

Inyo/LA Long Term Water Agreement

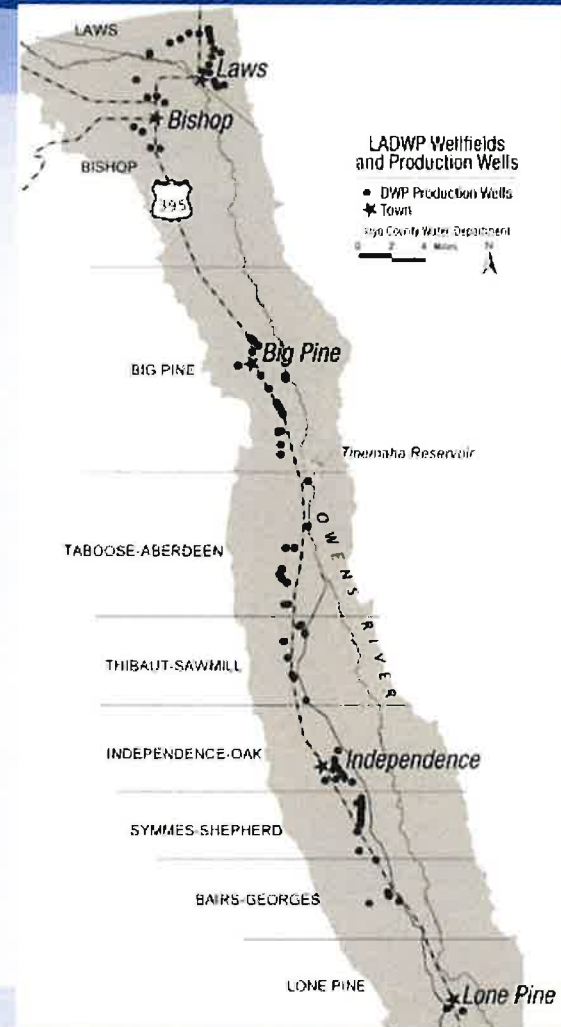


Overall Goal

“...to avoid certain described decreases and changes in vegetation and to cause no significant effect on the environment which cannot be acceptably mitigated while providing a reliable supply of water for export to Los Angeles and for use in Inyo County.”

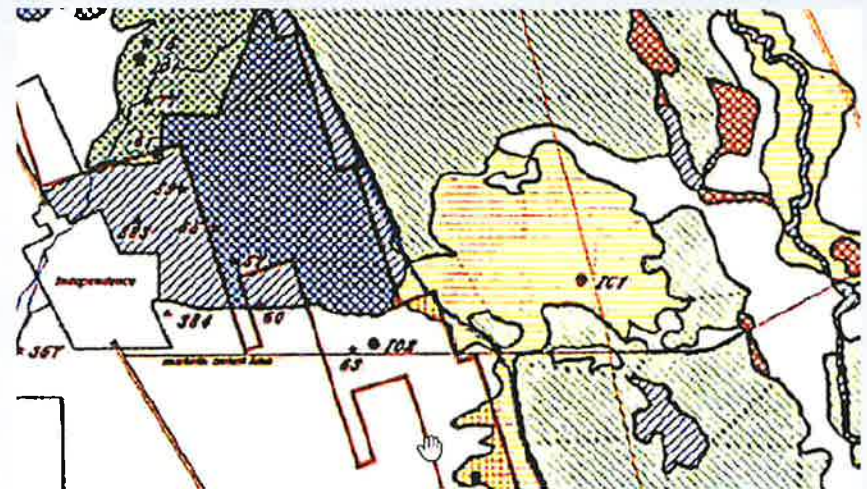
I. Management Areas

- In practice, management areas = wellfields
- Contains all vegetation that could be impacted from groundwater pumping
- Several monitoring sites per wellfield
- Each well linked to a monitoring site
- Vegetation and groundwater conditions monitored by Technical Group
- New management areas can be designated



II. Management Maps

- 1984-1987 vegetation inventories used in compiling maps
- 227,000 acres of vegetation classified
- Type A: Evapotranspiration (ET) = precipitation
- Type B: scrub with $ET > \text{precip}$
- Type C: grasslands with $ET > \text{precip}$
- Type D: riparian with $ET > \text{precip}$
- Type E: irrigated



III. Management Strategy

Groundwater Mining

Total pumping from any wellfield over 20-year period cannot exceed recharge for same wellfield over same 20-year period.

IV. Vegetation Management Goals & Principles

- Manage groundwater pumping and surface water management practices to avoid causing significant decreases in live vegetation cover or significant amount of Type B, C, or D vegetation to change to a classification that precedes it alphabetically.
- Significant changes or decreases in vegetation shall be mitigated through a mitigation plan developed by the Technical Group.
- Type E lands to be supplied with water such that water-related uses during 1981-82 runoff year can be continued

IV. Vegetation Management Goals & Principles

- Significant change or effect
 - Case by case analysis
 - Measurable
 - Attributable
 - Significant

V. Groundwater pumping program

Monthly water balance

- Compares soil moisture (water content) available to vegetation (AWC) with vegetation water requirements (VWR) for each monitoring site
- Basis for “On/Off” site status



V. Groundwater pumping program

Neutron Probe Program Timeline (for reference)

1987-1988 – Neutron Probe monitoring at On/Off sites begun

1995-1996 – Majority of access tubes installed and gauges calibrated

April 1996 – program agreed to by Tech Group

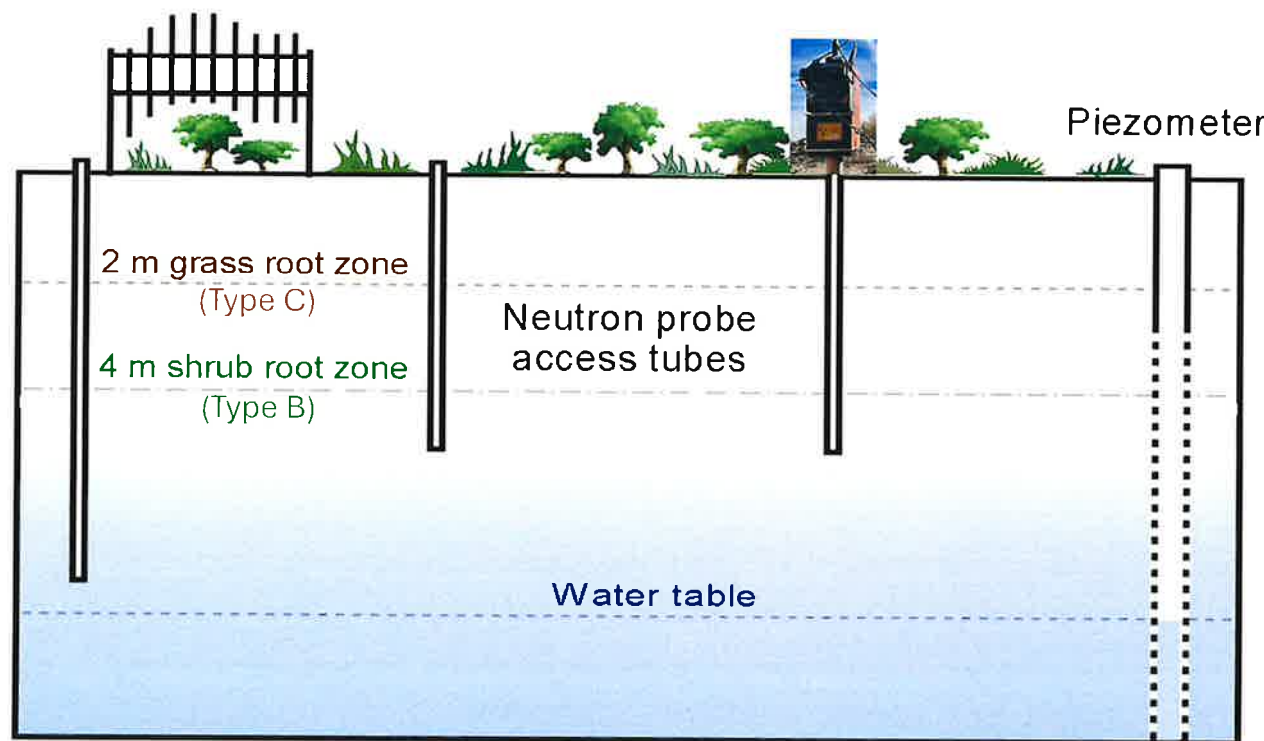
May 1, 1996 – implemented by Tech Group for On/Off

November 7, 1996 – reported to Standing Committee that soil water has been
measured by neutron probe

Draft Green Book Section III circulated but never brought to Standing Committee

V. Groundwater pumping program

100 m permanent vegetation transect

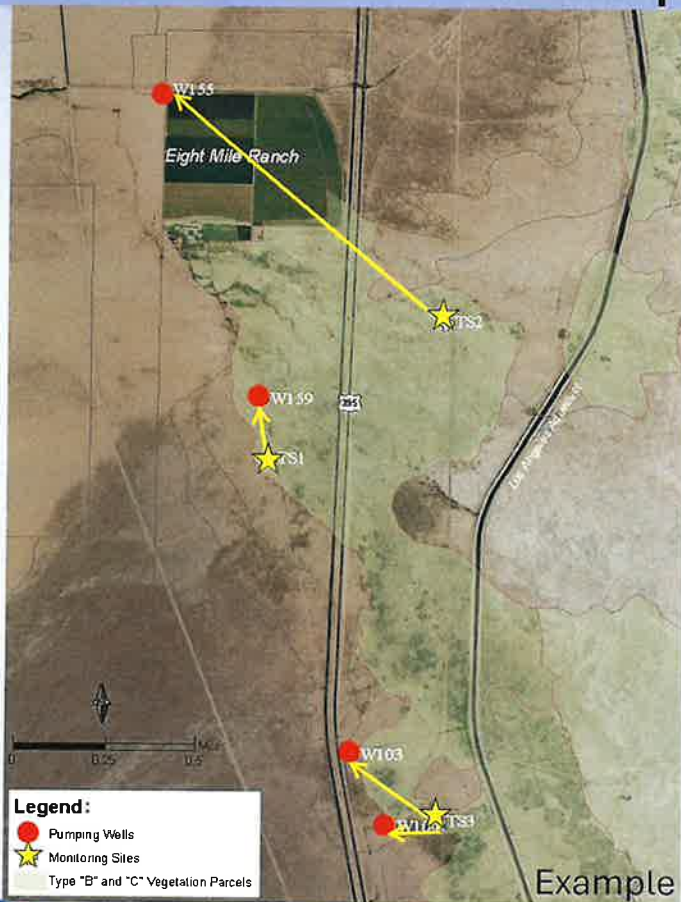


Groundwater depth is informational only.
No role in On/Off determination.



Reference doc: Perm Mon Site info.docx

V. Groundwater pumping program



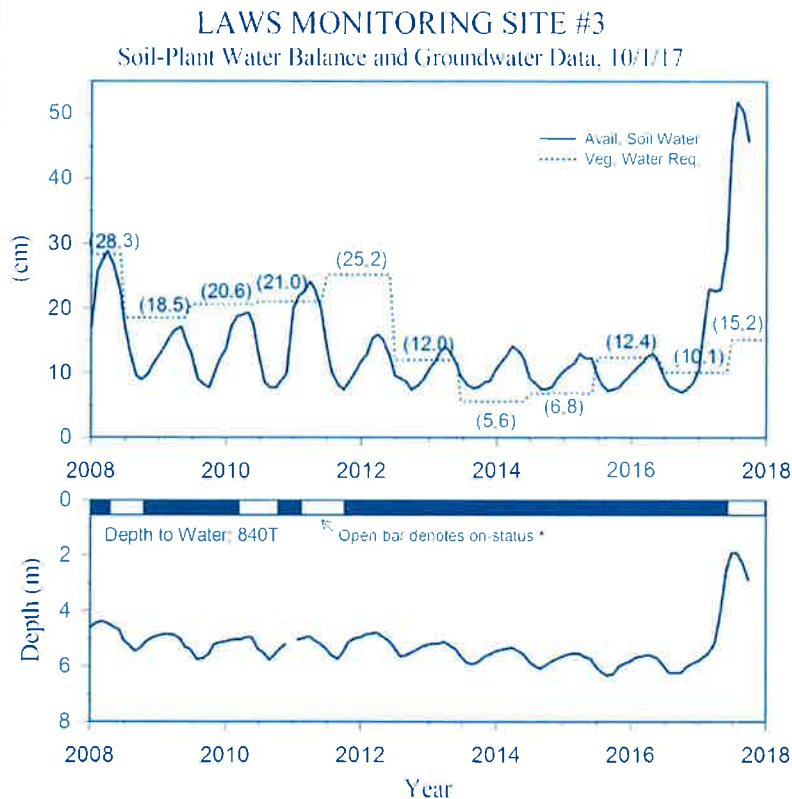
22 monitoring sites established in phreatophytes near pumping wells

One or more pumping wells linked to each site

Some wells exempt from On/Off to supply uses or because they are considered to not affect vegetation (<10 ft drawdown in early model runs)

Bishop wells governed by Hillside Decree

V. Groundwater pumping program



* Wells not necessarily operated when in on-status. On/off according to Green Book Section III values for Veg. Water Req.
Linked pumping wells - 240, 241, 399, 376, 377
Soil water required for turn on (---)

Green Book Section I.B.2.a.ii

Annual June measurement of leaf area index to predict vegetation water requirement (VWR)

Measure Available Water Content (AWC) each month

July 1 and October 1: if soil water less than veg. water req., pumps linked to the site are OFF

Wells back ON when soil water is greater than veg. water req. when site status went OFF

<https://www.inyowater.org/maps-data/onoff-well-management-data/>

Additional Water Agreement provisions

- VI. New wells and production capacity
- VII. Bishop Cone
- VIII. Groundwater recharge facilities
- XI. Town water systems
- XIV. Financial assistance
- XV. Release of City-owned lands

X. Enhancement/mitigation projects



XII. Lower Owens River Project

