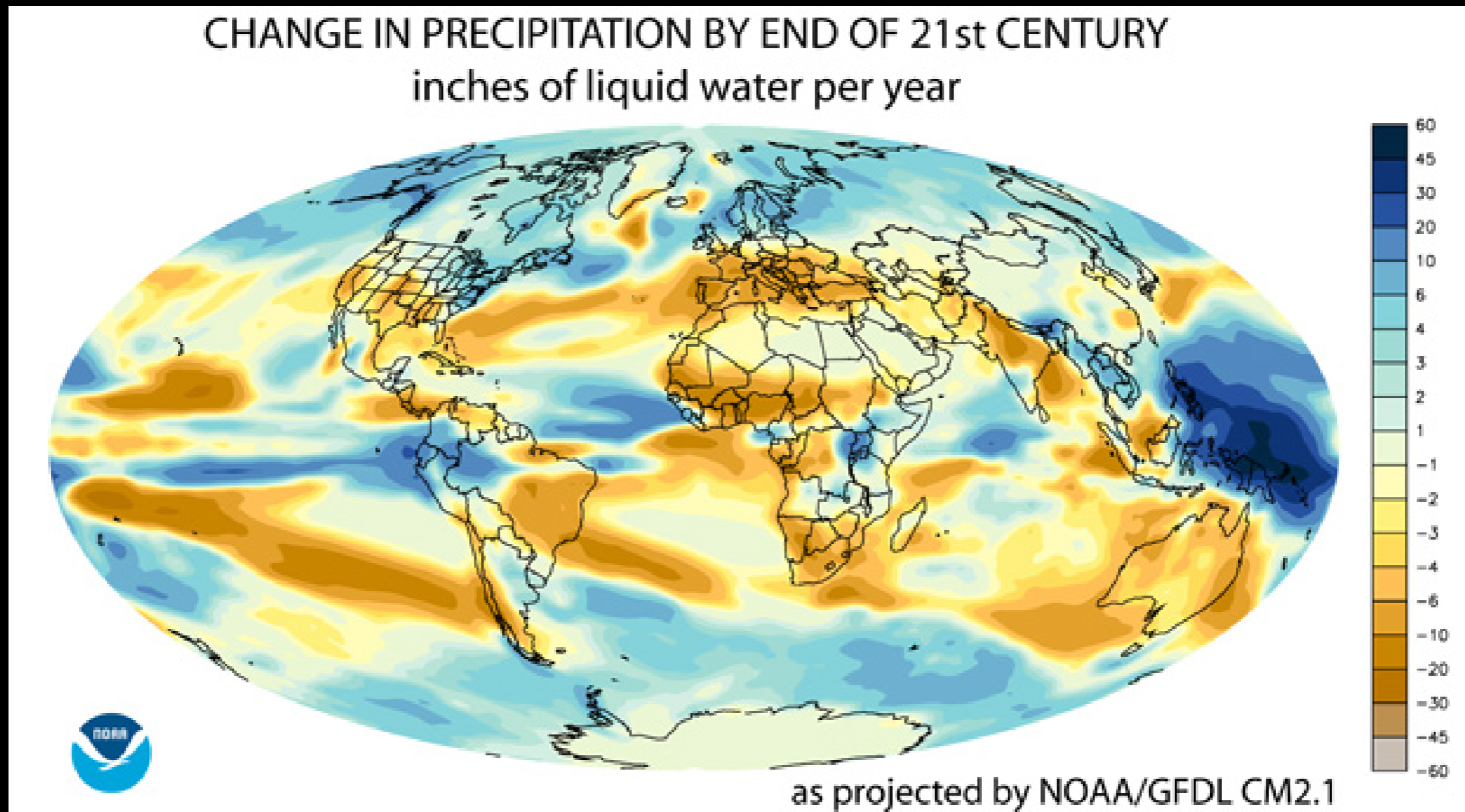
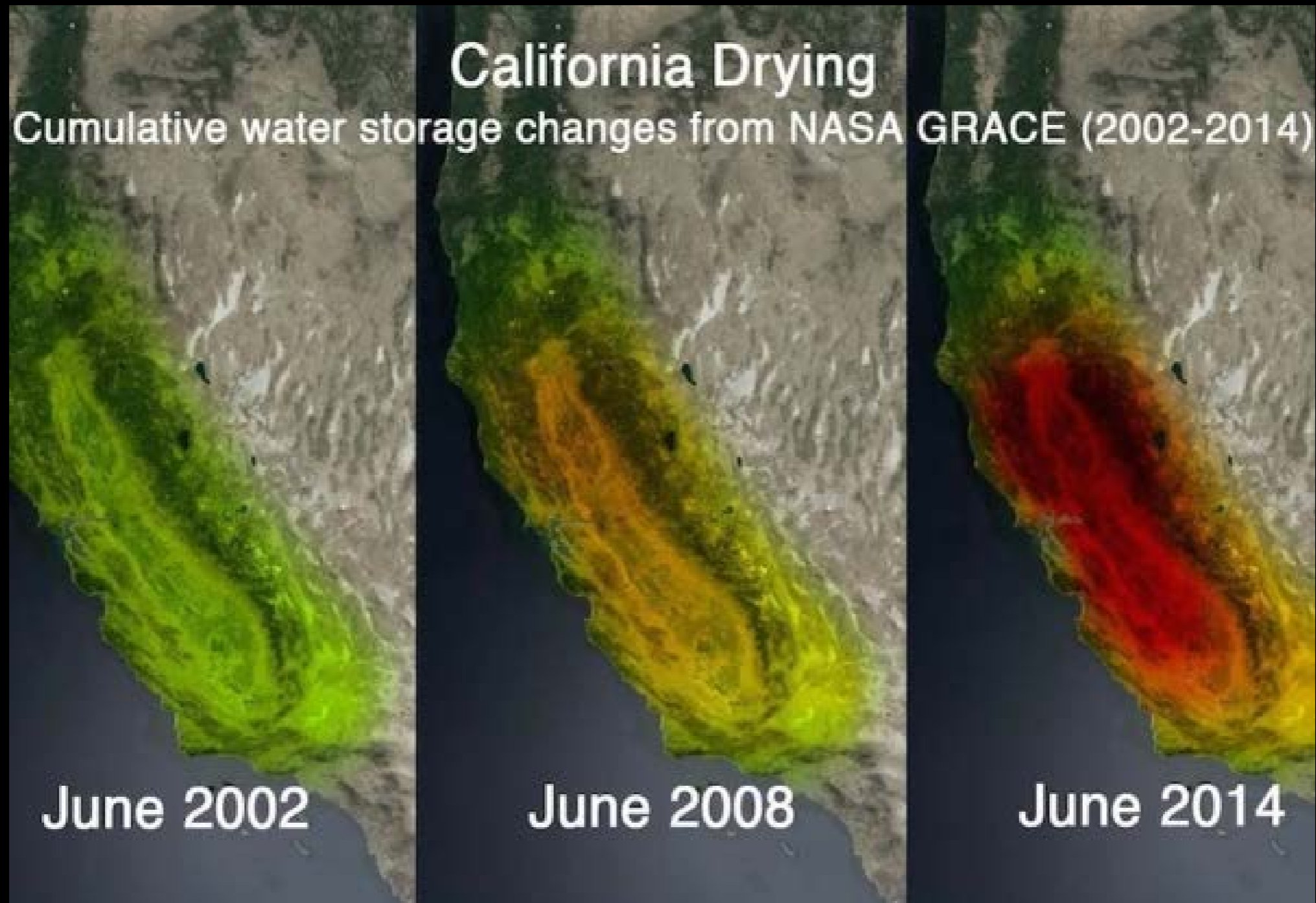


Advocating for Science

*Because we can't use the past to plan
the future*



The Big Gap: Planning and Science



Climate Change: Fundamental Change to CA Water System

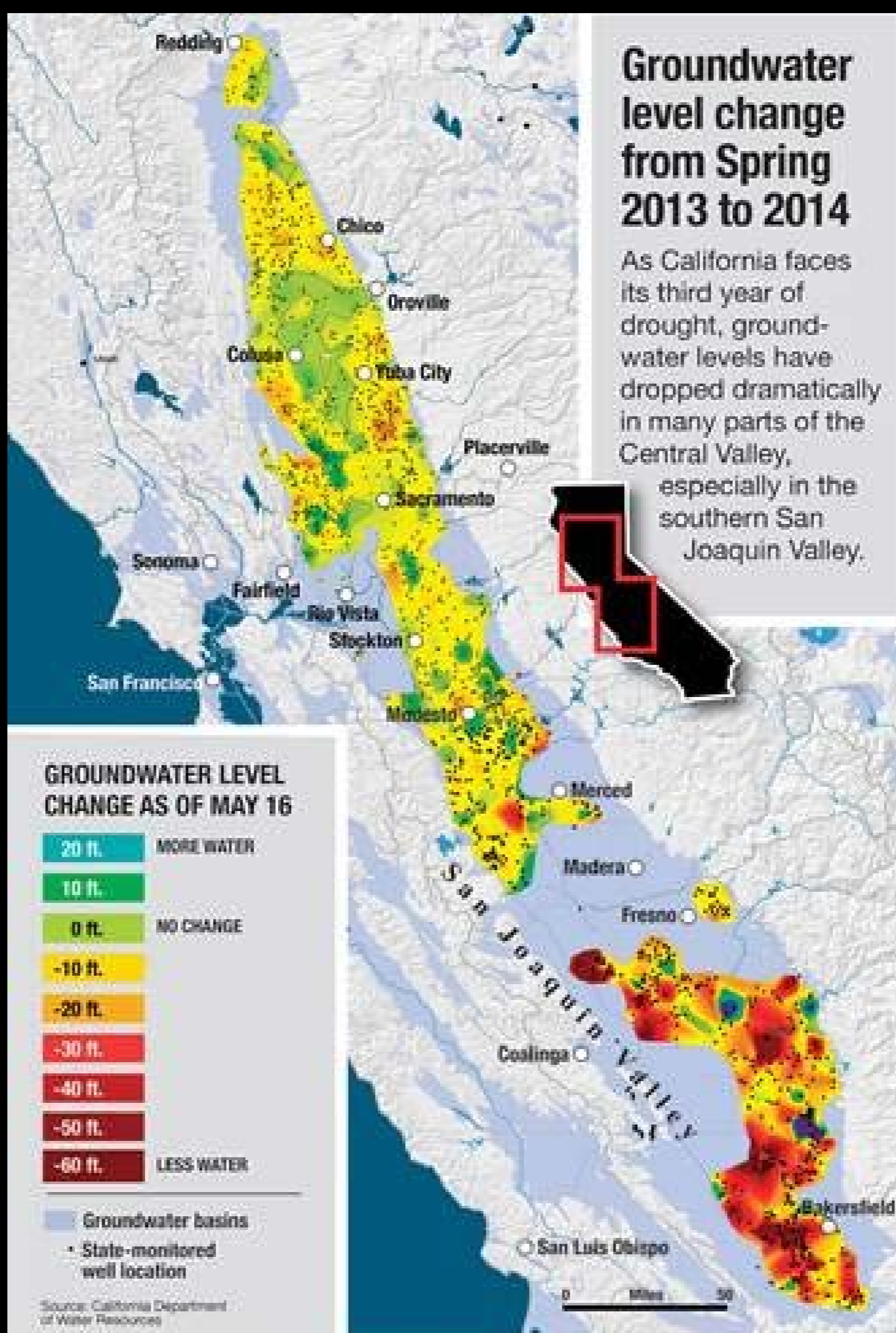


The Big Water Supply Shift



Groundwater level change from Spring 2013 to 2014

As California faces its third year of drought, groundwater levels have dropped dramatically in many parts of the Central Valley, especially in the southern San Joaquin Valley.



The Big Water Supply Shift

Groundwater Key to Water Security in California's Changing Climate

HIGHLIGHTS

For more than a century, California has relied on its snowmelt-fed reservoirs, rivers, and streams for the majority of its water, but drought and climate change are depleting those traditional supplies. Snow is already melting as many as 30 days earlier than in the mid-twentieth century, meaning less water is available during the hotter months when water demand is highest.

California is increasingly turning to groundwater to meet its water needs. Today, groundwater supplies up to 50 percent of California's water, but California's prolonged drought has led to the over-pumping of groundwater, overdrafting the Central Valley's aquifers. Sustainable groundwater management will allow the state to adapt to climate change while increasing water reliability in the future.

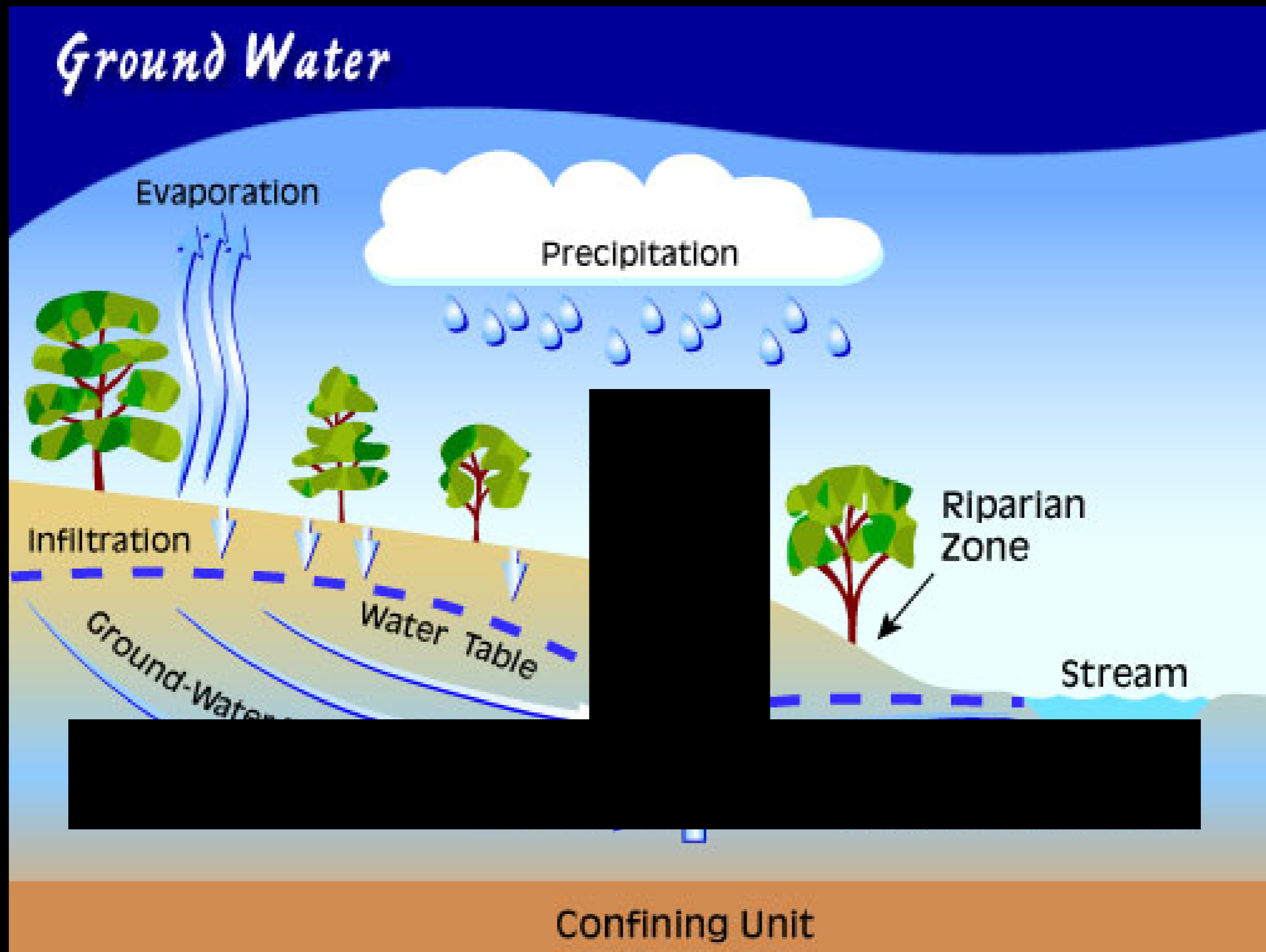
California's recent struggles with drought have brought state water supplies to unprecedented and dangerously low levels. As a result, Californians now see water management as a paramount issue of concern. Drought ranked as the greatest obstacle facing the state over all other issues in a 2015 survey of Californians. A record-high 70 percent of those polled said water supply is a "big problem" in their part of the state (Baldassare et al. 2015). Because this epic drought is a harbinger of what is to come, California must plan now for a different water future (Cook, Ault, and Smerdon 2015).

For more than a century, California has relied on its snowmelt-fed reservoirs, rivers, and streams for the majority of its water. Drought and climate change are depleting those traditional supplies, with California snowpack reaching a 500-year low (Belmecheri et al. 2015). The state surface-water storage system is not designed for a future in which precipitation is expected to come as rain rather than snow; it will consequently not be able to deliver adequate supplies. We must therefore change how we collect and manage our dwindling water resources. California is increasingly turning to groundwater to meet its water needs, so the focus must shift to making groundwater supplies more reliable and sustainable to ensure enough water for generations to come.

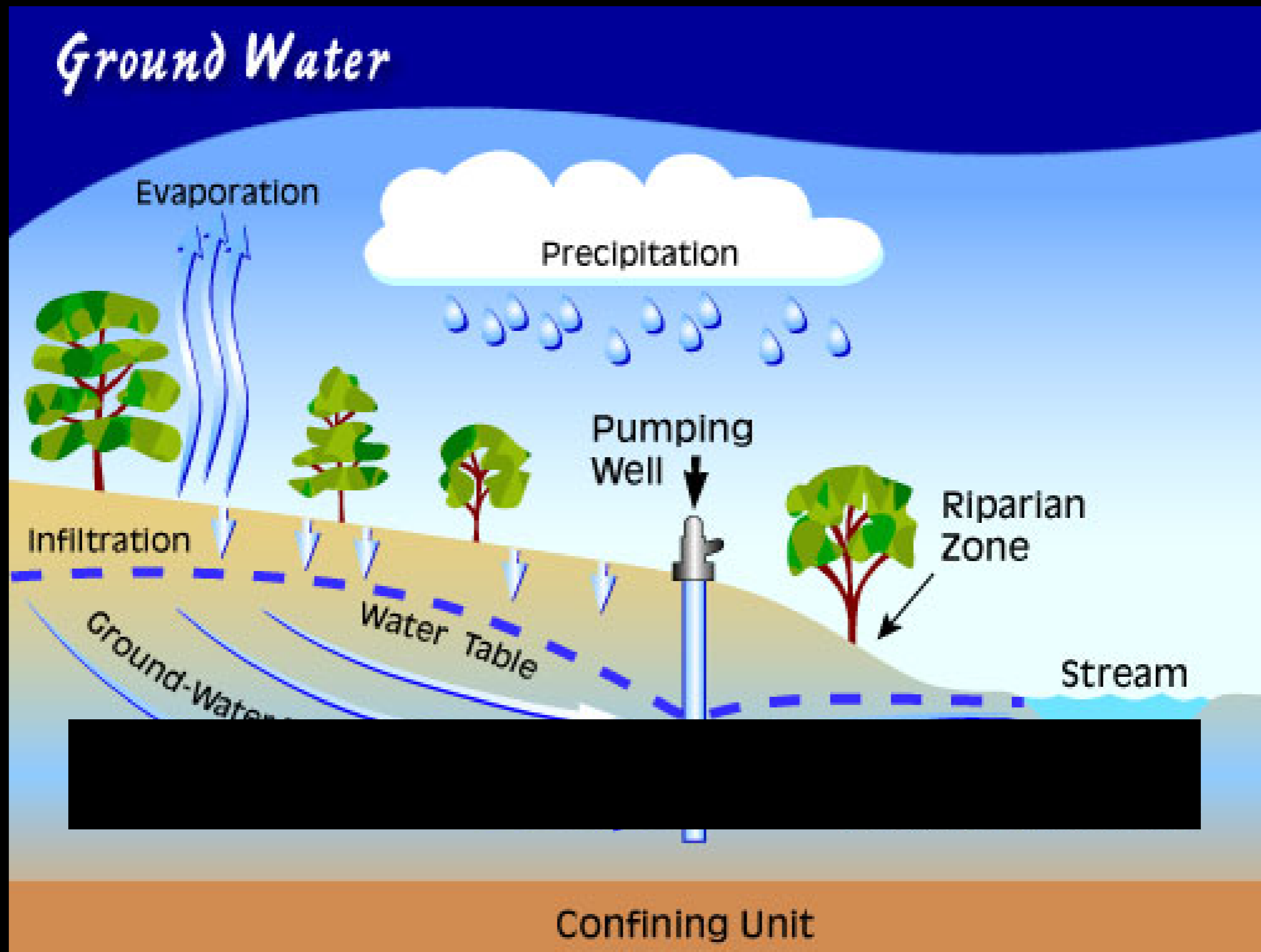


Decreased snowpack has brought less water into reservoirs (such as Lake Oroville, above, in Northern California), while increased temperatures have led to greater evaporation of surface water. Declining surface water supplies have led the state to increase its reliance on groundwater, so strong groundwater management is critical to ensuring a reliable water supply for the future.

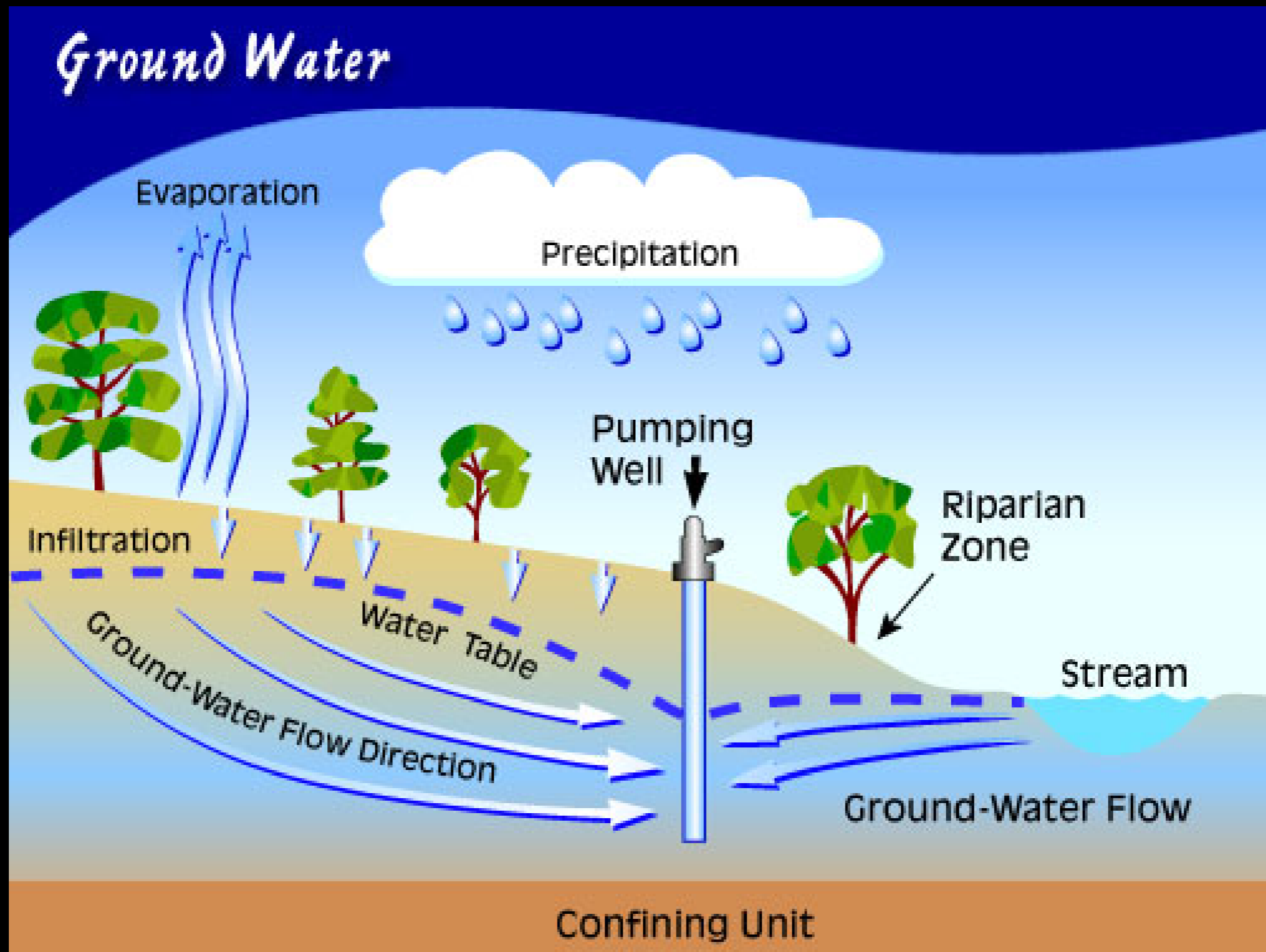
Lack of information has hampered water management



The “black box” is opening



The “black box” is opening

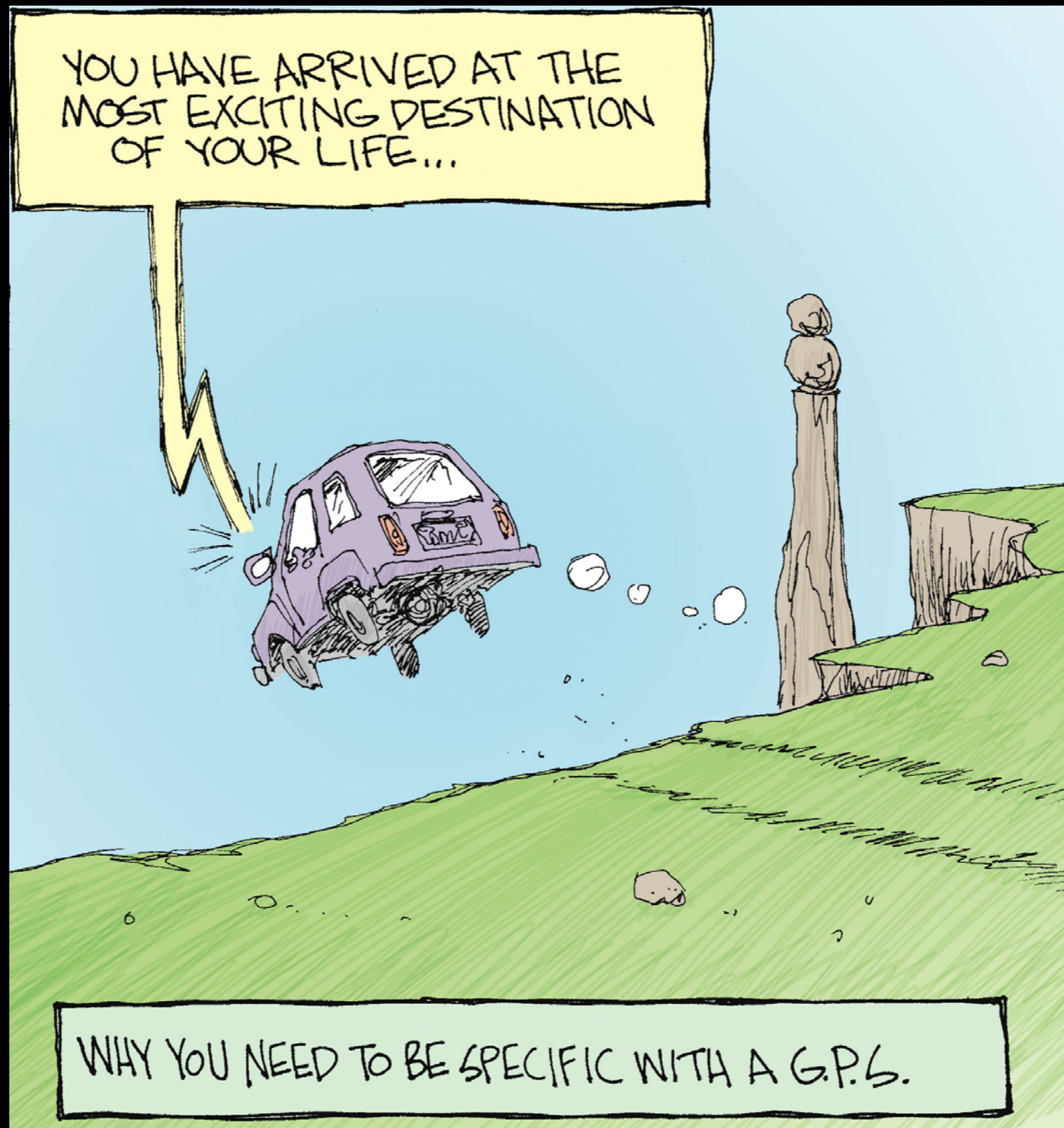


The Sustainable Groundwater Management Act



Thomas Harter

Groundwater GPS



State water regulators at a crossroads



Regulations could help avoid chaos



...or allow chaos



Measuring What Matters

Setting Measurable Objectives to Achieve Sustainable Groundwater Management in California



**[Union of
Concerned Scientists**

ucsusa.org/measuringwhatmatters

