

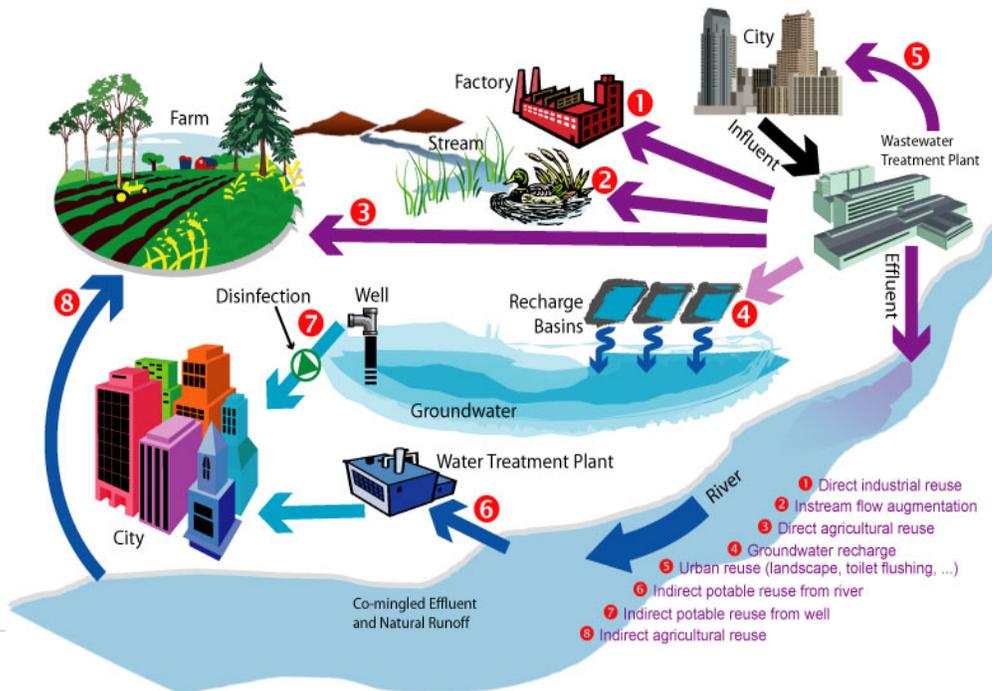
**OVERSIGHT HEARING:
UNTAPPED POTENTIAL: WATER REUSE FOR CALIFORNIA'S
FUTURE WATER SUPPLY RELIABILITY**

BACKGROUND

"Water recycling," also known as water reclamation or water reuse, is an umbrella term encompassing the process of treating wastewater, storing, distributing, and using the recycled water. The benefits of water recycling are many – decreased pressure on surface water supplies, less energy to convey imported water, improved local water reliability – and can accrue to public water supplies, agriculture, and the environment. For this reason California has recognized, in law, that recycled water is a valuable resource.

As the State population grows, public water supplies are becoming stressed. Water supplies in the Sierra snowpack and the Colorado River are declining; groundwater is becoming less reliable due to climate variability, environmental and contamination concerns, and prior overdrafting. Matched with a projected population in California of 60 million by 2050, the need for 'new' water supplies to meet current and future demands is becoming imperative.

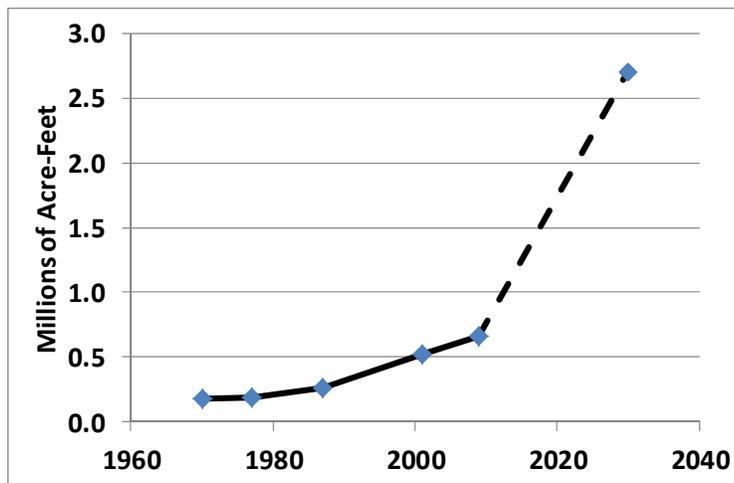
Water reuse can occur in two primary ways – indirect potable reuse (IPR) and direct potable reuse (DPR). In IPR, treated wastewater is discharged into ground water or surface water. From there, it is extracted for agricultural or municipal uses. In DPR, highly treated wastewater is put directly into the water supply.



Water management in California requires that both water supply needs and water quality be properly addressed. The Department of Water Resources is the primary state agency with planning responsibilities and the State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards, and the Department of Public Health (DPH) all play various roles with regard to water quality regulation. Careful monitoring by DPH and SWRCB ensure that recycled water meets all federal, state and local water quality standards. For example, adopted regulations under Title 22 of the California Code of Regulations, ensure that recycled water is safe for human contact. And recycled water has a long history of being safely used in the U.S for more than 50 years in recreational lakes, outdoor landscape systems, food crop irrigation and manufacturing processes.

In 2009, the SWRCB adopted a water policy goal of having an additional 2.5 MAF of recycled water per year by 2030. As seen in the graph below, in order to meet that goal, water recycling efforts will need to be greatly increased.

STATE GOAL: 2.5 MAF OF RECYCLED WATER BY 2030



COURTESY OF
WATEREUSE

Fortunately, the level of supplies that could potentially be derived from recycled water is substantial. The National Academy of Sciences, in its recent report: *Water Reuse: Potential for Expanding the Nation’s Water Supply Through Reuse of Municipal Wastewater* states that in the U.S., approximately 12 billion gallons of municipal wastewater effluent is discharged each day to an ocean or estuary and that reusing these coastal discharges could directly augment public supply by 27 percent. Unlike water that is discharged into a stream and potentially used by another downstream party, water discharged to the ocean is considered "irrecoverable" and thus constitutes "new" supply.

The next frontier of recycled water use will be DPR. This January, the National Water Research Institute (NWRI), in a white paper entitled *Direct Potable Reuse: Benefits for Public Water Supplies, Agriculture, the Environment, and Energy Conservation*, concluded that treating a significant fraction of the wastewater now being discharged to the ocean to drinking water standards and introducing direct potable reuse could stabilize the water supply in Southern California by augmenting reduced State Water Project deliveries and ensuring against water supply interruptions due to unforeseen events, such as a natural or human-made disasters.