

Impacts of Drought on Mariposa County

Eric Sergienko, MD, MPH
County Health Officer

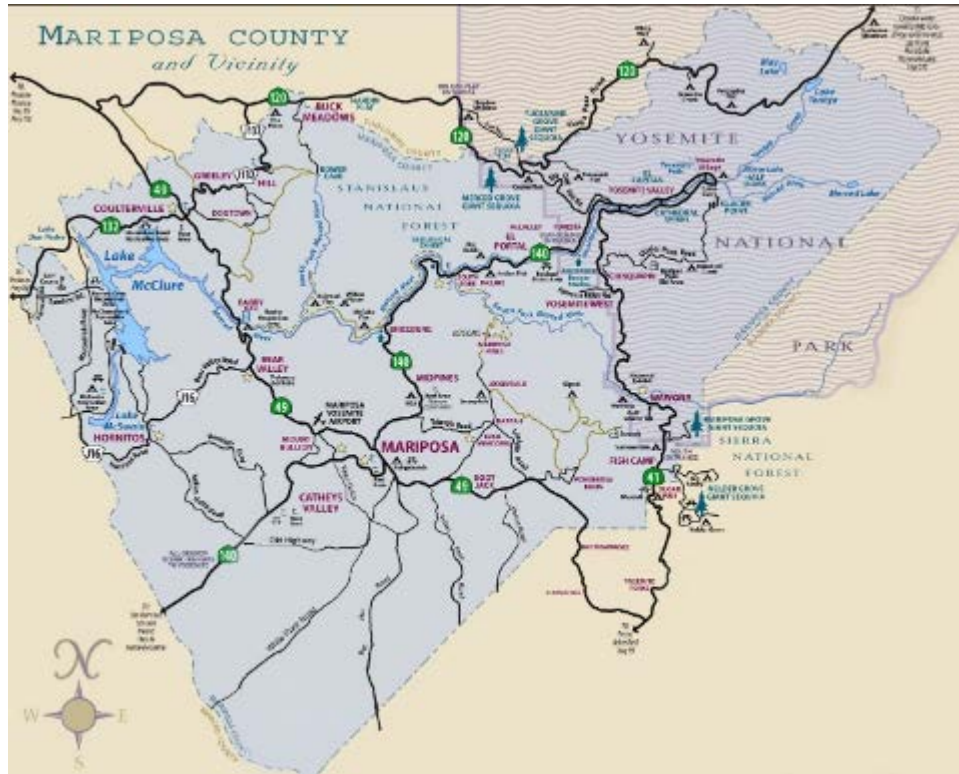
MARIPOSA
COUNTY
HEALTH
& HUMAN SERVICES
AGENCY



Public Health



The County



Living off the grid

- Small, rural county nestled in the Sierra Nevada foothills
 - The county spans approximately 1,450 square miles and residences tend to be spread out
- 17,569 residents in 2017, down from 18,101 in 2010
 - 7,434 Households
 - Exodus of 20-30 year olds
- Nearly 21% of the population aged 5 and older has a disability (compared to < 13% for all of California)
- Higher unemployment, lower median household income, and a higher proportion of the population living below poverty as compared to the state overall
- The isolation of residents creates an environment ripe for depression, anxiety, and other mental and behavioral health disorders, and also provides a conducive environment for illegal activities and substance abuse



Public Health Division Snapshot

- Mission Statement: To protect and promote the health, safety, and environment of the community by preventing and controlling diseases, environmental hazards, injury and disability, and by educating and promoting healthier lifestyles
- 19 Full time staff, 3 part time, and 5 extra help
- FY 17-18
 - Revenue: \$2,442,209
 - Expenditures: \$2,700,102
 - Current Net County Cost: \$257,893



Drought as part of Climate Change Milieu

- Drought is a slow-moving disaster
- Intersperse this with other events that are happening and ongoing in Mariposa County
- Pine Beetle Bark
 - Tree Mortality Task Force
- Fire
 - Harlow Fire – 1961
 - Telegraph Fire – 2008
 - Detwiler Fire – 2017
 - Ferguson Fire 2018
 - Air quality issues!
- Flooding – 1997, 2017, 2018





2011

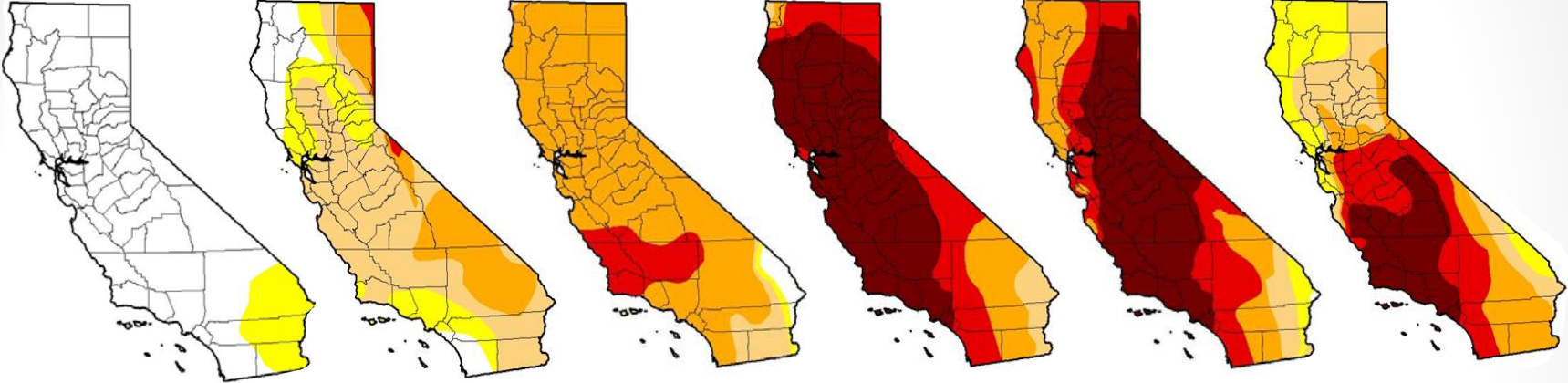
2012

2013

2014

2015

2016



Abnormally Dry

Moderate Drought

Severe Drought

Extreme Drought

Exceptional Drought

Source: U.S. Drought Monitor

The Mercury News

Brown declares California drought emergency

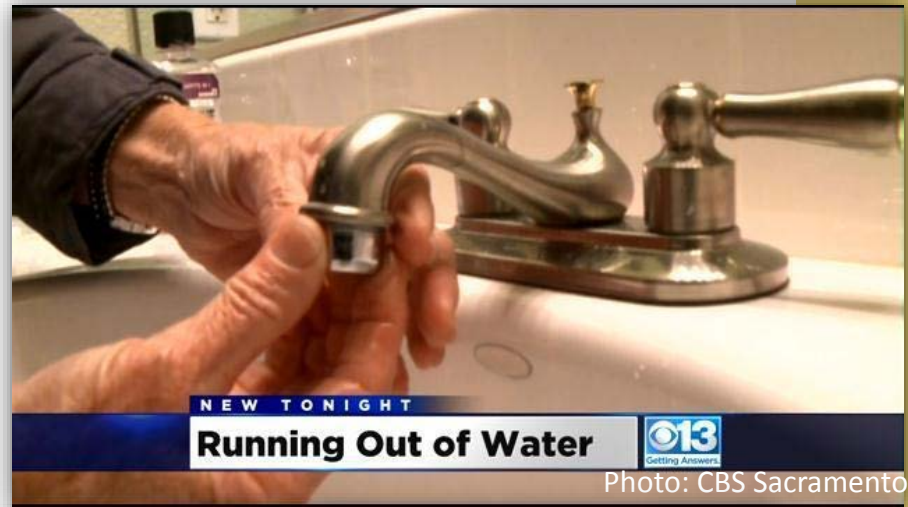
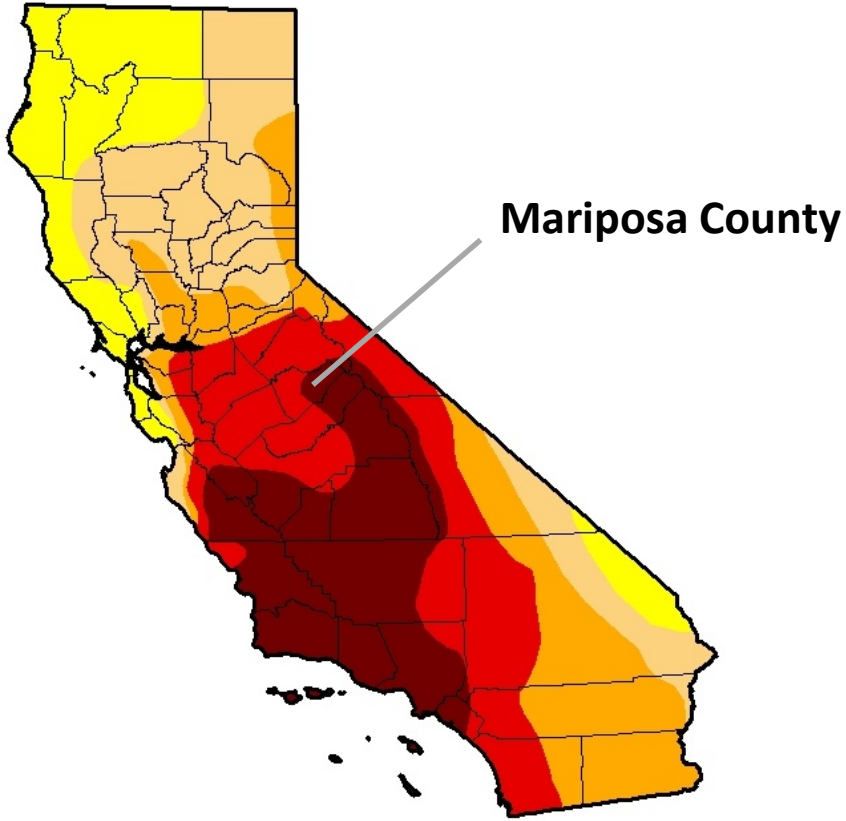
MARIPOSA COUNTY HEALTH & HUMAN SERVICES AGENCY



Public Health



2016



Drought Declaration

- On September 19, 2014, Governor Brown issued Executive Order (EO) B-26-14, authorizing the California Governor's Office of Emergency Services (Cal OES) to provide California Disaster Assistance Act (CDAA) funding, as deemed appropriate, for local government assistance to provide emergency water supplies to households without water for drinking and/or sanitation purposes.



County Actions

- December 2014 – The Mariposa County Board of Supervisors authorized the Health Dept. and local OES to apply for funding thru CDAA
- February 2015 – Mariposa County selected Self Help Enterprises (SHE) to administer the program
- Feb – Mar 2015 several meetings with SHE and local contractors to set up program
 - Direct mail information card sent to every mailbox in Mariposa County
- The week of April 13, 2015 water delivery began to homes in need



Status as of 7/22/2015

Applicants to Date	
Approved/Finaled	74
Pending Inspections	3
On Hold	3
Didn't Meet Standards	18
Cancelled	3
Total	101

Needs Analysis	
Total Gallons Per Week	98510
Avg. Gallons per Home	1331
Avg. # of Occupants	3
# homes with Evap. Cooler *	22
# Homes Requiring Tanks	41

Locations	
District 1	14
District 2	7
District 3	31
District 4	23
District 5	26
Total:	101



Final numbers by 2018

- 226 applications approved for assistance
 - 14 of these wells failed due to coliform concentrations
 - 18 of these wells failed due to elevated nitrate levels (<10mg/L)
 - Remainder due to water production
- \$109,282.81 in staff costs from 4/1/2015 to 4/17/2018



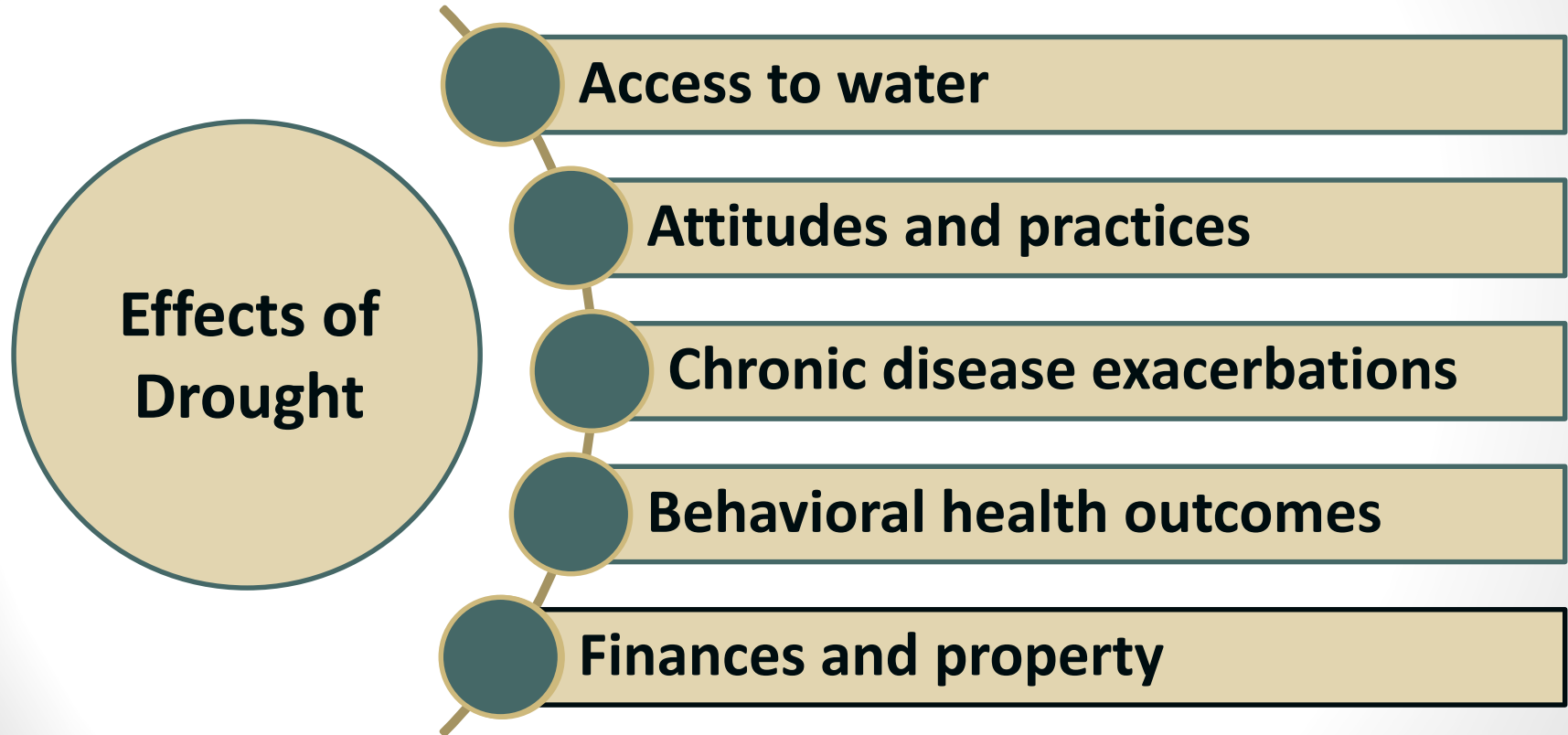
Dry Well Assistance Example



Dry Well Assistance Example



Using CASPER to define the impacts of the drought



Post-CDAA

- Drought emergency declared over April 7, 2017
- Transition of tanks/pumps to property owner
 - Release of liability signed
- Grants/loans for non-functioning wells
- Continued funding for water shipments during transition year 2017-2018
 - At end of April 2018, three households still on water shipments
 - Funding extended through September 2019
- Detwiler Fire burned out many water tanks
 - Able to replace 62 of these



Lessons Learned

- Climate change-related disasters will continue through the rest of our lives
 - Have staffed trained in responding to 'all-hazards' incidents
 - Adopt a SEMS/NIMS mentality for even 'slow' disasters
 - Be prepared to work with 'non-traditional' partners in Public Health
 - Be adaptive to allow for a more rapid response
- Better data collection
 - Great to have partners from CDPH/CDC assisting in defining the problem
 - In preparing this, it would have been better to not have to hand jam data...

