

WATER PETAL CASE STUDY SAN FRANCISCO PUBLIC UTILITIES COMMISSION

The essential function of the San Francisco Public Utilities Commission (the Commission) is to provide drinking water, power, and sewer services to the City of San Francisco. Their mission, however, is to do so “in a manner that is inclusive of environmental and community interests, and that sustains the resources entrusted to our care”. It’s a charge they take seriously.

The Commission views conservation and water efficiency as their number one long-term water management strategy, and they aren’t afraid to experiment: their own building served as proof of concept to showcase reusing water onsite. An essential facet of their brand of progressivism is managing intersectional interests: the Commission must incorporate rigorous safety and public health standards into every proposed ordinance. Whilst navigating the complexities of changemaking, they have become experts in stakeholder engagement. To share their expertise, they have situated themselves at the nexus of a national conversation around decentralized water systems. Their collaborative approach has laid the groundwork for solutions-oriented water regulation around the country.

INNOVATIVE ORDINANCES

These four programs in San Francisco, taken as a whole, provide a code-compliant pathway for project teams to use all water resources available on site as efficiently as possible.

RECYCLED WATER ORDINANCE PUBLIC WORKS CODE, ARTICLE 22 EFFECTIVE DATE: NOVEMBER 7, 1991

New buildings and buildings undergoing major renovation over 40,000 square feet are required to use recycled water for all uses authorized by the State of California. When this ordinance was first introduced in 1991, California only allowed recycled water use for irrigation. It has since expanded to include applications such as toilet/urinal flushing, cooling and water features.

STORMWATER MANAGEMENT REQUIREMENTS PUBLIC WORKS CODE, ARTICLE 4.2 SEC 147-147.6 EFFECTIVE DATE: MAY 22, 2010; UPDATED 2016

Any properties that involve a disturbance of 5,000 square feet or more must manage stormwater using green infrastructure and maintain that green infrastructure for the lifetime of the project. A majority of the projects that have been affected by this ordinance have opted for rainwater harvesting, and are therefore also subject to the Non-Potable Water Ordinance.

NON-POTABLE WATER ORDINANCE PUBLIC WORKS CODE, ARTICLE 12C EFFECTIVE DATE: SEPT 2012; UPDATED OCT 2013

This ordinance allows commercial, mixed-use and multi-family developments to collect, treat and use greywater, rainwater or foundation drainage sources for non-potable applications. In 2013, this ordinance was amended to allow for district-scale water systems for buildings of two or more to share non-potable water across property lines. Beginning November 1, 2016, any building over 250,000 square feet must evaluate the ability of all available on-site water supplies to meet and/or offset the building’s irrigation and toilet water needs.

RAINWATER HARVESTING FOR POTABLE USE PILOT PROGRAM EFFECTIVE DATE: TBD

In addition to these ordinances, the Commission is working on a pilot project with a local developer to determine how to safely collect and treat rainwater on site for potable use. To this end, they have convened a working group of relevant regulatory authorities having jurisdiction. The pilot, if effective, may result in a code variance for this project.



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NATIONAL IMPACT

In order to disseminate knowledge that they've gained in applying ordinances safely across San Francisco, the Commission hosted the Innovations in Urban Water Systems Meeting May 29 - 30, 2014. This summit of water agencies, public health departments, research institutions, and other stakeholders from across North America resulted in the "Blueprint for Onsite Water Systems: A Step-by-Step Guide for Developing a Local Program to Manage Onsite Water Systems". This informative guide provides a broadly applicable regulatory framework, intended for implementation in deference to the local circumstances of communities across the nation.

The group also created the National Blue Ribbon Commission to Accelerate the Adoption of Onsite Water Reuse, and will release a document providing risk-based public health guidance and recommendations around water quality permitting and monitoring by the end of October 2016.

There are a great many lessons to be learned from the Commission's decades of implementing progressive water efficiency ordinances, as well as the countless conversations they have had with engaged stakeholders. The methods and strategies below represent a brief selection that both regulators and prospective projects can learn from.

LESSONS LEARNED

GET THE RIGHT PEOPLE AT THE TABLE

Who has regulatory jurisdiction? Engage them early and often to make sure their concerns are aired and addressed. In the case of San Francisco, the Commission created a forum for conversation with city, county, and state officials in order to move forward in a way that was collaborative and positive. It was clear from the outset that the goal was to implement important efficiency and conservation measures without subverting any critical regulatory priorities.

ACKNOWLEDGE LOCAL CONTEXT

Avoid prescriptive approaches that stifle the variety of strategies available to developers; instead, establish outcome-based requirements. Empower project teams to achieve these requirements using methods that make sense for their site, community, budget, and available resources.

TAKE A SOLUTIONS-BASED APPROACH

Acknowledge the priorities of all stakeholders, and identify common goals. Everyone can agree on the fact that safety is paramount, and most understand the importance of water efficiency. Work from there.

FIND YOUR "PERFECT STORM"

Around the same time that the Commission was considering water efficiency guidelines, developers began asking regulators at the City and County level for guidance with respect to permitting their decentralized water systems. This "perfect storm" of interest from the private developers created a collaborative partnership, and the Commission's guidelines created a pathway for these early pilot programs.