



# DEPARTMENT OF WATER RESOURCES

## PUMP STORAGE DWR PERSPECTIVE



NORTHWEST HYDROELECTRIC ASSOCIATION  
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# STATE WATER PROJECT (SWP) OVERVIEW

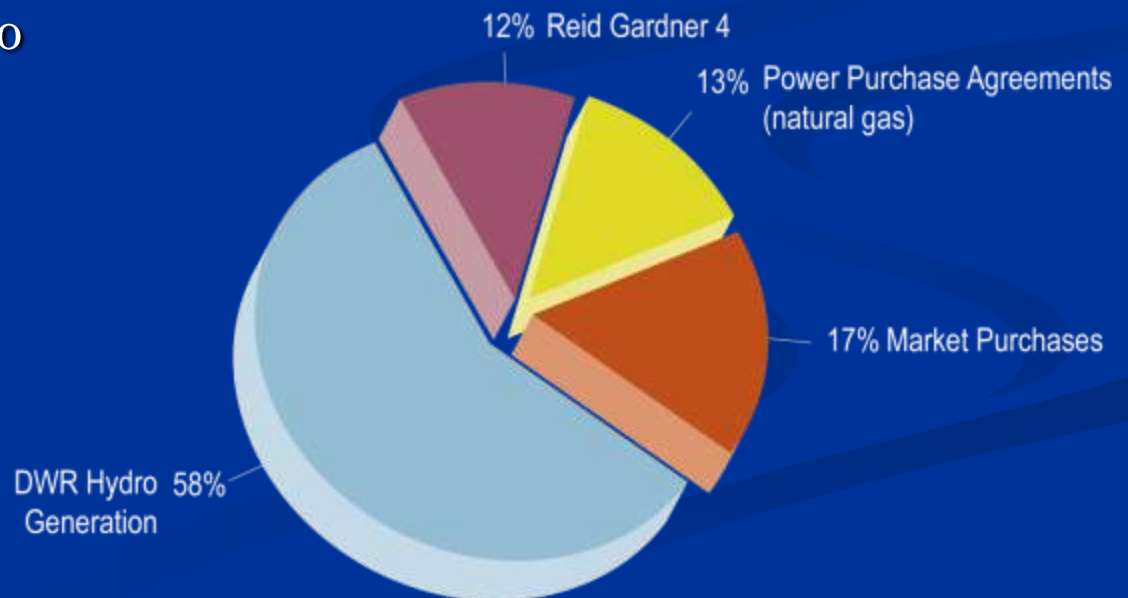


- Largest state owned & operated water delivery system
- Serves 24 million Californians & 755,000 acres of farmland
- 32 storage facilities
- 21 pumping plants
- 4 pumping-generating plants
- 8 hydroelectric power plants
- About 700 miles of Canals and Pipelines
- Major Benefits: water supply and power generation



## SWP POWER PORTFOLIO

- Use/Production based on hydrology
- 9 – 10 million MWh consumed annually
- 5 – 6 million MWh hydro generated annually
- SWP 4th largest hydropower generator
- SWP largest energy consumer
- Future addition of wind and solar







## SWP PUMP-STORAGE FACILITIES

### Hyatt Pump-Generating Plant

- Largest of three power plants at 645 MW
- Three conventional generating units and 3 pumping-generating units
- Generating capacity of 16,950 cfs
- Pumping flow capacity of 5,610 cfs

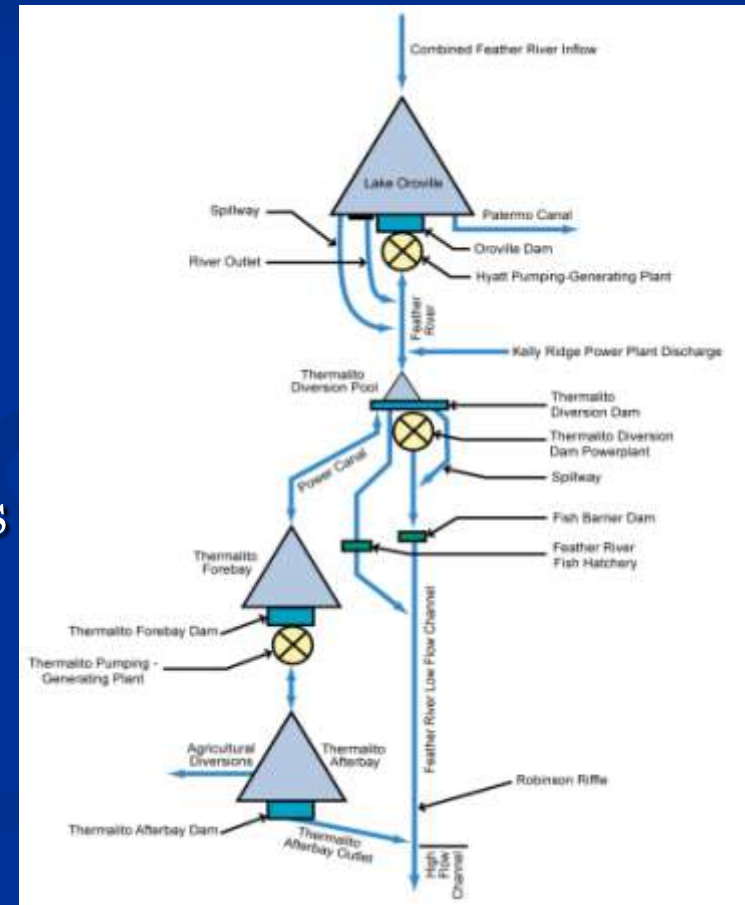




## SWP PUMP-STORAGE FACILITIES

### Thermalito Pump-Generating Plant

- 114-MW Capacity
- Designed to operate in tandem with Hyatt
- Generating capacity of 17,400 cfs
- Pump-back flow capacity of 9,120 cfs





## **SWP PUMP-STORAGE FACILITIES**

### **Gianelli Pump-Generating Plant**

- Pumps water from O'Neill Forebay into San Luis Reservoir
- Operates in generating mode when demands are in excess of Delta diversions
- Generating capacity of 16,960 cfs
- Pump-back flow capacity of 11,000 cfs





## **SWP PUMP-STORAGE FACILITIES**

### **Castaic Pump-Generating Plant**

- Pumpback from Elderberry forebay on upper end of Castaic Lake
- Owned and operated by LADWP
- Generating capacity of 17,840 cfs
- Pump-back flow capacity of 12,000 cfs





## FUTURE SWP PUMP-STORAGE USE

- Provide firming generation resources for wind and other intermittent renewable resources
- Help DWR meet Green Energy Policy goals
- Address climate change





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Questions?

