ACTION 22 Expand the use of recycled water

Work with water agencies, municipalities, and stakeholders to reduce barriers to the broader use of recycled water. Encourage the use of the right water at the right time and in the right place.

TASK 22-1 Increase coordination among municipalities, wastewater agencies, and drinking water agencies to expand incorporation of recycled water into local and regional water resources planning. Collaborate to identify opportunities for the broader use of recycled water as well as ways to overcome funding and planning gaps, and regulatory and permitting constraints.

BY 2018 Hold three meetings.

TASK 22-2 Promote existing outreach activities educating the public about recycled water. Encourage the sharing of informational materials, resources, and program models among municipalities, wastewater agencies, and drinking water agencies.

BY 2017 Develop platform for sharing resources.

OWNERS

Bay Area Clean Water Agencies (Tasks 22-1, 22-2)
SF Estuary Partnership (Tasks 22-1,22-2)

COLLABORATING PARTNERS

Association of Bay Area Governments, North Bay Water Reuse Authority, WateReuse California, WateReuse Northern California Chapter, Western Recycled Water Coalition, various municipalities and water and wastewater agencies .

BACKGROUND

Recycled water refers to water treated to either non-potable or potable standards to provide a beneficial use. Recycled water is an increasingly important part of the Bay Area's water portfolio, yet regional use still lags behind other parts of the state according to the 2015 *State of the Estuary Report*. Until recently, most of the surface and ground water consumed in the Bay Area was treated to drinking water standards, used once, treated again to remove pollutants, and discharged to the Bay from wastewater treatment plants. Increasing competition for high quality fresh water in a time of prolonged drought, with resulting conflicts between environmental and human uses, make water recycling more important than ever.

This CCMP action supports efforts underway to make more efficient use of the Bay Area's potable water supply by using recycled water to 1) irrigate landscapes and crops, 2) cool the processing water in refineries and power plants, 3) create wetlands and other habitats, and 4) supplement instream flow where other alternatives are not available. Recycled water can also be used to expand water supplies by recharging groundwater, as is already done in other areas of California or, after it is purified, to supplement the surface storage and distribution system.

This CCMP action endorses the "right use of the right water at the right time and in the right place" approach. This approach seeks to optimize recycled water use within current constraints. Constraints may include a lack of infrastructure for recycled water delivery, limited funding for pumping or pipeline construction, and planning gaps.

One effort to address planning gaps has been the 2013 *Bay Area Integrated Regional Water Management Plan* (BAIRWMP). The plan projects that recycled water use will more than double over the next 20 years, to 120,000 acre-feet per year, primarily by offsetting potable supplies and in environmental restoration projects and landscaping. Local wastewater agencies are working individually and through partnerships to implement projects identified in the BAIRWMP. Partnerships such as the Bay Area Clean Water Agencies (BACWA), the North Bay Water Reuse Authority, and the Western Recycled Water Coalition, have developed greater regional capacity.

Recent efforts are coalescing around a concept called "direct potable reuse" or DPR. DPR is the introduction of highly purified recycled water directly into the raw water supply immediately upstream of a water treatment plant, or into the distribution system downstream of a water treatment plant. More scientific research on the impacts of expanding DPR may be required, but it offers an opportunity to significantly reduce the distance that purified water would need to be pumped, thereby reducing costs.

One barrier to expanding DPR is the public's lack of awareness about just how clean recycled water can be (in many cases cleaner than potable water). A key to gaining public acceptance is aggressive source control of pharmaceuticals and other Constituents of Emerging Concern (CECs), traces of which remain in municipal wastewater. A process called reverse osmosis, used to purify recycled water, is also of concern to environmental health because of potential impacts from reverse osmosis concentrate, a by-product. Additional studies evaluating how to best protect human health and the environment, or more outreach sharing the results of existing studies, may help foster public support.

This CCMP action supports regional partnerships like BACWA in efforts to share resources and reduce barriers to the broader use of recycled water.

NEXUS

Actions14, 17, 20, 21, 23, 25, 27; Goals; Objectives