

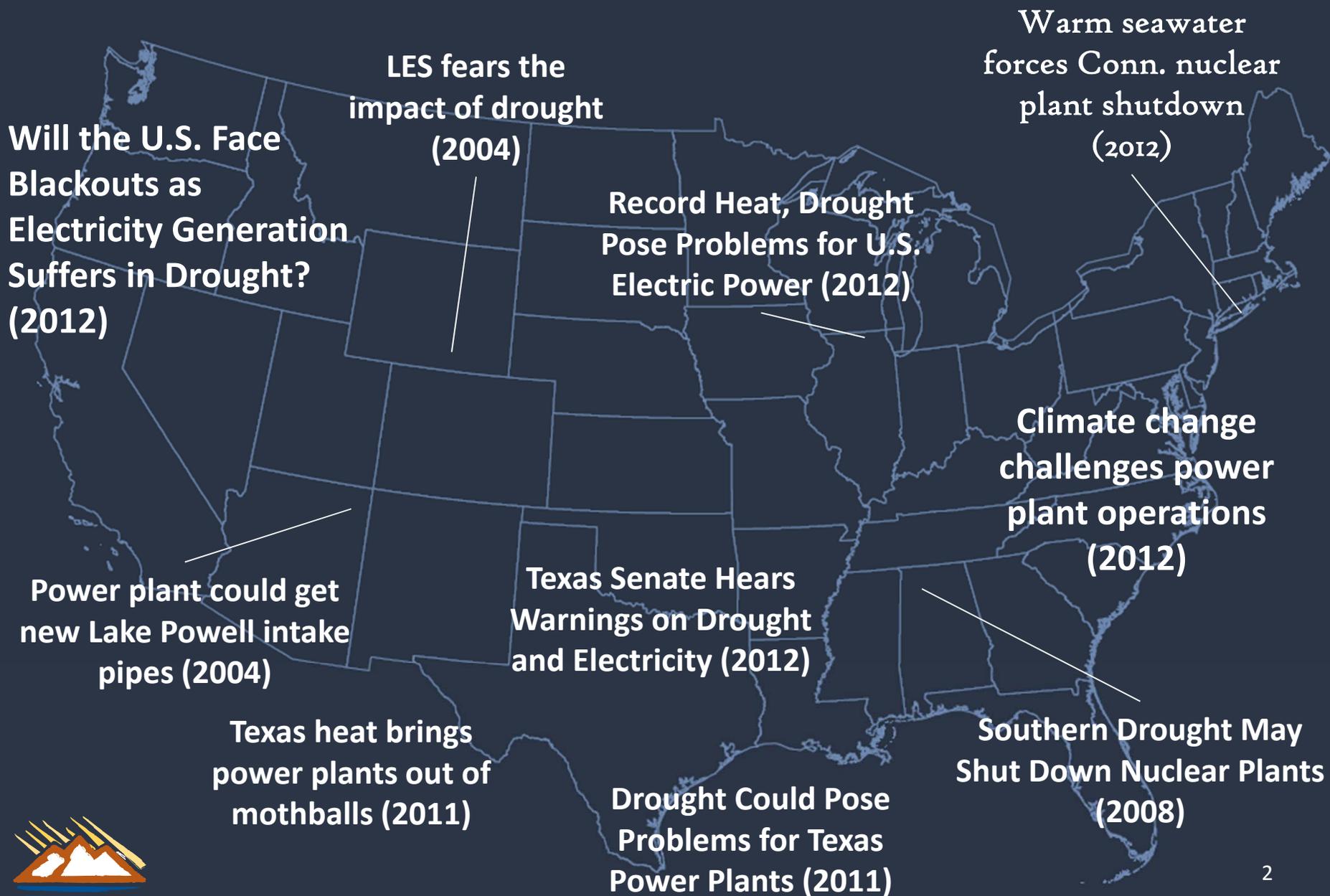
# Managing Energy, Water, & Drought

Stacy Tellinghuisen  
Senior Energy/Water Policy Analyst

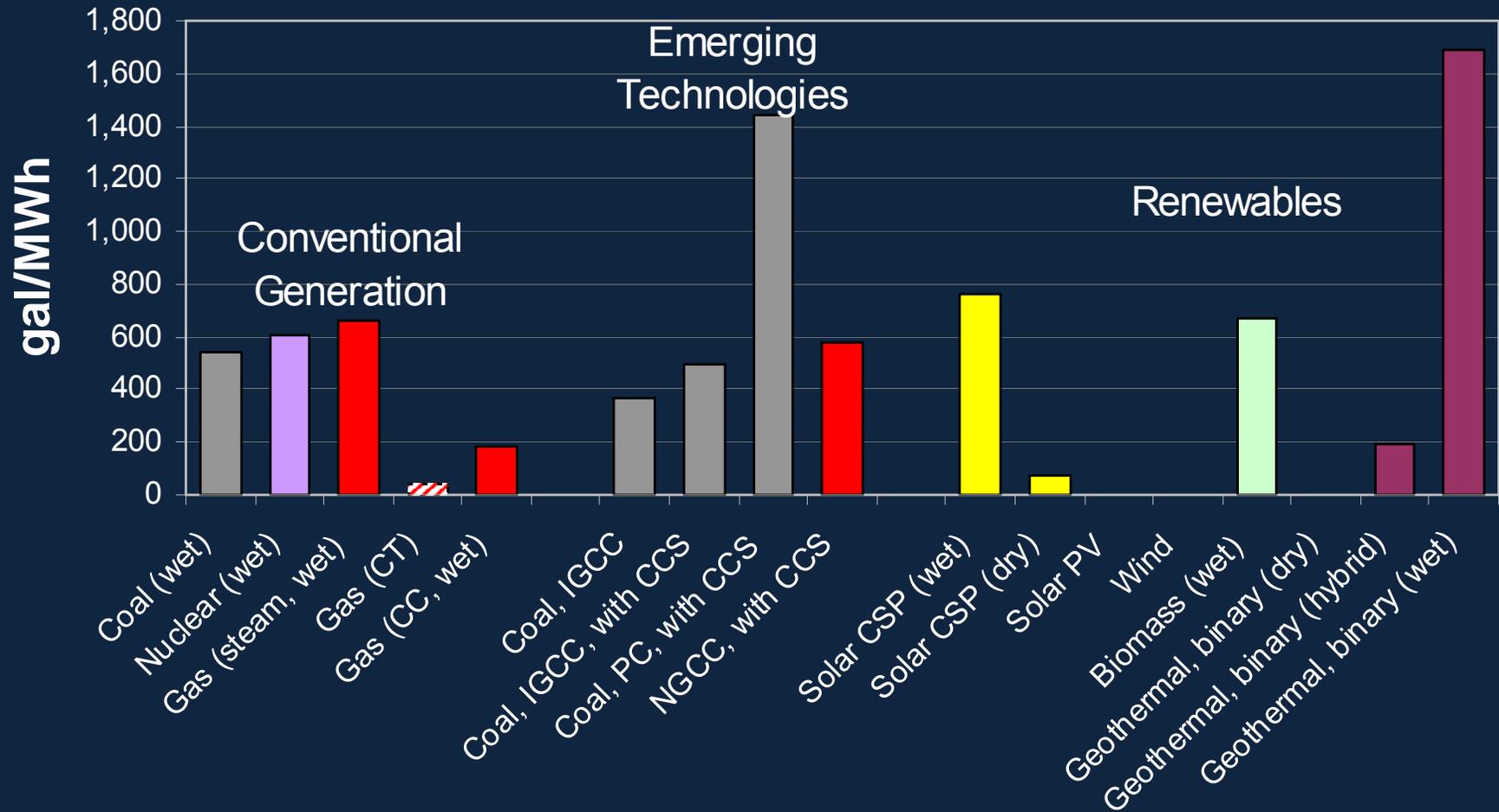


**WESTERN RESOURCE**  
ADVOCATES

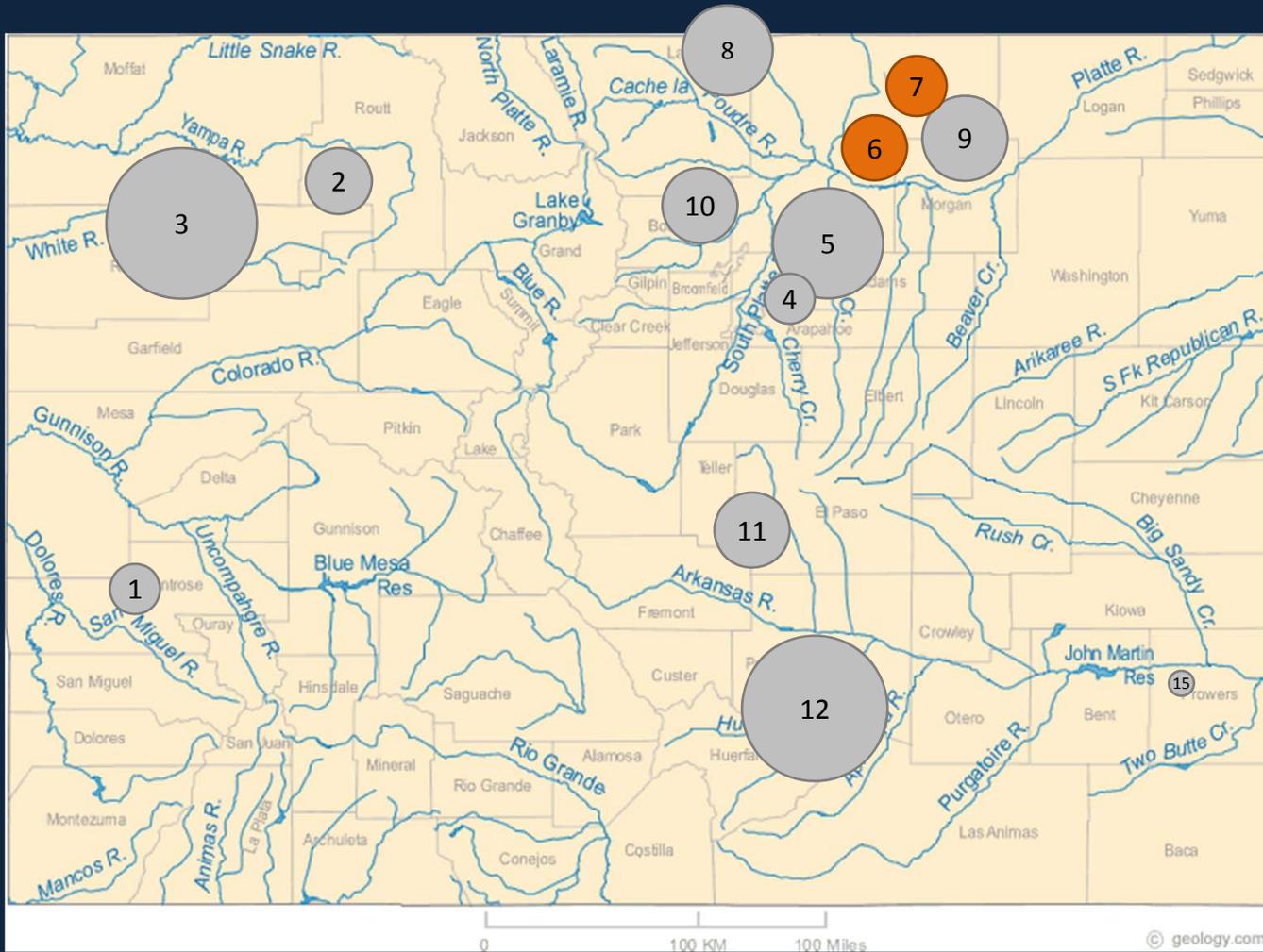
# Prominent News Stories



# Water Intensity of Electricity (Consumptive Use)



# Water Use by Power Plants



Plant	Water Use (Cons.) (AF/yr)
1 Nucla	1,600
2 Hayden	2,800
3 Craig	14,300
4 Arapahoe	1,700
5 Cherokee	7,800
6 Fort St. Vrain	2,700
7 Rocky Mtn. Energy Center	2,400
8 Rawhide	5,100
9 Pawnee	4,400
10 Valmont	3,700
11 Martin Drake	3,500
12 Comanche	13,100*
13 Nixon	2,800*
14 Front Range Power	800*
15 Lamar	500

Circle sizes are based on water use.  
Water use is estimated.

# Impacts of Drought

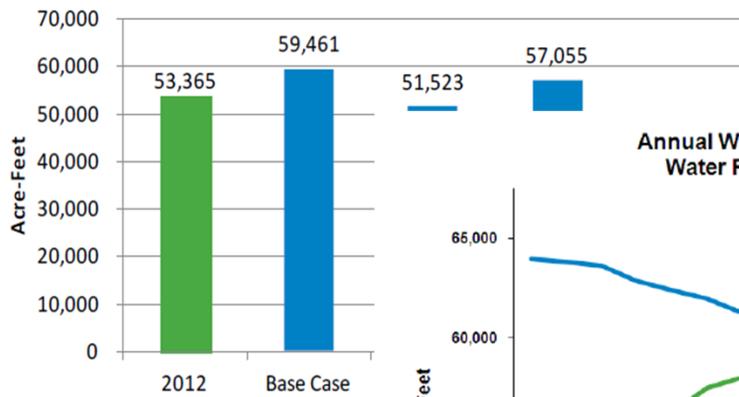
- ✓ Reliability
- ✓ Cost
- ✓ Other water users



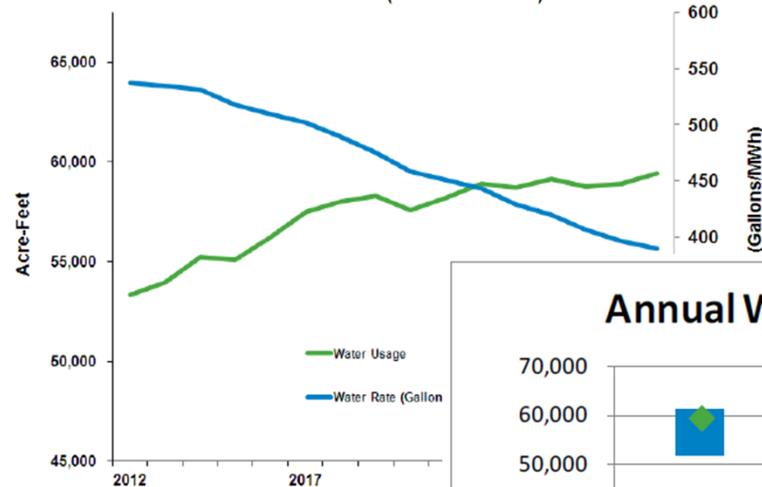
Photo: Wikimedia

# Information – Arizona Public Service

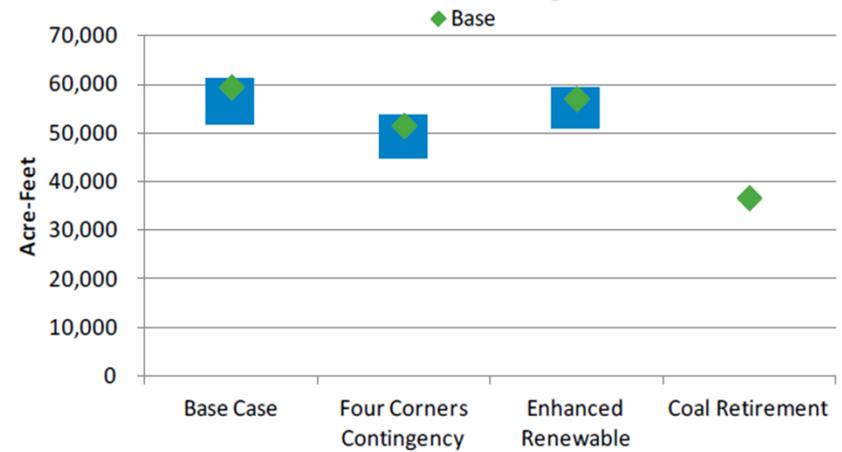
**Water Use - 2027**



**Annual Water Use (Acre-Feet) & Water Rate (Gallons/MWh)**



**Annual Water Use Range - 2027**

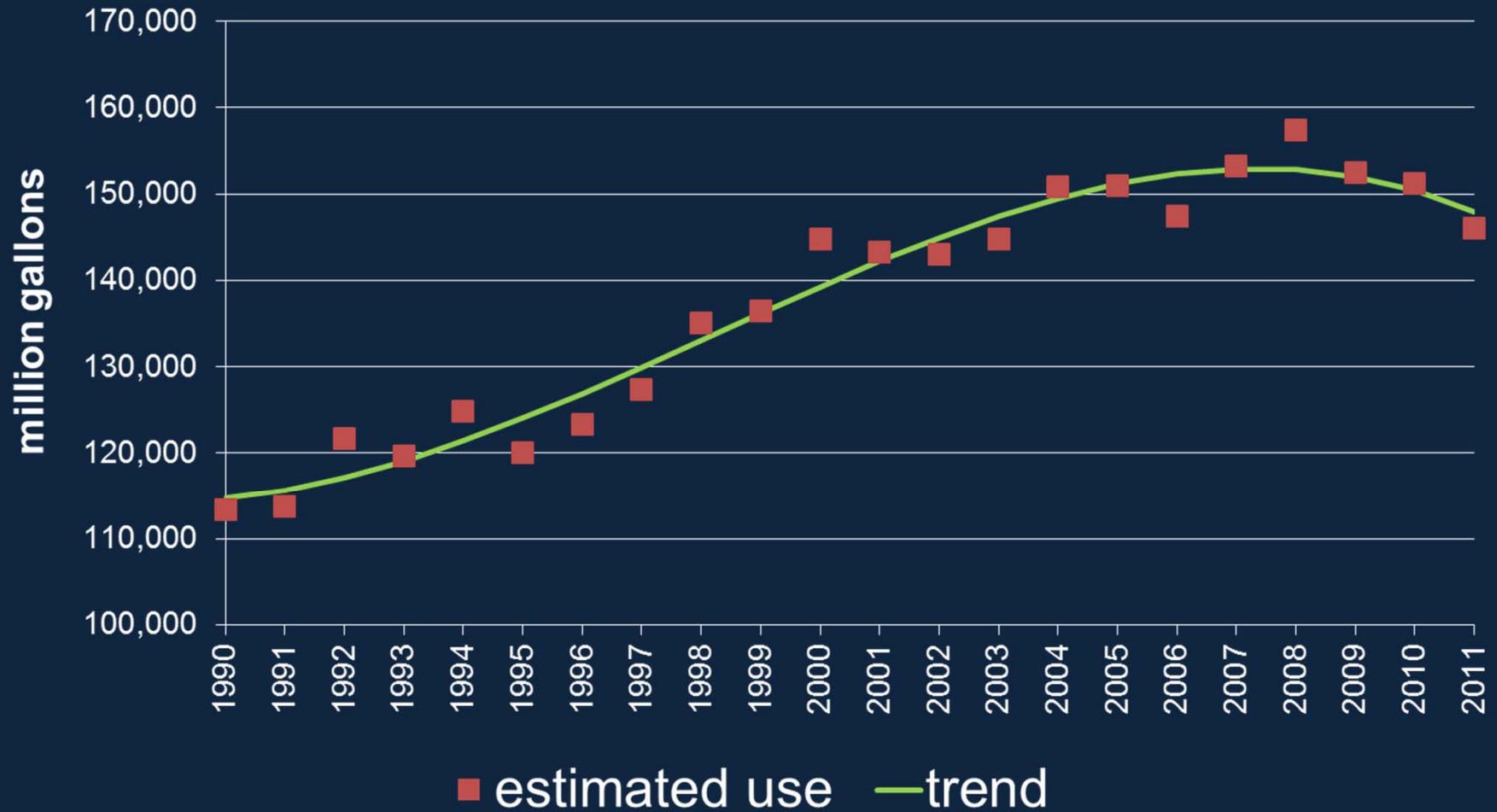


# Recognize Risk

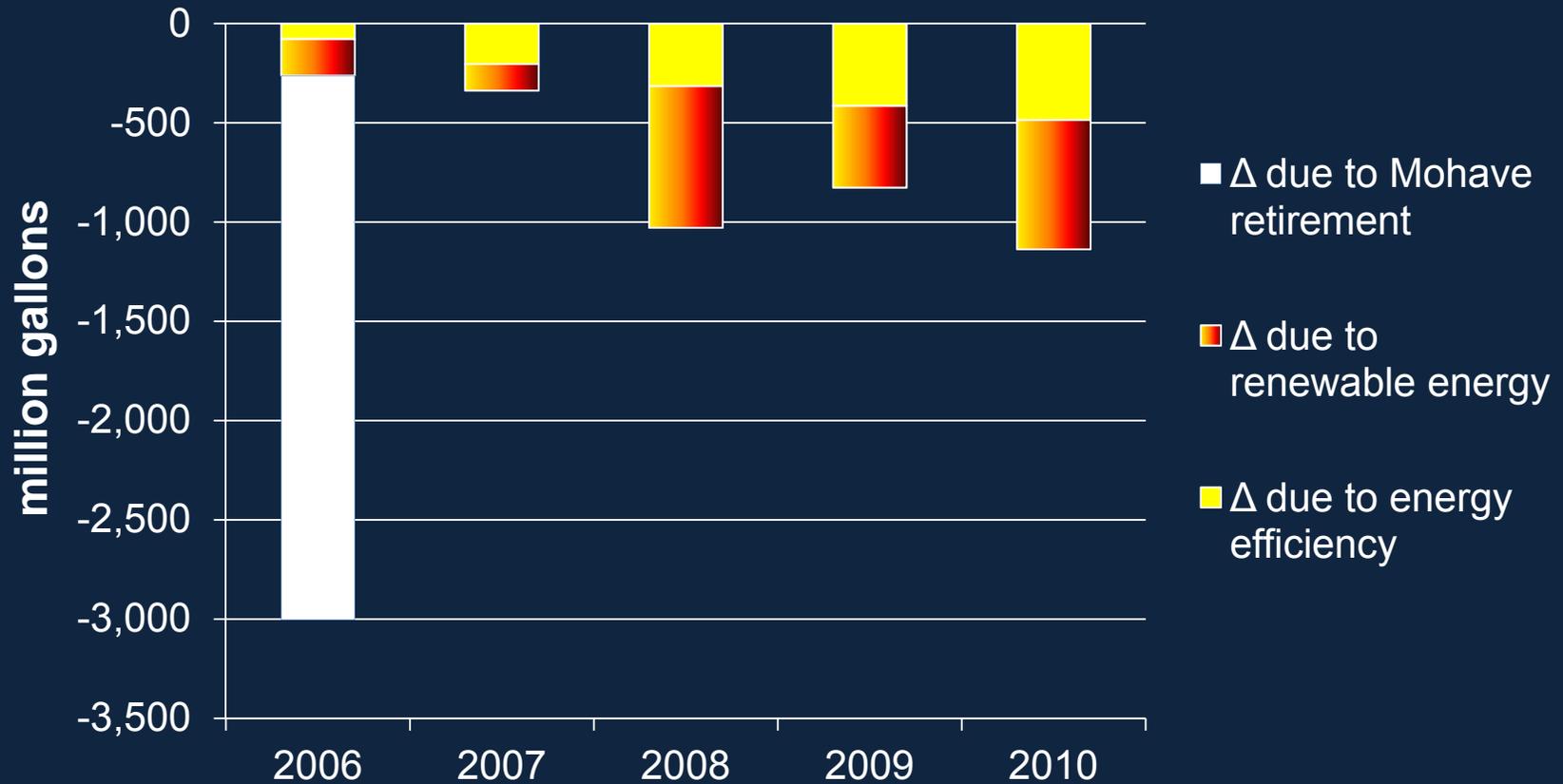
- Develop drought scenarios (PNM)
  - Informed by hydrology
  - 1 yr, 3 yr, longer?
- Include a qualitative discussion of how a resource or portfolio mitigates the risk of drought and other environmental impacts.



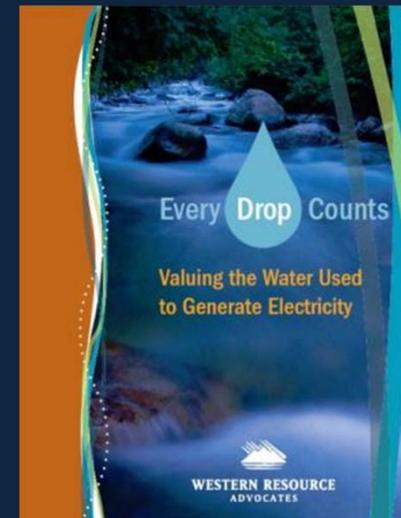
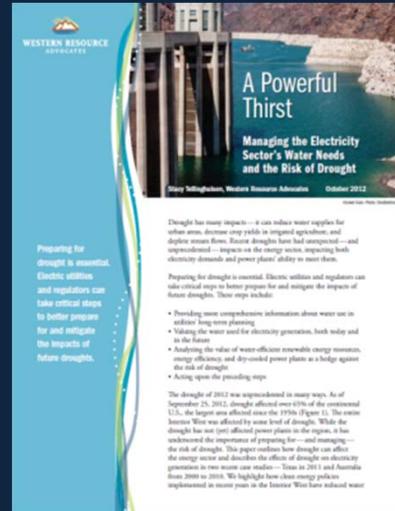
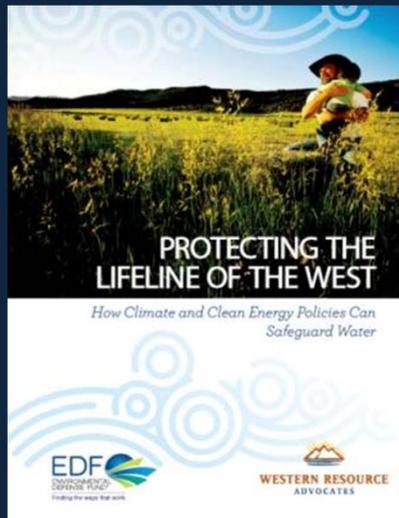
# Estimated Water Use for Power Generation in the Mountain West



# Change in Water Use from Previous Year Due to Clean Energy Events: Mountain West



# Thank You



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# Value Water – NV Energy

- Current opportunity cost
  - Does the current cost reflect future costs?

- *Value/price changes with time*

