

**EFFECTIVE DATE
OF ORDINANCE**

February 5, 2009

ORDINANCE NO. 2316 N.C.S.

1 Introduced by

Seconded by

2
3
4 Tiffany Renée

Teresa Barrett

5
6
7 **AN ORDINANCE OF THE COUNCIL OF THE CITY OF PETALUMA REPEALING SECTIONS 15.12.071,**
8 **15.12.072, 15.12.073, 15.12.074, 15.12.075, 15, 12.076, 15.12.077 AND 15.12.078 OF CHAPTER 15.12**
9 **AND ADDING CHAPTER 15.17, WATER CONSERVATION REGULATIONS, TO THE**
10 **PETALUMA MUNICIPAL CODE**

11 **WHEREAS**, in 1928 the California Legislature mandated, under the State's constitution,
12 that water will not be wasted but put to reasonable and beneficial uses setting the foundation
13 for future water conservation regulations and programs; and,

14
15 **WHEREAS**, in 1983 the California Legislature passed the Urban Water Management
16 Planning Act acknowledging the importance of water conservation and demand management
17 as essential components of water planning; and,

18
19 **WHEREAS**, the City of Petaluma recognizes that water is an essential and limited resource;
20 and,

21
22 **WHEREAS**, the City of Petaluma has historically undertaken a proactive water
23 conservation program to improve the water use efficiency of its customers; and,

24
25 **WHEREAS**, the City of Petaluma jump-started its water conservation program in October
26 1999 by supplying 1000 ultra low flush residential toilets; and,

27
28 **WHEREAS**, as a signatory to the Memorandum of Understanding Regarding Urban Water
29 Conservation in California as coordinated by the California Urban Water Conservation Council
30 ("CUWCC") since January 1, 2002, the City has continued to incorporate Best Management
31 Practices ("BMP") for efficient water use; and,

32
33 **WHEREAS**, the City of Petaluma General Plan 2025 ("General Plan"), in its Water Demand
34 and Supply Analysis, identifies water conservation as an essential source of water supply to meet
35 potable water demand in the City through 2025; and,

36
37 **WHEREAS**, General Plan Policy 8-P-18, programs A, B, C, D and F call for the reduction of
38 potable water demand through conservation, using BMP, implementation of the City's Water
39 Drought Contingency Plan as needed and revising local ordinances as needed to encourage or
40 require use of water-efficient landscaping and elimination of wasteful uses of water; and,
41
42

1 **WHEREAS**, the Environmental Impact Report ("EIR") prepared for the General Plan relied
2 on increased water conservation to provide potable water offset as part of its evaluation that
3 there would be an adequate water supply in the City to serve General Plan buildout; and,
4

5 **WHEREAS**, after public review and comment, and in full compliance with the California
6 Environmental Quality Act ("CEQA"), on April 7, 2008, the City Council certified the General Plan
7 EIR by adopting Resolution No. 2008-058 N.C.S.; and,
8

9 **WHEREAS**, on May 19, 2008, the City Council adopted Resolution No. 2008-084 N.C.S.
10 making required findings of fact as to the environmental impacts of the General Plan, finding in
11 part that because of the water conservation and water recycling programs contained in the
12 General Plan, its environmental impact on water supply was less than significant under CEQA;
13 and,
14

15 **WHEREAS**, after the completion of all required environmental review and other public
16 process, the General Plan was adopted by City Council Resolution No. 2008-085 N.C.S. on May
17 19, 2008; and,
18

19 **WHEREAS**, on September 19, 2005, the City Council authorized the City Manager to
20 execute a professional services agreement with Dodson Engineers for engineering services in
21 support of preparation of a Water Conservation Plan; and,
22

23 **WHEREAS**, to develop the Water Conservation Plan, a project team was selected based
24 on their unique skills and expertise in the field of water conservation; the project team consisted
25 of City staff from the Department of Water Resources and Conservation, Department of
26 Community Development, and Department of Parks and Recreation; landscape and irrigation
27 experts, water conservation experts, financial consultant, and internationally acclaimed
28 consultants such as Bill Maddaus (Maddaus Water Management) and Ned Orrett (Resource
29 Performance Partners) and Dodson-Psomas Engineers with extensive knowledge of the City's
30 demand and supply needs. Together, this team has over 180 years of experience in the area of
31 water conservation; and,
32

33 **WHEREAS**, the Water Conservation Plan team met first on November 14, 2005 to begin
34 the development of the Water Conservation Plan. The team met numerous times over the next
35 two year period with the final team meeting occurring on January 25, 2007. Over this period the
36 team analyzed 202 potential water conservation programs using a highly sophisticated
37 computer model known as Least Cost Planning Decision Support System (DSS). Through this
38 process, the team was able to develop a recommended program that met the water
39 conservation plan goal of saving approximately 495 million gallons per year of potable water at
40 buildout of the City's general plan (2025) by implementing 19 water conservation programs;
41 and,
42

43 **WHEREAS**, on September 10, 2006 the City Council considered a draft Water
44 Conservation Plan ("WCP") and provided Department of Water Resources and Conservation
45 ("WRC") staff with direction for further modification; and,
46

47 **WHEREAS**, on January 28, 2008, the City Council adopted Resolution No. 2008-021 N.C.S.,
48 approving the WCP; and,
49

50 **WHEREAS**, adoption of a mandatory Water Conservation Ordinance with development
51 standards, landscape water efficiency standards and water waste prohibitions will carry out
52 General Plan policy, provide careful stewardship of water resources available to the City to

1 provide for orderly application of water conservation measures; and will have the positive
2 impact of creating substantial water savings; and.

3
4 **WHEREAS**, the City Council finds that adoption of this ordinance is exempt from CEQA
5 pursuant to Section 15061 (b)(3) of the CEQA Guidelines (Title 14, Chapter 3 of the California
6 Code of Regulations) because there is no possibility that the activity may have a significant
7 effect on the environment under CEQA.

8
9 **NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF PETALUMA AS**
10 **FOLLOWS:**

11
12 **Section 1. Findings.**

13
14 The foregoing recitals are true and adopted as findings of the City Council.

15
16 **Section 2. Repeal of Sections 15.12.071, 15.12.072, 15.12.073, 15.12.074, 15.12.075, 15.12.076,**
17 **15.12.077 and 15.12.078.**

18
19 Sections 15.12.071, 15.12.072, 15.12.073, 15.12.074, 15.12.075, 15.12.076, 15.12.077 and 15.12.078
20 of the Petaluma Municipal Code are hereby repealed in their entirety.

21
22 **Section 3. Addition of Chapter 15.17 to Title 15.**

23
24 Chapter 15.17, Water Conservation Regulations, is hereby added to Title 15 of the Petaluma
25 Municipal Code to read in full as follows:

26
27 **Chapter 15.17 Water Conservation Regulations**

28
29 15.17.010 Title and Purpose

30
31 This chapter shall be known as and may be cited as the "City of Petaluma Water Conservation
32 Regulations Ordinance." The purpose of this ordinance is to promote the efficient use and reuse
33 of water by all City of Petaluma water service customers by requiring that all new construction
34 projects and existing customers use water as efficiently as possible and comply with new
35 development standards, landscape water use efficiency standards and water waste prohibition
36 regulations.

37
38 15.17.020 Definitions

39
40 Unless a provision in this Chapter specifies otherwise, the following terms and phrases, as used in
41 these chapters, shall have the meanings hereinafter designated:

- 42
43 A. "Applicant" means the owner(s) of a property subject to compliance with this
44 Ordinance or his or her authorized representative or agent.
45
46 B. "Authorized representative" or "Agent" – any person(s) with written authorization from
47 the property owner to sign documents and bind the property owner to compliance with
48 this Chapter.
49
50 C. "Check valve" means a valve installed in a lateral line or at individual sprinkler heads in
51 an irrigation system that prevents water from draining out of the irrigation system after the
52 system has been turned off.

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- D. "City" means the City of Petaluma. The City Council of Petaluma may designate the position(s) or person(s) to whom responsibilities and authority of the City are delegated and may from time to time modify such delegations. Absent any further specific delegation by the City Council, the authority and responsibility set forth in this chapter shall be delegated to the director of water resources and conservation, including his or her designee(s).
- E. "Dwelling unit" means a room or group of internally connected rooms that have sleeping, cooking, eating and sanitation facilities, but not more than one kitchen, which constitutes an independent housekeeping unit, occupied or intended for one household on a long-term basis, or such other definition as may be subsequently adopted by the City as part of its zoning ordinance and/or development code.
- F. "ET Controller" or "Smart Controller" means an irrigation system controller or timer that automatically adjusts irrigation run times and run days based on data received from local weather stations. ET stands for evapotranspiration which is the amount of water that has evaporated from the soil and has transpired through the plant.
- G. "Head-to-head coverage" means coverage resulting from placement of irrigation sprinklers so that the water from one sprinkler throws all the way to adjacent sprinklers.
- H. "Hardscaped area" means the inanimate elements of landscaping, especially any masonry work or woodwork, stone walls, concrete or brick patios, tile paths, wooden decks and wooden arbors.
- I. "Hydrozone" means a group of plants that have the same or similar water use requirements.
- J. "Irrigation season" means the time of year when irrigation first begins at a location and last occurs. The irrigation season in Petaluma is typically March/April through October/November.
- K. "Irrigation lateral line" means any point in an irrigation valve circuit that is normally not under constant water pressure. This is normally any point downstream from the irrigation remote control valve or hose bib.
- L. "Irrigation mainline" means any point in the irrigation system that is under constant water pressure. This is normally any point downstream of the water meter up to and including the irrigation remote control valve or hose bib.
- M. "Master valve" means an irrigation remote control valve that is placed upstream of all other remote control valves and activates and deactivates in conjunction with each subsequent irrigation remote control valve on the irrigation system. The purpose of the master valve is to prevent water waste by acting as a separate automatic shutoff valve should any of the subsequent irrigation remote control valves inadvertently stay open.
- N. "Operating pressure" means the pressure in part of a plumbing or irrigation system, when the system is in normal operation.

- 1 O. "Overspray" means any water from an irrigation system that lands on an area not
2 intended to be irrigated by the activated valve circuit.
- 3
- 4 P. "Precipitation rates" means the amount of water applied by an irrigation emission device
5 measured in inches per hour.
- 6
- 7 Q. "Reference evapotranspiration" means the evapotranspiration, or amount of water that
8 evaporates from the soil and transpires through plant material, that occurs from a
9 standardized "reference" crop such as clipped grass or alfalfa.
- 10
- 11 R. "Reverse osmosis" means a process by which a solvent such as water is purified of solutes
12 by being forced through a semipermeable membrane through which the solvent, but
13 not the solutes, may pass.
- 14
- 15 S. "Runoff" means any water from an irrigation system that escapes from an irrigated area
16 onto an area not intended to be irrigated by an activated irrigation valve circuit due to
17 the excessive application of water.
- 18
- 19 T. "State" means the state of California.
- 20
- 21 U. "Static water pressure" means the water pressure of a plumbing or irrigation system while
22 the system is not in operation or while no water is moving through the system.
- 23
- 24 V. "Irrigation valve circuit" means a group of sprinklers that are all turned on and off by the
25 same irrigation valve.
- 26
- 27 W. "Water factor" means the quotient of the total weighted per-cycle water consumption
28 divided by the capacity of the clothes washer. The lower the value, the more water
29 efficient the clothes washer is.
- 30
- 31 X. "Water Feature" means any decorative water fountain, pond or other device intended
32 to use water for aesthetic purposes that uses an automatic pump to circulate water.
- 33
- 34 Y. "Wetted diameter" means the area that is wetted by a single sprinkler device and by a
35 series of overlapping sprinkler devices.

36
37 15.17.030 - Development Standards

38
39 The development standards established in this section apply to all new commercial, industrial,
40 institutional, agricultural, single-family and multi-family residential construction, including tenant
41 improvements or a change in use requiring any City entitlement or permit for existing
42 commercial, industrial and institutional accounts. The development standards are intended to
43 ensure that all installed water using fixtures, appliances, irrigation systems, and any other water
44 using devices apply water as efficiently as possible.

45
46 15.17.030.10 Indoor Water Use Development Standards-New Single Family Residential
47 Construction

48
49 Any water using device installed in any new development shall meet the standards of the
50 California Plumbing Code (Part 5, Title 24, California Code of Regulations), and the following:
51
52

1 15.17.030.20 Standards for New Single-Family Residential Construction

- 2
- 3 1. Water closets must be an approved High Efficiency Toilet (HET) as designated on the
- 4 City's list of qualifying HET's.
- 5
- 6 2. Shower heads must not use more than 2 gallons per minute. Where more than one
- 7 showerhead exits in a shower unit, each showerhead must be plumbed so that each
- 8 showerhead can be turned on and off independently from each other.
- 9
- 10 3. Any clothes washing machine provided with the residence must have a water factor of 6
- 11 or lower.
- 12
- 13 4. Lavatory and/or bar faucets must not exceed 1.5 gallons per minute.
- 14
- 15 5. Kitchen and/or utility sink faucets must not exceed 2.2 gallons per minute.
- 16
- 17 6. All Dishwashers must have the EPA's Energy Star label.
- 18

19 15.17.030.30 Standards for New Multi-Family Residential Dwellings

- 20
- 21 1. Water closets must be an approved High Efficiency Toilet (HET) as designated on the
- 22 City's list of qualifying HET's.
- 23
- 24 2. Shower heads must not use more than 2 gallons per minute. Where more than one
- 25 showerhead exits in a shower unit, each showerhead must be plumbed so that each
- 26 showerhead can be turned on and off independently from each other.
- 27
- 28 3. Any clothes washing machine installed on the premises must have a water factor of 6 or
- 29 lower.
- 30
- 31 4. Lavatory and/or bar faucets must not exceed 1.5 gallons per minute.
- 32
- 33 5. Kitchen and/or utility sink faucets must not exceed 2.2 gallons per minute.
- 34
- 35 6. All Dishwashers must have the EPA's Energy Star label.
- 36
- 37 7. Each dwelling unit must be separately metered or sub-metered.
- 38

39 15.17.030.40 Standards for New Commercial, Industrial, or Institutional (CII) Accounts and Tenant

40 Improvements or Change of Use Requiring Any City Entitlement or Permit for Existing CII Accounts

- 41
- 42 1. Water closets and/or urinals must be an approved High Efficiency Toilet (HET) as
- 43 designated on the City's list of qualifying CII HET's,
- 44
- 45 2. Shower heads must not use more than 2 gallons per minute. Where more than one
- 46 showerhead exits in a shower unit, each showerhead must be plumbed so that each
- 47 showerhead can be turned on and off independently from each other.
- 48
- 49 3. Commercial clothes washing machines shall have a water factor of 4.5 or lower.
- 50
- 51

- 1 4. Lavatory faucets must be self-closing and not exceed 1.5 gallons per minute. All faucets
2 must be equipped with an aeration device.
- 3
- 4 5. Kitchen and/or utility sink faucets must not exceed 2.2 gallons per minute. All faucets
5 must be equipped with an aeration device.
- 6
- 7 6. Dishwashers must have the EPA's Energy Star and/or Water Sense designation and must
8 recycle the final rinse into the next wash cycle.
- 9
- 10 7. Pre-rinse hand-held dish-rinsing wands must not exceed 1.6 gpm and must utilize positive
11 shut-off valves.
- 12
- 13 8. Cooling Towers (see Section 15.48.070 of this code, Sewer Use and Source Control
14 Regulations).
- 15
- 16 9. Ice makers must be air-cooled.
- 17
- 18 10. Any other water using apparatus not mentioned above must use or reuse water as
19 efficiently as possible and must be approved by the City prior to installation.
- 20

21 15.17.040 Standards for New or Renovated Vehicle Wash Facilities.

- 22
- 23 A. Vehicle wash facilities using conveyORIZED, touchless, and / or rollover in-bay technology
24 shall reuse a minimum of fifty percent of water from previous vehicle rinses in subsequent
25 washes.
- 26
- 27 B. Vehicle wash facilities using reverse osmosis to produce water rinse with a lower mineral
28 content shall incorporate the unused concentrate in subsequent vehicle washes.
- 29
- 30 C. Self-service spray wands shall emit no more than three (3) gallons of water per minute.
- 31

32 15.17.050 Landscape Water Use Efficiency Standards

33

34 15.17.050.10 Properties Excluded from Applicability

35

36 The landscape water use efficiency standards described herein do not apply to registered
37 historical sites (if the landscape is a part of the historic designation), properties irrigating with
38 private well water, properties irrigated with recycled water or for zoned agricultural cultivation.
39 Owners of these excluded properties are encouraged to implement efficient landscape water
40 use practices.

41

42 15.17.050.20 Landscape Water Use Efficiency Standards for all New Single Family Residential
43 ("SFR") and Multi-Family ("MFR") Residential, Commercial, Industrial and Institutional (CII)
44 Landscape Installations

45

46 This subsection applies to all new residential and CII landscape installation projects and to CII
47 and MFR projects which propose renovation of 5,000 square feet or more of existing landscaping
48 within one twelve month period.

1 A. Application Process

2
3 Prior to installation of the proposed landscape and/or irrigation project the applicant
4 shall submit to the City a set of scaled landscape and irrigation plans which shall include
5 but not be limited to:

- 6
7 a. A planting plan indicating: location and square footages of turf, high water use
8 plants and low water use plants per water meter; existing plant names and
9 locations; a plant legend indicating Latin and common names of new plants,
10 and sizes and quantities of new plants; hardscaped areas and; swimming pools,
11 spas and water features.
12
13 b. An irrigation plan shall be submitted where irrigation hardware other than drip
14 irrigation will be installed. When only drip irrigation will be installed an irrigation
15 plan is not required for submittal. A description of the drip irrigation components
16 shall be sufficient. The description shall include: manufacturer, name and
17 specifications of all drip irrigation components; gallons per hour (gph) per
18 emission device; and number, type, and gph of emission devices per plant size.
19 Where microspray emission devices will be used, the rated gph shall be noted and
20 the area(s) being irrigated under microspray shall be described. A pressure
21 reducing valve must be installed where the operating pressure will exceed the
22 manufacturer's recommendation of any drip irrigation emission device.

23
24 Where any non-drip irrigation hardware is used an irrigation plan shall be
25 submitted indicating: type(s) and size(s) of irrigation pipe; location, quantity and
26 type of irrigation emission device(s) with manufacturer name and rated
27 specifications of gallons per minute (gpm) of each device; manufacturer's
28 recommended operating pressure in pounds per square inch (psi) and
29 precipitation rates for each device; location and type of backflow prevention
30 device and pressure reducing valve(s); valve type(s) and size(s); valve location(s);
31 gallons per minute and valve circuit number for each valve circuit, and;
32 manufacturer's name and type of automatic irrigation controller(s). When more
33 than one water meter exists for a particular landscape, each meter shall be
34 designated and labeled as M-1, M-2, M-3, etc and noted on the irrigation plan.
35 The meter number must be labeled with each valve number when more than
36 one meter exists.

- 37
38 c. A grading and drainage plan indicating site elevations.

39
40 B. Plan Review and Landscape Water Budget Assignment

41
42 The City, or its agent, will review the submitted set of plans to ensure compliance of the
43 landscape and irrigation standards. For accounts with dedicated irrigation meters, the
44 City will assign a landscape water budget to the project in order to monitor landscape
45 water use and to help determine the amount of water that should be applied to the
46 landscape. The landscape water budget will allocate a determined amount of water to
47 be dedicated to the landscape. The water budget will act as a guide for customers to
48 use to irrigate their landscape. It will also provide a benchmark for evaluating water use
49 efficiency. Any multi-family residential or CII customer who exceeds their water budget
50 by 20% will be in violation of this ordinance and will be subject to enforcement. The
51 landscape water use budget will be implemented upon final project approval.
52

1 C. Landscape Water Use Efficiency Standards

- 2
- 3 a. A dedicated irrigation meter(s) must be installed for all CII and multi-family
- 4 residential projects. The dedicated irrigation meter shall separate all outdoor
- 5 irrigation water use from all other water use.
- 6
- 7 b. Pressure regulation is required where site static water pressure will exceed 80
- 8 pounds per square inch (psi).
- 9
- 10 c. Backflow Prevention devices must be installed where required by state and local
- 11 codes.
- 12
- 13 d. A master valve shall be installed after the backflow prevention device and
- 14 before all irrigation system valves.
- 15
- 16 e. Soils in landscaped areas must be amended to promote optimal plant health
- 17 and maximum water infiltration.
- 18
- 19 f. The use of California native plants is highly encouraged.
- 20
- 21 g. Plant water use classifications will be determined using the Water Use
- 22 Classification of Landscape Species (WUCOLS) rating system.
- 23
- 24 h. Irrigation systems shall be designed and installed to maximize efficiency during
- 25 operation. System design shall include but not be limited to:
- 26
- 27 1) All overhead spray irrigation systems other than drip irrigation applications
- 28 shall be a brake rotary type and be a multi-stream, multi-trajectory
- 29 rotating stream sprinkler with matched precipitation rates. The sprinkler
- 30 shall produce and maintain a matched precipitation rate no greater than
- 31 0.6" per hour throughout the arc adjustment range and radius adjustment
- 32 range, (up to 25% of radius reduction), when spaced at 50% of wetted
- 33 diameter. For applications where the radius is designed to exceed thirty
- 34 feet, water conserving rotor type sprinkler heads shall be permitted.
- 35
- 36 2) Individual hydrozones must be irrigated by separate valve circuits.
- 37
- 38 3) Irrigation systems must be designed and installed to prevent run off and
- 39 overspray.
- 40
- 41 4) Check valves must be installed to prevent low head drainage.
- 42
- 43 5) Head-to-head coverage is required for all turf areas.
- 44
- 45
- 46 i. Turf and High Water Use Plant Restrictions:
- 47
- 48 1) Turf and high water use plants shall occupy no more than a combined
- 49 20% of the total irrigated landscaped area.
- 50
- 51 2) Turf areas shall not be less than 8 feet wide.
- 52

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2 3) Turf is not permissible on slopes greater than 10%.

- 3
4 j. All automatic irrigation controllers must be labeled as ET Controllers or Smart
5 Controllers or otherwise have the ability to automatically adjust irrigation start-
6 times, run-times and/or run days based on local or site specific soil moisture levels,
7 weather and/or reference evapotranspiration data. These controllers or devices
8 must be labeled by the Irrigation Association (IA) as a Smart Water Applications
9 Technology (SWAT) and must have passed the SWAT testing protocols by 100
10 percent in all testing parameters.
11
12 k. A minimum 3 inch layer of porous mulch is required for all irrigated areas other
13 than turf, ground cover, or annual color areas.
14
15 l. Rain shut-off devices shall be installed on any controller not equipped to halt
16 irrigation during and after rain as appropriate.
17
18 m. All water features must utilize recirculating water.

19
20 15.17.050.30 Landscape Water Use Efficiency Standards for Renovated Commercial, Industrial
21 and Institutional (CII) and Multi Family Residential (MFR) Landscape Projects

22
23 A. Applicability

24
25 This section applies to all CII and MFR landscape renovation projects. Renovated
26 landscape construction shall be defined as any landscape project considered for
27 installation where more than 1,000 square feet and up to 5,000 square feet of the existing
28 landscaping will be renovated. CII/MFR landscape renovation projects where more than
29 5,000 square feet of existing landscaping proposed for renovation within a twelve month
30 period must comply with the standards established in Section 15.17.050.20.

31
32 B. Application Process

33
34 1. CII/MFR Landscape Renovation Project Description Form

35 Prior to the demolition and installation of the proposed landscape renovation
36 project, the applicant shall submit to the City the CII/MFR Renovation Project
37 Description form describing the renovation project including square footages of
38 existing landscaping to be renovated and square footages of new landscaping to
39 be installed.

40
41 The City, or its agent, will review the submitted form to ensure compliance of the
42 below listed standards. Once the form is reviewed and approved, the City will submit
43 to the applicant an authorization to proceed with the landscape and/or irrigation
44 renovation project.

45
46 C. Landscape Water Use Efficiency Standards

- 47
48 a: All landscape and/or irrigation systems shall be installed so as not to violate the
49 City's Water Waste Policy.
50
51 1) The City encourages the installation of a dedicated irrigation meter(s) or
52 sub-meter during the renovation process.

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- b. The use of California native plants is highly encouraged.
- c. Irrigation systems shall be designed and installed to ensure the efficient use of water during operation. System design shall include but not be limited to:
 - 1) All overhead spray irrigation systems other than drip irrigation applications shall be a brake rotary type and be a multi-stream, multi-trajectory rotating stream sprinkler with matched precipitation rates. The sprinkler shall produce and maintain a matched precipitation rate no greater than 0.6" per hour throughout the arc adjustment range and radius adjustment range, (up to 25% of radius reduction), when spaced at 50% of wetted diameter. Operating pressure of each sprinkler head shall be at the manufacturer's recommendation for optimal performance. For applications where the radius is designed to exceed thirty feet, water conserving rotor type sprinkler heads shall be permitted.
 - 2) Individual hydrozones must be irrigated by separate valve circuits.
 - 3) Irrigation systems must be designed to prevent run off and overspray.
 - 4) Check valves must be installed to prevent low head drainage.
 - 5) Head-to-head coverage is required for all turf areas.
- d. Turf and High Water Use Plant Restrictions:
 - 1) Turf and high water use plants shall occupy no more than a combined 20% of the total renovated landscaped area.
 - 2) Turf areas shall not be less than 8 feet wide.
 - 3) Turf is not permissible on slopes greater than 10%.
- e. All automatic irrigation controllers must be labeled as ET Controllers or Smart Controllers or otherwise have the ability to automatically adjust irrigation start-times, run-times and/or run days based on local or site specific moisture levels, weather and/or reference evapotranspiration data. These controllers or devices must be labeled by the Irrigation Association (IA) as a Smart Water Applications Technology (SWAT) and must have passed the SWAT testing protocols by 100 percent in all testing parameters.
- f. Rain shut-off devices shall be installed on any controller not equipped to halt irrigation during and after rain as appropriate.
- g. A minimum 3 inch layer of porous mulch is required for all irrigated areas other than turf, ground cover, or annual color areas.
- h. All water features must utilize recirculating water.

1 15.17.050.40.Landscape Water Use Efficiency Standards for New and/or Renovated
2 Parks/Playgrounds, Golf Courses, School Grounds, Cemeteries and Sports Fields.

3
4 A. Applicability and Landscape Water Use Efficiency Standards

5
6 The standards established in Sections 15.17.50.20 or 15.17.50.30 apply with the following
7 exceptions:

- 8
9 a. Turf-area limits will be waived for parks, playgrounds, golf courses, sports fields and school
10 grounds if it is demonstrated by the applicant to the City's Department of Water
11 Resources and Conservation that the new/renovated turf area is designed for
12 recreational purposes.
13
14 b. Renovated cemeteries must demonstrate that new turf or renovated turf will be used for
15 foot traffic or vehicular traffic for cemetery plot access.
16

17 15.17.060 Water Budgets for New and Existing Dedicated Irrigation Accounts

18
19 The City shall provide any account with a dedicated irrigation meter(s) a landscape water
20 budget. The water budget will be calculated by the City or its agent by measuring the total
21 irrigated landscaped area and the plant type(s) that exist per water meter. Any account
22 assigned a water budget may not exceed the water budget for that billing period by more than
23 20% during that billing period. Accounts that exceed their water budget by more than 20% will
24 be notified by the City. The City will work with the property owner or its authorized representative
25 to ensure corrective actions are taken. Exceeding an account's water budget by more than
26 20% more than two times in one twelve month period and/or failure to cooperate with the City
27 in taking corrective action after notification by the City of specific action(s) to be taken shall
28 constitute a violation of this chapter.
29

30 15.17.070 Water Waste Prohibition

31
32 The purpose this section is to promote water conservation and efficient use of potable water
33 furnished by the City of Petaluma, by eliminating nonessential water use and intentional or
34 unintentional water waste when a reasonable alternative solution is available and by prohibiting
35 the use of water equipment that is wasteful.
36

37 15.17.070.10 Nonessential Uses Defined and Prohibited.

38
39 No customer of the City shall use or permit the use of potable water from the City for residential,
40 commercial, institutional, industrial, agricultural, or other purpose for the following nonessential
41 uses:
42

- 43 1. The washing of sidewalks, walkways, driveways, parking lots and other hard-surfaced
44 areas by direct hosing not equipped with a shutoff nozzle, except as may be necessary
45 to properly dispose of flammable or other dangerous liquids or substances and/or to
46 prevent or eliminate materials dangerous to the public health and safety;
47
48 2. The escape of water through breaks or leaks within the customers plumbing or private
49 distribution system for any substantial period of time within which such break or leak
50 should reasonably have been discovered and corrected. It shall be presumed that a
51 period of one (1) hour to stop the flow of water from such break or leak after the
52 consumer discovers such a break or leak or receives notice from the City and seventy-

1 two (72) hours to correct such break or leak after the consumer discovers such a break or
2 leak or receives notice from the City, is a reasonable time period;

- 3
4 3. Irrigation in a manner or to the extent that allows runoff of water or over-spray of the
5 areas being irrigated. Every customer is deemed to have their irrigation system under
6 control at all times, to know the manner and extent of their water use and any runoff and
7 overspray, and to employ available alternatives to apply irrigation water in an efficient
8 manner;
- 9
10 4. Washing cars, boats, trailers, or other vehicles, equipment and machinery directly with a
11 hose not equipped with a hose-end shutoff nozzle;
- 12
13 5. Using water for non-recycling water features;
- 14
15 6. Using water for single pass evaporative cooling systems for air conditioning in all
16 connections installed after July 1, 2001, unless required for health or safety reasons;
- 17
18 7. Using water for new non-recirculating conveyor car wash systems; Self-service car wash
19 spray wands shall emit no more than three gallons of water per minute;
- 20
21 8. Using water for new non-recirculating industrial clothes wash systems.
- 22
23 9. Dedicated irrigation accounts exceeding the allocated water budget by more than 20%
24 in any billing period.

25
26 15.17.070.20 Pressure Regulation

27
28 A pressure-regulating valve shall be installed and maintained by the consumer if static service
29 pressure at the meter exceeds 80 pounds per square inch. The pressure-regulating valve shall be
30 located between the meter and the structure valve, and set at not more than 60 pounds per
31 square inch when measured at the structure valve. This requirement may be waived if the
32 consumer presents evidence satisfactory to the City that high pressure is necessary in the design
33 and that no water will be wasted as a result of high-pressure operation.

34
35 15.17.070.30 Swimming Pool and Spa Covers

36
37 Covers are required for all outdoor swimming pools and spas.

38
39 15.17.070.40 Exempt Water Uses

40
41 All water use associated with the operation and maintenance of fire suppression equipment or
42 employed by the City for water quality flushing and sanitation purposes shall be exempt from the
43 provisions of this section. Use of water supplied by a private well or from properly authorized
44 recycled water, gray water, or rainwater catchment system is also exempt.

45
46 15.17.80 Exceptions

47
48 Any customer of the City may make written application for an exception to the Water
49 Conservation Regulations Ordinance. Said application shall describe in detail why applicant
50 believes an exception is justified;
51

1 A. The Director of Water Resources and Conservation may grant exceptions for use of
2 water otherwise prohibited by this ordinance if an exception is necessary to avoid an
3 adverse impact on health, sanitation or safety of the applicant or the public, and/or
4 to avoid undue hardship for the applicant or the public. Any exception granted shall
5 not be broader than necessary, or of a duration longer than necessary to avoid the
6 adverse effect on health, sanitation, fire protection or safety and/or to avoid the
7 undue hardship.

8
9 B. The decision of the Director of Water Resources and Conservation may be appealed
10 to the City Council by submitting a written appeal to the City Clerk within fifteen (15)
11 calendar days of the date of the decision. Upon granting any appeal, the Council
12 may impose any conditions it determines to be just and proper. Exceptions granted
13 by the Council shall be prepared in writing, and the Council may require the
14 exception be recorded at applicant's expense.

15
16 15.17.090 Applicability of Water Shortage Emergency Regulations.

17
18 In the event of conflict between the provisions this chapter and the provisions of Chapter 15.18
19 of this code, the provisions of Chapter 15.18 shall supersede the provisions of this chapter from
20 such time as the City Council has determined and declared by resolution that a water shortage
21 emergency exists pursuant to Chapter 15.18, as it may be subsequently amended, until such
22 time as the declaration of emergency has been suspended by later resolution of the City
23 Council.
24

25 15.17.100 Enforcement and Fees

26 A. Depending on the extent of the water waste, the City may, after written notification to
27 customer and a reasonable time to correct the violation as solely determined by the
28 City, take some or all of the following actions. Seventy-two hours from notice of the
29 violation shall be considered a reasonable time for correction, absent unusual
30 circumstances that lengthen or shorten the reasonable time for correction. Penalties,
31 fees and charges noted below shall be established by resolution of the City:

32
33 1. Personal contact with the customer at the address of the water service. If
34 personal contact is unsuccessful, written notice of the violation including a date that the
35 violation is to be corrected may be left on the premises, with a copy of the notice sent by
36 certified mail to the customer.

37
38 2. The City may install a flow-restricting device on the service line.

39
40 3. The City may levy a water waste fine to the customer.

41
42 4. The City may shut off water service, and the charge for same shall be billed to
43 the customer. Except in cases of extreme emergency as solely determined by the City
44 Manager, service shall not be reinstated until verified by the City that the violation has been
45 corrected and all charges and fees have been paid.

46
47 B. Depending on the nature and extent of water waste and/or the condition creating
48 water waste, the City may discontinue water services without notice, pursuant to Section
49 15.12.070, and/or discontinue water services pursuant to Section 15.12.080 of this code.
50

1 C. In addition to discontinuance of water services, any violation of this chapter is subject to
2 enforcement as specified in Chapters 1.10 through 1.16 of this code.

3
4 Section 4. Repeal of Conflicting Provisions

5 All existing code provisions, ordinances and parts of ordinances in conflict with the provisions of
6 this ordinance are repealed upon the effective date of this ordinance, except that provision of
7 Chapter 15.18 of this code which conflict with the provisions of this ordinance may be
8 implemented and enforced at any time when the City Council has determined and declared
9 by resolution that a water shortage emergency exists pursuant to Chapter 15.18, as it may be
10 subsequently amended.

11
12 Section 5. Severability

13
14 If any provision of this ordinance or the application thereof to any person or circumstance is held
15 invalid, the remainder of the ordinance, including the application of such part or provision to
16 other persons or circumstances shall not be affected thereby and shall continue in full force and
17 effect. To this end, provisions of this ordinance are severable. The City Council hereby declares
18 that it would have passed each section, subsection, subdivision, paragraph, sentence, clause,
19 or phrase hereof irrespective of the fact that any one or more sections, subsections, subdivisions,
20 paragraphs, sentences, clauses, or phrases be held unconstitutional, invalid, or unenforceable.

21
22 Section 6. Effective Date

23
24 This ordinance shall become effective thirty (30) days after the date of its adoption by the
25 Petaluma City Council.

26
27 Section 7. Publication

28
29 The City Clerk is hereby directed to post and/or publish this ordinance or a synopsis of it for the
30 period and in the manner required by the City Charter.

31
32 **INTRODUCED** and ordered posted/published this 1st day of December, 2008.

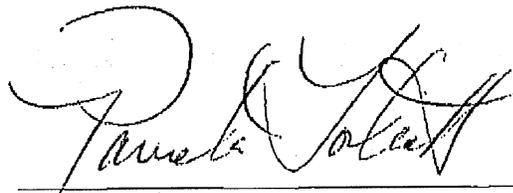
33 **ADOPTED** this 5th day of January, 2009, by the following vote:

34
35 Ayes: Vice Mayor Barrett, Glass, Harris, Healy, Rabbitt, Renée, Mayor Torliatt

36
37 Noes: None

38
39 Abstain: None

40
41 Absent: None

42
43
44 

45
46 Pamela Torliatt, Mayor

47
48 ATTEST:

49 
50 Claire Cooper, City Clerk

APPROVED AS TO FORM:


Eric W. Danly, City Attorney

City of Petaluma – Water Efficient Landscape Ordinance - Comparison Chart with State Model Water Efficient Landscape Ordinance

Criteria	Existing Petaluma Water Efficient Landscape Requirements	State Model Water Efficient Landscape Ordinance
Applicability	Comprised of two subsections. Subsection one applies to all new residential and CII landscape installation projects and to CII and MFR projects which propose renovations of 5,000 square feet or more of existing landscaping within one twelve month period. Subsection two applies to all CII and MFR landscape renovation projects where more than 1,000 square feet and up to 5,000 square feet of the existing landscaping will be renovated. Each subsection has specific requirements.	<p>Applies to:</p> <ul style="list-style-type: none"> • New and rehabilitated CII and developer installed SFR landscaping over 2,500 square feet. • New SFR and MFR landscaping over 5000 square feet.
Submittal Criteria <i>Planting Plan:</i>	Identify location and square footages of turf, high water use plants and low water use plants per water meter; existing plant names and locations; a plant legend indicating Latin and common names of new plants, and sizes and quantities of new plants; landscaped areas and; swimming pools, spas and water features.	Identify landscape materials, trees, shrubs, groundcover, turf, etc. Planting symbols clearly drawn - labeled by botanical name, common name, container size, spacing and quantities of each group of plants; Delineate planting areas dedicated to edible plants; identify hydrozones; identify water features.
<i>Grading Plan:</i>	A grading and drainage plan indicating site elevations.	Height of graded slopes, drainage patterns, proposed underground and in-ground drainage improvements, pad elevations, and finish grade.

City of Petaluma – Water Efficient Landscape Ordinance - Comparison Chart with State Ordinance

Criteria	Existing Petaluma Water Efficient Landscape Requirements	State Water Efficient Landscape Ordinance
<p><i>Irrigation Plan:</i></p> <p>Criteria</p>	<p>An irrigation plan shall be submitted where irrigation hardware other than drip irrigation will be installed. When only drip irrigation will be installed an irrigation plan is not required for submittal. A description of the drip irrigation components shall be sufficient. The description shall include: manufacturer, name and specifications of all drip irrigation components; gallons per hour (gph) per emission device; and number, type, and gph of emission devices per plant size. Where microspray emission devices will be used, the rated gph shall be noted and the area(s) being irrigated under microspray shall be described. A pressure reducing valve must be installed where the operating pressure will exceed the manufacturer's recommendation of any drip irrigation emission device.</p> <p>Where any non-drip irrigation hardware is used an irrigation plan shall be submitted indicating: type(s) and size(s) of irrigation pipe; location, quantity and type of irrigation emission device(s) with manufacturer name and rated specifications of gallons per minute (gpm) of each device; manufacturers recommended operating pressure in pounds per square inch (psi) and precipitation rates for each device; location and type of backflow prevention device and pressure reducing valve(s); valve type(s) and size(s); valve location(s); gallons per minute and valve circuit number for each valve circuit; and; manufacturer's name and type of automatic irrigation controller(s). When more than one water meter exists for a particular landscape, each meter shall be designated and labeled as M-1, M-2, M-3, etc and noted on the irrigation plan. The meter number must be labeled with each valve number when more than one meter exists.</p>	<p>Same scale as planting plan • Indicate flow rate and pressure at Point of Connection (POC) • Indicate all components of irrigation system, including main and lateral lines • Indicate valves, controllers, heads/emitters, quick couplers head precipitation rates/emitter rates, meter size, moisture sensor devices, rain switches, backflow prevention device, electric POC.</p>
<p><i>Irrigation Schedule:</i></p> <p>Criteria</p>	<p>All landscapes are required to install a weather based irrigation controller capable of creating an irrigation schedule that reflects current weather patterns and moisture levels.</p>	<p>Annual irrigation program with monthly schedules required for plant establishment period, established landscape, and temporarily irrigated areas. Irrigation scheduling shall utilize automatic irrigation systems and evapotranspiration data. Overhead irrigation using potable water shall only occur between 8 p.m. and 10 a.m., unless unfavorable weather conditions would result in detriment to plant health.</p>

City of Petaluma – Water Efficient Landscape Ordinance - Comparison Chart with State Ordinance

	Existing Petaluma Water Efficient Landscape Requirements	State Water Efficient Landscape Ordinance
Criteria		
Plant values	Low water use = 0.30 Medium water use = 0.60 High water use = 1.00	Low water use = 0.30 Medium water use = 0.60 High water use = 1.00
Mulch requirement	3" of organic mulch, no non-porous material may be placed beneath mulch, no shredded or "gorilla" mulch	2" of organic mulch, no non-porous material may be placed beneath mulch, no shredded or "gorilla" mulch
Water features	Allowed. Re-circulating water systems required. Surface area calculated as high water use	Allowed. Re-circulating water systems required. Surface area calculated as high water use
Plant Selection, Water Budget, & Planting Plan Design Criteria <i>Water use criteria:</i>	Estimated Total Water Use (ETWU) shall not exceed Maximum Applied Water Allowance (MAWA), based on low, moderate, and high water use plant factors, and based on a 0.7 evapotranspiration adjustment factor. MAWA shall be calculated as follows: MAWA = (ETo)(0.62)[0.7 x LA + 0.3 x SLA]	Estimated Total Water Use (ETWU) shall not exceed Maximum Applied Water Allowance (MAWA), based on low, moderate, and high water use plant factors, and based on a 0.7 evapotranspiration adjustment factor. MAWA shall be calculated as follows: MAWA = (ETo)(0.62)[0.7 x LA + 0.3 x SLA]
<i>Turf selections and use:</i>	Turf and high water use plants shall occupy no more than a combined 20% of the total irrigated landscaped area. Turf areas shall not be less than 8 feet wide. Turf is not permissible on slopes greater than 10%.	Not permitted in median strips, slopes greater than 4:1, or protected zone of native oaks, toe of slopes shall be a minimum of 24" behind curb or sidewalk to minimize runoff. Shall not comprise greater than 50% of front yard planting area of single family landscaping. Shall not comprise greater than 50% of all non-residential and multi-family landscaped area.
<i>Non-turf selections:</i>	The use of California native plants is highly encouraged. Plants shall be grouped according to water needs and irrigated separately.	Plants shall be selected for suitability/adaptability to climate of this region. Plants shall be grouped according to water needs and irrigated separately • No landscaping within protected zone of native oak trees.

City of Petaluma Water Efficient Landscape Ordinance – Comparison Chart with State Ordinance

Criteria	Existing Petaluma Water Efficient Landscape Requirements	State Water Efficient Landscape Ordinance
<p>Irrigation Water Use analysis and monitoring</p>	<p>The city shall provide any account with a dedicated irrigation meter(s) a landscape water budget. The water budget will be calculated by the city or its agent by measuring the total irrigated landscaped area and the plant type(s) that exist per water meter. Any account assigned a water budget may not exceed the water budget for that billing period by more than 20% during that billing period. Accounts that exceed their water budget by more than 20% will be notified by the city. The city will work with the property owner or its authorized representative to ensure corrective actions are taken. Exceeding an account's water budget by more than 20% more than two times in one twelve month period and/or failure to cooperate with the city in taking corrective action after notification by the city of specific action(s) to be taken shall constitute a violation of this chapter. The City uses the same MAWA formula as the State Ordinance in calculating the water budget.</p>	<p>Irrigation water usage shall not exceed MAWA assigned to each account. $MAWA = (0.8)(ETo)(LA)(0.62)$. City shall administer programs to monitor irrigation water use that may include: irrigation water use analysis, mandatory irrigation audits (conducted by property owner at owner's expense), irrigation surveys for compliance with MAWA. City may consider Effective Precipitation (not to exceed 25% of annual precipitation) in tracking water use and may calculate MAWA as follows: $MAWA = (ETo-Eppt)(0.62)(0.7 \times LA + 0.3 \times (SLA))$.</p>
<p>Enforcement and Penalties</p>	<p>Non-compliance with landscape ordinance results in violation of Water Conservation Regulations Ordinance and is subject to fines and/or disruption in water service.</p>	<p>Up to local agency.</p>