

**CALMAC Study ID CPU0035.01
Volume 6 of 15
Appendix E**

**Embedded Energy in Water Studies
Study 1: Statewide and Regional Water-Energy Relationship**

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**Prepared for the
California Public Utilities Commission
Energy Division**

**Managed by
California Institute for Energy and Environment**

August 31, 2010

Appendix E Water Balance Definitions

The following tables define the entries in the regional water balances. These definitions were taken directly from the definitions to the California Water Plan update, produced by DWR.

Table 1. Water Demand Definitions

Demand	
<u>Urban</u>	
Large Landscape	The water used to irrigate recreational and large landscape areas such as golf courses, parks, play fields, highway medians, and cemeteries.
Commercial	The water used by light industry and light or non-manufacturing business establishments including retail services, office buildings, restaurants, dry cleaners, and other consumer-oriented services or businesses. Also includes employee uses and recreational facilities (temporary lodging). This can include Institutional or Governmental use as well.
Industrial	The heavy water using manufacturing with cooling towers - for processing, manufacturing, and other industrial plant uses (canneries, mills or other large complex users of supply) as defined by the North American Industry Classification System (NAICS). This water can be used as cooling water, or for rinsing, washing, diluting, and other sanitation operations. Also included are employee uses and landscape irrigation.
Energy Production	The water used for refineries and cooling in thermo-electric power generation.
Residential - Interior	The water used within a single-family, detached housing unit for such uses as personal hygiene, cooking, drinking, and laundry.
Residential - Exterior	The water used outside of a single-family, detached housing unit. Uses include landscape irrigation, swimming pools, car washing, sidewalk cleaning, and the watering of domestic animals.
Conveyance Applied Water	The sum total of conveyance that is irrecoverable (evaporation and evapotranspiration), outflows to salt sink or seeps into the groundwater
Groundwater Recharge Applied Water	The amount of intentional water application to increase deep percolation.
<u>Agriculture</u>	
Applied Water - Crop Production	The quantity of water delivered to the intake of a city's water system or factory; the farm or wetland headgate; or the portion of stream flow dedicated to instream use or reserved under the federal or State legislation
Conveyance Applied Water	The sum total of conveyance that is irrecoverable

	(evaporation and evapotranspiration), outflows to salt sink or seeps into the groundwater
Groundwater Recharge Applied Water	The amount of intentional water application to increase deep percolation
<u>Environmental</u>	
<u>Instream</u>	
Applied Water	The use of water within its natural watercourse as specified in an agreement, water rights permit, court order, FERC license, or other State or federal requirement.
<u>Wild & Scenic</u>	
Applied Water	Annual natural flows from the designated State and Federal Wild and Scenic Rivers system.
<u>Required Delta Outflow</u>	
Applied Water	Fresh water outflow from the Sacramento-San Joaquin Delta required by law to protect the beneficial uses within the Delta from the incursion of saline water
<u>Managed Wetlands</u>	
Applied Water	The applied water use for managed wetlands areas.
Conveyance Applied Water	The sum total of conveyance that is irrecoverable (evaporation and evapotranspiration), outflows to salt sink or seeps into the groundwater
TOTAL USE AND OUTFLOW	The sum of all water demand

Table 2. Water Supply Definitions

SUPPLIES	
Surface Water	
Local Deliveries	The amount of water delivered by local water agencies and individuals. It includes direct deliveries of water from stream flows, as well as local water storage facilities. Also includes water supply for Instream and Wild and Scenic River flows – a change from Update 2005 wherein there was a separate category for Dedicated Environmental Water.
Local Imported Deliveries	The amount of water transferred by local agencies from other regions of the state.
CR	The amount of water diverted from the Colorado River by the Metropolitan Water District of Southern California, Imperial Irrigation District, Coachella Valley Water District, Palo Verde Irrigation District, the Yuma Project, and others under California's entitlement to use Colorado River Water.
CVP	The delivery of project water to Central Valley Project contractors.
Other Federal Deliveries	The sum of deliveries from federal projects other than the Central Valley Project.
SWP	The sum of all deliveries to State Water Project contractors.
Groundwater	The amount of groundwater extraction in excess of deep percolation.
Reuse/Recycle	
Reuse Surface Water	The amount of untreated raw applied water recaptured for use through surface drainage facilities.
Recycled Water	The application of treated water/reclaimed water to meet a beneficial use, supplanting a potable or potentially potable supply.
Seawater Desalination	Water coming from seawater that is desalted by reverse osmosis or other processes.
Brackish Desalination	Water coming from groundwater that is desalted by reverse osmosis or other processes.
TOTAL SUPPLIES	The sum of all water supplies