Model Water Efficient New Development Ordinance Developed by the Santa Clara County Water Efficient New Development Task Force (November 29, 2016)

ORDINANCE NO. XXXX

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ADDING A NEW CHAPTER \_\_\_\_\_\_ (WATER EFFICIENT NEW DEVELOPMENT) TO TITLE \_\_\_ OF THE \_\_\_\_\_\_\_\_\_\_\_\_\_ MUNICIPAL CODE RELATED TO REQUIREMENTS FOR NEW DEVELOPMENT THAT PROMOTES WATER USE EFFICIENCY AND THE DEVELOPMENT OF ALTERNATE SOURCES OF WATER SUPPLY

WHEREAS, all California water users are responsible for making effective use of the available water resources.

WHEREAS, water is a public resource that the California Constitution protects against waste and unreasonable use.

WHEREAS, growing population, climate change, and the need to protect and grow the City’s economy make it essential that the City manage its water resources as efficiently as possible.

WHEREAS, reduced water use through conservation provides significant energy reduction and associated environmental benefits, and can help protect water quality, preserve and improve streamflows, and reduce greenhouse gas emissions.

WHEREAS, improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

WHEREAS, the development of alternate water source systems will assist in meeting future water requirements of the City and lessen the impacts of new development on the City's sanitary sewer system.

WHEREAS, adoption of this ordinance and adoption of rules and regulations by the City will help achieve the City's goals for water supply use and preservation by:

(1) Promoting the values and benefits of nonpotable water use while recognizing the need to invest water and other resources as efficiently as possible;

(2) Encouraging the use of nonpotable water for nonpotable applications; and

(3) Replacing potable water use for toilet and urinal flushing and irrigation to the maximum extent possible with alternate water sources.

WHEREAS, it is the intent of the City Council of the City of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to require new development constructed in the City of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to meet and exceed the water efficiency and alternate water supply requirements of the State of California.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_\_\_\_\_\_\_\_ DOES ORDAIN AS FOLLOWS:

SECTION 1. CEQA REVIEW.

The City Council has evaluated this ordinance and has determined that it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the California Environmental Quality Act per \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SECTION 2. DEFINITIONS.

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

Alternate Water Source: a source of nonpotable water that includes recycled water, graywater, stormwater, condensate, on-site treated nonpotable water, Rainwater, Blackwater, and any other source approved by the Director.

Blackwater: Wastewater containing bodily or other biological wastes. This is discharge from toilets, dishwashers, kitchen sinks, and utility sinks.

Director: the Director of \_\_\_\_\_\_\_\_\_\_or any individual designated by the Director to act on his or her behalf.

First Certificate of Occupancy: either a temporary certificate of occupancy or a Certificate of Final Completion and Occupancy

Graywater: untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to, wastewater from bathtubs, showers, bathroom sinks, lavatories, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

Graywater Ready: A design criteria for a structure’s plumbing system that provides a noninvasive pathway to install a graywater treatment and reuse system at a later date. In a Graywater Ready home, for example, it will be possible to install an NSF 350 System without altering the in-wall or in-ground plumbing and electrical infrastructure.

Hot Water Recirculation System: A hot water system that uses the hot water return line and/or supply line connected to a water heater to enable continuous delivery of hot water to fixtures.

Hot Water System: A system that distributes hot water, consisting of a water heater, piping, and related equipment and devices.

Multifamily Residential - a residential building that contains three or more dwelling units

New Development: buildings and structures that have not received initial design approval from the Planning Department or a building permit from the Building Department prior to January 1, 2017.

Nonpotable Water: Water collected from alternate water sources, treated, and intended to be used on the Project site for direct beneficial use.

Nonpotable Water Engineering Report: Report submitted by project applicant to the Director describing the alternate water source system in accordance with the rules and regulations adopted by the City.

Nonresidential: A building that contains occupancies other than dwelling units. For the purposes of this section, hotels, motels, institutional housing (such as hostels and dormitories), hospitals, and night shelters are considered nonresidential.

NSF 350 System: Any treatment system certified to meet NSF/ANSI Standard 350 for Onsite Residential and Commercial Reuse Treatment Systems, as amended from time to time.

On-site Treated Non-Potable Water: Nonpotable water that has been collected, treated, and intended to be used on-site and is suitable for direct beneficial use. Permittee: owner or operator of an On-site Treated Nonpotable Water system.

Rainwater: precipitation collected from roof surfaces or other manmade, aboveground collection surfaces.

Recycled Water: Water that has been reclaimed from wastewater for beneficial use as defined by Title 22 of the California Code of Regulations.

Residential: A building that contains residential dwelling units including single-family or multifamily, [housing](http://www.businessdictionary.com/definition/housing.html) [units](http://www.businessdictionary.com/definition/unit.html) and [mobile](http://www.businessdictionary.com/definition/mobile.html) homes.

Single-family Residential - A residential building that contains one or two dwelling units

Smart Hot Water Recirculation System: A hot water recirculation system that is capable of monitoring and recording hot water usage patterns for optimal pump activation.

Stormwater runoff: Precipitation collected from at-grade or below grade surfaces.

SECTION 3. APPLICABILITY.

This chapter shall apply to all New Development in the City/County.

SECTION 4. REQUIREMENTS.

1. **Hot Water Waste Reduction**. The hot water system shall not allow more than 0.5 gallons of water to be delivered to any fixture before hot water arrives. Where a hot water recirculation or electric resistance heat trace wire system is installed, the branch from the recirculating loop or electric resistance heat trace wire to the fixture shall contain a maximum of 0.5 gallons. Hot water recirculation systems may include, but are not limited to, the following:

(1) Timer-initiated systems.

(2) Temperature sensor-initiated systems.

(3) Occupancy sensor-initiated systems.

(4) Smart hot water recirculation systems.

(5) User-activated systems.

(6) Other systems acceptable to the Director.

1. **Single-Family Graywater Collection, Filtration and Distribution System**. All new single-family residential units shall be built Graywater Ready and must include the following:
2. Dedicated graywater collection plumbing, which must:
   1. Capture water from all fixtures producing graywater, specifically including all showers, baths, lavatory sinks and laundry washing machines;
   2. Exit the envelope of the structure and converge in a single location; and
   3. Reconverge with the home’s blackwater collection system prior to flowing to the municipal sewer system.
3. The graywater collection system must include:
4. An in-ground surge tank with at least 60 gallons capacity;
5. A physical bypass function to allow graywater to be diverted away from the surge tank, to the municipal sewer system during construction;
6. A treated water tank with at least 175 gallons capacity.
7. A hose bib with potable water within 15 feet of the point where the graywater collection system exits the envelope of the home; and
8. A 20 amp, 120 volt dedicated electrical circuit with GFCI breaker within 15 feet of the point where the graywater collection system exits the envelope of the home.
9. Dedicated distribution plumbing for treated graywater, so that potable water can be disconnected in the future when appropriately treated graywater is available, which must include:
10. A single, dedicated supply feed for providing water to irrigation valves; and
11. A single, dedicated supply feed for providing water to all toilets in the home

Additions and alterations of existing buildings that use the existing building drain(s) are exempted from this provision.

1. **Multifamily and Nonresidential Development’s Use of Alternate Water Sources**. All new multifamily residential and all nonresidential structures shall include dual plumbing systems that facilitate and maximize the use of alternate water sources for use in irrigation, toilet flushing, cooling towers, and other uses suitable for nonpotable water as allowed by the appropriate agencies.
2. If recycled water is available within 200 feet of the property line or if The Director has determined that it is reasonably available,, 100 percent of water for water closets, urinals, floor drains, and process cooling and heating in that building shall come from recycled water.
3. If recycled water is planned to be made available to the development within ten years from the date of building permit issuance or the development is within the adopted recycled water project area, the development may meet the requirements of this section solely by building out the dual plumbing system to the anticipated point of connection to the future recycled water system.
4. If recycled water is not available to the development and is not anticipated to be made available to the development within ten years, the development shall install water collection and treatment systems that comply with the applicable sections of the California Plumbing Code to capture, collect, treat, and distribute graywater, rainwater, and stormwater runoff.
5. A commercial building(s) or campus may be permitted by the appropriate agency for treatment and use of blackwater for nonpotable purposes so long as systems complies with current standards (now Title 22) for installation, reporting and monitoring.

EXCEPTIONS:

1. Additions that use any part of the existing plumbing piping system.
2. Alterations that do not include replacing all of the potable water piping.
3. Where recycled water quality has been deemed unsuitable by the Director for a particular fixture or equipment, the fixture and/or equipment shall be dual- plumbed for future connection.
4. **Recycled Water use in Single-Family Common Landscaping.** All new single-family residential units with landscaping provided by a water meter serving three or more homes that is managed by a homeowner’s association or other association or entity shall be irrigated with recycled water if recycled water is available within 200 feet of the property line. If recycled water is planned to be made available to the development within ten years from the date of building permit issuance or is within the adopted recycled water project area, a system shall be constructed that will enable recycled water to be easily connected to the irrigation system once the recycled water supply is available within 200 feet of the property line.
5. **Cooling Towers**. All newly constructed cooling towers shall connect to and use alternate water sources. All newly constructed cooling towers shall include the following:
6. Connectivity controllers
7. Automated chemical feed systems
8. Plumbing to facilitate the use of nonpotable water supplies
9. Recirculation systems that recirculate the water as much as possible prior to discharge
10. Devices to capture and reuse the blow down water discharged from the cooling tower.
11. **Retail Establishments.** All stores, outlets and other retails establishments shall only sell plumbing fixtures and other devices which are in compliance with California State and Federal water efficiency standards, e.g., EPA WaterSense certified.
12. **Automatic Sensor Operated Fixtures.** Faucets in commercial facilities, shall not have automatic sensors installed, and instead have manually operated handles. Toilets and urinals in commercial facilities shall not have sensor or automatic flush valves and instead have manually operated flush mechanisms.
13. **Plumbers, Contractors, and Service Providers**. All plumbers, contractors and other service providers shall not install any plumbing fixtures or other devices which are not in compliance with California State and Federal water efficiency standards, e.g., EPA WaterSense certified.
14. **Commercial Kitchens.**  All new and replacement food related and utensil-related equipment shall be certified or classified for sanitation by an American National Standards Institute (ANSI) accredited certification program and are in compliance with any California State and Federal water efficiency standards, where applicable, and may develop an Water Efficiency Management Plan to help establish an effective facility water management program using appropriate guidelines such as the EPA WaterSense at Work-Best Management Practice for Commercial and Institutional Facilities document.

**J. Landscape Meters.** A landscape water meter shall be installed for landscape irrigation for the following:

1. When required by the California Department of Water Resources Model Water Efficient Landscape Ordinance or local water efficient landscape ordinance.

2. Additions and alterations, with a valuation of $200,000 or more, where the entire potable water system is replaced, including all underground piping to the existing meter.

3. Landscaped areas shall have flow sensors or hydrometers, regardless of being metered separately.

**K. Additional Meters Required.** New Buildings or Additions in Excess of 50,000 Square Feet. Separate submeters or meters shall be installed as follows:

1. For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gallons per day (380 L/day).

2. Where potable water is used for industrial/process uses, for water supplied to the following subsystems:

a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).

b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).

c. Steam and hot-water boilers with energy input more than 500,000 Btu/h (147 kW).

3. For each building that uses more than 100 gallons per day on a parcel containing multiple buildings.

**L.** **Irrigation Controllers**. In new construction or building addition or alteration over 500 square feet of cumulative landscaped area, install irrigation controllers and sensors which include the following criteria, and meet manufacturer’s recommendations:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants’ needs as weather conditions change.

2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

EXCEPTION: For new residential construction, manual irrigation is also permitted.

**M. Irrigation System:** In landscaped areas, irrigation nozzles shall have a maximum precipitation rate of one inch per hour.

**N. Irrigation Audits:** For newly constructed landscaped areas, the local agency shall administer an irrigation audit to verify that the irrigation system complies with regulations, as well as to identify potential deficiencies and assure that corrections have been made. If corrections are needed, these must be addressed prior to approval of the new construction.

**O.**  **Exterior Faucets**. Locks shall be installed on all publicly accessible exterior faucets and hose bibs except those installed on single family dwellings.

**P.**  **Swimming Pool Covers**. For one- and two-family dwellings, any permanently installed outdoor in-ground swimming pool or spa shall be equipped with a cover having a manual or power-operated reel system. For irregular-shaped pools where it is infeasible to cover 100 percent of the pool due to its irregular shape, a minimum of 80 percent of the pool shall be covered.

EXCEPTION: Additions or alterations to existing swimming pools and spas with a building valuation not exceeding $25,000.SECTION 5. SEVERABILITY

If any provision of this Title, or its application to any person, or circumstances, is held to be invalid, the remainder of this Ordinance, or the application of the provision to other persons or circumstances, shall not be affected.

SECTION 6. EFFECTIVE DATE. This Ordinance shall take effect thirty (30) days after the date of its adoption.

SECTION 7. POSTING AND PUBLICATION. The City Clerk is hereby directed to publish this ordinance pursuant to §36933 of the Government Code.

**THE FOREGOING ORDINANCE WAS INTRODUCED AT A MEETING OF THE CITY COUNCIL HELD ON THE XX DAY OF \_\_\_\_\_\_\_\_\_\_\_, AND WAS FINALLY ADOPTED AT A MEETING OF THE CITY COUNCIL HELD ON THE XX DAY OF \_\_\_\_\_\_\_\_\_\_\_\_\_, AND SAID ORDINANCE WAS DULY PASSED AND ADOPTED IN ACCORDANCE WITH LAW BY THE FOLLOWING VOTE:**

**AYES: COUNCIL MEMBERS:**

**NOES: COUNCIL MEMBERS:**

**ABSTAIN: COUNCIL MEMBERS:**

**ABSENT: COUNCIL MEMBERS:**

**ATTEST:** **APPROVED:**