

WATER MANAGEMENT PLAN

1999

Westlands Water District

September 30, 1999
Revised with Supplemental Urban Plan
May 2002

WESTLANDS WATER DISTRICT

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LIST OF COMMON ABBREVIATIONS

Ac	-	Acre
AF	-	Acre-Foot
AW	-	Applied Water
Bureau	-	United States Bureau of Reclamation
CC	-	Coalinga Canal
CIMIS	-	California Irrigation Management Information System
CVP	-	Central Valley Project
DU	-	Distribution Uniformity
DWR	-	California Department of Water Resources
ET	-	Evapotranspiration
EWMPs	-	Efficient Water Management Practices
IIP	-	Irrigation Improvement Program
IMIS	-	Irrigation Management Information System
IMS	-	Irrigation Management Service
kWh	-	Kilowatt Hour
LRD	-	Leaching Requirement Depth
M&I	-	Municipal and Industrial
O&M	-	Operation and Maintenance
Project	-	See CVP
RRA	-	Reclamation Reform Act
SAE	-	Seasonal Application Efficiency
SAM	-	Salinity Assessment and Monitoring
SLD	-	San Luis Drain
SLU	-	San Luis Unit
USDA	-	United States Department of Agriculture
USGS	-	United States Geological Survey
WCP	-	Water Conservation Program
WMIP	-	Water Management Information Program
WRCD	-	Westside Resource Conservation District

SUMMARY

The mission of Westlands Water District is to provide timely, reliable and affordable water supply to its landowners and water users, and to provide drainage service to those lands that need it. To this end, Westlands is committed to the preservation of its federal contract, which includes water and drainage service, and to the acquisition of additional water necessary to meet the needs of its landowners and water users. The following objectives have been adopted to support this mission:

- Preserve and restore the federal contract water supply.
- Obtain supplemental water supplies through short- and long-term purchases and transfers; support individual transfers..
- Develop a process to examine the various options available for the purposes of supply enhancement and drainage mitigation.
- Support timely construction of cost-effective facilities to enhance the quality and reliability of water supplies.
- Conduct the maintenance, operational and administrative functions of the District in an efficient and effective manner.

Water conservation was an integral part of the design of Westlands' distribution system in the early 1960s. A closed pipeline distribution system and metered deliveries, prerequisites for optimum water management, enabled the District to equitably and efficiently deliver the District's water supply with virtually no losses to seepage, evaporation, and spills.

In 1972 the District began to look at on-farm water management as the area where immediate conservation gains could be made. The goal then, as it is today, was to provide farmers with accurate and up-to-date information and technical assistance to help them with water management planning and decisions.

Water Conservation Program

Westlands' current *Water Conservation Program* has evolved out of necessity and adversity into the Program that it is today, staffed by a graduate-level water management specialist and a public information person, under the direction of the Water Conservation Coordinator, a civil engineer with a PE. The Program's staff collects data, provides practical information to the farmers, renders technical assistance as necessary, and keeps abreast of statewide water conservation-related developments.

Westlands' *Water Conservation Program* has surpassed the goals to meet the changing needs of its farmers under increasingly difficult water supply and drainage conditions. The Program has responded to these needs and other critical issues with farmer information and assistance programs toward the following objectives:

- Increase seasonal application efficiency.
- Increase distribution uniformity.
- Increase crop yields.
- Decrease deep percolation.
- Decrease the effects of soil salinity.

The tangible results have been a relative stabilization of shallow groundwater depths, a substantial increase in the number of pressurized (sprinklers and drip) irrigation systems, and intensified irrigation management through the use of irrigation specialists and science-based technology, and a historic average District-wide seasonal application efficiency of 83 percent.

The current *Water Conservation Program* consists of the following elements:

- The *Irrigation Guide* provides farmers with water requirements for various crops based on actual weather and computer modeling. The *Guide's* crop water use values are verified with neutron probe sites strategically located throughout the District. A separate *Guide* for each of the District's three climatic regions is mailed and faxed to all farmers weekly.
- The *Water Conservation and Management Handbook (Irrigation Management Handbook)* contains specific water management information for Westlands' farming conditions. First published in 1985, it is currently undergoing a major revision.
- *Profitable Practices* highlights progressive efforts by farmers to conserve water and reduce costs or increase income. This regular column in the monthly *Irrigator* presents proven water conservation methods and equipment in a manner that emphasizes "bottom-line" profit.
- Workshops and meetings with small groups of farmers facilitate a two-way flow of timely water management information. Key District staff and water management experts from the private sector, academia, and government are invited to present the latest tips on water supply and management, irrigation equipment, and available resources.
- Technical assistance and water conservation computer programs provide farmers with one-on-one interaction on irrigation management issues. A full-time, graduate-level water management specialist is available to address farmers' technical questions and problems and assist them with the District's computer programs.
- The District maintains an aggressive program for the installation, upgrading, and repair of District water meters. Water meters are required at each District delivery and on private wells participating in any of the District's conjunctive use programs. They provide farmers and the District with an important water management tool.
- Groundwater monitoring provides farmers with information on the quality and depth of deep groundwater. This enables them to assess their groundwater development and use options at much lower cost than if they had to obtain the information on their own.
- Shallow groundwater monitoring provides farmers with information on the quality and depth of shallow groundwater on a District-wide basis. This gives irrigation managers another low-cost tool with which to develop their water management strategy.
- Efficiency testing is conducted on District pumps which serve as part of the water distribution system. This can help prevent potentially catastrophic system downtime and reduce electrical consumption and costs.
- Conjunctive use of surface and groundwater improves overall water supply reliability by making more efficient use of whatever water is then available. In wet periods, use of surface water is encouraged to preserve groundwater supplies. In droughts, greater flexibility in the use of groundwater is facilitated to extract the maximum benefit from this resource.