WateReuse California Policy:
Decentralized Non-Potable Water Systems and Graywater

11-3-16

Introduction

With the passage of the Clean Water Act in the early 1970's, the federal government established a critical policy toward centralized wastewater treatment plants to protect the waters of the state and public health and safety. The Clean Water Act has proven to be an extremely successful public policy strategy to protect both the environment as well as public health and safety. California led the way by passing the Porter-Cologne Water Quality Control Act in 1969. Shortly after the passage of these critical statutes, water managers recognized that wastewater from these centralized wastewater treatment plants could be a new, sustainable, drought resilient water supply once properly treated.

California's unprecedented and on-going drought has re-emphasized the need for innovation as well as options and flexibility when seeking water recycling and other water reuse solutions. WateReuse California (WRCA) recognizes that each city, county and region has its own unique set of variables that must be considered to effectively respond to water scarcity.

Different Types of Non-Potable Water Reuse:

Recycled Water is defined in state law as water, which as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable source (Water Code Section 13050(n). Recycled water is used for both non-potable, and with additional treatment, potable purposes and has been rapidly expanding in California.

Graywater is defined in state law as "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 (Health and Safety Code Section 17922.12(a)". Under the California Plumbing Code (CPC), Chapter 16, graywater that is used for subsurface irrigation does not require treatment. Further, under the CPC, Chapter 16, Section 1601.7.1, graywater from a single-family residence, multi-family residence and non-residential building may be treated to a minimum water quality applicable for intended applications as determined by the authority having jurisdiction. In the absence of requirements, the requirements of NSF 350 shall apply. Permitted end uses of treated graywater include: toilet flushing, irrigation, and end uses listed in Section 1604.1.

Emerging Decentralized Non-Potable Water Systems is defined as wastewater generated in a commercial, multi-family or mixed use building treated by an on-site treatment facility to meet existing state and local water quality and public health standards and reused for specified non-potable uses. This option is being considered and implemented in communities in California, including San Francisco and Los Angeles. A comprehensive framework to oversee and manage decentralized, non-potable water systems will be proposed through an expert panel of the National Water Research Institute in the fall of 2016.

Emerging Alternate On-site Water Sources: Other water sources that may be gathered on-site as an alternative to potable water supplies include: rainwater, stormwater, blackwater and foundation drainage. Rainwater treatment and water quality requirements for permitted end uses are listed in the CPC Chapter 16 and 17, respectively. Currently, no water quality standards have been established for the treatment and use of blackwater, stormwater, and foundation drainage.

WRCA Policy

Regulatory Agencies Should Maintain Strong and Consistent Levels of Public Health Protection

Water reuse can be used beneficially for different types of uses—from drinking water to landscape irrigation, industrial and other non-potable uses. Appropriate levels of treatment depend upon the intended us. State and local regulatory agencies need to ensure that the water quality treatment facilities and associated infrastructure is in place to protect public health and the environment. For example, all local and state cross connection requirements must be in place and all projects must be in full compliance with state and local water quality regulations and other types of permitting. As the state moves forward to consider regulations for DPR, decentralized non-potable water systems, and other forms of reuse, it is critical that the State provide a comprehensive framework for oversight and management of each water supply type.

Water quality and construction requirements are included in the California Plumbing Code for residential and commercial graywater use. As described above, the "Risk-Based Framework of Public Health Guidance Recommendations for Decentralized Non-Potable Water Systems" will be released in 2016. This report will provide a comprehensive framework for oversight and management programs, including appropriate water quality, monitoring and permitting strategies for local communities that are interested in pursuing programs. There are discussions of developing a decentralized non-potable water systems policy for consideration by the State Water Resources Control Board that will include a comprehensive framework to protect public health.

Allow Communities to Decide What Type of Water Reuse Makes Sense for Them

Each community has unique geographic, political, and financial dynamics. Water reuse options should be tailored to meet the needs of each community considering these and other factors. For example, many communities with centralized wastewater collection and treatment systems have invested or plan to invest in recycled water – either potable or non-potable. These funding decisions are often made years, and in some cases decades, before project implementation. These communities need assurances that the wastewater flow will be available for the existing and planned recycled water project expansions. Diminished flows at wastewater treatment plants have already become an operational challenge because

of higher “strength” wastewater and reduced wastewater flows from indoor water conservation activities throughout California. Other communities might decide for a number of reasons, including geographic or financial, to encourage the installation of graywater and decentralized non-potable water systems.

Maintain Clear Definitions of Non-potable Water Reuse Terms

For WRCA, it is critical to maintain the public trust brand and provide clear information about recycled water and other types of reused water. This is important for the public and overall transparency because each type of reused water is held to a different public health and safety standard and applied for different uses as allowed by regulation. As part of this effort, WRCA supports maintaining clear distinctions between the different types of reused water.