



July 2021 Drought Update

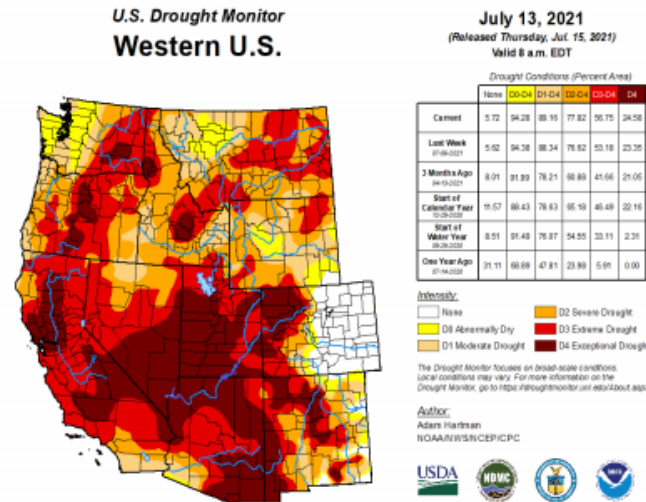
LAKE COUNTY, CA

JULY 27, 2021

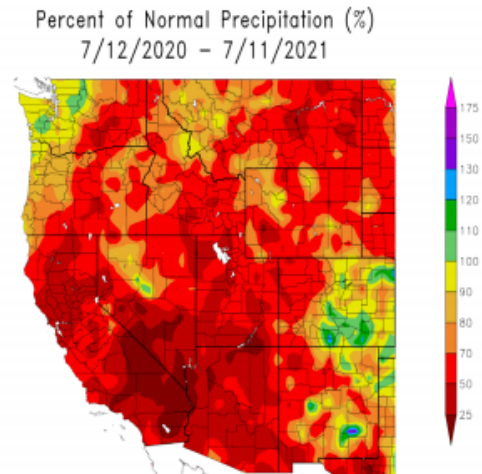


Long-Term Drought in the West Impacts Water Supplies and Increases Wildfire Risk

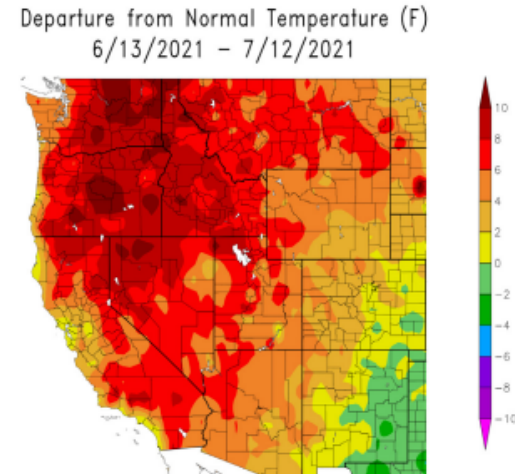
- 89% of the West is in drought and 25% is in Ex-ceptional (D4) Drought. Both are U.S. Drought Monitor records.
- Much of the West was drought free just over 14 months ago, but drought conditions began developing around May 2020.
- A poor summer 2020 monsoon season followed by snow drought in winter 2020-21 worsened conditions in California and the Southwest.
- Record-shattering temperatures and dry conditions in the Northwest in early summer 2021 caused conditions to rapidly deteriorate in a region that was already facing multi-year precipitation deficits.



▲ Fig 1. July 13, 2021 U.S. Drought Monitor. Source: National Drought Mitigation Centre



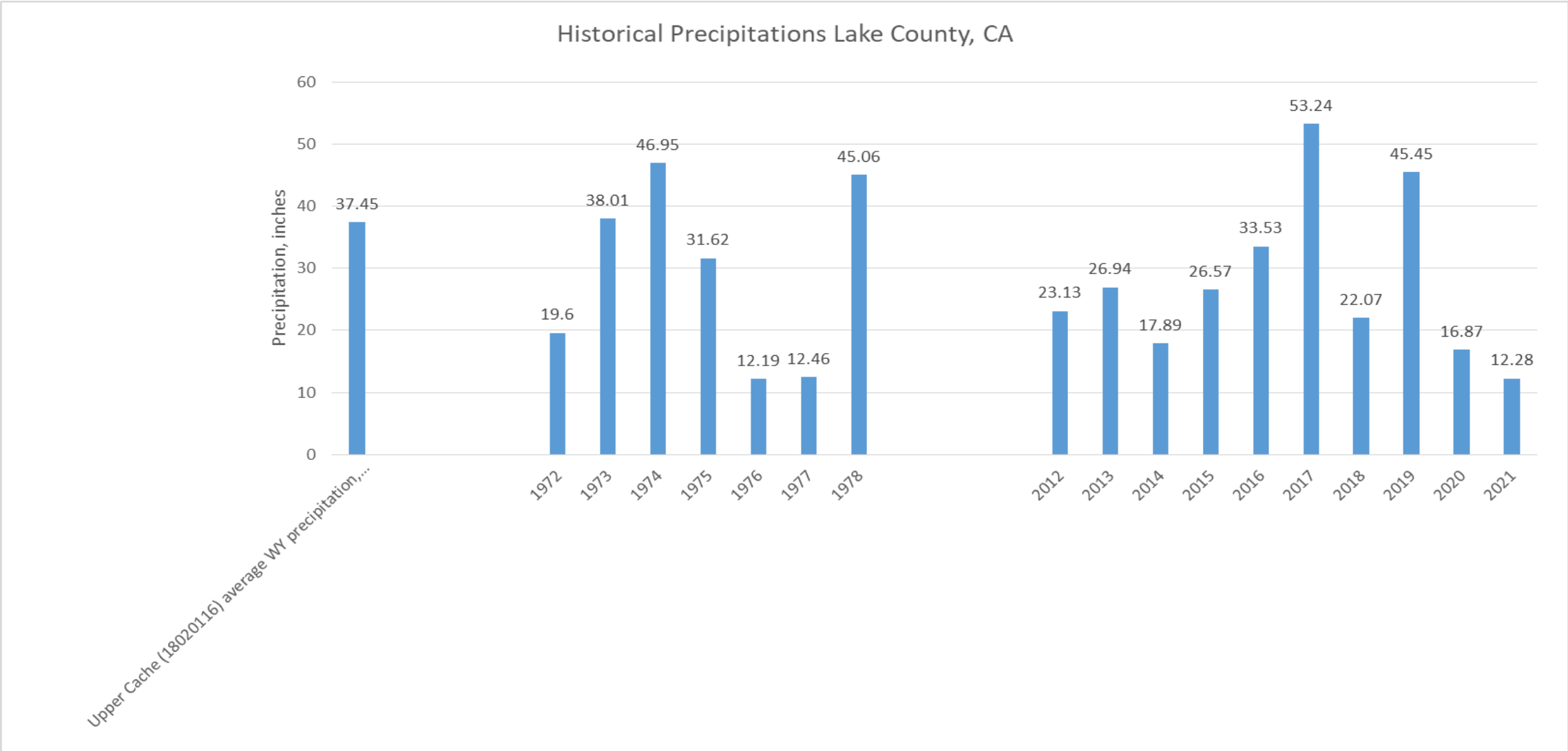
▲ Fig 2. Percent of normal precipitation in the last year as of July 11, 2021. Source: High Plains Regional Climate Center



▲ Fig. 3 Departure from normal temperature in the last month as of July 12, 2021. Source: High Plains Regional Climate Center



Lake County Historical Precipitation



Current Lake County Drought Conditions



D3 - Extreme Drought

- Livestock need expensive supplemental feed; cattle and horses are sold; little pasture remains; fruit trees bud early; producers begin irrigating in the winter
- Fire season lasts year-round; fires occur in typically wet parts of state; burn bans are implemented
- Water is inadequate for agriculture, wildlife, and urban needs; reservoirs are extremely low; hydropower is restricted

85.8%
of CA
(D3-D4)

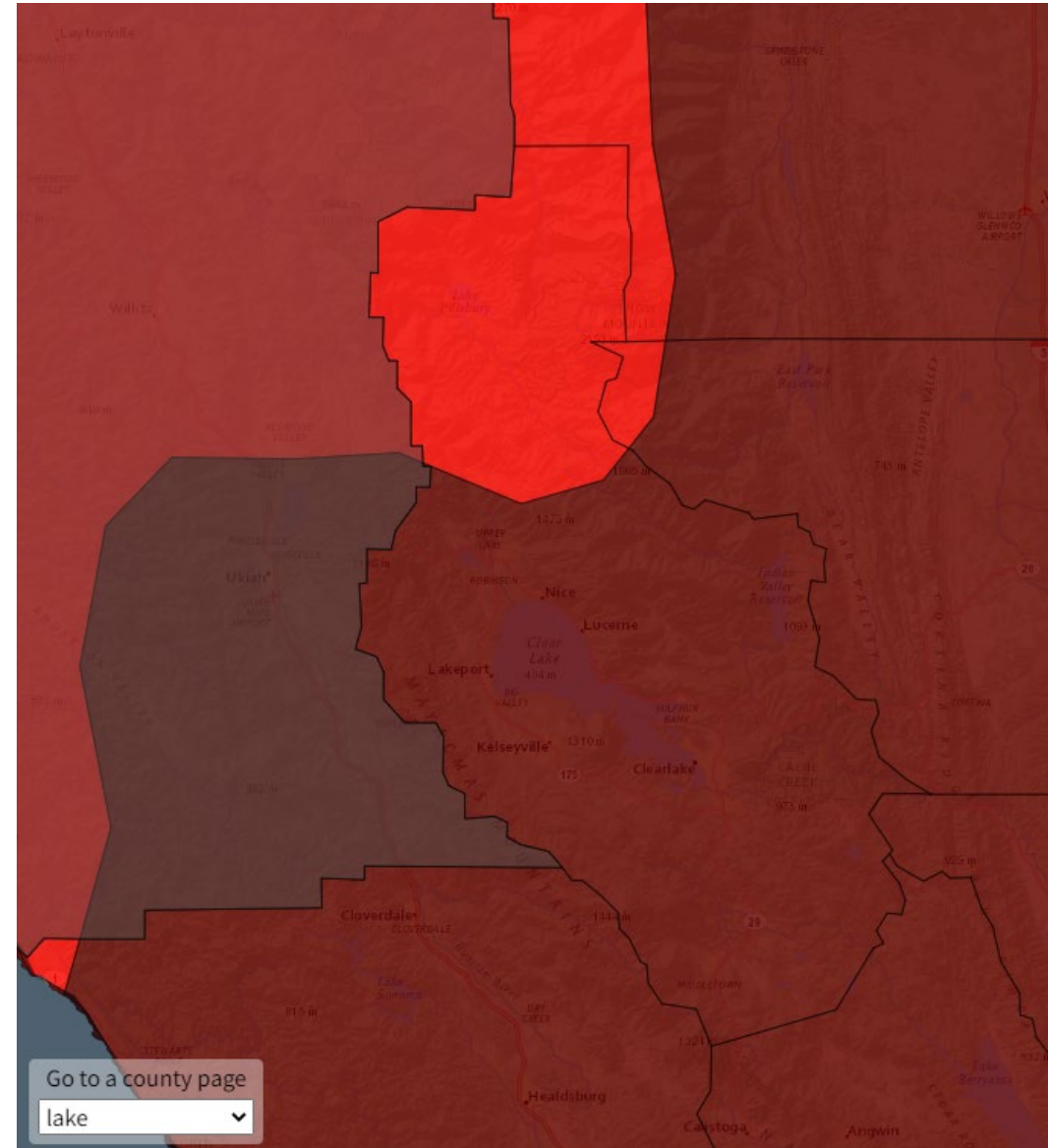


D4 - Exceptional Drought

- Fields are left fallow; orchards are removed; vegetable yields are low; honey harvest is small
- Fire season is very costly; number of fires and area burned are extensive
- Fish rescue and relocation begins; pine beetle infestation occurs; forest mortality is high; wetlands dry up; survival of native plants and animals is low; fewer wildflowers bloom; wildlife death is widespread; algae blooms appear

33.4%
of CA
(D4)

Source(s): [NDMC](#), [NOAA](#), [USDA](#)





Drought.gov

National Integrated Drought Information System



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Drought Conditions for Lake County

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64,665

people in Lake County are
affected by drought

No change since last week

No change since last month

100%

of people in Lake County
are affected by drought

No change since last week

No change since last month

47th

driest June was in 2021,
over the past 127 years

↓ 0.35

inches from normal

14th

driest year to date in 127
years occurred in 2021

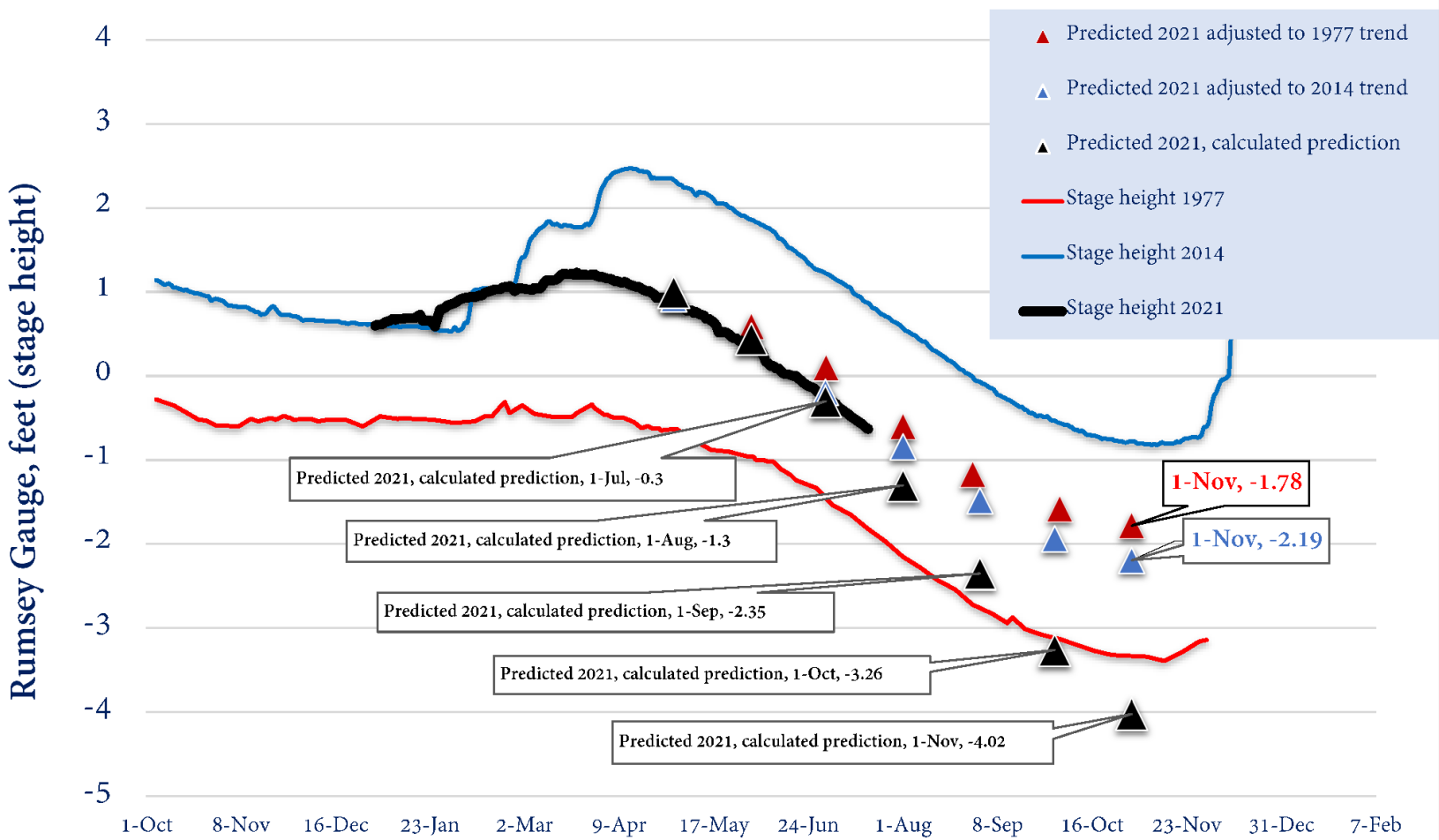
↓ 14.34

inches from normal

[Learn more about these stats](#)



Clear Lake Water Levels for 1977, 2014, & 2021 and multiple predicted* 2021 levels



**Predicted values derived from a simplified Penman Formula for evaporation rate. The model considers altitude, dew point temperatures, and daily mean temperatures and other values based on several locations around Clear Lake. The model was not validated against other models and calculated predictions use gage data starting from April 1, 2021. Adjusted predictions incorporate the variables from their respective years (i.e. 1977 & 2014).*



Clear Lake, Public Boat Ramps

County/City Maintained Boat Ramp	Depth at the end of the Boat Ramp (ft R)	Measurement Method	Recommendation
Crystal Lake Way Extension, North Lakeport	0ft R	Engineers Rod	CLOSE (TOO MUCH SEDIMENT/SHORT LENGTH)
Clearlake Avenue Extension, Lakeport	-1ft R	Engineers Rod	CLOSE
5th Street, Lakeport	-5.3ft R	Engineers Rod	OPEN
3rd Street, Lakeport	-3.6ft R	Engineers Rod	OPEN
Lakeside Park	-3ft R	"As-Built"	OPEN (BUT MONITOR, ASK FOR OTHER RECS)
Redbud Park, Clearlake	-3ft R	Engineers Rod	OPEN (BUT MONITOR, LOTS OF SEDIMENT ON RAMP)
Clearlake Oaks Park	-3.6ft R	Engineers Rod	OPEN
Lucerne Harbor	-1ft R	"As-Built"	CLOSE (CLOSED IN PREVIOUS YEARS)
Keeling Park	-2ft R	Engineers Rod	CLOSE (CLOSED IN PREVIOUS YEARS)
Rodman Slough	-1.1ft R	Kayaker Depth Finder	CLOSE (LEAVE OPEN FOR KAYAKERS)

Water Use 2020-2021

CSA 21 - North Lakeport

Number of Connections: 1,244

Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	% Change from 2020 to 2021
Jan-20	31	9,139,732	294,830	Jan-21	31	10,784,504	347,887	18.00%
Feb-20	28	9,700,382	346,442	Feb-21	28	9,341,075	333,610	-3.70%
Mar-20	31	13,639,951	439,998	Mar-21	31	10,202,736	329,121	-25.20%
Apr-20	30	12,074,398	402,480	Apr-21	30	13,594,097	453,137	12.59%
May-20	31	15,526,213	500,846	May-21	31	17,198,868	554,802	10.77%
Jun-20	30	19,384,964	646,165	Jun-21	30	19,576,553	652,552	0.99%
6 Month Total		79,465,640				80,697,833		1.55%

CSA 2 - Spring Valley

Number of Connections: 495

Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	% Change from 2020 to 2021
Jan-20	31	2,905,011	93,710	Jan-21	31	2,785,733	89,862	-4.11%
Feb-20	28	2,607,272	93,117	Feb-21	28	2,596,853	92,745	-0.40%
Mar-20	31	2,626,200	84,716	Mar-21	31	2,900,830	93,575	10.46%
Apr-20	30	3,471,900	115,730	Apr-21	30	3,101,070	103,369	-10.68%
May-20	31	4,778,600	154,148	May-21	31	3,743,110	120,745	-21.67%
Jun-20	30	5,839,920	194,664	Jun-21	30	4,926,977	164,233	-15.63%
6 Month Total		22,228,903				20,054,573		-9.78%

Kelseyville County Waterworks District #3

Number of Connections: 1,297

Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	% Change from 2020 to 2021
Jan-20	31	9,373,000	302,355	Jan-21	31	11,039,000	356,097	17.77%
Feb-20	28	9,408,000	336,000	Feb-21	28	10,103,000	360,821	7.39%
Mar-20	31	10,785,000	347,903	Mar-21	31	11,503,000	371,065	6.66%
Apr-20	30	12,684,000	422,800	Apr-21	30	15,216,000	507,200	19.96%
May-20	31	16,403,000	529,129	May-21	31	19,255,000	621,129	17.39%
Jun-20	30	22,951,000	765,033	Jun-21	30	21,692,000	723,067	-5.49%
6 Month Total		81,604,000				88,808,000		8.83%

CSA 13 - Kono Tayee

Number of Connections: 141

Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	% Change from 2020 to 2021
Jan-20	31	731,900	23,610	Jan-21	31	619,059	19,970	-15.42%
Feb-20	28	525,000	18,750	Feb-21	28	555,500	19,839	5.81%
Mar-20	31	568,100	18,326	Mar-21	31	598,100	19,294	5.28%
Apr-20	30	622,500	20,750	Apr-21	30	694,566	23,152	11.58%
May-20	31	740,890	23,900	May-21	31	845,234	27,266	14.08%
Jun-20	30	824,200	27,473	Jun-21	30	703,900	23,463	-14.60%
6 Month Total		4,012,590				4,016,359		0.09%

CSA 20 - Soda Bay

Number of Connections: 645

Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	Month/Year	Days/Month	Production (gal)	Daily Ave (gal)	% Change from 2020 to 2021
Jan-20	31	3,006,698	96,990	Jan-21	31	3,316,571	106,986	10.31%
Feb-20	28	2,914,563	104,092	Feb-21	28	3,187,882	113,853	9.38%
Mar-20	31	3,421,244	110,363	Mar-21	31	3,345,413	107,917	-2.22%
Apr-20	30	3,883,489	129,450	Apr-21	30	4,257,625	141,921	9.63%
May-20	31	5,420,746	174,863	May-21	31	5,167,316	166,688	-4.68%
Jun-20	30	6,347,285	211,576	Jun-21	30	6,228,443	207,615	-1.87%
6 Month Total		24,994,025				25,503,250		2.04%



Environmental Health - Well Permits Issued

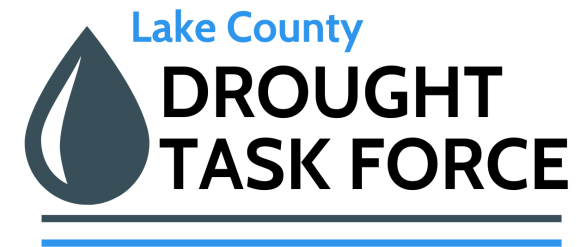
2021	133 (As of July 22, 2021)
2020	148
2019	78
2018	87
2017	110
2016	94
2015	97



Lake County Drought Task Force (LCDTF) Mission Statement

To identify, develop, and maintain drought preparedness and response resources for use by public and private water systems, tribes, self-supplied households, and local government for the protection of:

- Safe drinking water
- Fish and wildlife
- Public safety, health, and welfare
- Sustaining economic vitality
- Fire protection
- Groundwater dependent ecosystems
- Agriculture
- Recreation



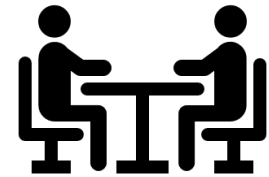


LCDTF Goals

Integrated Regional Water Management

To work collaboratively to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives.

- Consistent local messaging
- Share resources
 - Outreach materials/platforms
 - Knowledge exchange
 - Funding sources

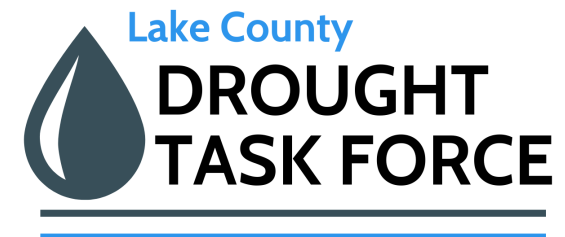




LCDTF Participating Members

The LCDTF is not a Board appointed committee and is made up of stakeholders who voluntarily meet on a regular basis to work towards group goals:

- Robinson Rancheria
- Big Valley Band of Pomo Indians
- Lake County Department of Water Resources
- Lake County Office of Emergency Services
- Lake County Department of Health Services
- Lake County Special Districts
- City of Lakeport
- Hidden Valley Lake Community Services District
- California Water Service
- Konocti County Water District
- Upper Lake County Water District
- California Water Service



LCDTF Achievements

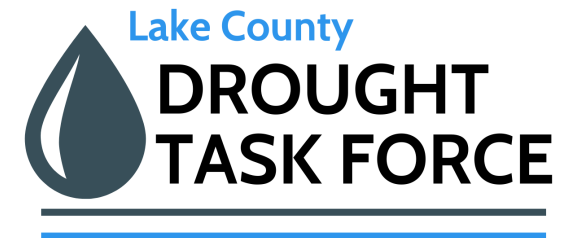
- Lake County Transit Authority conservation messaging
- CalTrans CMS conservation messaging
- Various marquee and billboard conservation messaging
- Facebook outreach page
- Letter to the Board of Supervisors





LCDTF Recommendations

- Well Drilling Accountability
- Strengthen for environmental review for operations / agriculture
- Public Outreach and Education
- Board support of continuation of LCDTF Workgroup



Resources

- <https://www.drought.gov/states/california>
- <https://waterdata.usgs.gov/ca/nwis/uv?11450000>
- <http://www.lakecountycal.gov/Assets/Departments/WaterResources/images/General+Website/Historical+Waters+of+CL-4.19.pdf>
- <https://www.cnrfc.noaa.gov/ol.php?product=hucPrecipSeasonal&zoom=10&lat=39.1286307377589&lng=-123.07926177978518>