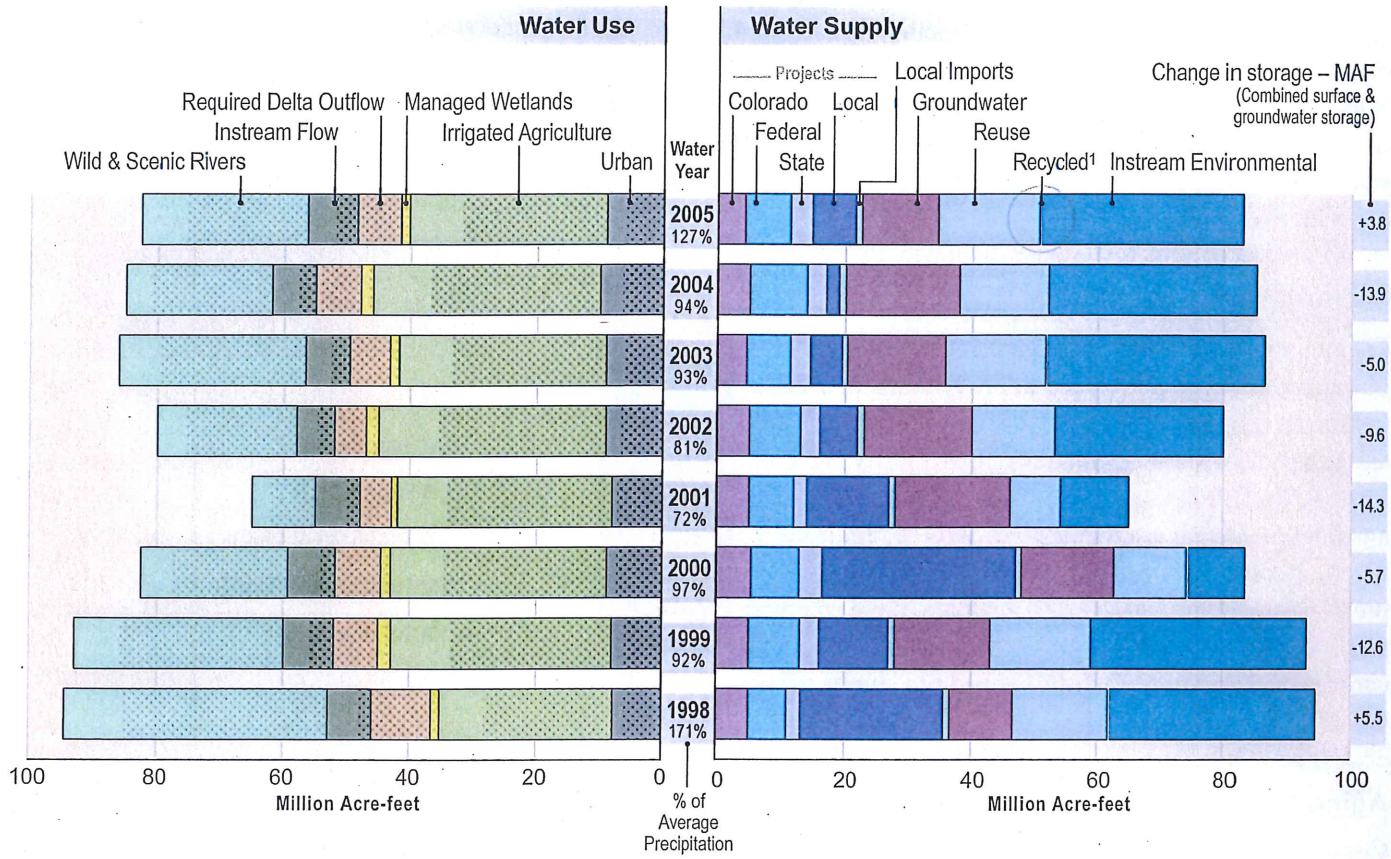
California's Water Resources:

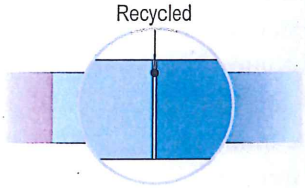
California Water Balance by Year

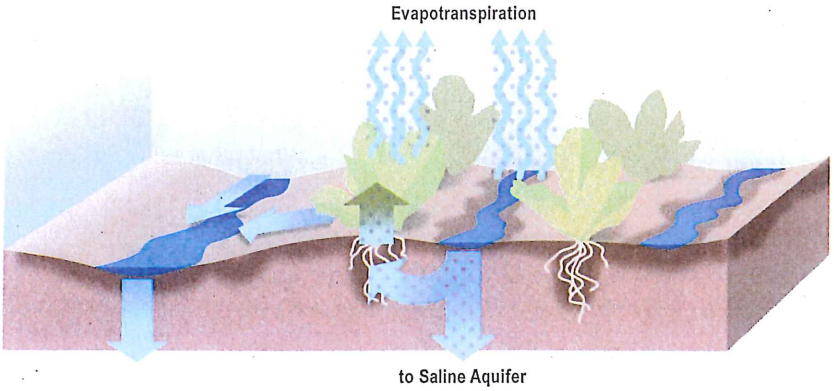
A lot of information is presented in this figure including statewide water use, source of supply, annual change in storage, and percentage of average precipitation.



Stippling in bars indicates **depleted (irrecoverable) water use** *(water consumed through evapotranspiration, flowing to salt sinks like saline aquifers, or otherwise not available as a source of supply)*

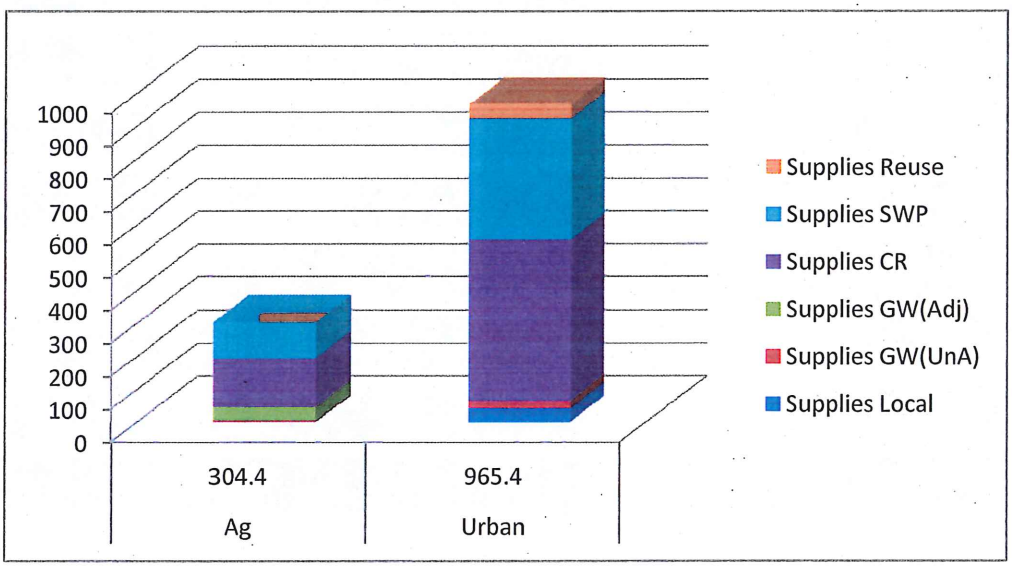
1 **Detail of bar graph:** *For water years 1998-2005, recycled municipal water varied from 0.2 to 0.5 MAF of the water supply.*



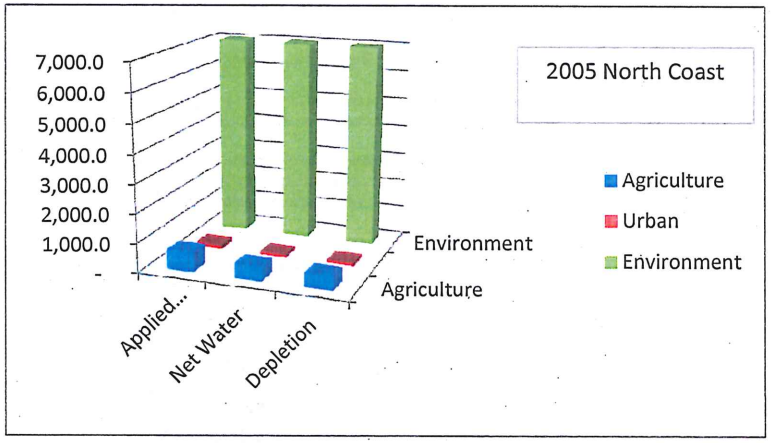


Water Balance by Use

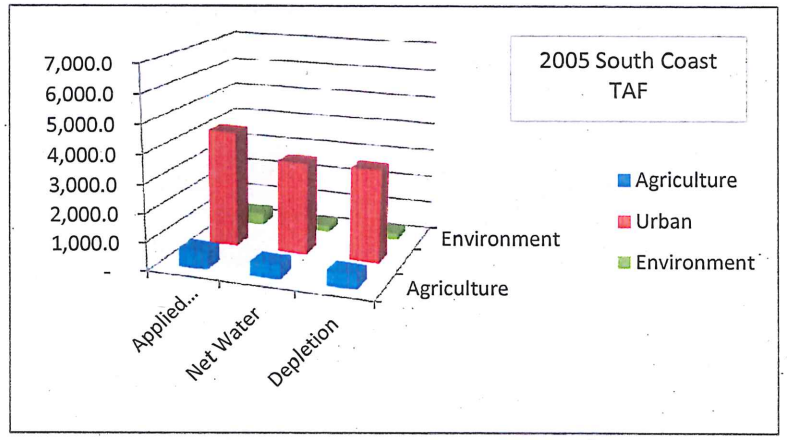
South Coast		Draft 2007 numbers	
		Ag	Urban
AW		304.4	965.4
Supplies	Local	0.7	43.3
	GW(UnA)	4.3	22.1
	GW(Adj)	41.3	0.9
	CR	149.1	486.9
	SWP	109	368.9
	Reuse	0	43.3



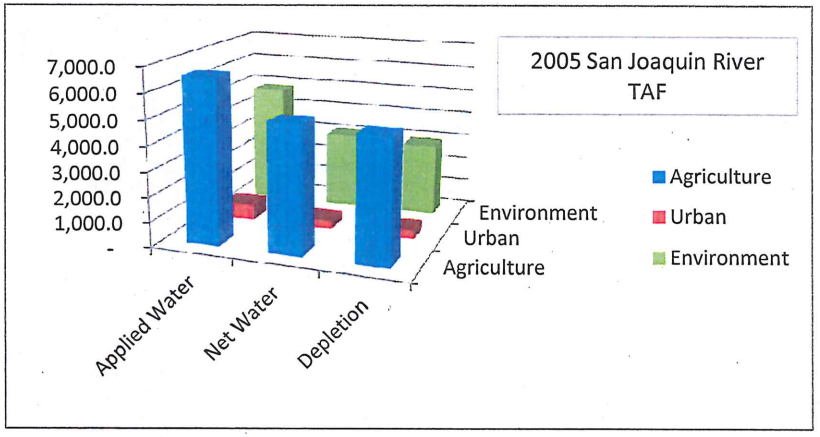
2005 North Coast	Applied Water	Net Water	Depletion
Agriculture	662.8	491.5	485.0
Urban	155.0	101.1	101.1
Environment	17,769.5	17,499.7	17,477.5



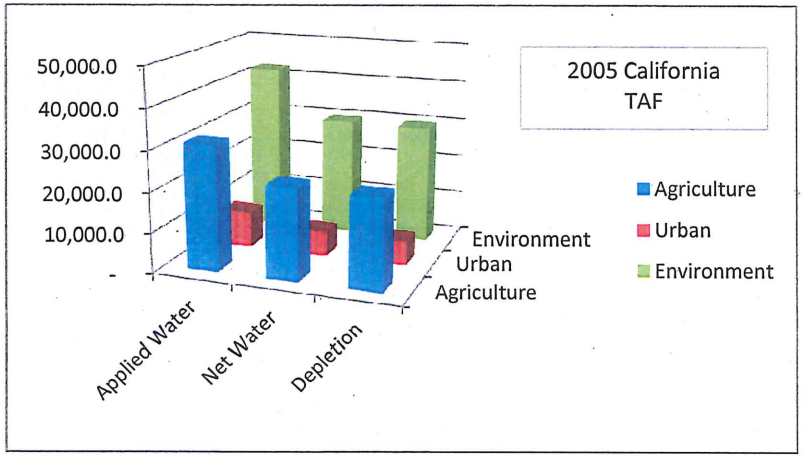
2005 South Coast	Applied Water	Net Water	Depletion
Agriculture	612.9	505.7	505.7
Urban	4,131.3	3,267.9	3,267.9
Environment	431.2	234.6	234.6



2005 San Joaquin River	Applied Water	Net Water	Depletion
Agriculture	6,559.2	5,100.2	4,921.5
Urban	664.7	346.5	346.5
Environment	4,841.0	3,077.0	2,958.7

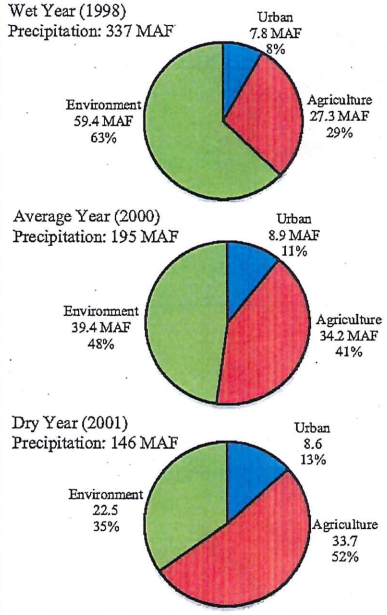


2005 California	Applied Water	Net Water	Depletion
Agriculture	31,178.4	23,003.0	22,710.0
Urban	9,030.4	6,125.4	6,121.8
Environment	42,462.1	29,811.0	29,669.2



HUMAN USE IS FIRST PRIORITY AND ENVIRONMENTAL WATER TAKES THE REDUCTIONS

Gross Water Use in Representative Water Year Types



Gross (or "applied") water use is the water delivered to a home, business, or farm—not all of which is consumed. Some water—such as excess irrigation water and discharges from wastewater treatment plants—flows to streams, lakes, aquifers, or the sea ("return flow"). Some of this return flow ("recoverable flow") is available for reuse, because it returns to freshwater streams, lakes, or canals or recharges groundwater basins.

Source: Hanak, E., J. Lund. A. Dinar, B. Gray, R. Howitt, J. Mount, P. Moyle, and B. Thompson. 2011. Managing California's Water: From Conflict to Reconciliation. San Francisco, CA.

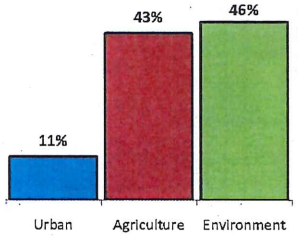
Source: Delta Stewardship Council. 2012. Adapted from DWR California Water Plan Update 2005, Table 3-1 California Water Summary. Includes groundwater use.

- In dry years, urban and particularly agricultural water use increases both in absolute numbers and as a proportion of the water available. Also note that precipitation in each year far exceeds gross water use as roughly two-thirds of precipitation is lost to evaporation and transpiration.
- Environmental water is water that is used for managed wetlands or instream flows to support public trust resources although much of this water is reused for human use.
- Water allocated to the environment declines significantly in dry years as human use is historically prioritized before environmental use.

For more information, see the California Water Plan Update 2005.

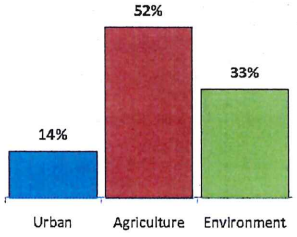
MOST ENVIRONMENTAL WATER HAS FEW CONNECTIONS TO OUR STATEWIDE WATER SYSTEM AND CANNOT BE RECLAIMED FOR URBAN AND AGRICULTURAL USE

Statewide Gross Water Use 1998-2005



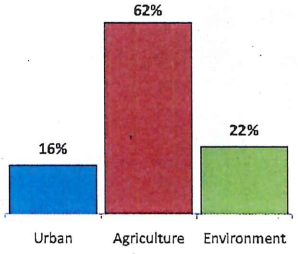
- Gross water use is a common measure of California's total water use. Gross water use is the water delivered for urban and agricultural use, and also set aside for instream flow, habitat, and water quality requirements not all of which is consumed.
- In this measurement, environmental water use is dominated by flows designated for Wild and Scenic Rivers. Most of this water flows in rivers in the North Coast far from most urban and agricultural demand and includes flood flows that there is no practical way to reclaim for urban and agricultural use.

Gross Water Use Excluding North Coast Flows 1998-2005



- Excluding North Coast flows that have few connections to the statewide water supply, the amount of water that goes to the environment decreases from 46 percent to 33 percent with urban and agricultural water use increasing in proportion.

Net Water Use Excluding North Coast Flows 1998-2005



- When accounting is based on net water use, meaning water that is consumed, lost to evaporation and transpiration, or flows out of the State, environmental water use represents about a fifth of total use.
- Some of this environmental water is necessary to maintain water quality for drinking water supply.

Source: Delta Stewardship Council. 2012. Adapted from PPIC Myths of California Water – Implications and Reality. Figures represent the average water use for 1998-2005, adapted from California Water Plan Update 2009. Includes groundwater use.

For more information, see the California Water Plan Update 2009, U.S. Bureau of Reclamation Water Supply and Yield Study, and PPIC's Managing California's Water and Myths of California Water – Implications and Reality.