Water Conservation:

A Legacy of Adaptation. A Commitment to Stewardship and Innovation.

Throughout its history, Westlands Water District has recognized the long-term survival of its farms depend on the effective management of California's precious water resources.

CAREFUL APPROACH TO WATER DISTRIBUTION:

Successful water distribution systems must balance many factors: meeting the needs of thousands of uses simultaneously, with adequate water pressure at all locations and a thoughtful strategy to address water quality, quantity and peak flow rates. With its history of pervasive water shortages, Westlands Water District and its growers work together to ensure that every drop of water delivered through its comprehensive water supply system is responsibly and sustainably managed.

- The Westlands distribution system is fully enclosed to eliminate losses from evaporation and leakage. Today, more than 90 percent of Westlands irrigated lands are served by efficient drip irrigation systems, representing an investment of more than $500 million.

WHY FOCUS ON PRUDENT WATER MANAGEMENT?

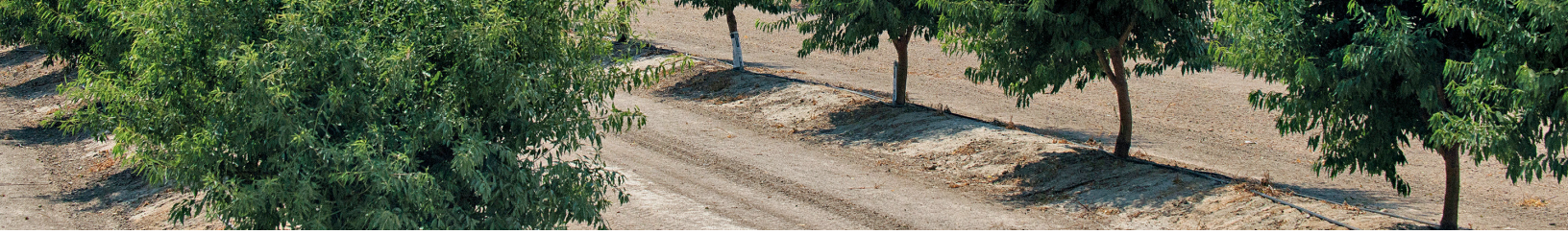
Water is directed to Westlands through the Central Valley Project (CVP), which moves stored water from Lake Shasta to Bakersfield to the region through dams, canals and pumps. Under state and federal agreements, the CVP is intended to provide 90 percent of its water to farms, but in dry years, cities receive priority over farms. Environmental and drought restrictions also contribute to water shortages.

In the past ten years, Westlands received its full water allocation only once in 2006. Over the last five years, the district has received an average 10% allocation; two of those years, it received a zero allocation.

EFFICIENCIES IN WATER USE:

Irrigated agriculture is essential in meeting our food and fiber production needs. Irrigation water management, which encourages the application of water in a manner that nourishes plants and crops without extended soil saturation or runoff, plays a crucial role in the conservation of water. By increasing application precision and reducing applications, water can be conserved and energy saved.

- Research shows that statewide between 1990 and 2010, flood irrigation dropped 24 percent, while the use of drip irrigation increased 23 percent. In Westlands, the use of water-saving initiatives such as precision drip irrigation, micro-sprinkler irrigation and regulated deficit irrigation has increased 55 percent over the last 30 years.
- Westlands offers an Expanded Irrigation System Improvement Program (EISIP), which provides low interest loans to water users for the lease-purchase of irrigation system equipment. EISIP funds up to $130,000 towards the purchase of irrigation system equipment, design of irrigation system and purchase of portable aluminum irrigation pipe, micro irrigation, linear move and center pivots.



GROUNDWATER MANAGEMENT:

The lack of consistent statewide policy surrounding groundwater management has exacerbated existing water supply problems resulting from minimal allocations and the drought. Over the last decade, some farmers have been forced to rely heavily on groundwater. Excessive pumping can result in long-term declines in groundwater supply, high pumping costs, sinking lands and dry wells.

- Westlands has taken a proactive approach to groundwater management that balances pumping rights with efforts to improve overall supply reliability and minimize total water supply costs. Through its Groundwater Management Program, Westlands became the first water district in the state to integrate local groundwater resources into the district's comprehensive water supply system. Westlands installs or acquires title to groundwater pumps, integrates them into its comprehensive water supply system, and provides groundwater pumping from under a fixed schedule.

PROMISING DESALINATION TECHNOLOGIES:

Former irrigation water can get trapped beneath the surface and prevent the water from draining lower into the underground and can cause environmental damage. Westlands Water District works with federal and state water officials on new initiatives for desalination, a process that removes minerals and contaminants from saline water.

- Cutting-edge desalination technologies have proven effective at processing drainage water at, in some cases, about half the cost of traditional desalination methods. At the **WaterFX** desalination plant near Firebaugh, farm drain water is heated by solar thermal energy and then cleaned. Westlands is also exploring a new process from researchers at Humboldt State University and the University of Southern California called Reverse Osmosis-Pressure Retarded Osmosis (RO-PRO), which captures and reuses salty drainage water on salt-tolerant plants before treating it.

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