



CALIFORNIA WATER BOARDS

State Water Resources Control Board

Regional Water Quality Control Boards

Water Board Function: Water use efficiency

Water Board Program(s) Relevant to Function:

Waste Discharge Requirements (WDR) program, NPDES Program, Storm Water Program, Water Rights, Basin Planning, and Financial Assistance programs

Problem/Issue Description:

The use of recycled water, desalinated water, and the push for water conservation are continually increasing as the State's population grows and water availability is reduced by environmental constraints and supply reduction due to dryer weather patterns. The employment of recycled water, desalinated water, and water conservation measures do have water quality impacts that have to be considered and regulated by the Water Boards. For instance, recycled water can have a couple of water quality considerations such as brine waste discharges from reverse-osmosis systems, and the potential affects on groundwater quality due to salts or nitrates. Desalination facilities will have considerations such as entrainment and impingement of sea life in their intake water and brine discharges. Balancing the need to encourage water use efficiency while protecting water quality and beneficial uses can be challenging under certain conditions.

Overview of Function:

Water use efficiency activities such as recycling water or desalination have impacts on water quality that require regulation by the Water Boards. Generally these impacts are regulated by issuing waste discharge requirements and/or NPDES permits (see function sheets on municipal and industrial wastewater regulation, stormwater regulation, and waste discharge to land regulation). However, there is a difference when regulating water recycling and desalination as opposed to a waste discharge, and that is that the primary objective is not the discharge of waste, rather the waste discharge is a consequence of the recycling or desalination activity. Therefore, a dilemma often faced is one of encouraging water recycling while protecting water quality and beneficial uses.

Another factor that bears consideration when dealing with water recycling is the potential for a water rights issue. Diversion of water from natural water bodies, and for example the reduction of a waste discharge flow for the purposes of recycling, may require a water rights approval.

Outside of the standard waste discharge permitting function of the Water Boards, water use efficiency and the State Water Board's ability to affect it can also be found in the Storm Water program. Diversion of storm water from storm-drain systems so that it can percolate into the groundwater and become a future resource rather than contributing to polluted storm water flows is a burgeoning idea for inclusion in storm water permits. Low impact development (LID) is one means of achieving this water use efficiency and the inclusion of LID requirements in storm water permits can foster water use efficiency.

The Water Boards also have historically offered and administered financial assistance programs that provide funding for water recycling facilities. These have varied from grants to loans and have been tied at times to specific objectives like reducing impacts on the Bay-Delta. New grant programs, like the upcoming Proposition 84 Storm Water grant program, will also provide an opportunity to incorporate water use efficiency in decreasing impervious surfaces and increasing storm water percolation to groundwater.

Role of Water Board Staff:

Water Board staff develops the waste discharge requirements, NPDES permits, and storm water permits that affect water use efficiency. Also, the State Water Board's Division of Water Rights may need to address water rights issues associated with water recycling and diversion of storm water.

Role of Regional Board Members:

Conducts public hearing, and considers and adopts proposed water recycling permits and permits regulating the discharge from desalination projects.

Conducts public hearing, and considers and adopts water quality plans, orders, and permits, taking into consideration any relevant water conservation issues and issues involving the capture and use of stormwater.

Role of State Board Members:

Review petitions from Regional Boards for water recycling permits and desalination projects. Adopts policies and regulations.

Administers water rights program. Conducts public hearing, and considers and adopts water quality plans, orders, and permits, taking into consideration any relevant issues involving the capture and use of storm water and water conservation.

Primary Issues of Concern:

Encouraging water recycling, desalination, and storm water diversions while protecting water quality and beneficial uses.

Definition of Key Terms:

Desalination – the removal of salt, especially from sea water.

Recycled water - means 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 resource [CWC Section 13050 (n)].