

October 2014

Meeting of the School and Institutional Trust Lands Administration

Board of Trustees

Response to Beneficiary Report

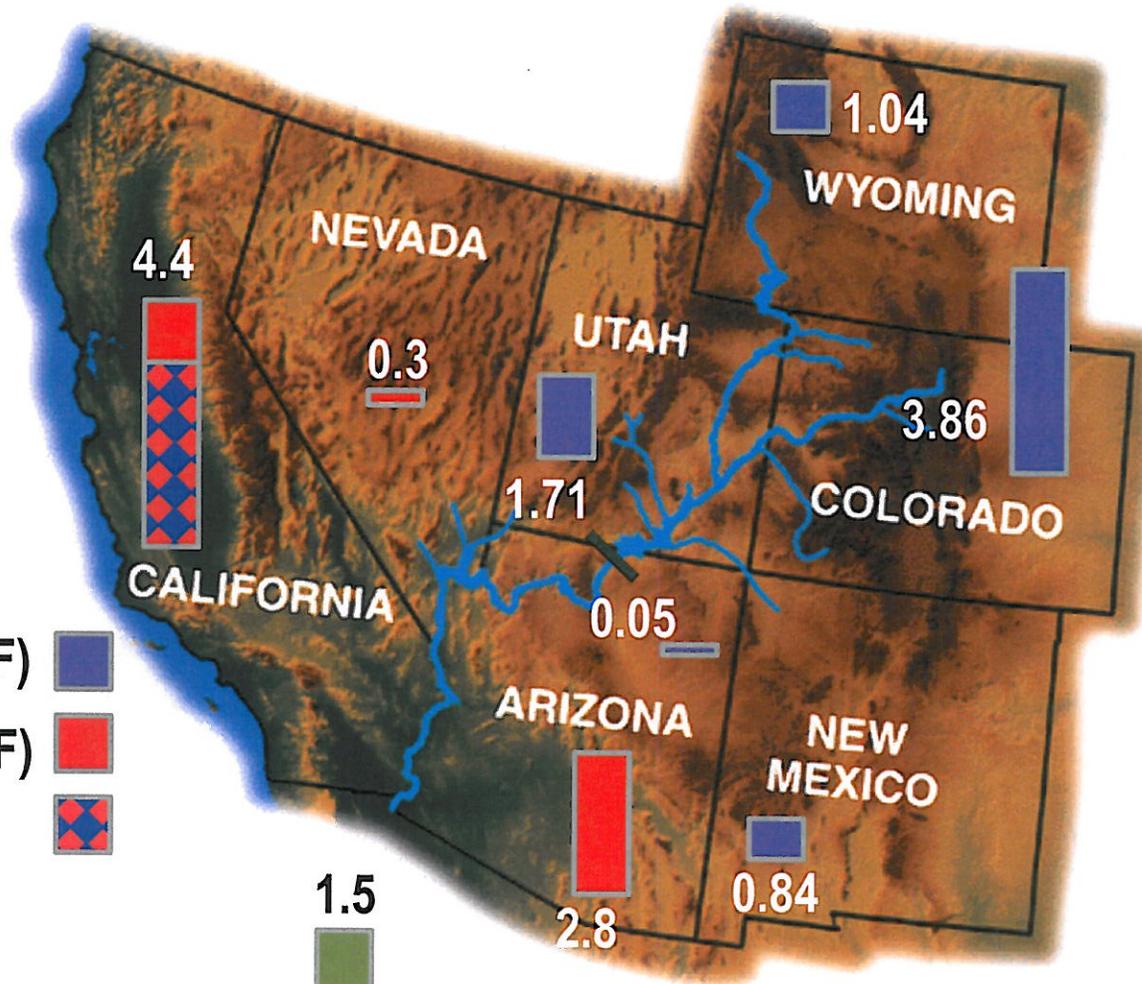
- ❖ In general, a valuable analysis
- ❖ In most areas there is substantial agreement
- ❖ Some different perspectives regarding:
 - ❖ Land Exchange issues
 - ❖ Development investments
 - ❖ Proper role of legal group within the agency
 - ❖ Use of outside counsel

Report of Conference

Urban Water Institute

August 2014

Colorado River Basin State Entitlements



Upper Basin (7.5 MAF) 
Lower Basin (7.5 MAF) 
IID (3.1 MAF) 



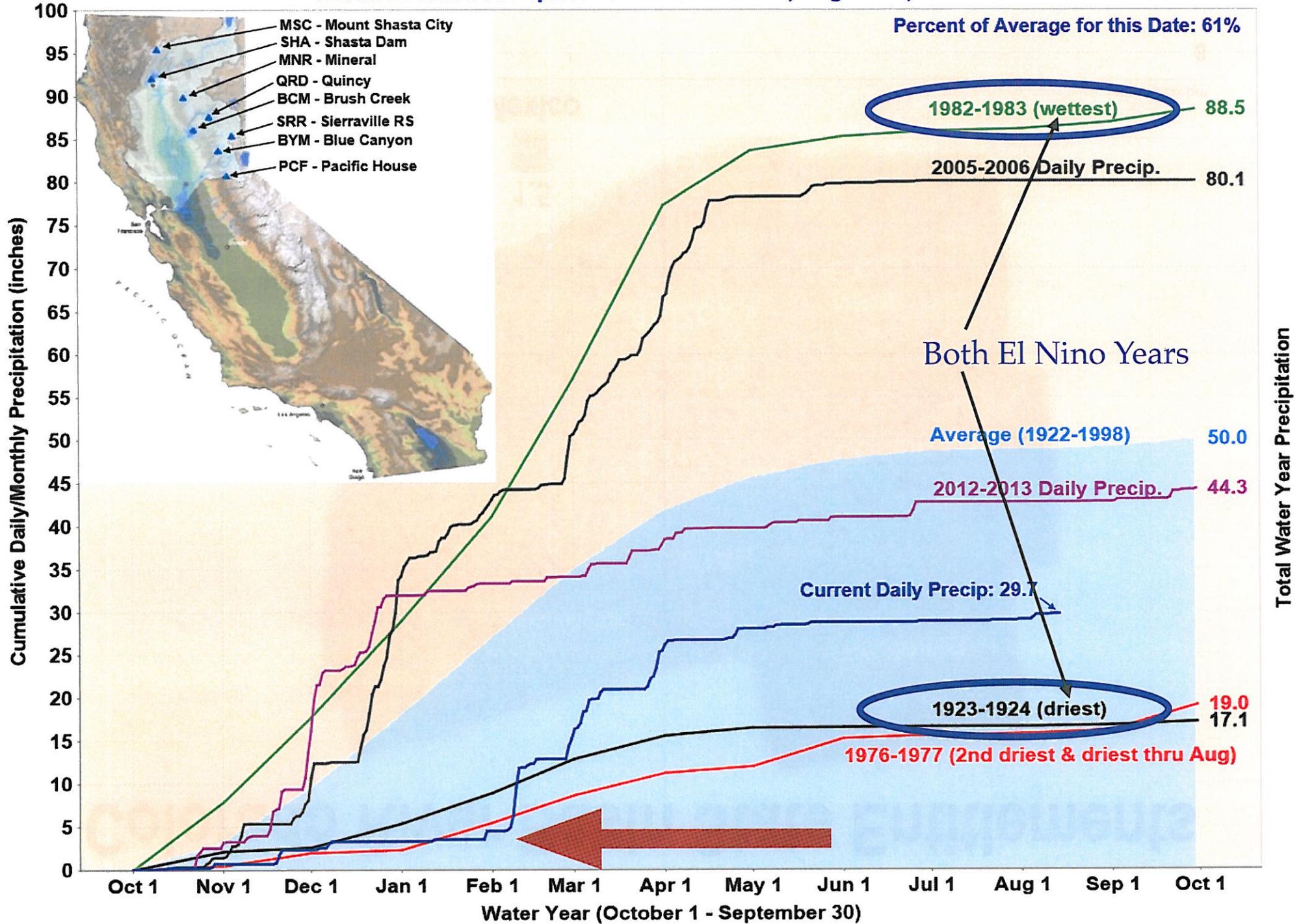
IID

A century of service.

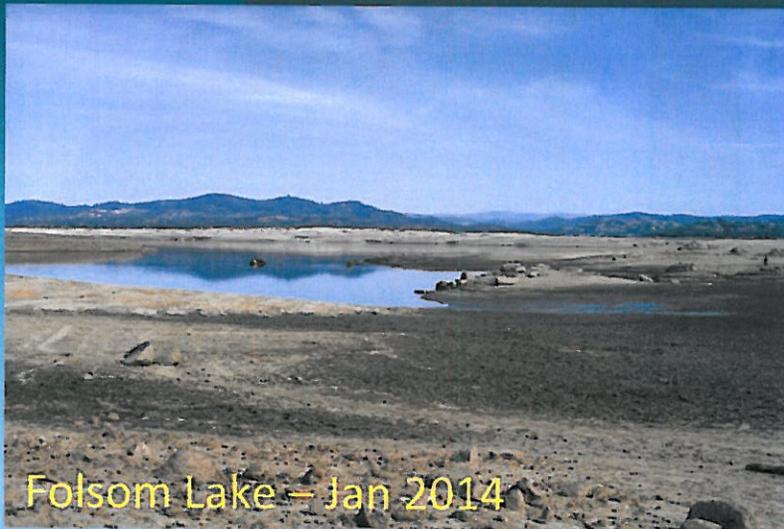
1.5

Mexico

Northern Sierra Precipitation: 8-Station Index, August 14, 2014



Current Reservoir Conditions

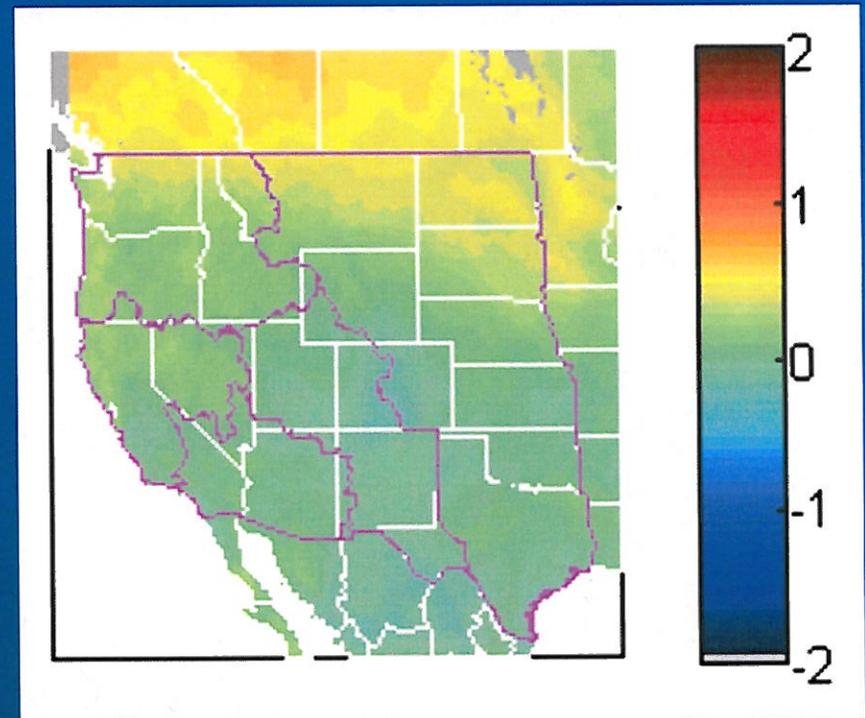
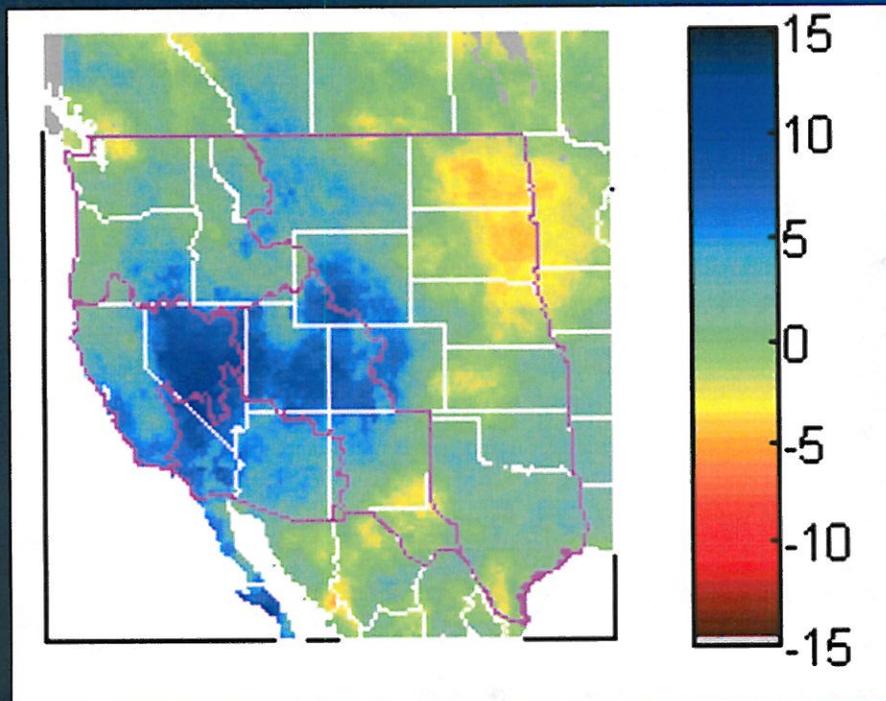


	% Avg	% Cap
Shasta	33	48
Oroville	34	48
Folsom	40	59
San Luis	20	43

Aug 11, 2014

Results of New Climate Science Research

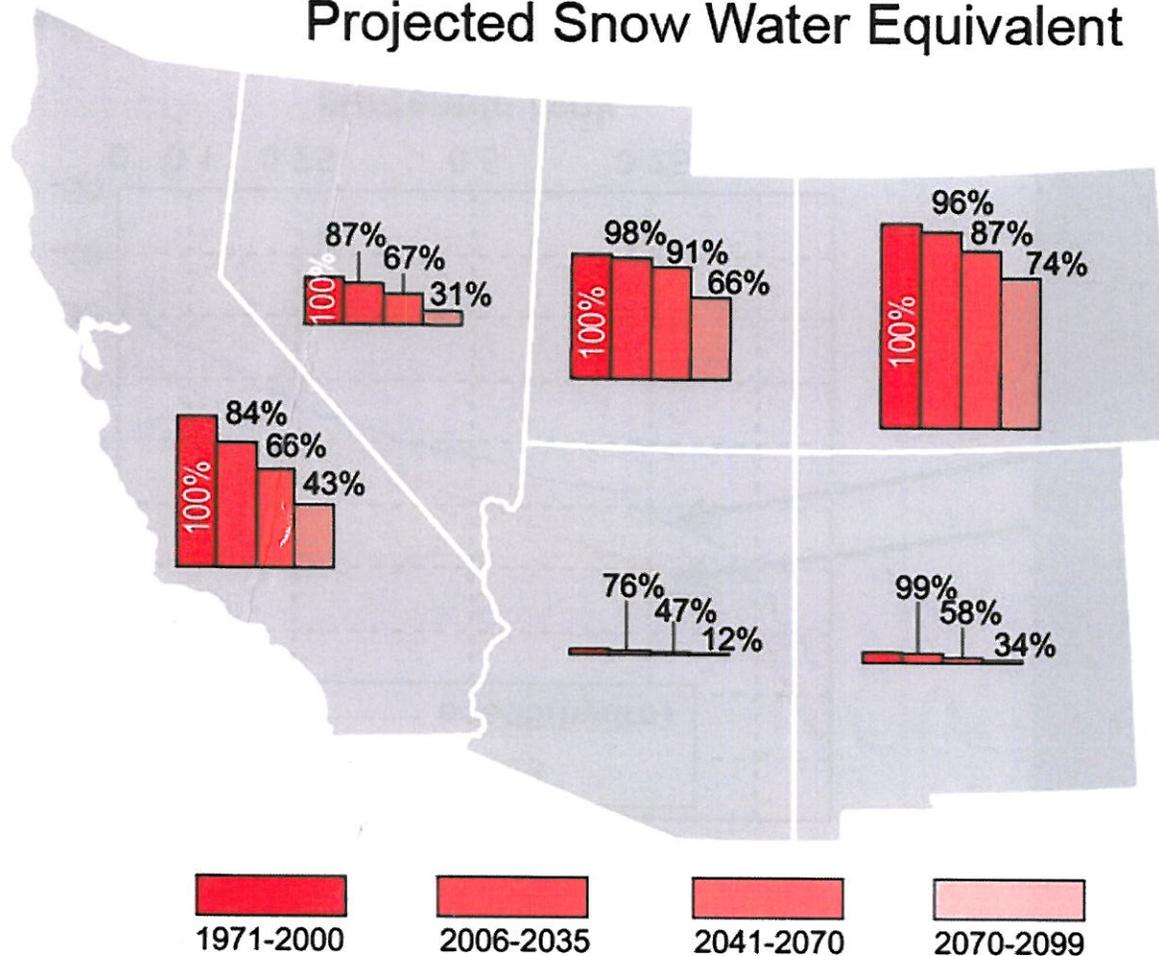
Mean annual Temperature Change,
degrees C (new – previous)
1970-1999 to 2040-2069, 50th percentile



Mean annual Precipitation Change,
percent (new – previous)
1970-1999 to 2040-2069, 50th percentile

NCA

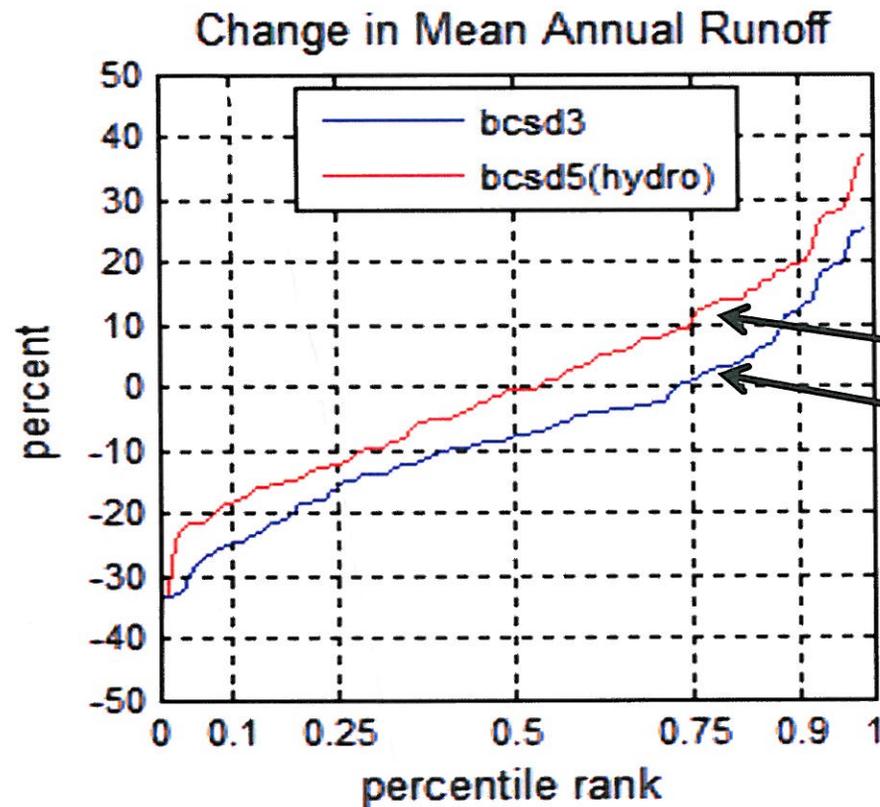
Projected Snow Water Equivalent



Source: NCA. 2014.
 Chapter 20. Southwest
 Region. [http://
 nca2014.globalchange.g
 ov/report/regions/
 southwest](http://nca2014.globalchange.gov/report/regions/southwest)

Figure 20.2: Snow water equivalent (SWE) refers to the amount of water held in a volume of snow, which depends on the density of the snow and other factors. Figure shows projected snow water equivalent for the Southwest, as a percentage of 1971-2000, assuming continued increases in global emissions (A2 scenario). The size of bars is in proportion to the amount of snow each state contributes to the regional total; thus, the bars for Arizona are much smaller than those for Colorado, which contributes the most to region-wide snowpack.

Results of New Climate Science Research



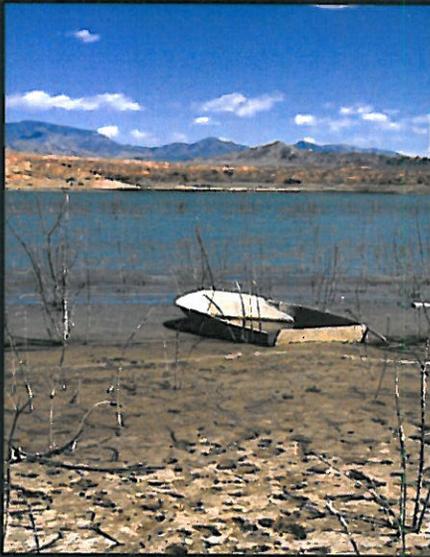
Change in Mean Annual
Runoff at Lees Ferry
1970-1999 to 2040-2069

new

previous

RECLAMATION

**What does lowered
Lake Mead elevations
mean for
Southern Nevada?**



Access to water supplies

Access lost at 1,000 feet – currently at 1,085 feet

Compromised water quality

Additional treatment costs

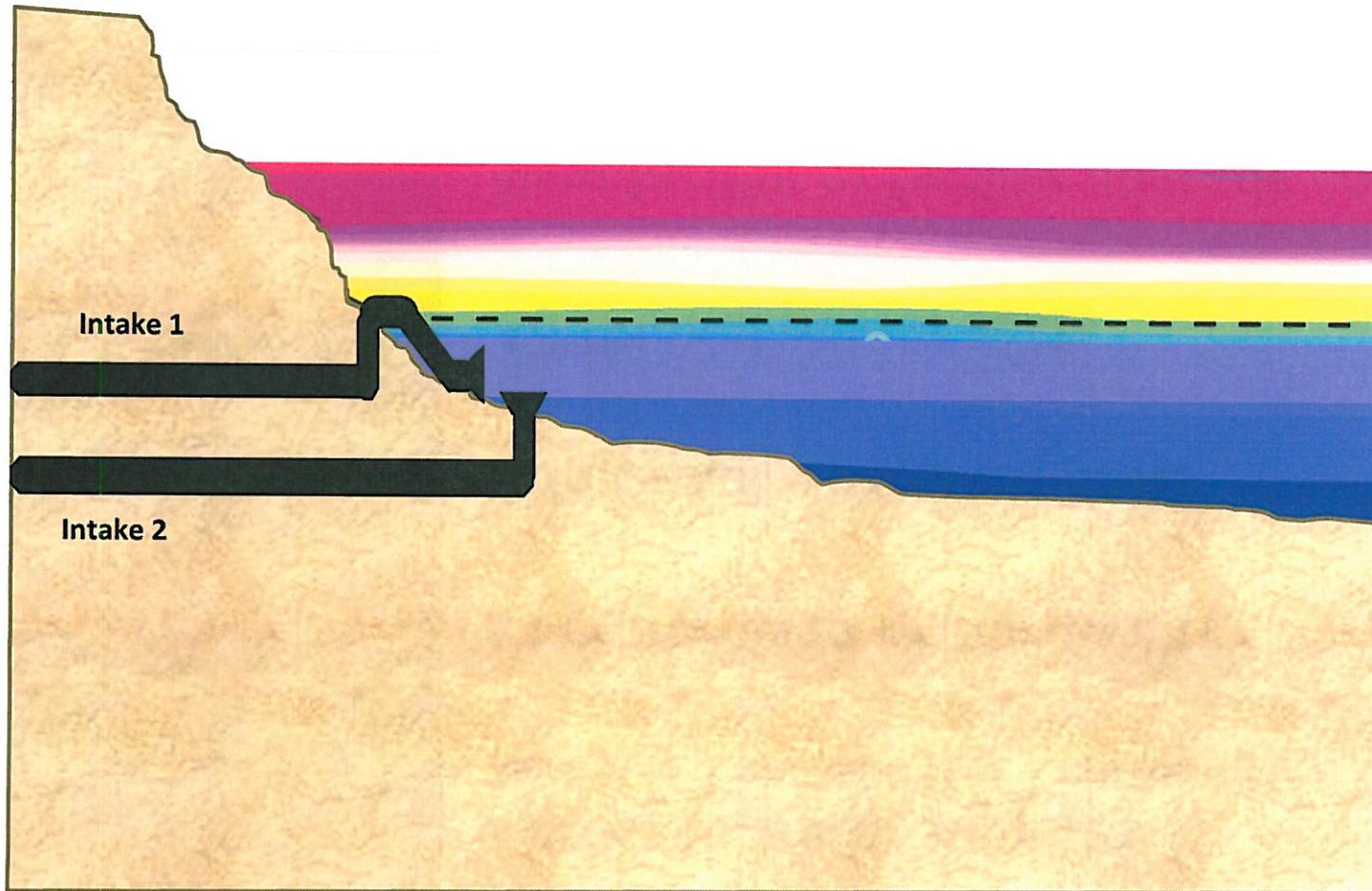
Additional power costs

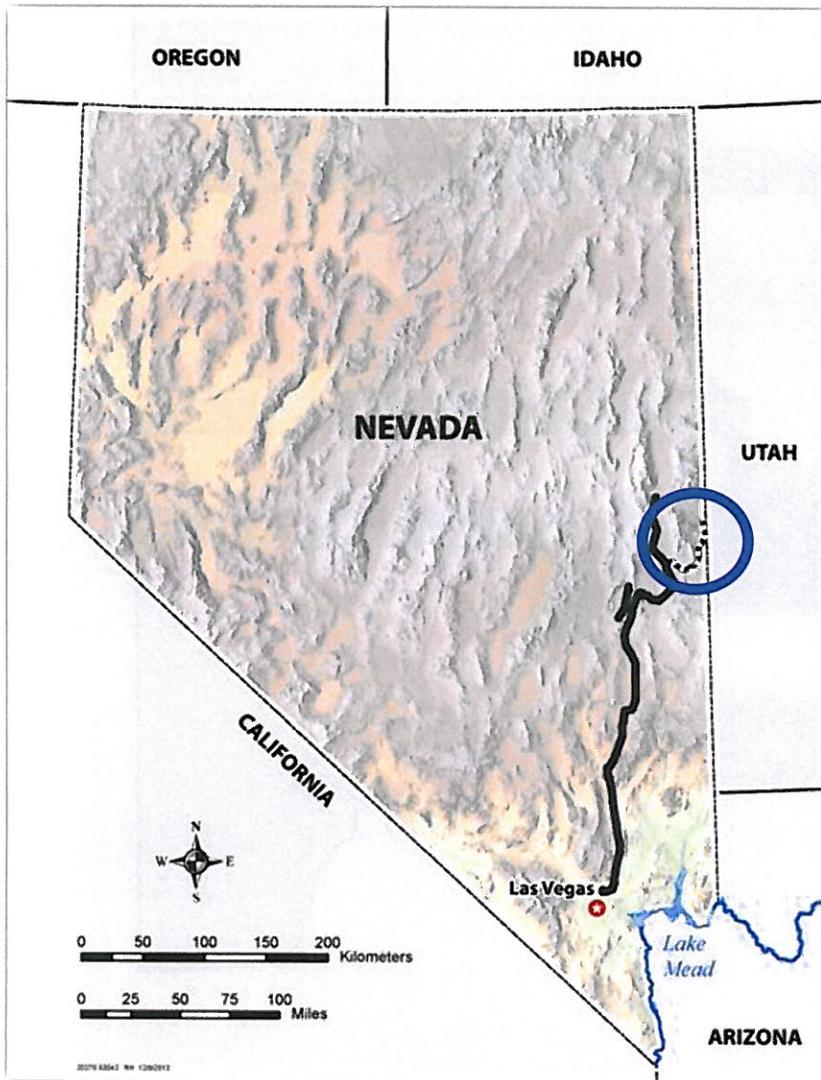
New facility or facility upgrade costs

Supplemental resource costs

Loss of operational flexibility

Lake Mead Intake Profile

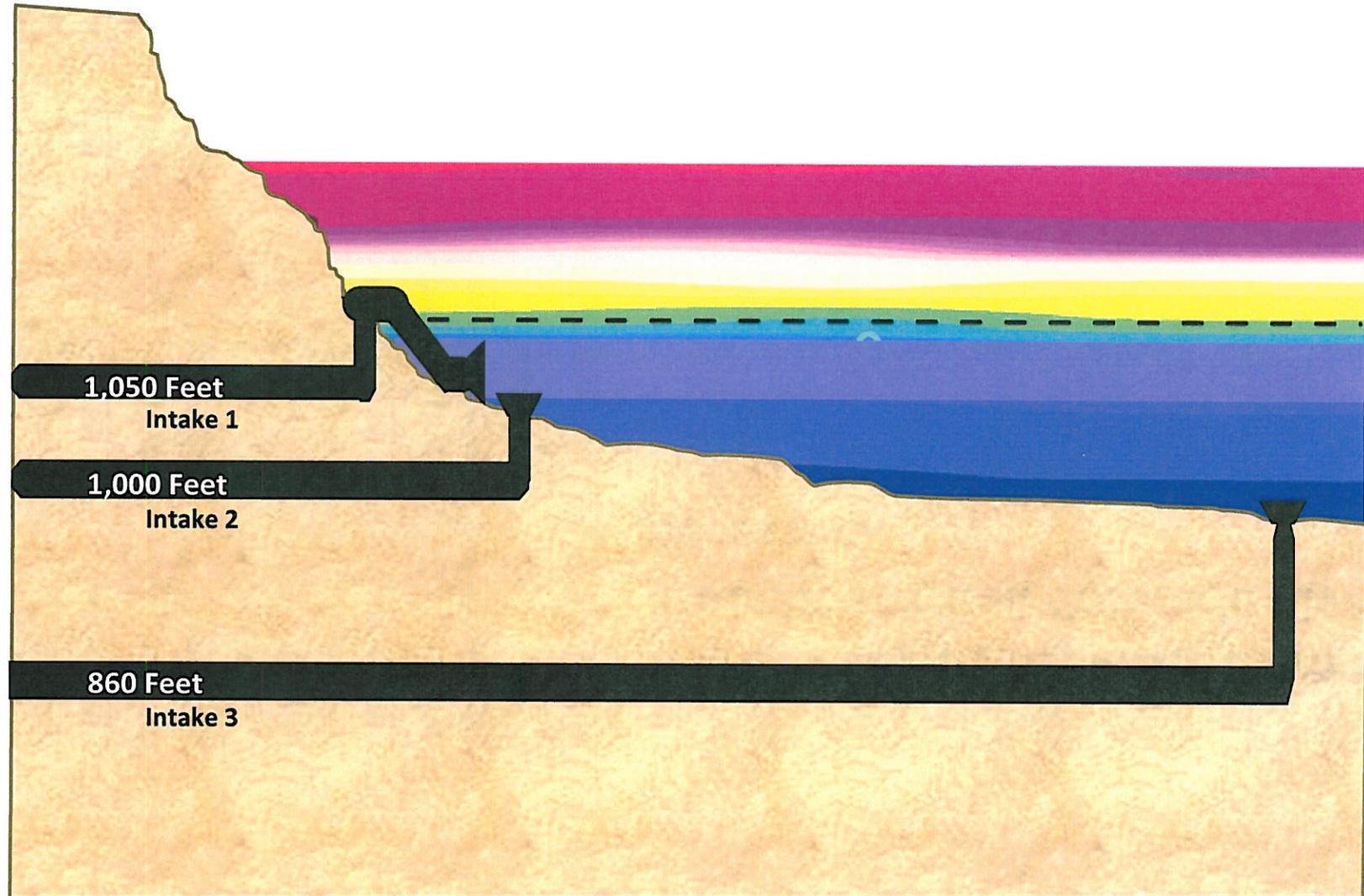




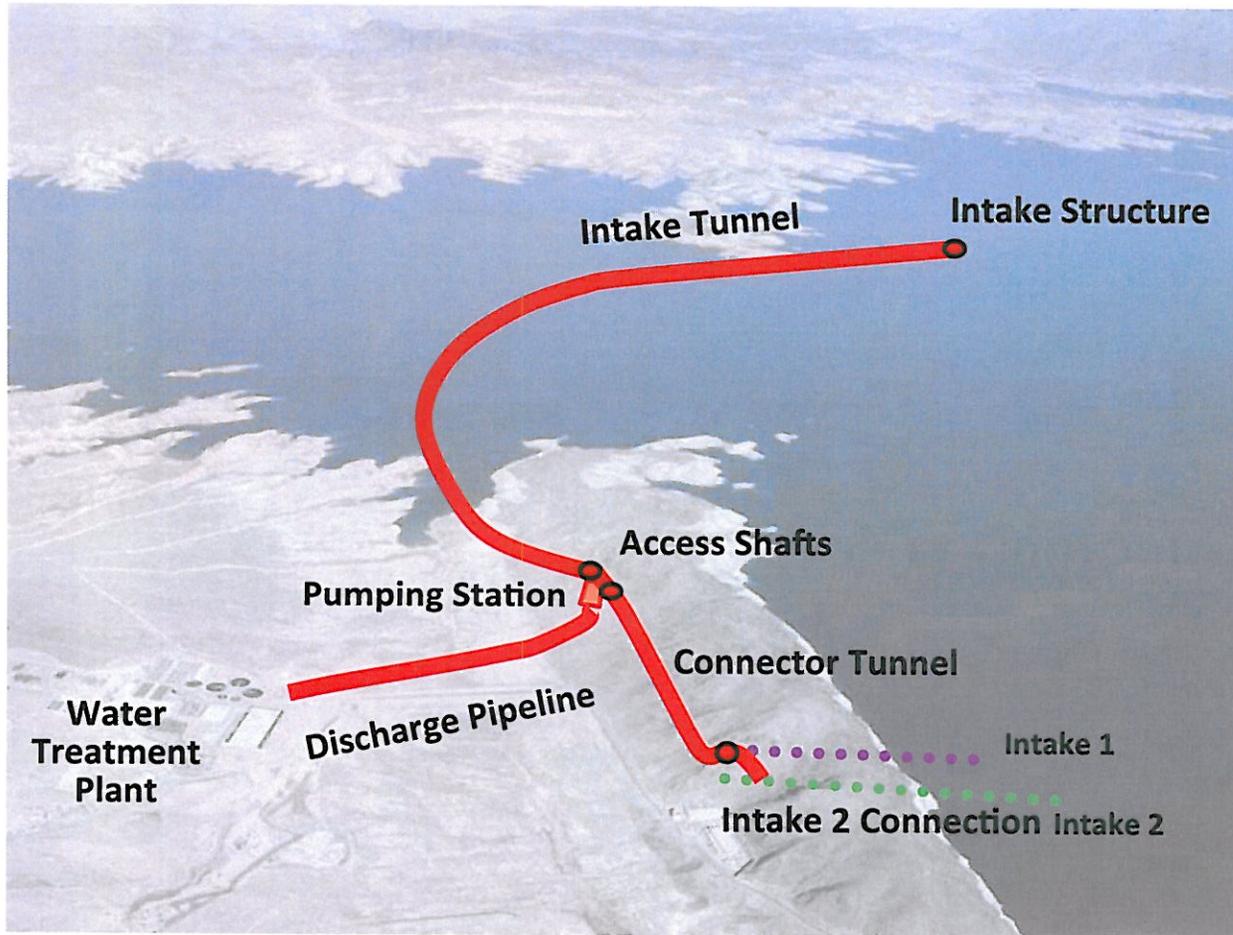
A water supply separate from the drought-stricken Colorado River is necessary.

Groundwater Development Project alignment

The SNWA is constructing a third intake in Lake Mead to access the deepest part of the lake.



Major Project Components

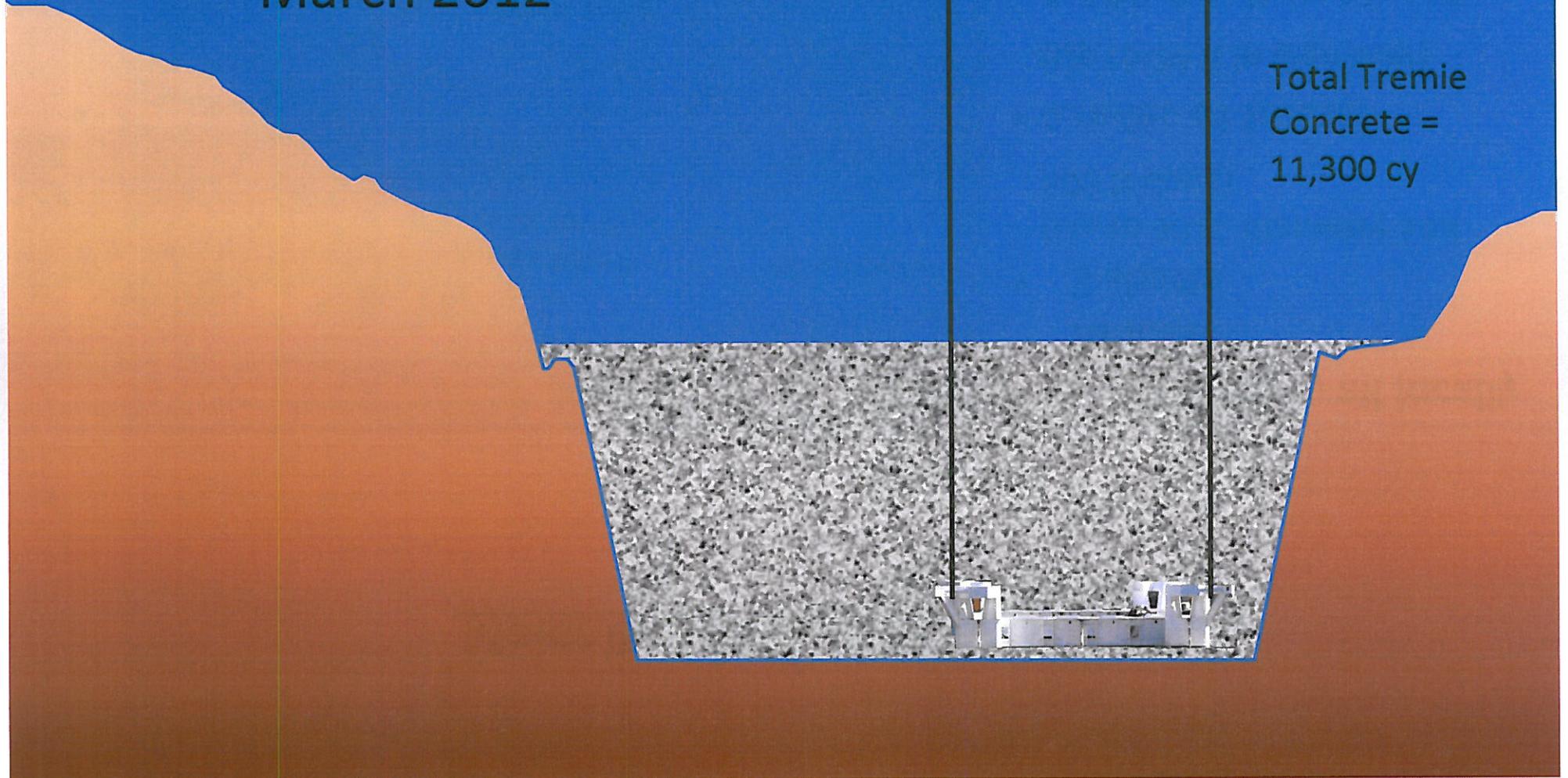


- **\$817 million, all locally funded**
- **3 shafts**
(Up to 30 ft. diameter and 600 ft deep)
- **4 miles of tunnel**
(Up to 20 ft in diameter)
- **A 100-ft tall steel and concrete intake structure on the lake bottom**

Intake Structure Installation

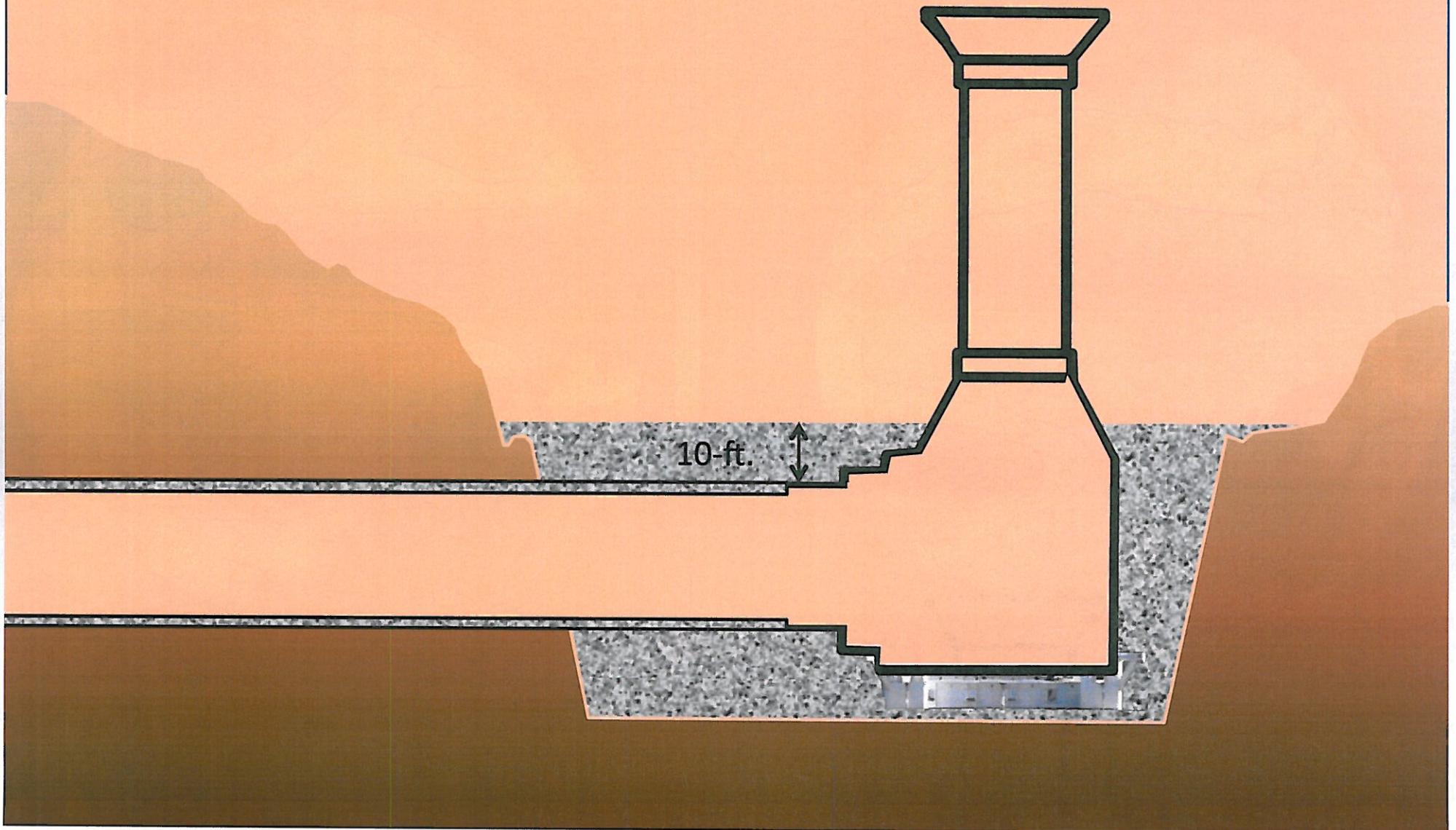
February and
March 2012

Total Tremie
Concrete =
11,300 cy



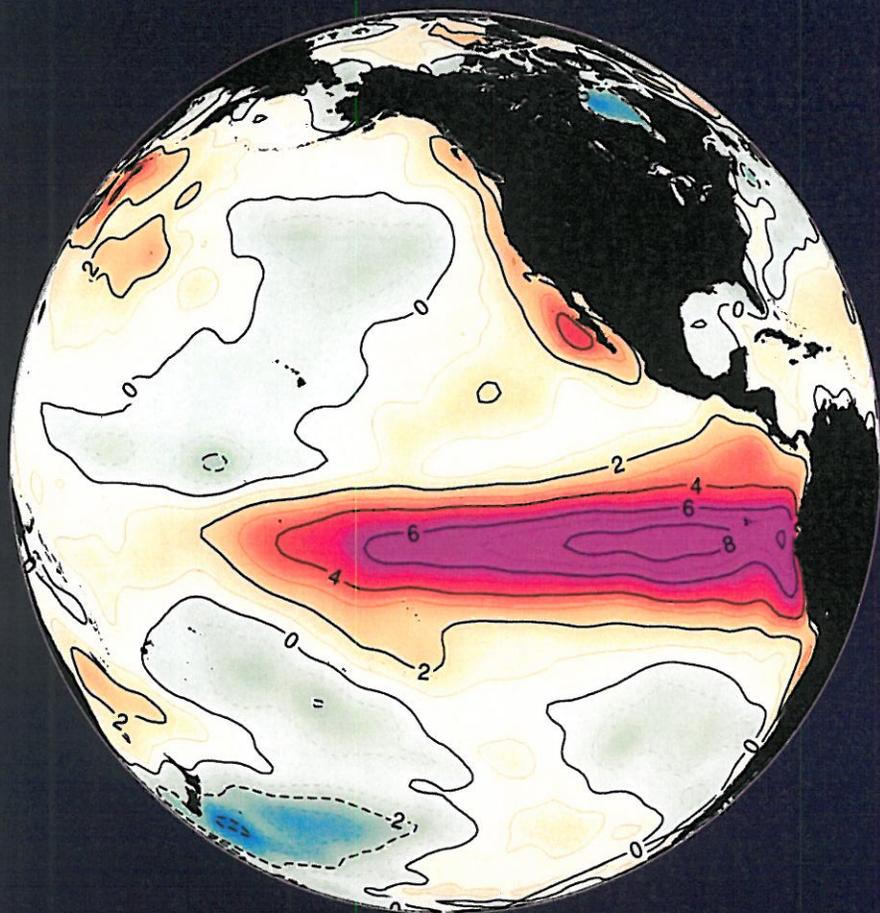
A Look Ahead...

Intake Structure Tie in

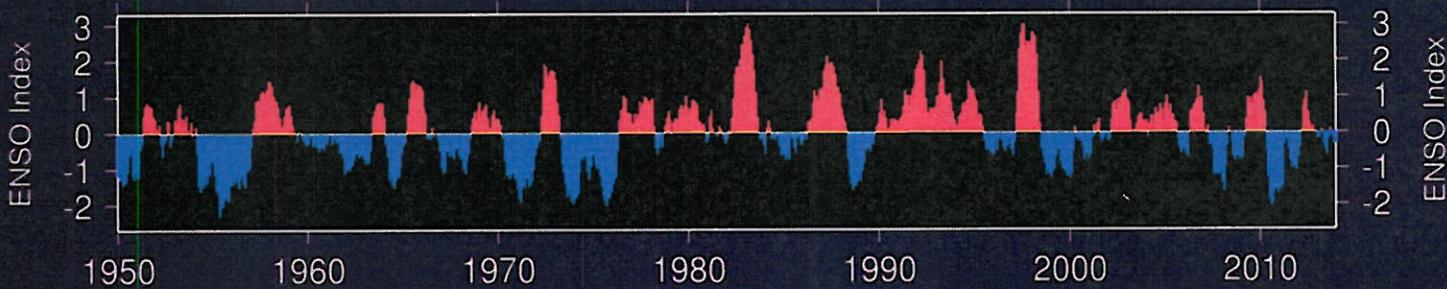
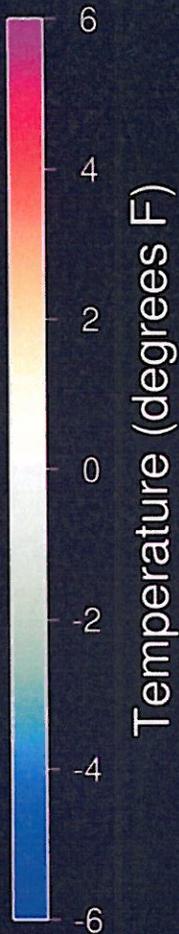
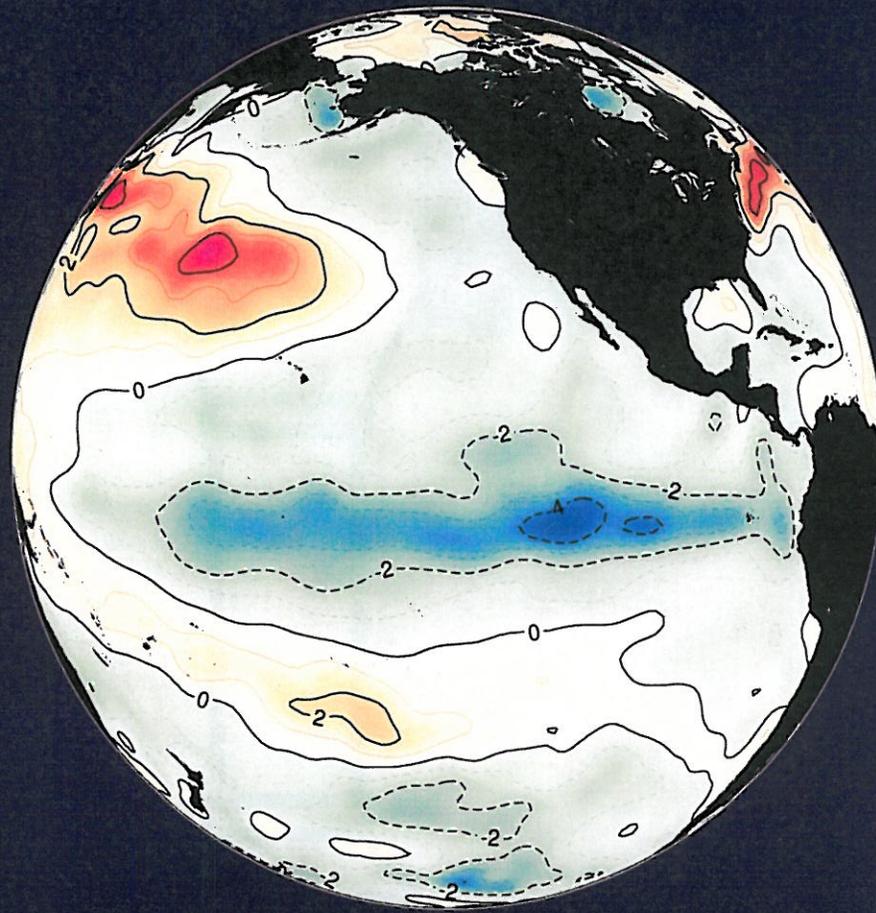


El Nino/Southern Oscillation (ENSO) Sea Surface Temperatures (Departure from Normal)

El Nino (Dec 1997)



La Nina (Dec 1999)



Summary

- El Nino is when equatorial Pacific ocean temperatures are warmer than usual
- Changes where water vapor gets into atmosphere and typical path of winter storms
- Warms waters and elevates sea level all along the west coast of the Americas
- Best forecast right now: ~75% chance of modest El Nino this winter
- Really big anomalies from this spring have dwindled
- Highest **and** lowest Sierra snowpacks have been in El Nino years

