permit Counter at City Hall, or arrange for the Water District to mail one to you by calling 408-265-2607 ext. 2554. The software has detailed information (including water use) for hundreds of plants that grow well in the region. It allows you to click on photo examples of gardens and create a "wish" list of plants that can easily be printed out. The City partners with the Water District and BAWSCA to provide free workshops on water-efficient landscaping and irrigation: [www.green.insunnyvale.com](http://www.green.insunnyvale.com). The attached handout includes more information about the Water District's landscaping programs. These resources may be the help you are looking for in planning the landscaping on your rental property.

To clarify, the state law (AB 1881, Water Conservation Act of 2006) requires all local agencies to adopt the Model Water-Efficient Landscape Ordinance or adopt one that is at least as efficient in water savings. Staff recommends that the new regulations only affect those single-family home projects that include new landscape installations equal to or greater than 2,500 square feet and in connection with construction of a new dwelling unit. If a project includes a new addition to an existing home and update of a garden, or if no construction is involved but the property owner updates the garden, the new water-efficient landscape regulations would not apply. Although the biggest change that would come out of this effort is new water-efficient landscape regulations for single-family homes (as there are currently none), staff does not anticipate a large number of single-family home projects to be affected each year. Just as you have suggested, one of the goals in this effort is to further increase awareness about water conservation and available resources that can aid both residential and commercial/property owners in creating their own water-efficient landscapes. We appreciate your suggestions and will take them into consideration as we move forward.

Please let me know if you have additional questions or comments. I will include your email message and this response in the staff report to the Planning Commission and City Council. I'll also be sure to place you on the mailing list for this study and send/email you a copy of the staff report once it is available for public review. Thank you again for your interest in this issue.

ATTACHMENT H  
Page 4 of 8

Sincerely,

Rosemarie Zulueta, Assistant Planner  
 Community Development Department  
 City of Sunnyvale  
 Phone: (408) 730-7437  
[rzulueta@ci.sunnyvale.ca.us](mailto:rzulueta@ci.sunnyvale.ca.us)

CC: Trudi Ryan, Planning Officer

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&gt;&gt;&gt; steve burke &lt;[REDACTED]&gt; 2/25/2010 8:46 AM &gt;&gt;&gt;

Rosemarie,

In regard to your article in the Sunnyvale Sun (Feb 24), let me say that for the last 18 months I have endeavored to find city resources (including talking with the various workers in trucks around my neighborhood, inquired with various city employees (e.g. arborists), contacted Sunnyvale City websites, and called the city of Sunnyvale) who can provide advice on drought tolerant landscaping. Unfortunately, no one could advise me on my landscaping projects. We have three properties in Sunnyvale and would appreciate proactive advice to save water.

Saving water makes good economic (saves residents cash every month in water bills) sense so i do not think we need additional city oversight (e.g. planning committee approval) to compel people to save water. On the contrary, adding planning approval will likely be perceived as added bureaucracy. Instead, let me propose a couple ideas.

1. Within the current city planners, identify someone who can help residents re-landscape. Provide contact information prominently on the city website
2. Provide a list of suggested plants with some kind of graph showing those that are mega savers, savers, and those plants that should be avoided.
3. Provide collateral in terms of pictures, schematics or other resources that will help residents plan their landscaping (my house is on the front page of the the city planners' planning guide for infilling -- see 480 Lincoln).
4. Work with SUNNYVALE businesses to create workshops, on "best practices" for plants, irrigation, storing rain and using grey water for irrigation. These might include nurserys, hardware stores (e.g. OSH, Lowes, Home Depot).
5. Work with recyclers to provide alternative materials and creative reuse designs (go talk to Sunset magazine on ideas)
6. Fix known issues. I have had a water leak on the city-side of my water meter (at my 484 Lincoln rental) that has not been fixed despite calls to the city; the response is that leak is "relatively low on list."

As a final note, I am still in search of city help to plan a water saving front and back yard for a rental property I purchased. This can save me money and provide the city with a canvas for working with citizens to save water.

Steve Burke  
 [REDACTED]

Rosemarie Zulueta - Re: Sunnyvale Landscaping & conservation efforts

ATTACHMENT H  
Page 5 of 8

**From:** Rosemarie Zulueta  
**To:** Midha, Deepti  
**Date:** 3/2/2010 1:46 PM  
**Subject:** Re: Sunnyvale Landscaping & conservation efforts  
**CC:** [REDACTED]  
**Attachments:** Landscape Ord Outreach Mtg Handout.pdf; Water Conserving Plants.pdf; Water Conserving Trees.pdf

Hello Deepti,

Thank you for your comments. There are many available resources and existing programs that could help you in your water-efficient landscape project. I have attached a handout that was provided at the public outreach meeting held on February 11, 2010 regarding the landscape ordinance. The handout includes a summary of the state law and links to more information about the state's Model Water-Efficient Landscape Ordinance, a regional template ordinance developed by the Bay Area Water Conservation Agency (BAWSCA) and resources on water-efficient landscaping. Also attached are the City's list of water-conserving plants and trees. If you are unable to access the attached files, the documents are available at [www.sunnyvaleplanning.com](http://www.sunnyvaleplanning.com).

Staff also provided a software CD at the outreach meeting called "Water-Wise Gardening for Santa Clara County" by GardenSoft in partnership with the Santa Clara Valley Water District. This CD is actually free for all Santa Clara Valley Water District customers and can be requested by calling the Water District hotline at 408-265-2607 ext. 2554. I also have a few copies left and would be glad to arrange for you to pick one up at the One-Stop Permit Counter at City Hall. The software has detailed information (including water use) for hundreds of plants that grow well in the region. It also allows you to click on photo examples of gardens and create a "wish" list of plants that can easily be printed out. The City also partners with the Water District and BAWSCA to provide free workshops on water-efficient landscaping and irrigation: [www.green.insunnyvale.com](http://www.green.insunnyvale.com). The attached handout also includes more information about the Water District's landscaping programs.

The City does not have any regulations that pertain to artificial grass or turf. If you decide to install artificial turf on your property, we can only advise that you choose a material that would still allow stormwater to percolate through to the soil.

We appreciate your initiative in incorporating water conservation efforts in your landscape project. Just to clarify, state law requires that the new landscape regulations affect only those single-family home landscape projects that are tied to new construction of a new building/home. Staff does not anticipate a large number of single-family properties to be affected per year with this criteria. Council may decide to adopt a different applicability criteria.

Please let me know if you have additional questions or comments. Would you like me to include your email message and this response in the staff report to the Planning Commission and City Council? I'll also be sure to place you on the mailing list for this study and send/email you a copy of the staff report once it is available for public review. Thank you again for your interest in this issue.

Sincerely,

Rosemarie Zulueta, Assistant Planner  
Community Development Department  
City of Sunnyvale  
Phone: (408) 730-7437  
[rzulueta@ci.sunnyvale.ca.us](mailto:rzulueta@ci.sunnyvale.ca.us)

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ATTACHMENT H  
Page 6 of 8

>>> Deepti Midha <[REDACTED]> 3/1/2010 1:29 PM >>>

Hi Rosemarie,

I read the article on restrictions on landscaping projects in THE SUN dated Feb 24, 2010.

We live in Sunnyvale on Lusterleaf drive and are looking to re-landscape our front yard in the next couple of months. Are there any guidelines that we should be aware of?

We are quite appreciative of this initiative – in fact, even without this initiative we wanted to ensure that any new landscaping we do is in line with our conservation efforts. But if Sunnyvale is coming up with some guidelines we would like to make sure that we follow them as well – could you please direct us to where we can find more information on this subject.

Also, are there any guidelines on artificial lawns?

Thanks,

Deepti

ATTACHMENT H  
Page 7 of 8**Rosemarie Zulueta - Re: Landscape water ordinance**

**From:** Rosemarie Zulueta  
**To:**  
**Date:** 3/12/2010 3:17 PM  
**Subject:** Re: Landscape water ordinance  
**CC:** Craig, Jim; Ryan, Trudi

Hi Barbara,

The amount of water the proposed Sunnyvale ordinance would save is difficult to quantify because we do not have data on the amount of water used for landscaping on single-family properties (since separate water meters for landscaping are not required on those properties). The State has done comprehensive research in determining which water-efficient landscape measures to include in the Model Water-Efficient Ordinance, including the factors used in the calculation of a water budget. Assuming that the State's Model Water-Efficient Ordinance was designed to achieve the level of water savings the State is aiming for, staff estimates that the proposed ordinance would achieve at least the same level of water savings as the State's Model Ordinance, if not more. The proposed ordinance contains applicability thresholds that are lower than what is being required by the State's Model Ordinance.

For more background information on how the State's Model Ordinance was developed, please visit the following sites:  
<http://www.cuwcc.org/WorkArea/showcontent.aspx?id=7444>  
[http://www.water.ca.gov/wateruseefficiency/landscapeordinance/updatedOrd\\_history.cfm](http://www.water.ca.gov/wateruseefficiency/landscapeordinance/updatedOrd_history.cfm)

Also, the City of Sunnyvale Water Resources Sub-Element of the General Plan (<http://sunnyvale.ca.gov/Departments/Community+Development/General+Plan/>) provides a graph of water usage in Sunnyvale (pg. 20). You may also find information in the Sunnyvale 2005 Urban Water Management Plan (<http://sunnyvale.ca.gov/NR/rdonlyres/57C1074F-6808-49F2-9B7B-77C2EA03E0DE/0/UWMP2005Rev806.pdf>).

Thank you for your inquiry. I would like to include your email and this response in the staff report with your permission. Please let me know if you have additional questions. Thanks again.

Sincerely,  
 Rosemarie Zulueta, Assistant Planner  
 Community Development Department  
 City of Sunnyvale  
 Phone: (408) 730-7437  
[rzulueta@ci.sunnyvale.ca.us](mailto:rzulueta@ci.sunnyvale.ca.us)

 Save the environment. Please don't print this email unless you really need to. 

CC: Trudi Ryan, Planning Officer  
 Jim Craig, Field Services Superintendent

>>> < > 3/11/2010 5:51 PM >>>  
 Hi, Rosemarie

Our group wanted me to ask whether you have an idea of how much water the proposed ordinance would save. And how much would it save in comparison to the Sunnyvale community's overall usage percentage-wise? In other words, would it apply to so few parcels that it would have a negligible effect?

Thanks.

Barbara Fukumoto  
 Sunnyvale Cool

Planning AP - Re: New water use rules

ATTACHMENT   H    
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**From:** Tappan Merrick <[REDACTED]>  
**To:** <council@ci.sunnyvale.ca.us>, planning Sunnyvale <planning@ci.sunnyvale.ca.us>  
**Date:** 4/9/2010 12:21 PM  
**Subject:** Re: New water use rules

Dear Mayor Hamilton, Honorable Council Members, City Planning Staff and Planning Commission, I have briefly reviewed the upcoming proposal regarding restricting water usage within Sunnyvale and I find a couple of specifics not clearly and thoroughly addressed.

1. I often see sprinklers going off automatically in the neighborhood while it is actually raining. This is a clear waste of water and I would like to see a more active role taken by the City to penalize the offenders (including City parks, if necessary).
2. Many of us live on corners that are rounded, making it difficult to water our lawns without water going into the street. Is there some way to limit this wasted water usage?
3. The parkway strips in our neighborhood tend to be the most unkempt because sprinklers normally aren't run under sidewalks. I would like to see the City develop policies to develop better looking parkways (cement, or no, ground cover, cacti, etc.) that can be applied throughout the City.
4. At Raynor Park there are about ten liquidambar trees that bound the park that make those areas unusable by the citizenry because of the balls these trees drop. Can we either remove these trees and help make all of the park more usable, or stop watering the areas under these trees, thus acknowledging the fact that the areas are already unusable?
5. Doesn't it make sense to stop building more high density housing that will require more water to be used, then to keep performing this exercise when we keep encouraging more people to live in Sunnyvale?

Respectfully,  
Tap Merrick  
[REDACTED]  
Sunnyvale, CA 94087  
[REDACTED]

**PLANNING COMMISSION MINUTES OF APRIL 12, 2010**

**2009-0710: Water-Efficient Landscape Ordinance** – Amendment to Municipal Code Title 19 (Zoning) to comply with State law (Water Conservation in Landscaping Act of 2006, AB 1881). RZ (*Continued from March 22, 2010.*)

**Rosemarie Zulueta**, Assistant Planner, presented the staff report. She said she received a call prior to this meeting from Comm. Sulser and provided clarification regarding the ordinance and confirmed that all landscaped area on a property could be considered a “special landscaped area” as long as it meets the definition. She introduced **Jim Craig**, Superintendent of Field Services, Department of Public Works for the City Sunnyvale, and said he is on the technical advisory committee for BAWSCA (Bay Area Water Supply Conservation Agency) and is the City’s representative to the retailers committee of the Santa Clara Valley Water District (SCVWD). She said he is available to answer questions.

**Comm. Klein** discussed with staff the enforceability of the ordinance. **Trudi Ryan**, Planning Officer, said that administratively the enforceability has not been worked out, however part of the requirements would be to educate the public of the changing code and that the Public Works’ staff is already working on outreach efforts. Comm. Klein discussed the ordinance in Attachment A and asked where certain items eliminated from the prior ordinance went, commenting that this ordinance only focuses on development. Ms. Ryan said staff moved away from the prescriptive statements to more generalized performance-based statements. Comm. Klein discussed with staff cemeteries and school grounds and how they are handled in the code with Ms. Ryan saying there are no cemeteries in Sunnyvale and the parks and school grounds would be covered under the special use areas. Comm. Klein asked about the public education of the complex formulas mandated by the State. Ms. Zulueta said that educational materials would be provided to the public with future application packets including samples and links to resources, adding that Sunnyvale and many other local agencies have already begun preparing educational materials. Comm. Klein discussed with staff reclaimed water and requiring dual piping for new developments, saying that he thinks dual piping would be a good step in preparation for the use of reclaimed water in landscaping when it is added to other parts of the City. Ms. Ryan said requiring dual piping for landscaping in this ordinance would be a big shift in policy for the City and that there are other titles in the Code that cover Public Utilities, with the Zoning Code applying more to private property.

**Comm. Hungerford** referred to Attachment A, and discussed the 2500 square feet of landscape triggering the ordinance requirements. Staff provided examples of how much 2500 square feet of landscaping is and what types of developments would be required to meet the regulations. Comm. Hungerford referred to page 8 of Attachment A and discussed with staff the table in the ordinance regarding “Minimum

Landscaped Area and Useable Open Space". Comm. Hungerford referred to page 11 in Attachment A regarding water features and the use of recycled water expressing concern about the safety of the water and children that might play in it. **Jim Craig** said that the quality of the recycled water in Sunnyvale is classified as "tertiary disinfected" recycled water and is approved for all purposes including skin contact and use for the watering of edible plants. Mr. Craig said the recycled water is very high quality and approved for the purpose of water features. Comm. Hungerford discussed with staff the parking lot landscaping design requirements in regards to solar energy systems and parking. Comm. Hungerford discussed the size of private balconies, how the size applies to useable open space and variations in the code with staff explaining that there is a different standard downtown for the balcony size requirements that does not apply to the rest of the City.

**Comm. McKenna** confirmed with staff that this ordinance would not apply to existing single-family homes in their current condition, even if remodeled. Comm. McKenna referred to page 8 of Attachment A, (f)(2) and said that limiting paved areas seems to present a mixed message about what we value. Ms. Ryan said most of the communities in the area are focusing the majority of their water conservation effort requirements on multi-family and non-residential development. Ms. Ryan reiterated that there would be public outreach and that water conservation would be encouraged. Ms. Ryan further discussed that environmentally the City would encourage less paving and more pervious surfaces. Comm. McKenna commented that she has always thought that when a person submits plans for a remodel that a landscape plan should be part of the submission, not requiring that the landscape plan be followed through within any specific period of time, but to allow staff to review the plan to see if it consistent with this type of guideline. Comm. McKenna said if the City is going to have an impact on the community that the time to do that is when people desire to do new construction. Ms. Ryan commented that when someone is remodeling their home, doing a little more to comply with green building requirements will award the applicant with more green building points. Ms. Ryan said that staff provides a pre-design list to applicants that encourages the consideration of green building efforts.

**Chair Chang opened the public hearing.**

**Bret Flesner**, a Sunnyvale resident, said he thinks this ordinance is problematic and is creating another statute or code. He said he does not know if the State requirements would allow the City to have a voluntary situation rather than an ordinance. He said he would like the requirements to be voluntary and that incentives be provided possibly reducing the rate on water bills. He said if the State would allow

it, he would like to see this information rewritten and the requirements be voluntary and not a mandate.

**Comm. Klein** asked staff to comment regarding non compliance to State requirements regarding the water conserving standards. Ms. Ryan said that the State requires the City to adopt water conservation regulations for landscaping and if the City does not adopt regulations then the State regulations come into effect. Ms Ryan noted that there is not a specific mandate to include single-family homes, but that overall the ordinance needs to be effective in meeting water conservation goals. Ms. Ryan said staff has talked with colleagues in the region, that the proposed standards are similar to our colleagues standards, and that the City must demonstrate to the State that we make the goals in the statute.

**Kathryn Berry**, Senior Assistant City Attorney, added that if the City does not adopt an ordinance then the model ordinance from the State applies. She said the State ordinance is intended to cover the whole State, and the BAWSCA ordinance is tailored to the San Francisco Bay Area communities.

**Chair Chang closed the public hearing.**

**Comm. Klein moved for alternative 2, to recommend to City Council to introduce the proposed ordinance with modifications. He said the modifications are to be included in the ordinance or related supplemental documentation. He said the modifications are: to add the tree installation details to the tree permitting process; to request that staff look at adding to the ordinance the requirement for dual piping for future reclaimed water hook-ups. Vice Chair Travis seconded the motion.**

**Comm. McKenna offered a friendly amendment that it be noted that water conservation be a component of the overall sustainability effort for residences and she would suggest that the information be included in the introduction of the ordinance, possibly in the description.** Comm. Klein further discussed with Comm. McKenna that this additional information could possibly be included in the single-family application materials. **The maker and the seconder agreed to recommend that staff look at adding additional water conservation language.**

**Comm. Hungerford** discussed with Comm. Klein and staff the dual piping issue. **Comm. Klein clarified that the motion would only be for dual piping for new non-residential irrigation.** He said it is likely in the future Sunnyvale will have reclaimed water available throughout the City and by providing the infrastructure today when the reclaimed water becomes available the piping would be in place. Comm. Hungerford clarified that the **dual plumbing would need to go out to the**

property line. Ms. Ryan clarified that the motion applies to irrigation water and that the Commission would like staff to look at the dual piping issue before the ordinance is sent to Council. Comm. Klein said yes.

Comm. McKenna suggested that her modification be included under section 19.37.040 (f) (1). This suggestion was acceptable to the maker and the seconder.

Comm. Klein said that this is a very important ordinance. He said he thinks water conservation moving forward is going to become more important. He said there are letters from the public concerned about how this ordinance would affect them and their existing homes, however this ordinance will not affect existing homes and will only apply to new development. He said there is still the question about enforceability of the ordinance in the long run. He said this is implementation by the local community dictated by the State, and our goal is to meet the State goal and make it as effective in the community as possible. He said he is glad to see that staff is already looking at public outreach and overall the ordinance looks good, and is focusing on the water portion of the ordinance. He said this is a good step toward better conservation of water.

Vice Chair Travis said that it is good that the City is starting to talk about water conservation. He said he likes the idea of requiring the dual piping and this ordinance is a step in the right direction.

**ACTION:** Comm. Klein made a motion on 2009-0710 to recommend to City Council to introduce the proposed ordinance in Attachment A with modifications: to add tree installation details to the tree permitting process; to request that staff look at adding the requirement of dual piping for landscaping water for future reclaimed water hook ups for new non-residential development: to add language to the ordinance that water be a component of the overall sustainability efforts for residences. Vice Chair Travis seconded. Motion carried 6-0, with Comm. Rowe absent.

**APPEAL OPTIONS:** This recommendation will be forwarded on to City Council and is scheduled to be considered at the April 27, 2010 City Council meeting.