



Partnering to Save Water

Phill Consiglio
Southern California Edison

What We Are Going to Discuss

- A Little Bit About Water
- The Energy Cost of Water
- Water Technologies
- What We Have Done
- Where We Are Going



A Little Bit About Water



- The Earth Has A Finite Supply Of Fresh Water.
 - Water Is Stored In Aquifers, Surface Waters And The Atmosphere
 - Sometimes Oceans Are Mistaken For Available Water, But The Amount Of Energy Needed To Convert Saline Water To Potable Water Is Prohibitive Today
- This Has Created A Water Crisis Due To:
 - Inadequate Access To Safe Drinking Water For About 884 Million People
 - Inadequate Access To Water For Sanitation And Waste Disposal For 2.5 Billion People
 - Groundwater Overdrafting (Excessive Use) Leading To Diminished Agricultural Yields
 - Overuse And Pollution Of Water Resources Harming Biodiversity
 - Regional Conflicts Over Scarce Water Resources Sometimes Resulting In Warfare
- Locally to SCE:

According to the California Department of Water Resources, if more supplies aren't found by 2020, the region will face a shortfall nearly as great as the amount consumed today. Los Angeles is a coastal desert able to support at most 1 million people on its own water; the Los Angeles basin now is the core of a megacity that spans 220 miles from Santa Barbara to the Mexican border. The region's population is expected to reach 33 million by 2020, up from 21 million in 2009. The population of California continues to grow by more than a million a year and is expected to reach 65 million in 2030, up from 39 million in 2009. But water shortage is likely to surface well before then.

The Energy Cost of Water



Urban Water Agency Energy Use by Sector (kWh/MG)

| | |
|------------------------------|------------------------------|
| Conveyance: | 0 - 10,000 kWh/MG |
| Treatment: | 100 - 5,000 kWh/MG |
| Distribution: | 0 - 1,200 kWh/MG |
| Wastewater pumping: | 0 - 400 kWh/MG |
| Wastewater treatment: | 1,000 - 3,500 kWh/MG |
| <hr/> | |
| Total: | 1,100 - 20,100 kWh/MG |

DATE: 6/05

SOURCE: California Energy Commission

At \$0.10/kWh That Would Be \$110.00 to \$2,010.00 per MG

Water Technologies

- Low Flush Toilets, Low/No Flush Urinals, Low Flow Faucets and Shower Heads, Washing Machines, Pools and Jacuzzi Covers, Fix the Leaks
- Improper Irrigation Is Truly Wasteful
 - Watering at the Wrong Time
 - Watering Too Much



What We Have Done

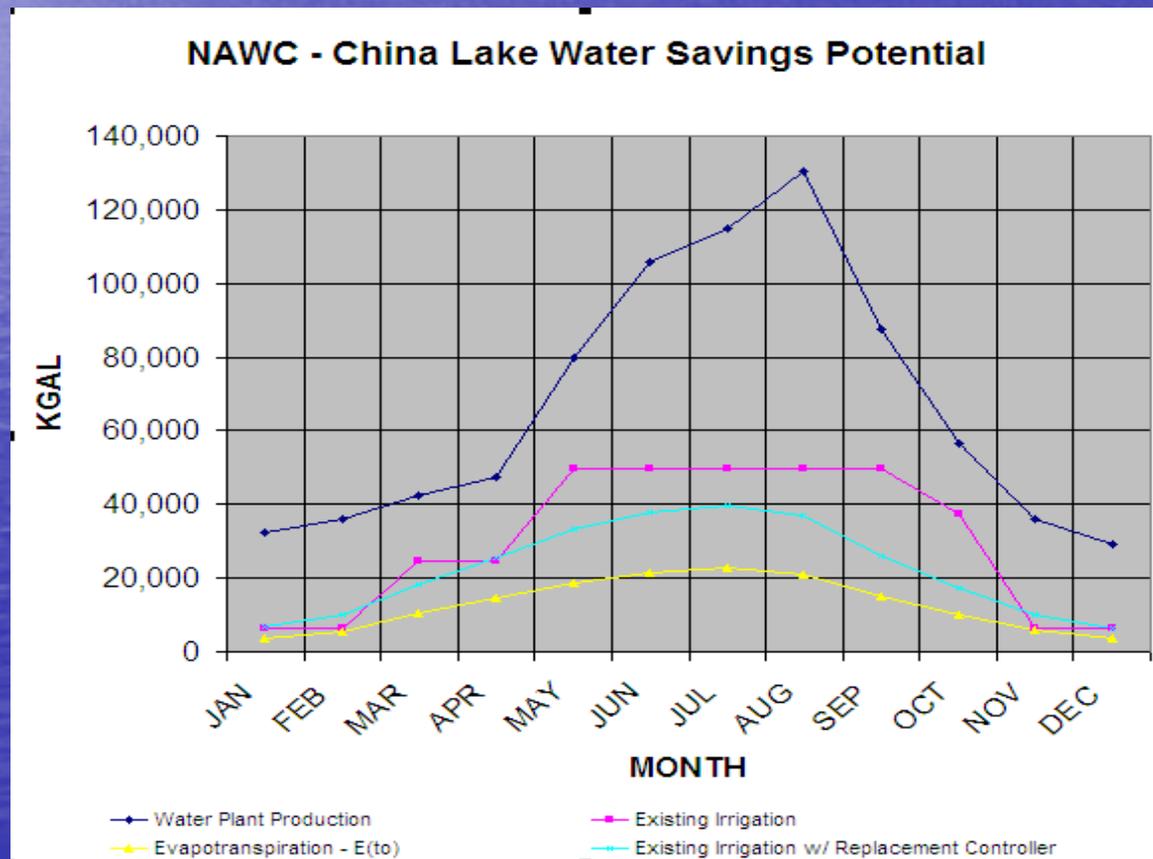
- The Base Pumps Its Own Water Using Electricity
 - We Have Added Water Conservation to Every Energy Audit
- As a Result of the Audits, Water Conservation Projects have Focused on Irrigation and Pumping Efficiencies
- 2 Delivery Orders have Been Issued



What We Have Done



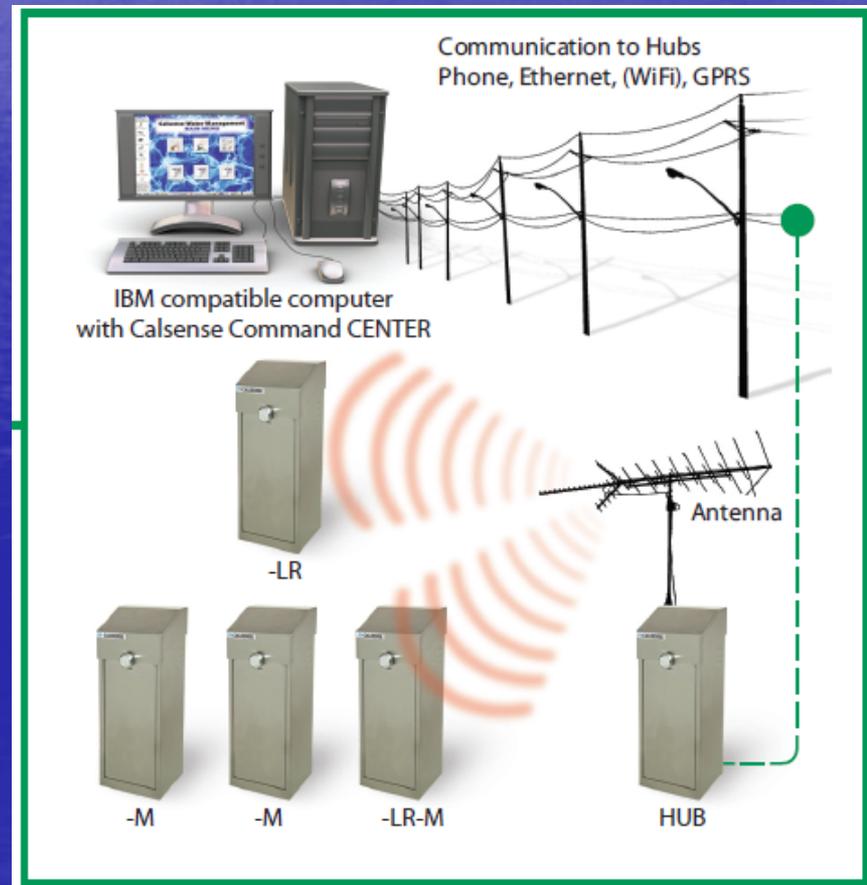
What the Audits Show





What We Have Done

- How We Control the Irrigation System
- We Lowered a Lawn
- We are Replacing Old Inefficient Well Pumps



Where We Are Going



More of the Same

