

**POLICY FACT SHEET: LA COUNTY GROUNDWATER MANAGEMENT**

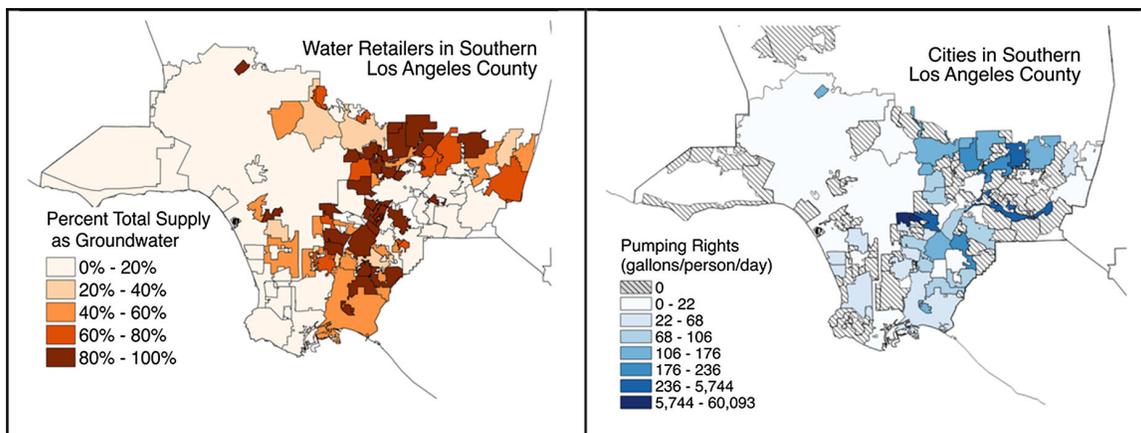
Groundwater use in California has historically been unregulated. Los Angeles County is one exception, with seven *adjudicated* groundwater basins where pumping rights are established and overseen by court-appointed groundwater masters. Groundwater rights were collectively allocated to those who could show a record of pumping through the legally negotiated adjudications. Rights are codified and can be leased or transferred. This has resulted in a system with over 300 rights holders throughout L.A. County today, overseen by groundwater masters who manage pumping levels to ensure safe yield.

For groundwater supplies to match annual pumping allowances, natural groundwater recharge from rainfall is supplemented from many sources, including imported water from the Metropolitan Water District, captured stormwater from L.A. County water agencies, and recycled water. Water for recharge also comes through conservation. The established system of groundwater rights, however, limits the volume of water that parties can store. Adjudicated pumping and storage rights have been fixed for decades. **Future challenges will likely necessitate changes to the historic allocation of groundwater rights** as cities, municipal water districts, and utilities seek flexibility to store more water in groundwater basins to meet water shortages during droughts.

Groundwater rights vary greatly throughout the county. **Retailers along the coast are generally less reliant on groundwater, while upper basin retailers in the Main San Gabriel and Raymond basins receive significant groundwater supplies.**

In addition, throughout the county, **45 of the 67 incorporated cities have pumping rights.** Per capita rights to groundwater range widely in the region. For instance, the City of Santa Fe Springs has approximately 220 gallons/person/day (gpd) while the City of Artesia has less than 2 gpd.

**The majority of cities (28) have rights of less than 100 gpd.** Twelve cities have rights to less than 22 gpd, including the City of Los Angeles (15 gpd, not counting long-term storage rights). Many cities in L.A. cannot meet even conservative estimates of per capita daily water use with existing groundwater rights alone. Across the county, cities in the Upper Basin users tend to have more per capita pumping rights.



**Figure 1: Water retailers in L.A. County: Percent supply from groundwater (left) and Per Capita pumping rights (right)**

The complex and polycentric governance structure has successfully adapted to changes over time. But past achievements do not guarantee future successes in the face of water scarcity and population growth. With less reliable imported water supplies, groundwater basins must be used even more for short- and long-term water storage. Retailers with access to more groundwater rights, storage capacity, and imported water will be better positioned to store water in wet periods for later pumping. Given these differences, some areas will find it harder to achieve local reliance and increase drought resilience than others. **Equitable access to groundwater throughout the county will likely require reallocating some rights.** Market trades such as leasing or selling rights can help efficiently redistribute rights, while re-adjudications will also be necessary for communities less able to pay market prices for long-term groundwater access.

Our analysis of the seven adjudicated basins indicates a **trend toward greater control or regulation of groundwater rights by public institutions**, as well as a **consolidation in the number of rights held by larger parties.**

<i>Basin</i>	Pumping Rights at Time of Adjudication (acre-feet per year)			
	Private	Public	Publicly-Regulated	Non-Profit
West Coast	13,486	0	15,743	0
ULARA	0	55,970	0	0
Six Basins	0	6,657	6,705	2,972
Raymond	0	29,140	2,299	0
Main San Gabriel	0	9,252	33,400	11,025
Current Pumping Rights (acre-feet per year)				
<i>Basin</i>	Private	Public	Publicly-Regulated	Non-Profit
West Coast	9,549	19,495	35,039	-
ULARA	-	279,671	-	-
Six Basins	-	12,740	6,888	5,467
Raymond	-	36,397	-	-
Main San Gabriel	-	22,565	24,613	17,747

Table 1: Changes in pumping rights in adjudicated L.A. County Basins over time

Many agencies are examining possibilities for greater water recycling and stormwater capture to augment recharge sources. Larger institutions, such as municipalities and special districts will likely drive this process and induce broader system changes. Such agencies are most capable of building the large, capital-intensive projects for capture and recycling. However, they may not have sufficient groundwater rights for storing water. As a first step, groundwater managers can facilitate long-term plans for **excess groundwater basin capacity that offer utilities and agencies opportunities to store recycled or captured water for later use.**

**Further Reading**

LADWP. (2010). *Urban Water Management Plan*. Los Angeles, CA: Los Angeles Department of Water and Power.

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WRD. (2014). *2014 Engineering Survey and Report 2014*. Los Angeles, CA: Water Replenishment District of Southern California.