

California's Water Market

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► **Water marketing is an important tool for managing scarce supplies.**

In California's water market, buyers and sellers trade water through short-term leases, long-term leases, and permanent sales of their water rights. Trading adds flexibility to the state's water allocation process. Short-term transfers lessen the economic impact of shortages during droughts by shifting water to activities and places where the lack of water will be more costly. Long-term and permanent transfers accommodate geographic shifts in water demand as the economy changes and the population grows. Given the physical, financial, and environmental limits on expanding water supplies in California—and the prospect of supply reductions caused by a warming climate—the water market will become an increasingly valuable tool.

► **Water sales grew significantly during the 1990s, but trading has since been flat.**

Overall, California's market now accounts for about 3% of all water used. Most trading occurs within the same county (38%) or region (41%). The state began fostering market growth in the early 1980s, when annual trades averaged just over 100,000 acre-feet. A major uptick in market activity occurred during the 1987–92 drought. In 1991, direct state purchases and a state-run Drought Water Bank resulted in trades of more than one million acre-feet. Market expansion continued when the rains returned, partly driven by increased purchases of water for the environment. Trading has been fairly flat since the early 2000s.

► **Most water sales are from the farm sector.**

Both farms and cities buy water, but most sellers are in the farm sector—reflecting the fact that farms hold many more water rights (roughly four times as much as cities). The 2000s saw a shift toward more long-term leasing and sales. Growing cities in the San Joaquin Valley and Southern California were major buyers. Southern California cities now receive more than 10% of their supplies from such trades. But farmers with valuable orchards and less reliable supplies—such as those on the west side of the San Joaquin Valley—have also been developing more long-term deals.

► **Water sales also support the environment.**

Environmental water purchases are used to support wildlife refuges, increase flows for fish, and reduce salt build-up in the Salton Sea. Such trades can help reduce conflicts with water users over the allocation of scarce supplies. In all, more than five million acre-feet were acquired for environmental purposes from 1982 to 2014, or 18% of total market flows. Funds have come from state and federal taxpayers and some water users. State and federal budget constraints have reduced recent volumes of environmental water purchases, but a state water bond approved in 2014 provides \$200 million to acquire long-term supplies for the environment.

► **The transfer approval process is complicated.**

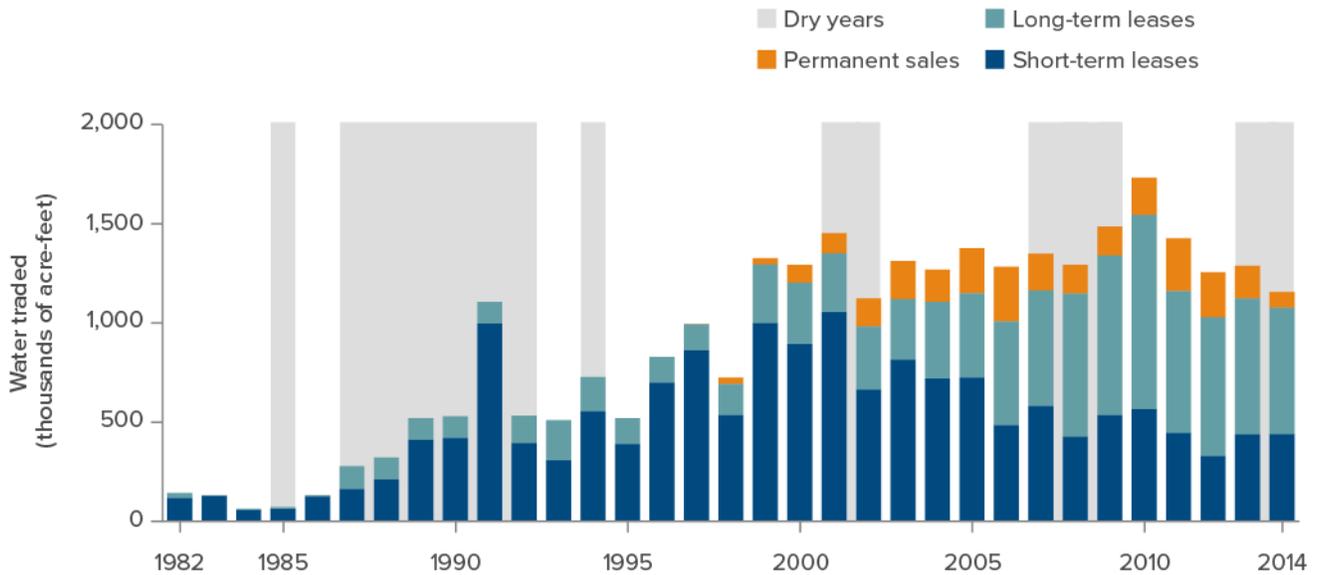
Trading is subject to regulatory oversight because moving water from one place to another can affect the environment and other water users. However, the transfer approval process is fragmented and inconsistent, with different rules for different types of water rights and agencies. State and federal administrative reviews can be lengthy—often taking months, even years. Many rural counties also have local restrictions on transfers of groundwater.

► **Reforms could help strengthen the market.**

Several changes could help California's water market function more smoothly. A top priority is improving information about water availability and how much can be safely traded without harming the environment or other legal water users. Building a central repository of information on volumes and prices of trades can also improve transparency and market access. Clarifying and streamlining the review process for transfers is another priority. Addressing infrastructure weaknesses that restrict moving water between buyers and sellers can also improve trading in some areas.



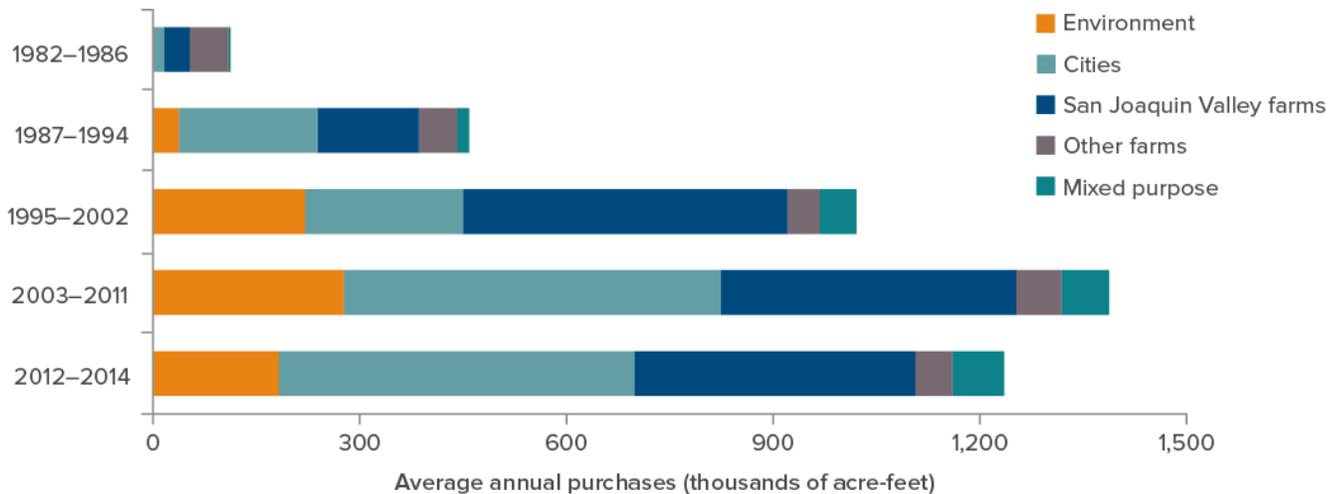
California's water trades have been fairly flat since the early 2000s



Source: Updated from E. Hanak and E. Stryjewski. *California's Water Market, By the Numbers: Update 2012* (PPIC, 2012).

Note: The figure shows water traded between entities that are not members of the same water district or wholesale agency. It excludes volumes committed under long-term lease and permanent-sale contracts that were not physically transferred because of hydrologic conditions or other factors (in 2014, roughly 800,000 acre-feet). Dry years are those classified as critical or dry for the Sacramento Valley.

Cities, farms, and the environment acquire water through the market



Source: Updated from E. Hanak and E. Stryjewski. *California's Water Market, By the Numbers: Update 2012* (PPIC, 2012).

Note: The figure shows actual volumes purchased by different sectors. "Mixed purpose" denotes purchases by agencies with significant urban and agricultural uses, such as the Coachella Valley Water District and the San Luis Delta Mendota Water Authority.

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