

File No. 101079

Committee Item No. 2

Board Item No. \_\_\_\_\_

## COMMITTEE/BOARD OF SUPERVISORS

### AGENDA PACKET CONTENTS LIST

Committee: Land Use and Economic Development Date November 8, 2010

Board of Supervisors Meeting Date \_\_\_\_\_

#### Cmte Board

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#### OTHER

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|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Environmental Review Determination</u>                     |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>Complying with Water Efficient Irrigation Requirements</u> |
| <input type="checkbox"/>            | <input type="checkbox"/> | _____   |
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Completed by: Alisa Somera Date November 5, 2010

Completed by: \_\_\_\_\_ Date \_\_\_\_\_

An asterisked item represents the cover sheet to a document that exceeds 25 pages.  
The complete document can be found in the file.

1 [Water Efficient Irrigation]

2  
3 **Ordinance amending the San Francisco Administrative Code by repealing Chapter 63 in**  
4 **its entirety and adding Chapter 63, requiring the development and maintenance of**  
5 **landscape irrigation controls for specified new construction landscapes and landscape**  
6 **rehabilitation projects.**

7           NOTE:       Additions are single-underline italics Times New Roman;  
8                           deletions are ~~strike-through italics Times New Roman~~.  
9                           Board amendment additions are double-underlined;  
                          Board amendment deletions are ~~strikethrough-normal~~.

10           Be it ordained by the People of the City and County of San Francisco:

11           Section 1. Environmental Findings. The Planning Department has determined that the  
12 actions contemplated in this Ordinance are in compliance with the California Environmental  
13 Quality Act (California Public Resources Code sections 21000 et seq.). Said determination is  
14 on file with the Clerk of the Board of Supervisors in File No. 101079 and is  
15 incorporated herein by reference.

16           Section 2. The San Francisco Administrative Code is hereby amended by repealing  
17 Chapter 63 in its entirety and adding a new Chapter 63, to read as follows:

18           SEC. 63.1. TITLE.

19                   This chapter shall be known as the Water Efficient Irrigation Ordinance.

20           SEC. 63.2. INTENT.

21           The Board of Supervisors finds that:

22           (a) Irrigated landscapes contribute significantly to the quality of life of the people of San  
23 Francisco by providing areas for active and passive recreation and as an enhancement to the  
24 environment by cleaning air and water, and adding to the natural beauty of our commercial,  
25 industrial, and residential neighborhoods.

1 (b) San Francisco has been a leader in water conservation policy in California and  
2 currently has the lowest per capita use of water in the state. Our potable water supply is a vital  
3 public resource that faces ever increasing demands; and landscape design, installation,  
4 maintenance, and management can and should be water efficient.

5 (c) In 2006, the California Legislature passed and the Governor signed Assembly Bill  
6 1881, the Water Conservation in Landscaping Act, which enacted Article 10.8 of the California  
7 Government Code requiring that local agencies adopt a water efficient landscape ordinance  
8 that meets water conservation criteria and standards adopted by the California Department of  
9 Water Resources.

10 (d) Adoption of this ordinance by the Board of Supervisors and adoption of regulations  
11 by the Public Utilities Commission will improve the effectiveness of the City's landscape water  
12 efficiency program and ensure compliance with the requirements of the State's Water  
13 Conservation in Landscaping Act.

14 (e) Consistent with these legislative findings, this ordinance will:

15 (1) Promote the values and benefits of landscapes while recognizing the need to  
16 invest water and other resources as efficiently as possible;

17 (2) Encourage the use of climate appropriate and local California native plant  
18 species.

19 (3) Establish a structure for planning, designing, installing, maintaining, and  
20 managing water efficient landscapes in new construction and rehabilitated projects;

21 (4) Establish provisions for water management practices and water waste  
22 prevention for existing landscapes;

23 (5) Use water efficiently without waste by setting a Maximum Applied Water  
24 Allowance, using state mandated formulas and accounting for local climatic conditions, that  
25 will serve as an upper limit for water use by irrigated landscapes; and

1 (6) Comply with the requirements of Article 10.8 of the California Government  
2 Code, enacted by the State as the Water Conservation in Landscaping Act.

3 SEC. 63.3. Definitions.

4 The terms used in this ordinance have the meaning set forth below:

5 (a) Certificate of landscape completion: the document required under Section 63.6.2.

6 (b) Certified Landscape Irrigation Auditor: a person certified to perform landscape  
7 irrigation audits by an accredited academic institution, a professional trade organization or  
8 other program such as the US Environmental Protection Agency's WaterSense irrigation  
9 auditor certification program and the Irrigation Association's Certified Landscape Irrigation  
10 Auditor program.

11 (c) Ecological restoration project: a project where the site is intentionally altered to  
12 establish a defined, indigenous, historic ecosystem.

13 (d) First certificate of occupancy: either a temporary certificate of occupancy or a  
14 Certificate of Final Completion and Occupancy as defined in San Francisco Building Code  
15 Section 109A, whichever is issued first.

16 (e) First construction document: the first building permit issued for a project or, in the  
17 case of a site permit, the first building permit addendum issued or other document that  
18 authorizes construction of the project. "First construction document" shall not include permits  
19 or addenda for demolition, grading, shoring, pile driving, or site preparation work.

20 (f) General Manager: the General Manager of the Public Utilities Commission, or his or  
21 her designee.

22 (g) Irrigation audit: an in-depth evaluation of the performance of an irrigation system  
23 conducted by a Certified Landscape Irrigation Auditor. An irrigation audit includes, but is not  
24 limited to: inspection, system test with distribution uniformity or emission uniformity,  
25 precipitation rates, reporting deficiencies in the system, reporting overspray or runoff that

1 causes overland flow, and preparation of an irrigation schedule. An irrigation audit may  
2 include suggested upgrades, current estimated water usage, and suggested system  
3 upgrades.

4 (h) Landscape area: all the planting areas, turf areas, and water features in a  
5 landscape design plan subject to the Maximum Applied Water Allowance calculation,  
6 including any adjacent planted areas in the public right-of-way for which the property owner is  
7 responsible pursuant to the Section 400.1 and Section 805 of the Public Works Code. The  
8 landscape area does not include footprints of buildings or structures unless the footprints  
9 include planted areas such as green roofs. The landscape area also does not include  
10 sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or  
11 non-pervious hardscapes, and other non-irrigated areas designated for non-development  
12 such as open spaces and existing native vegetation.

13 (i) Landscape documentation deadline: the date by which Tier 1 or Tier 2  
14 documentation must be submitted for approval by the General Manager. This date shall be a  
15 specified number of days after the issuance of the first construction document as determined  
16 by the General Manager and in consultation with the Department of Building Inspection.

17 (j) Landscape rehabilitation project or rehabilitated landscape: includes any  
18 modifications to landscape areas over a 12-month period at a site that cumulatively exceeds  
19 1,000 square feet. A landscape rehabilitation project or rehabilitated landscape does not  
20 include turf replacements on sports fields where the turf replaced provides a playing surface,  
21 routine weeding, brush removal where no new plant materials are installed, or seasonal  
22 plantings in areas dedicated solely to edible plants.

23 (k) Low water use plants or climate appropriate plants: plants, shrubs, groundcovers or  
24 tree species that meet at least one of the following conditions:  
25

1 (1) The species has a water use ranking of "low" or "very low" in Region 1  
2 (North-Central Coast) as established in the California Department of Water Resources 2000  
3 publication "Water Use Classification of Landscape Species" or subsequent editions as it may  
4 be updated.

5 (2) The species has a water use ranking of "no water", "little water," or "little to  
6 moderate water" in the climate zone for the planting location as established in the Sunset  
7 Western Garden Book, Eighth Edition, published by Oxmoor House on February 1, 2007 or  
8 subsequent editions as it may be updated.

9 (3) The plantings are part of an engineered stormwater management feature  
10 approved by the General Manager pursuant to the San Francisco Stormwater Design  
11 Guidelines established by the Public Utilities Commission;

12 (4) The Department of Public Works, the Recreation and Park Department, or  
13 the General Manager has determined that the species, when watered for sufficient plant  
14 health and appearance, is low water use based on the agency's experience with the species,  
15 and the agency has added the species to the Low Water Use and Climate Appropriate Plant  
16 List maintained by the General Manager;

17 (5) The species appears on the San Francisco Street Tree Species List  
18 established by the Department of Public Works Bureau of Urban Forestry;

19 (6) The planting is part of a species test approved by the Department of Public  
20 Works or the Recreation and Park Department; or

21 (7) The species has been permitted at the site by the Department Public Works  
22 or the General Manager based on wet soil conditions stemming from proximity to naturally  
23 occurring water features such as a high water table, springs, ponds, lakes, creeks, and  
24 wetlands.

1 (l) Maximum Applied Water Allowance: the amount of annual applied water established  
2 by the Public Utilities Commission for a landscaped area, using state mandated formulas and  
3 accounting for local climatic conditions, that serves as an upper limit for lawful water use for  
4 irrigating landscaped areas.

5 (m) New construction landscape project: the total area of landscape in the project as  
6 defined in landscape area, and the modified landscape area for a landscape rehabilitation  
7 project.

8 (n) Project applicant: the person or entity applying for approval of a landscape project  
9 for a new construction project or a landscape rehabilitation project. A project applicant may be  
10 the property owner or his or her designee.

11 (o) Property Owner: the legal owner of a property.

12 (p) Special landscape area: an area of the landscape dedicated solely to edible plants,  
13 areas irrigated all or in part with gray water or harvested rain water, water features using only  
14 harvested rain water, and areas dedicated to active play such as parks, sports fields, golf  
15 courses, and where turf provides a playing surface.

#### 16 SEC. 63.4. Applicability

17 (a) This chapter shall apply to the following:

18 (1) Tier 1: All public agency, residential, and commercial new construction  
19 landscape projects and rehabilitated landscape projects with a modified landscape area equal  
20 to or greater than 1,000 square feet and less than 2,500 square feet;

21 (2) Tier 2: All public agency, residential and commercial new construction and  
22 rehabilitated landscape projects with a modified landscape area equal to or greater than 2,500  
23 square feet;

24 (3) The irrigation and maintenance of any landscape irrigation system in the  
25 City and County of San Francisco.

1 (b) This ordinance does not apply to:

2 (1) Registered local, state or federal historical sites where the landscape is  
3 maintained as part of the historical integrity of the site;

4 (2) Ecological restoration projects that do not require a permanent irrigation  
5 system;

6 (3) Plant collections or animal habitat areas, as part of botanical gardens,  
7 zoological gardens, and arboretums open to the public.

8 (c) The General Manager may waive some or all of the requirements of this chapter if,  
9 based on a site inspection, the General Manager determines that compliance is not feasible.

10 (d) A process for document submissions and approvals pursuant to Section 63.6.1 will  
11 be developed by the General Manager in conjunction with the Department of Building  
12 Inspection, with the purpose of administrative efficiency and effective customer service.

13 SEC. 63.5. Regulation of Landscape Irrigation Efficiency

14 (a) Landscape projects shall be installed, constructed, operated, and maintained in  
15 accordance with this chapter and the rules and regulations adopted by the Public Utilities  
16 Commission that establish limits on water consumption for the purpose of irrigating landscape  
17 areas that are part of new construction, landscape rehabilitation projects, and existing  
18 landscapes.

19 (b) Landscape projects shall be planted and irrigated efficiently by complying with water  
20 efficient design and operation requirements developed by the General Manager, including but  
21 not limited to the use of low water use plants or climate appropriate plants, restrictions on turf  
22 areas over 25% of the total landscaped area or on steep slopes, irrigation system audits,  
23 regular irrigation scheduling and maintenance practices.



1 (c) All landscape projects shall not exceed a Maximum Applied Water Allowance using  
2 the formulas developed by the General Manager for local climate conditions within the City  
3 and County of San Francisco.

4 (d) Landscape areas irrigated with graywater or harvested rain water may have a  
5 Maximum Applied Water Allowance that exceeds those for landscapes irrigated with potable  
6 water.

7 (e) The architectural guidelines of a common interest development, which include  
8 community apartment projects, condominiums, planned developments, and stock  
9 cooperatives as defined in Section 1351 of the California Civil Code, shall not prohibit or  
10 include conditions that have the effect of prohibiting the use of low water use plants as a  
11 group.

12 SEC. 63.6. Provisions for Water Efficient Landscapes for New Construction and  
13 Landscape Rehabilitation Projects

14 (a) Tier 1: Beginning January 1, 2011, project applicants for all public agency,  
15 commercial, and residential new construction landscape projects and landscape rehabilitation  
16 projects, with a modified landscape area equal to or greater than 1,000 square feet and less  
17 than 2,500 square feet, shall comply with this chapter and the rules and regulations adopted  
18 by the Public Utilities Commission.

19 (b) Tier 2: Beginning January 1, 2011, the project applicant for all public agency,  
20 commercial, and residential new construction landscape projects and landscape rehabilitation  
21 projects, with a modified landscape area equal to or greater than 2,500 square feet, or a  
22 project under Tier 1 with a turf limitation exceeding 25 percent of the landscape area, shall  
23 comply with this chapter and the rules and regulations adopted by the Public Utilities  
24 Commission.

1 (c) Beginning January 1, 2011, property owners maintaining a total irrigated landscape  
2 of 10 acres or greater may submit compliance plans for approval by the General Manager that  
3 support a programmatic approach to compliance with this chapter, rather than through the  
4 review and approval of individual landscape rehabilitation projects.

5 63.6.1. Landscape Documentation.

6 (a) Tier 1 project applicants' documentation shall be submitted for approval to the  
7 General Manager not later than the landscape documentation deadline. Tier 1 documentation  
8 shall include a project checklist describing the proposed landscape project, the selection of  
9 low water use plants or climate appropriate plants, water efficient irrigation system  
10 components, and other applicable project information as determined by the General Manager.

11 (b) Tier 2 project applicants' documentation shall be submitted for approval to the  
12 General Manager not later than the landscape documentation deadline. Tier 2 documentation  
13 shall include a Landscape Documentation Package describing the proposed landscape  
14 project that includes a landscape plan, irrigation plan, soil management report, grading plan,  
15 the calculation of the Maximum Applied Water Allowance, and other applicable project  
16 information as determined by the General Manager.

17 (c) If complete documentation for Tier 1 or Tier 2 compliance has not been submitted  
18 to the General Manager on or before the landscape documentation deadline, an address  
19 restriction shall be placed on the property such that no further construction permits or  
20 addenda shall be issued and no further inspections by the Department of Building Inspection  
21 shall occur, unless and until all landscape documentation, developed in accordance with the  
22 provisions of this chapter and the Public Utilities Commission's rules and regulations has been  
23 submitted to the General Manager for approval.

24 ///

25 ///

1           SEC. 63.6.2. Certificate of Landscape Completion.

2           (a) Upon completion of a new construction landscape project or rehabilitated landscape  
3 project that requires the submittal of landscape documentation pursuant to Section 63.6.1, the  
4 project applicant shall submit a Certificate of Landscape Completion for review and approval  
5 by the General Manager.

6           (b) No City department shall approve or issue a first certificate of occupancy or  
7 landscape project completion authorization or approval for any site where Tier 1 or Tier 2  
8 compliance is required, unless and until the landscape documentation pursuant to Section  
9 63.6.1 and a Certificate of Landscape Completion, developed in accordance with the  
10 provisions of this chapter and the Public Utilities Commission's rules and regulations, has  
11 been approved by the General Manager. The General Manager may authorize issuance of a  
12 first certificate of occupancy prior to approval of a Certificate of Landscape Completion,  
13 subject to conditions determined by the General Manager.

14           SEC. 63.7. Water Waste Prevention.

15           (a) This section shall apply to all landscaped areas in the City and County of San  
16 Francisco.

17           (b) Water runoff leaving the landscape area due to low head drainage, overspray,  
18 broken irrigation hardware, or other similar conditions where water flows onto adjacent  
19 property, walks, roadways, parking lots, structures, or non-irrigated areas designated for non-  
20 development such as open spaces and existing native vegetation, is prohibited.

21           SEC. 63.7.1. Irrigation Audits for Landscape Areas.

22           (a) When required by the General Manager, the project applicant or property owner,  
23 whichever is deemed appropriate by the General Manager, shall conduct an irrigation audit  
24 through a certified landscape irrigation auditor.

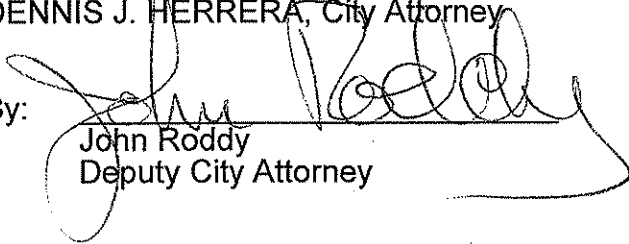
1 (1) Following the findings and recommendations of the certified landscape  
2 irrigation auditor, the project applicant or property owner shall perform adjustments to the  
3 irrigation usage, irrigation hardware, or landscape materials to reduce irrigation water use and  
4 to bring the irrigation systems in compliance with the applicable Maximum Applied Water  
5 Allowance, as directed by the General Manager.

6 SEC 63.8. Enforcement.

7 The property owner or project applicant, where appropriate, shall be subject to  
8 enforcement for violation of any provision of this chapter, in accordance with Chapter 100 of  
9 the San Francisco Administrative Code, and any other available legal remedies, at the sole  
10 discretion of the General Manager.

11  
12  
13 APPROVED AS TO FORM:  
14 DENNIS J. HERRERA, City Attorney

15 By:

16   
17 John Roddy  
18 Deputy City Attorney  
19  
20  
21  
22  
23  
24  
25

## LEGISLATIVE DIGEST

[Water Efficient Irrigation.]

**Ordinance amending the San Francisco Administrative Code by repealing Chapter 63 in its entirety and adding Chapter 63, requiring the development and maintenance of landscape irrigation controls for specified new construction landscapes and landscape rehabilitation projects.**

### Existing Law

Chapter 63 of the San Francisco Administrative Code was first enacted in 1991 to ensure compliance with provisions of the California Government Code requiring local agencies to adopt and implement water conservation measures. The purpose of this chapter was to promote efficient water use in new and renovated landscaping by utilizing proper landscape design, management and efficient irrigation equipment and techniques through mandatory restrictions on the use of landscaping in new developments and landscaping renovations. Developments were required to submit landscaping plans, soil analysis reports, and irrigation plans for City approval prior to issuance of an application for water service, and were subject to various limitations on the amount of acceptable landscaping per development and other landscape elements. Chapter 63 also imposed technology-based irrigation system design and use restrictions on the operations of irrigation systems subject.

### Amendments to Current Law

California Government Code sections 65591-65599, adopted in 2006, require local agencies to either adopt the Department of Water Resources' model water efficient irrigation ordinance or adopt a local ordinance that is at least as effective in conserving water as the state model ordinance. The proposed ordinance meets that requirement, addresses San Francisco's smaller lot and landscape sizes, and enacts water waste enforcement measures now common in other California jurisdictions.

The ordinance requires that landscape projects be installed, constructed, operated, and maintained in accordance with regulations adopted by the San Francisco Public Utilities Commission (SFPUC) that establish limits on outdoor water consumption. A "Maximum Applied Water Allowance," or water budget, must be established for each landscape project and provides the project applicant with the appropriate amount of water that may be used to irrigate its landscape area.

**Applicability:** The primary requirements apply to all public agency, commercial, and residential new construction landscapes and rehabilitation landscape projects with a landscape area equal to or greater than 1,000 square feet. Water waste prevention provisions apply to all irrigated landscapes.

**Exemptions:** This ordinance does not apply in the following circumstances:

- Registered local, state or federal historical sites where the landscape is maintained as part of the historical integrity of the site;
- Ecological restoration projects that do not require a permanent irrigation system;
- Plant collections or animal habitat areas, as part of botanical gardens, zoological gardens, and arboretums, that are open to the public.

**Special Landscape Areas:** Certain landscape areas are permitted a higher Maximum Applied Water Allowance. These special landscape areas include:

- Areas solely dedicated to edible plants;
- Areas irrigated all or in part with graywater or harvested rain water; and
- Areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

**Tiered Compliance:** The ordinance applies different compliance mechanisms based on the square footage of the new construction or rehabilitated landscape area.

**Tier 1**

New construction landscapes and landscape rehabilitation projects with the following attributes are considered Tier 1 landscapes and are eligible for a simple checklist and self certification compliance.

- Landscape area of 1,000 to 2,500 square feet;
- Turf not exceeding 25% of total landscape area;
- 75% of landscape area consists of low water use or climate appropriate plantings.

The Tier 1 project checklist describes the landscape project, documents the selection of low water use or climate appropriate plants, and confirms the use of water efficient irrigation components and other relevant landscape and irrigation information.

Following the installation of a Tier 1 landscape project, a certificate of landscape completion is submitted which requires a property owner or a landscape professional to attest that the landscape does not use water at a rate exceeding the applicable maximum water allowance.

**Tier 2**

New construction landscapes and landscape rehabilitation projects with the following attributes are considered Tier 2 landscapes and must submit a landscape documentation package for plan review.

- Landscape area of 2,500 square feet or greater;

- Tier 1 landscapes exceeding 25% turf requirement;
- Tier 1 landscapes with less than 75% low water or climate appropriate plantings.

The Tier 2 landscape documentation package mirrors state regulation and includes a landscape plan, irrigation plan, soil analysis, grading plan, and a worksheet for calculating the Maximum Applied Water Allowance.

Following the installation of the landscape project, a certificate of landscape completion is submitted which requires a certified landscape professional to attest that the landscape does not use water at a rate exceeding the applicable maximum water allowance.

**Large Landscapes:** Property owners maintaining a total irrigated landscape area within the City and County of San Francisco of 10 acres or greater, may request they be allowed to comply pursuant to an approved Compliance Plan which allows a systematic implementation of irrigation improvements rather than through individual landscape rehabilitation projects.

**Compliance Points:** The ordinance requires SFPUC approval of certain landscape and irrigation documentation for development projects that include a new construction landscape or landscape rehabilitation of 1,000 square feet or more.

- Landscape Documentation Deadline – The date by which landscape documentation must be submitted for approval for development projects. This date is after the issuance of the first construction document, but before issuance of the certificate of occupancy;
- First Certificate of Occupancy – SFPUC approval of the certificate of landscape completion is required before issuance of the first certificate of occupancy. The SFPUC General Manager may allow exceptions if other compliance mechanisms are available.

**Climate Appropriate Plants:** Plants, shrubs, groundcovers or tree species that, after a 3 year establishment period, will survive in the planting location irrigated as a low water use hydrozone are deemed to be climate appropriate plants. An expansive list of climate appropriate species has been developed for use in the Green Landscaping Ordinance and this Irrigation Ordinance, and includes a process for adding species for which water use is not calculated or is improperly rated for San Francisco's climate by the state approved list of species water use.

**Gray Water and Harvested Rain Water:** The Irrigation Ordinance encourages the use of gray water and harvested rain water for landscape irrigation. Areas irrigated with gray water or harvested rain water are considered special landscape areas and are allowed a Maximum Applied Water Allowance that is 20 to 30 percent greater. The effect is that a property owner who would like to install more high water use landscaping (e.g. extra turf) may do so if they irrigate it with gray water or harvested rain water.

**Water Waste Prevention:** Most California jurisdictions have statutory prohibitions against water waste, but San Francisco does not. The ordinance prohibits irrigation runoff from the landscape area due to drainage from low elevation water emitters, overspray, broken irrigation hardware, or other conditions where irrigation water is not absorbed at the site and flows onto adjacent property, walks, streets, or other non-irrigated areas.

**Irrigation Audits:** The SFPUC may conduct irrigation audits to evaluate a site's water use. The audits may be a coordinated effort between the SFPUC and the water service customer, or if a violation of the Irrigation Ordinance is reported or is discovered by the SFPUC, may be ordered by the General Manager and conducted by a certified landscape irrigation auditor. In the case of violation of the Irrigation Ordinance, the General Manager may require adjustments to an irrigation system, its use, or the landscape materials such that the landscape complies with the Maximum Applied Water Allowance.

**Existing Enforcement Provisions:** In the event that the Irrigation Ordinance or its companion regulations are violated, the General Manager of the SFPUC may issue written warnings, employ existing SFPUC water service rules, or trigger enforcement through Chapter 100 of the Administrative Code which includes fines and, in extreme cases of nonpayment, property liens. All these enforcement measures are found in existing law.

#### Background Information

In 2006, the State Legislature added sections 65591-65599 to the California Government Code, also known as the Water Conservation in Landscaping Act. This act modified water conservation requirements originally enacted in 1991, and requires that local agencies adopt a water efficient landscape ordinance that meets water conservation standards and the model ordinance adopted by the California Department of Water Resources on September 10, 2009.

After review of the Department of Water Resources new standards and model ordinance, SFPUC staff concluded that modifications to Chapter 63 of the Administrative Code were necessary to ensure compliance with the Water Conservation in Landscaping Act. The proposed ordinance will ensure such compliance. In addition, rules and regulations adopted by the SFPUC for the installation and maintenance of landscapes will help ensure compliance with the Water Conservation in Landscaping Act.





# SAN FRANCISCO PLANNING DEPARTMENT

**MEMO**

**DATE:** August 3, 2010  
**TO:** Clerk of the Board, San Francisco Board of Supervisors  
**FROM:** Bill Wycko, Environmental Review Officer *SBj for*  
**RE:** Water Efficient Irrigation Ordinance  
San Francisco Public Utilities Commission  
Certificate of Determination of Exemption/Exclusion from  
Environmental Review, Issued May 12, 2010  
Concurrence with Determination, Issued May 20, 2010

1650 Mission St.  
Suite 400  
San Francisco,  
CA 94103-2479

Reception:  
**415.558.6378**

Fax:  
**415.558.6409**

Planning  
Information:  
**415.558.6377**

Under Chapter 31, Section 31.08.(e) of the San Francisco Administrative Code the Environmental Review Officer may delegate to other departments the determination whether a project is categorically exempt from the California Environmental Quality Act. Such delegation authority was granted to the San Francisco Public Utilities Commission (SFPUC) so long as the SFPUC consults with the Environmental Review Officer (ERO) and the ERO reviews and concurs with the issued exemption determination.

On May 12, 2010 the SFPUC issued a Certificate of Determination of Exemption/ Exclusion for the draft Water Efficient Irrigation Ordinance.

As Environmental Review Officer, I reviewed and concurred with the exemption determination on May 20, 2010.

Cc: Irina P. Torrey, A.I.C.P., Manager,  
SFPUC Bureau of Environmental Management  
Bart Broome, SFPUC Office of the General Manager

**CERTIFICATION OF DETERMINATION  
OF EXEMPTION/EXCLUSION FROM ENVIRONMENTAL REVIEW**

Project Title: San Francisco Public Utilities Commission Water Efficient Irrigation Rules and Regulations  
Location: Various Locations  
City and County: San Francisco, San Francisco County

Description of Nature and Purpose of Project: The San Francisco Public Utilities Commission (SFPUC) has developed rules and regulations to implement State Assembly Bill 1881, the Water Conservation in Landscaping Act, passed by the Legislature in 2006 and signed into law by the Governor (Chapter 559 of the Statutes of 2006). To comply with the Act, local jurisdictions must adopt a water efficient landscape ordinance that meets the water conservation standards adopted by the California Department of Water Resources on September 10, 2009. The proposed Water Efficient Irrigation Ordinance would apply to all public agency, commercial and residential new construction landscapes and rehabilitation landscape projects with a landscaped area equal to or greater than 1,000 square feet. The proposed Ordinance would require all such landscape projects be installed, constructed, operated and maintained within water consumption limits to be established by the SFPUC through the adoption of proposed rules and regulations. Certain landscapes on registered historic sites, ecological restoration projects, and plant collections would be exempt from the proposed Ordinance as described in the Remarks below. Special Landscape Areas which would be permitted a higher maximum applied water allowance are also described below. To carry out the provisions of the proposed Ordinance, the SFPUC has also prepared draft rules and regulations which the SFPUC would adopt and would implement in conjunction with the Department of Building Inspection.

Name of Project Applicant: Water Enterprise, Water Resources Planning,  
Public Utilities Commission, City & County of San Francisco

**EXEMPT STATUS:**

- Categorical Exemption (State Guidelines, Section 15300-15329; Public Resources Code, Section 21084).  
State Class Number: 15308 (Actions by Regulatory Agencies for Protection of the Environment).
- Declared Emergency Exclusion (State Guidelines, Section 15269(a); Public Resources Code Section 21172).
- Emergency Project Exclusion (State Guidelines, Section 15269(b) and (c); Public Resources Code, Section 21080 (b) (2) and (4)).
- Feasibility or Planning Study (State Guidelines, Section 15262; Public Resources Code, Section 21102).
- General Rule Exclusion (State Guidelines, Section 15061 (b) (3)).
- Ministerial Exclusion (State Guidelines, Section 15268; Public Resources Code, Section 21080 (b) (1)).
- Non-Physical Exclusion (State Guidelines, Section 15061 (b) (1) and 15378; Public Resources Code, § 21060.5).
- Ongoing Project, approved prior to November 23, 1970 (State Guidelines, Section 15261).
- Rates, Tolls, Fares and Charges (State Guidelines, Section 15273; Public Resources Code, Section 21080 (b)(8)).
- Specified Mass Transit Projects (State Guidelines, Section 15275; Public Resources Code, § 21080 (b)(11-14)).
- Other Exclusion (Specify): \_\_\_\_\_

**REMARKS:**

All cities in California, including San Francisco, must comply with the provisions of the State Water Conservation in Landscaping Act. San Francisco and its residents are required to reduce the volume of water they draw from our regional water system (including water collected in the Hetch Hetchy Watershed) by 10 million gallons by the year 2018 under the Water System Improvement Program (WSIP). The proposed Water Efficient Irrigation Ordinance would include provisions appropriate to the San Francisco climatic conditions and the urban environment of the City rather than attempt to conform to State-imposed regulations.

The proposed Water Efficient Irrigation Ordinance (Ordinance) would:

- (1) Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
- (2) Establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated landscape projects;
- (3) Establish provisions for water management practices and water waste prevention for existing landscapes;
- (4) Use water efficiently without waste by setting a Maximum Applied Water Allowance (MAWA), using state – mandated formulas and accounting for local climatic conditions, that will serve as an upper limit for water use by irrigated landscapes; and
- (5) Comply with the requirements of Article 10.8 of the California Government Code, enacted by the State as the Water Conservation in Landscaping Act.

The proposed Ordinance would include a number of provisions related to applicability to new construction landscapes and rehabilitation landscape projects, identify exempt landscapes that would not be subject to the provisions of the Ordinance, establish certain special landscape areas that would be allowed higher MAWA, would establish a tiered compliance mechanism based on the square footage of the landscaped area, would establish procedures to certify compliance with the provisions of the Ordinance, would develop lists of plants appropriate to the San Francisco climatic conditions, would encourage use of gray water and harvested rain water, would identify water waste prevention implementation strategies, and would provide for irrigation audits and establish enforcement procedures should the provisions of the Ordinance be violated.

The proposed Ordinance would apply to all public, residential, and commercial new construction landscape projects and rehabilitated landscape projects with a modified landscape area equal to or greater than 1,000 square feet and less than 2,500 square feet (Tier 1) or greater than 2,500 square feet (Tier 2).

Exemptions would be provided for landscapes on registered local, State or federal historical sites where the landscape is maintained as part of the historical integrity of the site, ecological restoration projects where a permanent irrigation system is not required, or plant collections or animal habitat areas which are part of botanical gardens, zoological gardens or arboreta open to the public.

The proposed Ordinance would require landscape projects to be planted and efficiently irrigated to comply with water efficient design and operation requirements promulgated by the General Manager of the SFPUC, including but not limited to the use of low water usage plants or climate appropriate plants, restrictions on turf areas representing more than 25% of the total landscaped area or on steep slopes, irrigation system audits, and regular irrigation scheduling and maintenance practices.

Utilizing formulas developed by the General Manager, a Maximum Applied Water Allowance (MAWA) shall be calculated for each irrigated landscape area subject to the provisions of the proposed Ordinance. The MAWA may not be exceeded except when the use of potable water is supplemented by the use of gray water or harvested rain water.

The proposed Ordinance also establishes procedures by which compliance with the rules and regulations would be confirmed. A Landscape Documentation Package (including a landscape plan, irrigation plan, soil analysis and grading plan (if applicable)) must be approved by the General Manager of the SFPUC before a first construction permit can be issued by any city department.

The project applicant must submit a Certificate of Landscape Completion to the General Manager of the SFPUC once the new construction landscape project or rehabilitated landscape project is completed before approval or issuance of a temporary certificate of occupancy or landscape project completion authorization.

Water waste prevention provisions in the proposed Ordinance preclude runoff leaving the landscape area.

A project applicant or property owner would be required to retain the services of a certified landscape irrigation auditor. The project applicant or property owner would be required to implement whatever findings and recommendations are contained in the audit report to reduce irrigation water use and to bring the irrigation system into compliance with the applicable MAWA. A project applicant or property owner would be subject to enforcement action to correct violations of the provisions of the Ordinance and the implementing rules and regulations.

No adverse environmental effects are anticipated as a result of adoption of the proposed Ordinance and implementation of the proposed rules and regulations. On the contrary, adoption of the Ordinance and implementation of the proposed rules and regulations would result in net positive environmental effects related to aesthetics, air quality, biological resources, cultural resources, hydrology and water quality, and utilities and service systems.

New and rehabilitated landscapes would enhance the visual quality of the urban environment.

Plant material in landscaped areas would enhance air quality by collecting carbon dioxide while generating oxygen.

Biological resources would be conserved by providing new or rehabilitated landscape areas for bird and insect species. Rare plant and animal species housed in zoological gardens, botanical gardens or arboreta would be protected because they would not be subject to the water use restrictions of the provisions of the Ordinance.

Cultural resources would also be protected because landscapes integral to registered historic properties would be exempt from the water use limitations under the Ordinance. In addition, adverse effects to undiscovered cultural resources would be unlikely in new and rehabilitated landscapes because excavation or grading for installation of irrigation systems would be no greater than six inches or one foot below ground surface.

Hydrology and water quality would be enhanced by the reduction of wasteful surface watering that can add to the combined sewer collection system and would require treatment before the water is discharged to San Francisco Bay or the Pacific Ocean rather than infiltration and recharge of groundwater through efficient landscape irrigation practices.

Finally, efficient use of potable water for landscape irrigation or substitution of gray water or harvested rain water conserves potable water supplies for the highest and best uses while reducing demand on the Sierra and local watersheds.

The SFPUC has prepared and would adopt and implement Water Efficient Irrigation Rules and Regulations which would be applicable to the landscapes described above. The General Manager of the SFPUC in cooperation with the Department of Building Inspection would ensure compliance with the provisions of the proposed Rules and Regulations through the building permit application review process. New construction or rehabilitated landscape projects (or the building project to which the landscape project would be related) would be subject to the provisions of the proposed Ordinance. These projects would require separate environmental evaluations which would be conducted under the California Environmental Quality Act once the Ordinance and the Rules and Regulations become applicable.

CEQA State Guidelines Section 15308, or Class 8, (Actions by Regulatory Agencies for Protection of the Environment), provides an exemption from environmental review for actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment, where the regulatory process involves procedures for protection of the environment. Therefore, adoption and implementation of the proposed Water Efficient Irrigation Ordinance is from environmental review under Class 8.

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Contact Person: **Amanda Cox, Water Conservation Administrator** Telephone: (415) 934-5768

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Date of Determination:

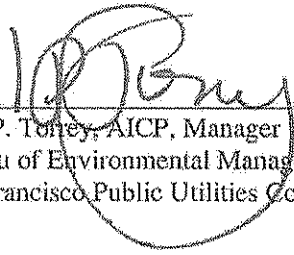
**May 12, 2010**

I do hereby certify that the above determination has been made pursuant to State and local requirements.

---

Date

cc: Bill Wycko, SF Planning Department, MEA, ERO  
Amanda Cox, SFPUC Water Enterprise  
Barry Pearl, SFPUC Bureau of Environmental Management  
John Roddy, Deputy City Attorney, Office of the City Attorney  
Sue Hestor, Esq.  
Exemption/Exclusion File

  
\_\_\_\_\_  
Irina P. Toney, AICP, Manager  
Bureau of Environmental Management  
San Francisco Public Utilities Commission

BOARD of SUPERVISORS



City Hall  
Dr. Carlton B. Goodlett Place, Room 244  
San Francisco 94102-4689  
Tel. No. 554-5184  
Fax No. 554-5163  
TDD/TTY No. 554-5227

## MEMORANDUM

TO: John Rahaim, Director  
Planning Department

FROM: Alisa Somera, Clerk, Land Use and Economic Development Committee  
Board of Supervisors

DATE: August 19, 2010

SUBJECT: LEGISLATION INTRODUCED

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On August 3, 2010, Mayor Newsom introduced the following legislation that has been assigned to the Land Use and Economic Development Committee. Pursuant to BOS Rules of Order 5.41, the Planning Department has 30 days to review and comment.

### File No. 101079

Ordinance amending the San Francisco Administrative Code by repealing Chapter 63 in its entirety and adding Chapter 63, requiring the development and maintenance of landscape irrigation controls for specified new construction landscapes and landscape rehabilitation projects.

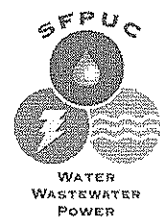
If you wish to submit any comments or reports please return this memorandum with your response to me at the Board of Supervisors, City Hall, Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102.

cc: Bill Wycko, Environmental Review Officer  
Nannie Turrell, Major Environmental Analysis  
Brett Bollinger, Major Environmental Analysis  
AnMarie Rodgers, Legislative Affairs  
Tara Sullivan, Legislative Affairs  
Kate Stacy, Deputy City Attorney

*Not a project per CEQA  
Guidelines Section  
15060(c)(2).  
Nannie Turrell  
August 19, 2010*

COMPLYING WITH  
**SAN FRANCISCO'S**  
WATER EFFICIENT IRRIGATION REQUIREMENTS

Issue Date: September 2010



## RESOURCES:

### RELATED DOCUMENTS

Available at:

[www.sfwater.org/landscapes](http://www.sfwater.org/landscapes)

- SFPUC Water Efficient Irrigation Ordinance\*
- Section F of the Rules and Regulations Governing Water Service to Customers\*
- SFPUC Low Water Use and Climate Appropriate Plant List\*
- San Francisco Master Plant List
- Examples of Maximum Applied Water Allowance (MAWA) Calculations
- Examples of Estimated Total Water Use (ETWU) Calculations
- Tier 1 application forms: project checklist, plant list, and certificate of completion\*
- Tier 2 application forms: project information sheet and certificate of completion\*

\* Printed reference copies of these materials

are available at SFPUC Customer Service

### SFPUC WATER CONSERVATION SECTION

For questions about the irrigation ordinance and other conservation services and assistance available to San Francisco residents and businesses, contact:

(415) 551-4730

[waterconservation@sfwater.org](mailto:waterconservation@sfwater.org)

[www.sfwater.org/landscapes](http://www.sfwater.org/landscapes)

### SFPUC CUSTOMER SERVICE

For printed reference copies of materials posted online, to pick up free conservation devices, or for help with accounts and billing visit:

1155 Market Street, 1st Floor,  
San Francisco, CA 94103

Open from 8am to 5pm, Monday to  
Friday, except public holidays

(415) 551-3000

### DEPARTMENT OF BUILDING INSPECTION

For questions about building permits, phone or visit online or in person:

1660 Mission Street, San Francisco,  
CA 94103

Open from 8am to 5pm, Monday to  
Friday, except public holidays

(415) 558-6088



### CONTACT INFORMATION

San Francisco Public Utilities Commission Water Conservation Section

[waterconservation@sfwater.org](mailto:waterconservation@sfwater.org)

(415) 551-4730

<http://conserve.sfwater.org>

## CONTENTS:

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## INTRODUCTION

Water is a scarce resource in California, and everyone who lives, works and visits our state can help use water wisely.

California has enacted a Water Conservation in Landscaping Act (Assembly Bill 1881), requiring all communities to adopt ordinances that regulate landscape irrigation practices and plant use. To meet this mandate, San Francisco is replacing its existing irrigation ordinance (Chapter 63 of the San Francisco Administration Code) and adopting a new **Water Efficient Irrigation Ordinance** and companion rules that will expand the water conservation requirements for outdoor water use. The new ordinance will become effective January 1, 2011, and will help us improve the City's green space and save water at the same time.

Common Name: African Daisy  
Botanical Name: *Osteospermum*  
Low Water Use



The photos in this Guide were taken at The Garden for the Environment, located in San Francisco on 7th Avenue at Lawton Street. The Garden, partially sponsored by the SFPUC, is a one-acre urban garden open to the public and also offers environmental education programs. To learn about their classes, please visit

[www.GardenForTheEnvironment.org](http://www.GardenForTheEnvironment.org)

Photos taken by Wanda Cheong



### San Francisco's Water Efficient Irrigation Ordinance will:

- Protect water resources and plant and animal habitats.
- Increase low water use and climate appropriate plantings.
- Reduce runoff and maximize water retention in soil and plantings.
- Lessen the impact of rising water costs on renters and homeowners alike.

### Goals of this guide:

This guide serves as an introduction to the Water Efficient Irrigation Ordinance and SFPUC companion rules and regulations; and helps San Francisco residents, property owners, and landscapers understand the benefits, requirements, and ways to comply with this ordinance.

For a complete list of all the rules and regulations necessary for compliance, please refer to Section F of the Rules and Regulations Governing Water Service to Customers. This document is also available online at [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes).

### Definition of Terms:

Definitions of selected *terms that are shown in blue* are listed in the glossary, which can be found on page 9.

## WHO NEEDS TO COMPLY?

The requirements apply to owners or tenants of **public agency, residential, commercial, and mixed use properties** with new construction landscape projects or rehabilitated landscape projects that include the following:

### Tier 1:

- A new or modified *landscape area* of 1,000 square feet, but less than 2,500 square feet; **and**
- *Turf* area that does not exceed 25% of the new or modified landscape area. Landscape projects exceeding the 25% turf limit are considered a Tier 2 landscape project.

### Tier 2:

- A new or modified landscape area of 2,500 square feet or greater; **or**
- Landscape projects that fall under the size criteria for Tier 1, but with a turf area exceeding 25% of the modified landscape area.

### Exemptions:

The ordinance does not apply to:

- Registered local, state or federal historical sites where the landscape is maintained as part of the historical integrity of the site
- Ecological restoration projects that do not require a permanent irrigation system
- Plant collections or animal habitat areas, as part of botanical gardens, zoological gardens, and arboretums that are open to the public

### When to comply?

Beginning January 1, 2011, all new landscape projects and all landscape rehabilitation projects that meet the criteria above will have to comply with Section F of the Rules and Regulations Governing Water Service to Customers.

## DO I NEED TO COMPLY?

**ARE YOU PLANNING TO:**

- Install a new landscape area?
- Modify your existing landscape area?

**NO** →

**This ordinance does not apply to you.**

We still encourage you to use low-water use plants.

**YES** ↓

**HOW BIG IS YOUR NEW OR MODIFIED LANDSCAPE AREA?**

**Less than 1,000 ft<sup>2</sup>**



**This ordinance does not apply to you.**

We still encourage you to use low-water use plants.

**Equal to or greater than 1,000 ft<sup>2</sup>, but less than 2,500 ft<sup>2</sup>**



**Comply with Tier 1 requirements**

See page 6, Self-Compliance.

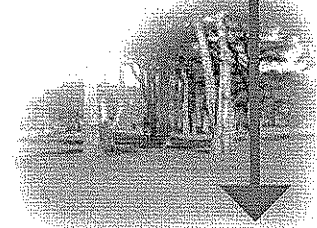
**Greater than 2,500 ft<sup>2</sup>**

**If turf area exceeds 25% of total landscape area.**

**Comply with Tier 2 requirements and use Landscape professionals**

See page 7.  
\* Projects over 5,000 square feet also must apply for a separate irrigation meter.

**a total area of 10 acres or greater**

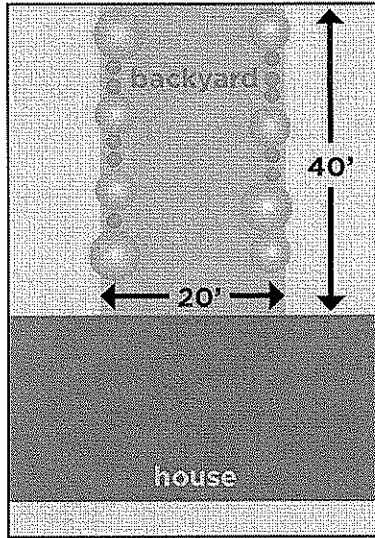


**Comply with Large Landscaping requirements**

Property owners maintaining a total irrigated landscape area of **10 acres or greater** may comply with Tier 1 or Tier 2 requirements (depending on the size of the individual landscape project), or they may request to comply pursuant to an approved *Compliance Plan*. See Page 10.

**EXAMPLE A**

Residents want to replace the turf in their backyard with low water use plants.



What is the square footage of the landscape area to be modified?

Using a measuring tape, they measured that their backyard is 20 feet wide and 40 feet long, so the total landscape area is:

Landscape area = 20' x 40' = 800 square feet.

**Conclusion:**

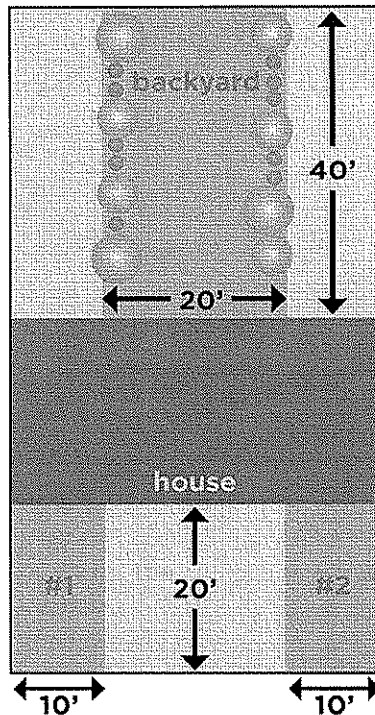
The total landscape area that they want to modify is less than 1,000 square feet, so their **project does not need to comply with the new ordinance.**

Water efficient landscape practices are still encouraged.

For more information visit [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes).

**EXAMPLE B**

A new house will be built with a front yard with 2 planted areas, and a backyard.



What is the total square footage of the new landscape area?

They measured the backyard and the 2 planted areas at the front using a measuring tape. These are their measurements:

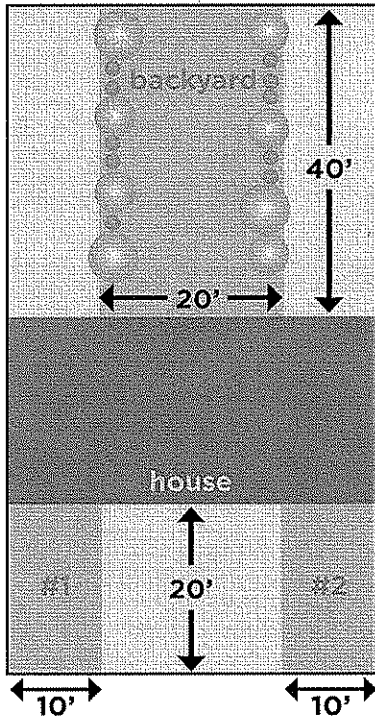
AREA	Width x Length	Square footage
Backyard	20' x 40'	800 ft <sup>2</sup>
Planted Area #1	10' x 20'	200 ft <sup>2</sup>
Planted Area #2	10' x 20'	200 ft <sup>2</sup>
<b>Total:</b>		<b>1,200 ft<sup>2</sup></b>

**Conclusion:**

The total new landscape area is over 1,000 square feet, so the **project must comply with Tier 1 requirements.** See page 6 for detailed Tier 1 requirements.

### EXAMPLE C

Owner wants to redesign the backyard with low water use plants and replace the front yard with turf grass, a high water use plant.



What is the total square footage of the new landscape area?

AREA	Width x Length	Square Footage
Backyard	20' x 40'	800 ft <sup>2</sup>
Planted Area #1	10' x 20'	200 ft <sup>2</sup>
Planted Area #2	10' x 20'	200 ft <sup>2</sup>
<b>Total:</b>		<b>1,200 ft<sup>2</sup></b>

What is the total percentage of turf?

$$\begin{aligned} \text{Turf \%} &= \text{turf area} / \text{total landscape area} \\ &= (200+200) / 1,200 \\ &= 33\% \end{aligned}$$

**Conclusion:**

The total new landscape area is over 1,000 square feet, and the total turf area is over 25% of the landscape area, so this **project must comply with Tier 2 requirements**. See page 7 for detailed Tier 2 requirements.



Common Name: Shasta Daisy  
 Botanical Name: *Chrysanthemum maximum*  
 Moderate water use



Common Name: Mexican Evening Primrose  
 Botanical Name: *Oenothera speciosa*  
 Low water use

## TIER 1 PROJECT COMPLIANCE

### Key Points:

- *Landscape area* of 1,000 square feet, but less than 2,500 square feet
- Simple checklist compliance
- Does not require a landscape professional

### Tier 1 Applicability:

The requirements apply to new construction landscape projects or rehabilitated landscape projects with the following attributes:

- A modified landscape area of 1,000 square feet, but less than 2,500 square feet; and
- Turf area does not exceed 25% of the modified landscape area. Landscape projects exceeding the 25 percent turf limit are considered a Tier 2 landscape project.

### Tier 1: How to Comply

All documents are available online at [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes), at the SFPUC Customer Service Office, or the Department of Building Inspection.

#### Submit the following *before* landscape installation\*:

1. Tier 1 project checklist
2. Tier 1 project plant list

#### Submit the following *after* installation:

1. Certificate of completion

\* For landscape projects installed as part of the construction or renovation of a building involving permits with the San Francisco Department of Building Inspection, the project's landscape compliance documents must be submitted by the *Landscape Documentation Deadline*.

### Requirements:

- Plant at least 75% of the landscape with climate appropriate or low water use plants. See [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes) for a list of climate appropriate and low water use plants.
- No invasive plant species and noxious weeds.
- Group plants with similar water needs within *hydrozones* and each hydrozone is controlled by a single irrigation valve.
- No *turf* on slopes greater than 25% or in areas that are less than eight feet wide, except limited circumstances allowed by law.
- Install automatic controllers that are equipped with rain sensors and use either evapotranspiration or soil moisture sensor data to adjust irrigation operation.
- Apply a minimum two inch (2") layer of mulch or stabilizing products on all exposed soil surfaces or planting areas to minimize evaporation, suppress weeds, moderate soil temperature, and prevent soil erosion on slopes.
- Use re-circulating *Water features* and, where available, use recycled water or harvested rain water.
- Do not exceed the *Maximum Applied Water Allowance (MAWA)* for irrigation use. Examples on how to calculate the MAWA can be found online at [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes).

### Note:

Tier 1 compliance does not require the services of a landscape professional.



Common Name: California Poppy  
Botanical Name: *Eschscholzia californica*  
Very Low Water Use

## TIER 2 PROJECT COMPLIANCE

### Key Points:

- Landscape area of 2,500 square feet or greater
- Landscape Documentation Package required
- Requires the services of a landscape professional

### Tier 2 Applicability:

The requirements apply to new construction landscape projects or rehabilitated landscape projects with the following attributes:

- A modified landscape area of 2,500 square feet or greater; or
- Landscape projects meeting the size criteria for Tier 1, but with a turf area exceeding 25% of the modified landscape area.

### Tier 2: How to Comply

All documents are available online at [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes), or at SFPUC Customer Service Office.

#### Submit the following *before* landscape installation\*:

1. Project information sheet
2. Landscape, irrigation, and grading plans
3. Soil management report
4. Water efficient landscape worksheet

#### Submit the following *after* installation:

1. Certificate of completion
2. Irrigation schedule
3. Landscape and irrigation maintenance schedule
4. Audit report completed by a SFPUC inspector or a certified private landscape irrigation auditor.

\* For landscape projects installed as part of the construction or renovation of a building involving permits with the San Francisco Department of Building Inspection, the project's landscape compliance documents must be submitted by the *Landscape Documentation Deadline*.

### Requirements:

- No invasive plant species and noxious weeds.
- Group plants with similar water needs within *hydrozones* and each hydrozone is controlled by a single irrigation valve.
- No *turf* on slopes greater than 25% or in areas that are less than eight feet wide, except limited circumstances allowed by law.
- Install automatic controllers that are equipped with rain sensors and use either evapotranspiration or soil moisture sensor data to adjust irrigation operation.
- Apply a minimum two inch (2") layer of mulch on all exposed soil surface or planting areas to minimize evaporation, suppress weeds, moderate soil temperature, and prevent soil erosion on slopes.
- Use re-circulating *Water features*, and use recycled water or harvested rain water if available.
- Keep *Estimated Total Water Use (ETWU)* for irrigation within the *Maximum Applied Water Allowance (MAWA)*. A landscape professional will calculate these for the project. Examples of ETWU and MAWA calculations can be found online at [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes).
- Use a landscape professional to develop and certify the landscape documentation.



Common Name: Feverfew  
Botanical Name: *Chrysanthemum parthenium*  
Low Water Use

## LARGE LANDSCAPE PROJECT COMPLIANCE

Landscape Area of 10 Acres of Greater  
 Property owners maintaining a total landscape area of 10 acres or greater may comply with Tier 1 or Tier 2 requirements (depending on the size of the individual landscape project), or they may request to comply pursuant to an approved *Compliance Plan* that lays out a systematic implementation of irrigation improvements. A Compliance Plan must be developed in coordination with SFPUC Conservation Section staff, and submitted by the deadline assigned following the initial request. Please contact SFPUC Conservation Section staff for more information.

### EXAMPLES OF LARGE LANDSCAPES IN SAN FRANCISCO

- Universities, colleges and schools
- Parks
- Golf Courses



Common Name: Astrobania  
 Botanical Name: *Astrobania aurea*  
 Moderate Water Use Plants

## GLOSSARY

**Estimated Total Water Use (ETWU):** the total water used for the landscape as estimated by a state mandated formula that accounts for the water use classification of the plants, local climate, and the square footage of the planted areas.

**First construction document:** the first building permit issued for a project or, in the case of a site permit, the first building permit addendum issued or other document that authorizes construction of the project. "First construction document" shall not include permits or addenda for demolition, grading, shoring, pile driving, or site preparation work.

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

**Landscape area:** all the planting areas, turf areas, and water features in a landscape design plan, including any adjacent planted areas in the public right-of-way for which the property owner is responsible. The landscape area does not include footprints of buildings or structures unless the footprints include planted areas such as green roofs. The landscape area also does not include 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 such as open spaces and existing native vegetation.

**Landscape documentation deadline:** the date by which Tier 1 or Tier 2 documentation must be submitted for approval by the General Manager. This date shall be not more than 100 days after the issuance of the first construction document.

**Landscape rehabilitation project:** includes any modifications to landscape areas over a 12 month period at a site that cumulatively exceeds 1,000 square feet. A landscape rehabilitation project or rehabilitated landscape does not include turf replacements on sports fields where the turf replaced provides a playing surface, routine weeding, brush removal where no new plant materials are installed, and seasonal planting in areas dedicated solely to edible plants.

**Low water use plants or climate appropriate plants:** plants, shrubs, groundcovers or tree species that have a water use ranking of "low" or "very low" as established in "Water Use Classification of Landscape Species" or other sources allowed by law. See a list of these plants at [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes).

**Maximum Applied Water Allowance (MAWA):** the amount of annual applied water established by the SFPUC for a landscaped area, using state mandated formulas and accounting for local climatic conditions, that serves as an upper limit for lawful water use for irrigating landscaped areas.

**Plant factor:** a factor that estimates the amount of water needed by plants. Plant factors shall be as established in the "Water Use Classification of Landscape Species" or other sources allowed by law. Plant factors can be found on the San Francisco Master Plant List, available online at [www.sfwater.org/landscapes](http://www.sfwater.org/landscapes).

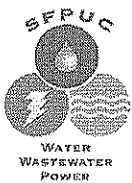
**Special Landscape Area (SLA):** an area of the landscape dedicated solely to edible plants, areas irrigated all or in part with gray water or harvested rain water, water features using only harvested rain water, and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface. SLAs are permitted a higher amount of irrigation water.

**Turf:** a ground cover surface of mowed grass, including but not limited to Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, Tall fescue, Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass.

**Water feature:** a design element where open water performs an aesthetic or recreational function. Water features include artificial ponds, lakes, waterfalls, and streams, and fountains, spas, and swimming pools. The surface area of water features is included in the high water use hydrozone of the landscape area.



COMPLYING WITH  
SAN FRANCISCO'S  
2010 WATER EFFICIENT IRRIGATION ORDINANCE



**CONTACT INFORMATION**

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