# CURRENT RESERVOIR CONDITIONS

# CALIFORNIA MAJOR WATER SUPPLY RESERVOIRS





#### GREEN BOOK ANALYSIS OF IRRIGATION REDUCTION PROGRAM

The Agreement states that successive dry years could result in insufficient water supply to meet all needs. Section 1V.A of the Agreement provides:

"It is recognized that successive dry years could result in insufficient water to meet all needs. During periods of dry year water shortages, the Technical Group will evaluate existing conditions. A program providing for reasonable reductions in irrigation water supply for Los Angeles-owned lands in the Owens Valley and for enhancement/mitigation projects may be implemented if such a program is approved by the Inyo County Board of Supervisors and the Department, acting through the Standing Committee."

The Greenbook, which is the technical appendix to the Inyo/Los Angeles Water Agreement, further describes factors that are to be considered in Section I.B.4.a. stating:

"The Agreement recognizes that successive dry years could result in insufficient water supply to meet all needs. Section IV.A of the Agreement provides that during periods of water shortages, a program to reduce the amount of irrigation water supply for Los Angeles-owned lands may be implemented if such a program is approved by the County Board of Supervisors and the Department. Factors that will be considered in determining if such a program is to be implemented include: 1) water use, supply, and conservation in Los Angeles; 2) flows in the Los Angeles Aqueduct System; 3) surface water runoff conditions; 4) level of groundwater extractions; and 5) extent of well turn-offs implemented for purposes of environmental protection."

#### Summary of Green Book Factors for Consideration of Irrigation Reduction Program

The Green Book describes five factors that are to be considered during the determination of whether to implement a program to reduce the amount of irrigation water supply for Los Angeles-owned lands. At this time, for all five factors, consideration of implementing an irrigation reduction program appears warranted.

#### 1. Water Use, Supply, and Conservation in Los Angeles

The first factor to be considered is water use, supply, and conservation in Los Angeles. Los Angeles has been a leader in conservation efforts as water use in Los Angeles is lower than it has been in 40 years while population has increased by over 1 million people. Since 1990, there has been a reduction of over 60% water use on a per capita basis reducing from 173 gallons per capita per day (gpcd) to 106 gpcd. Los Angeles now ranks among the most water efficient cities in the United States and has goals of reducing water usage to 100 gpcd by 2035. Water supply to Los Angeles has historically been provided by flows in the LAA, MWD water purchases, and local groundwater supply. Recently, LADWP has developed its water recycling and storm water capture programs to help reduce reliance on imported water supplies.



#### Historical Per Capita Water Use in LADWP's Service Area

## City of Los Angeles Water Supply

LADWP Historical Water Supply Sources FY 1980/81 to 2019/20



#### 2) Flows in the Los Angeles Aqueduct System

Flow in the Los Angeles Aqueduct for water supply for the city of Los Angeles ties in to the second factor identified in the Green Book. The current multi-year drought is impacting the entire State of California and deliveries from the State Water Project have been set at a 5% allocation. The Los Angeles Aqueduct is expected to only provide 13% of the supply to the City of LA for the 2022-23 runoff year. This is only 35% of the recent average of Los Angeles Aqueduct supplies. Water purchases from the Metropolitan Water District of Southern California, groundwater from the Los Angeles area aquifers, stormwater capture in the Los Angeles basin, and recycled water will supply the remainder of the City's water needs.



### Water Export from Eastern Sierra to Los Angeles

#### 3) Surface Water Runoff Conditions

The third factor for consideration is the surface water runoff conditions. The April 1 forecast for Eastern Sierra runoff for 2022-23 runoff year is 47% long term average annual runoff value. This is following the driest year for the period of record and this year will be the third year of the drought.



#### 4) Level of Groundwater Extractions

The level of groundwater extractions in the Owens Valley is the fourth factor to consider. Approximately 192,110 acre feet of water is available for groundwater pumping from Owens Valley wellfields under the terms of the Water Agreement during the 2022-23 runoff year, however, LADWP anticipates groundwater pumping will be less than 50% of this allowable capacity. The 1991 EIR called for 110,000 acre-feet of pumping per year, and pumping even in the dire supply conditions experienced now will fall below that number. Groundwater extraction plans and practices since the early 1990's have been environmentally sensitive to avoid lowering groundwater tables and the pumping plan for this year will be consistent recent plans and practices.



#### Owens Valley Pumping - Provided by Water Agreement and Actual Since Inyo/Los Angeles Water Agreement

#### 5) Extent of Well Turn-offs Implemented for Purposes of Environmental Protection

The fifth and last factor is the extent of well turn-offs for purposes of environmental protection. Currently, there are 19 wells turned off for environmental protection due to the provisions of the Green Book. LADWP has followed and will continue to follow the on-off provisions of the Green Book.

When considering each of these five factors laid out in the Green Book, this analysis shows proper conditions for the implementation of an irrigation reduction program.