

Water Conservation Code Landscape Section

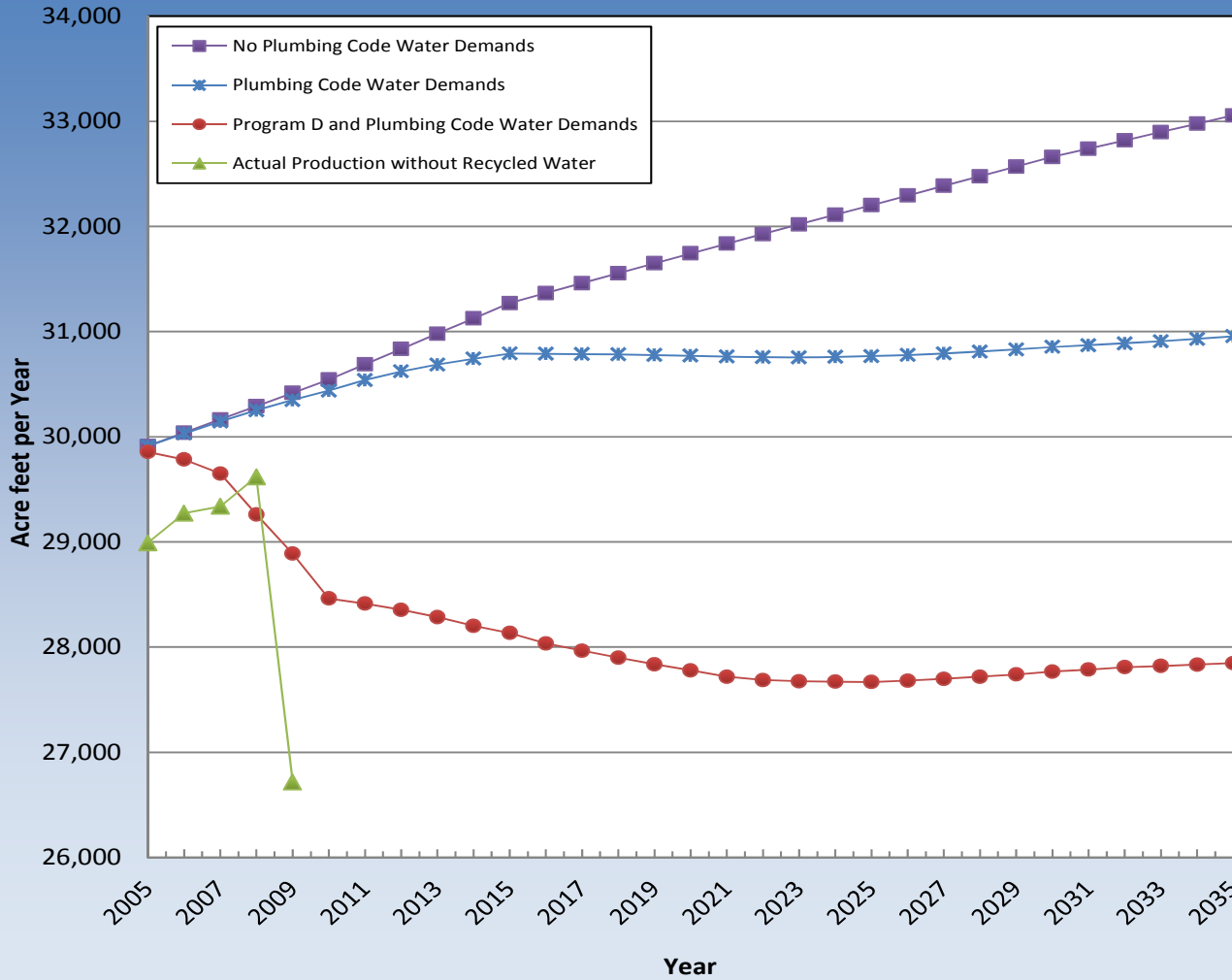
(Section 13.02.021)

Ordinance 421 Update

Marin Municipal

Water District

Water Demands with Conservation Savings Marin Municipal Water District



Your Reviewers

Joseph Eischens @ 415-945-1531

- Meter purchase, meter size, purchase water

Ken Feil @415-945-1558

- Proper backflow prevention devices and recycled water use

Mark Guthrie @ 415-945-1497

- Water Conservation Code (Section 13.02.021(5))

Article 10 Section 2 of the CA constitution states:

It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to **beneficial use** to the fullest extent of which they are capable, **and that the waste or unreasonable use or unreasonable method of use of water be prevented**, and that the conservation of such waters is to be exercised **with a view to the reasonable and beneficial use thereof** in the interest of the people and for the public welfare.

CA Water Code Section 375

- (a) Notwithstanding any other provision of the law, any public entity which supplies water at retail or wholesale for the benefit of persons within the service area or area of jurisdiction of the public entity may, by ordinance or resolution adopted by a majority of the members of the governing body after holding a public hearing upon notice and making appropriate findings of necessity for the adoption of a water conservation program, **adopt and enforce a water conservation program to reduce the quantity of water used by those persons for the purpose of conserving the water supplies of the public entity.**
- (b) With regard to water delivered for other than agricultural uses, the ordinance or resolution **may specifically require the installation of water-saving devices which are designed to reduce water consumption. The ordinance or resolution may also encourage water conservation through rate structure design.**



Plan Review Webpage

Who should comply with the landscape section?

| Type of Project | Installer | Threshold |
|---|--|---------------------|
| <p>New Construction and Rehabilitated* Landscapes</p> <p>*The term "rehabilitated" refers to renovations or changes made to sites with an existing irrigation system.</p> <p>(This includes sites that use well water)</p> | Public Agency or Private Development | ≥ 1,000 square feet |
| | Developer or Contractor Installed: Single- or Multi-Family | ≥ 1,000 Square Feet |
| | Homeowner Provided: Single- or Multi-Family | ≥ 2,500 Square Feet |

Exempt

- Registered local, state or federal historical sites;
- Ecological restoration projects that do not require a permanent irrigation system;
- Mined-land reclamation projects that do not require a permanent irrigation system;
- Plant collections, as part of botanical gardens and arboretums open to the public.

What should you submit?

- Landscape Planting Design Plan
- Irrigation Design Plan
 - If homeowner provided – a statement will suffice (see example)
- Grading Plan
- Maximum Applied Water Allotment & Estimated Total Water Use Calculator
- Project Data Sheet
- Checklist

Water Use Requirement

- Maximum Applied Water Allotment (MAWA)
 - Based on the total landscape area
 - Landscape factor of 0.6
- Estimated Total Water Use (ETWU)
 - Plant factors of high, moderate, and low water use zones.
- To pass the inspection:
 - $ETWU < MAWA$

Water Use Requirement

The Calculator

Meter Requirement

| Type | Description | Irrigated area | Requirement |
|-------------------------|----------------------------------|--------------------|-------------------------------------|
| New | Non- single and 2 unit residence | $\geq 1,000$ sq ft | MMWD Provided Dedicated Meter |
| Rehabilitated | Non- single and 2 unit residence | $\geq 1,000$ sq ft | Private submeter required |
| New or Rehabilitated | Single- or 2 unit residence | $\geq 2,500$ sq ft | Private submeter required |

On The Plans

- 3 inch layer of mulch
- Compost or natural fertilizer at rate of 6 cubic yards per 1000 sq. ft.
- Hydrozoning in place (use WUCOLS)
- For purposes of the calculator, mixed low and moderate water use plants will be classified as a moderate water use hydrozone.

On The Plans

- High water use plants (according to WUCOLS) shall not be irrigated with low or moderate water use plants.
- Turf shall not be allowed in the following conditions: slopes exceeding 10%, planting areas 8 feet wide or less, street medians, traffic islands, planter strips, and bulbouts of any size.

On The Plans

- No invasive plants (see MMWD list online)
- Follow firesafe landscape practices (contact Firesafe Marin)
- Applicable rain harvesting, graywater, or catchment technologies is encouraged
- Stormwater best management practices encouraged
- Water features shall be recirculating
- Recycled water used when available
- 1 ½ inch meters or greater shall have a high flow sensor
- Isolation valves installed at the POC and at each valve or valve manifold.

On The Plans

- Use a weather-based or sensor-based self-adjusting irrigation controller.
- Rain shut-off device onsite.
- Pressure regulation or booster pumps
- Designed to prevent overspray or runoff
- Overhead spray set back 24 inches from hardscapes that drain into curbs and gutters.

On The Plans

- Slopes greater than 15%: PR shall not exceed 0.75 inches/hour
- Trees shall be placed on separate irrigation valves except when planted in turf
- Matched precipitation rate nozzles on each valve
- Head-to-head coverage required

On The Plans

- Check valves to prevent low head drainage
- Hydrozone table and summary
- POC (meter) labeled on the plans with the word “NEW” or if existing, with the meter #
- Water use table provided by the district.

Plans are approved when...

- The customer has a letter from us stating the plans are approved

AND

- The customer has the approved plans in their hands (or attached to email) with our stamp of approval



**Install the project according to
the approved plans**

Once the project is installed...

- Perform an audit according to info at the back of the packet
- audit shall be performed by an IA Certified Landscape Irrigation Auditor, WaterSense Irrigation Auditor, Qualified Water Efficient Landscaper, or CLCA Water Manager
- Email the audit results and project completion form to the district
- We will schedule a final inspection and verify that the project has been installed according to approved plans (the ones that are stamped by the district)

Are You Done Yet?

Only if you have another letter from the district stating that the installation has been inspected and it passes.

Indoor Requirements

All plumbing installed, replaced or moved in any new or existing service shall be high-efficiency fixtures and shall meet the following minimum requirements:

| | |
|--|--|
| Pressure regulating valve | Shall be installed and maintained by the consumer if static service pressure exceeds 80 pounds per square inch (psi), and be set at a maximum operating pressure of 60 psi at the regulator outlet |
| High-efficiency Clothes Washers | Residential or commercial clothes washers that meet the current highest water efficiency standards as defined by the District |
| High-efficiency Lavatory Faucet | The maximum flow rate shall not exceed 1.5 gallons per minute (gpm) at a pressure of 60 pounds per square inch (psi) at the inlet, when water is flowing |

Indoor Requirements

| | |
|------------------------------------|---|
| High-efficiency Shower Head | The manufacturer shall specify a maximum flow rate equal to or less than 2.0 gallons per minute (gpm), at a pressure of 60 pounds per square inch (psi) at the inlet, when water is flowing |
| High-efficiency Toilet | Any WaterSense listed toilet rated at an effective flush volume of no greater than 1.28 gallons |
| High-efficiency Urinal | The average water consumption shall not exceed 0.25 gallons per flush (gpf) |
| Pool Covers | Pool covers are required for all new outdoor swimming pools |

Indoor Requirements

Commercial, Industrial, and Institutional Services



All plumbing installed, replaced or moved in any new or existing service shall be high-efficiency fixtures and shall meet the following minimum requirements:

Faucets

Lavatory faucets, other than public lavatory or metering faucets, shall deliver 1.5 gallons, or less of water per minute

Metered Faucets Self-closing or self-closing metering faucets shall be installed on lavatories intended to serve the transient public, such as those in, but not limited to, service stations, train stations, airports, restaurants, and convention halls. Metered faucets shall deliver no more than .25 gallons of water per use. Self-closing faucets shall deliver no more than .5 gallon per minute

Public Lavatory (other than metering) faucets shall deliver 0.5 gallons, or less, of water per minute.

Kitchen, Bar and Utility/Service (other than hand-washing sinks) faucets shall deliver 2.2 gallons, or less, of water per minute

Indoor Requirements

Commercial, Industrial, and Institutional Services



MARIN MUNICIPAL
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| | |
|-------------------------------|---|
| Dishwashers | Dishwashers shall meet the current specifications set by the Consortium for Energy Efficiency's (CEE) "High Efficiency Specifications for Commercial Dishwashers and any and all amendments thereto" |
| Steamers | Steamers shall meet the current specifications set by the CEE's "High Efficiency Specifications for Commercial Steamers and any and all amendments thereto" |
| Pre-Rinse Spray Valves | Pre-rinse spray valves shall (1) deliver 1.3 gallons, or less, of water per minute based on tested performance by the FSTC and (2) meets the cleaning performance standard of 26 seconds per plate or less, based on the <i>ASTM Standard Test Method for Performance of Pre-Rinse Spray Valves and any and all amendment thereto</i> |
| Dipper Wells | Dipper well flow rate shall be .3 gallon, or less, per minute |

Indoor Requirements

Commercial, Industrial, and Institutional Services



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Ice Machines

Ice machines shall (1) be Energy Star qualified and (2) meet the current highest Tier specification set by the CEE's "High Efficiency Specifications for Air-Cooled Ice Machines and any and all amendments thereto"

Clothes Washers

Commercial clothes washers shall meet the minimum Modified Energy Factor (MEF) and maximum Water Factor (WF) corresponding to the highest efficiency machines on the most recent CEE "High Efficiency Specification for Commercial, Family-Sized Clothes Washers and any and all amendments thereto". As of January 1, 2007, the highest efficiency machines have a minimum MEF of 2.20 and a maximum WF of 4.5

Indoor Requirements

Commercial, Industrial, and Institutional Services



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Heating, Ventilation and Air Conditioning (HVAC) Equipment

HVAC Equipment shall eliminate all once-through cooling, replacing with an air-cooled system or a cooling tower. For cooling towers, the following are recommended: (a) flow submeters on make-up and bleed-off lines; submeters should, at a minimum, be capable of totaling the flow. (b) conductivity controllers that activate the blowdown valve for dissolved solids control. (c) overflow sensors on the overflow pipes. (d) baffles or drift eliminators All cooling towers shall be monitored and maintained in a manner consistent with applicable regulatory guidelines and manufacturers recommendations.

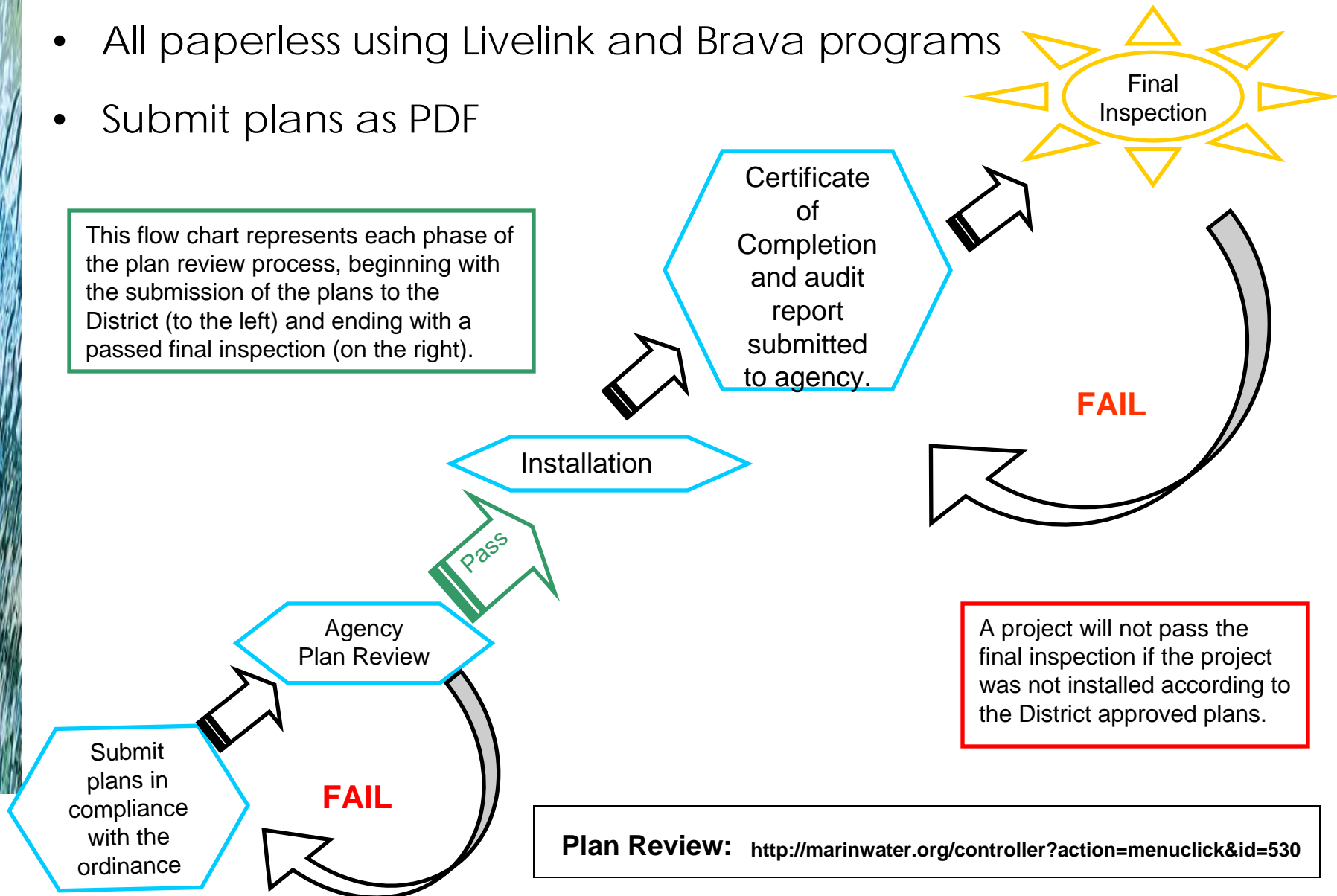
Indoor Process

- No current MMWD process
- Rely on local agencies for design approvals and inspections

Outdoor Review Process

- All paperless using Livelink and Brava programs
- Submit plans as PDF

This flow chart represents each phase of the plan review process, beginning with the submission of the plans to the District (to the left) and ending with a passed final inspection (on the right).



A project will not pass the final inspection if the project was not installed according to the District approved plans.

Plan Review: <http://marinwater.org/controller?action=menuclick&id=530>



Questions?

Your Reviewers

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