

# Water Efficient Irrigation Ordinance Tier 2 Landscape Application

New landscape projects greater than 500 square feet or modified projects greater than 2,500 square feet

| Project Information   |   |                  |                          |  |
|---|---|------------------|--------------------------|--|
| Applicant Name:   |   | Pho              | Phone:                   |  |
| Mailing Address:  |   | Ema              | Email:                   |  |
| Landscape Project Site Address:   |   |                  |                          |  |
| Have you previously submitted a Tier 1 or 2 application for   | Have you previously submitted a Tier 1 or 2 application for this project? ☐ Yes ☐ No SFPUC Account #: |                  |                          |  |
|   |   |                  |                          |  |
| Designee and/or Landscape Professional Information  |   |                  |                          |  |
| Designee Name (if different from applicant):  |   | Phone Number:    |                          |  |
| Mailing Address:  |   | Email:           |                          |  |
| Landscape Professional Name:  |   |                  |                          |  |
| Company:  |   | Phone Number:    |                          |  |
| Mailing Address:  |   | Email:           |                          |  |
| License or Certificate Name and Number:   |   | Expiration Date: |                          |  |
|   |   |                  |                          |  |
| Project Summary   |   |                  |                          |  |
| Landscape Project Type <sup>1</sup> :   | Γ   |                  |                          |  |
| otal Landscape Area (square feet): Turf Area (square  |   | feet):           |                          |  |
| Special Landscape Area (square feet) <sup>2</sup> : Water Feature Su  |   | face Are         | a (square feet):         |  |
| Will this project be irrigated with non-potable water (e.g., recycled water, rainwater, graywater)? ☐ Yes ☐ No  |   |                  | rwater)? ☐ Yes ☐ No      |  |
| Property Owner/Designee   |   |                  |                          |  |
| By typing or signing my name below I certify that the information provided in this application and all additional documentation is, to the best of my knowledge, accurate and complete. I understand that any changes to the planned project will require an additional application. Additionally, I understand in order to proceed with my Tier 2 project I must receive approval of this form and all additional documentation from the SFPUC. I agree to stay within the water budget (Maximum Applied Water Allowance) calculated above when irrigating this project's landscape. |   |                  |                          |  |
| Property Owner or Authorized Designee's Signature Date  |   | Date             |                          |  |
| Please provide the following documentation to complete your Tier 2 Application:   |   |                  |                          |  |
| ☐ Planting Plan ☐   | ☐ Grading Plan (if substantial grading)   |                  |                          |  |
| ☐ Irrigation Plan ☐   | Soil Managemen  | t Repor          | t (or copy of soil spec) |  |
| ☐ Water Use Calculations  |   |                  |                          |  |

## WATER USE CALCULATIONS

Please complete the table below for each hydrozone or valve of the irrigation system. If you have more than 15 hydrozones, please attach an additional page with the complete hydrozone information and a manual calculation of the project's Estimated Total Water Use (ETWU) and Maximum Applied Water Allowance (MAWA).

| Regular Landscape Areas                | S                    |                                   |   |                                |                |
|--|----------------------|-----------------------------------|---|--------------------------------|----------------|
| Hydrozone No. and Planting Description | Irrigation<br>Method | Plant Factor<br>(PF) <sup>3</sup> | Hydrozone Area (HA)<br>in ft <sup>2</sup> without SLA | Irrigation<br>Efficiency (IE)⁴ | (PF x HA) / IE |
| Ex. 1. Front lawn of residential home  | Spray                | 0.8                               | 200   | 0.75                           | 213            |
|  |                      |                                   |   |                                |                |
|  |                      |                                   |   |                                |                |
|  |                      |                                   |   |                                |                |
|  |                      |                                   |   |                                |                |
|  |                      |                                   |   |                                |                |
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|  |                      |                                   |   |                                |                |
|  |                      |                                   |   |                                |                |
|  |                      |                                   |   |                                |                |
|  |                      |                                   |   |                                |                |
|  |                      |                                   |   | Total                          |                |

| Special Landscape Areas (if any)   |                |  |
|------------------------------------|----------------|--|
| Special Landscape Area Description | Landscape Area |  |
|                                    |                |  |
|                                    |                |  |
| Total                              |                |  |

# **COMPARISON OF ETWU AND MAWA**

| Estimated Total Water Use (ETWU) <sup>5</sup> | Maximum Applied Water Allowance (MAWA) <sup>6</sup> |  |
|---|---|--|
| _   | <u></u>   |  |
| gallons per year                              | gallons per year                                    |  |

In order to be in compliance with the Water Efficient Irrigation Ordinance, the project's ETWU must be less than or equal to the project's MAWA.

Your Tier 2 Application Package is **not complete** until the necessary documentation has been received (see bottom of page 1). After your project is approved by the SFPUC and the landscape project is installed, a <u>Certificate of Completion</u> is required to verify compliance with the ordinance.

## **DEFINITIONS**

- Landscape Project Type is divided into residential and non-residential projects. Residential landscape means landscapes surrounding single or multi-family homes. Non-residential landscape means landscapes in commercial, institutional, industrial, mixed use, and public settings that may have areas designated for recreation or public assembly.
- Special Landscape Area (SLA) an area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated all or in part with graywater or harvested rainwater, water features using only rainwater, areas irrigated with recycled water, or water features using recycled water.
- Plant Factor is a factor, when multiplied by ETo, estimates the amount of water needed by plants. The plant factor used in the Hydrozone Table shall be from the <u>San Francisco Plant Water Use List</u>, WUCOLS, or other sources allowed by the SFPUC. Plant factors (PF) shall be classified as follows:

| Plant Factor | Water Use Ranking        |
|--------------|--------------------------|
| 0.1          | Very Low Water Use (VLW) |
| 0.1 - 0.3    | Low Water Use (LW)       |
| 0.4 - 0.6    | Moderate Water Use (MW)  |
| 0.7 - 0.9    | High Water Use (HW)      |

- Cool season turf shall use a plant factor of 0.9 and warm season turf shall use a plant factor of 0.7.
- Hydrozones that mix water use rankings (i.e. low water use and moderate water use) shall use the higher plant factor.
- All water feature surface area shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone.
- <sup>4</sup> **Irrigation Efficiency (IE)** measurement of the amount of water beneficially used divided by the amount of water applied. Use the following irrigation efficiencies as appropriate for each hydrozone:

| Irrigation Method                         | Irrigation Efficiency |
|---|-----------------------|
| Drip System                               | 0.81                  |
| Overhead Spray Devices (including rotors) | 0.75                  |

Estimated Total Water Use (ETWU) – the total amount of water used for the landscape. ETWU shall not exceed the Maximum Applied Water Allowance. The project's ETWU will be calculated based on the information you provide in the Hydrozone Table and using the following formula:

$$ETWU = 35.1 \times 0.62 \times [((PF \times HA)/IE) + SLA]$$

Maximum Applied Water Allowance (MAWA) – the upper limit of annual applied water for the established landscape area. The project's MAWA will be calculated based on the information you provide using the following formula:

$$MAWA = 35.1 \times 0.62 \times [(ETAF \times LA) + ((1-ETAF) \times SLA)]$$

#### Where:

35.1 = The Reference Evapotranspiration (ETo) for San Francisco in inches per year

0.62 = Conversion Factor (to gallons per square foot)

ETAF = Evapotranspiration Adjustment Factor (ETAF), 0.55 for residential and 0.45 for non-residential areas

Note: you must select a Landscape Project Type, see page 1 under Project Summary

LA = Total landscape area including Special Landscape Area in square feet

SLA = Special Landscape Area (SLA) in square feet

### **CONTACT US**

For additional questions on completing your application, please email <a href="mailto:landscape@sfwater.org">landscape@sfwater.org</a> or call (415) 551-4730. More information about San Francisco's Water Efficient Irrigation Ordinance requirements can be found at <a href="https://www.sfwater.org/landscape">www.sfwater.org/landscape</a>