

California's Dry Spell

What's Happening?

California frequently faces droughts, however, these past three months have been the driest in history. California's water department declared a 'regional drought emergency' in November too.



[Amid drought crisis, Newsom pushes Calif. water suppliers to ramp up conservation efforts. \(n.d.\). MSN. Retrieved April 5, 2022, from https://www.msn.com/en-us/news/us/amid-drought-crisis-newsom-pushes-calif-water-suppliers-to-ramp-up-conservation-efforts/ar-AAVCZtO?ocid=BingNewsSearch](https://www.msn.com/en-us/news/us/amid-drought-crisis-newsom-pushes-calif-water-suppliers-to-ramp-up-conservation-efforts/ar-AAVCZtO?ocid=BingNewsSearch)

Why This is Happening

California relies on snowpacks in the mountains to store water. Because of the warmer weather in the winter, that snow falls as rain instead and the little amount of snow that the state does get, melts earlier in the year. The snowpacks are at only 38% of what their average is; the snow is remarkably thin. Air also retains more moisture when it is warmer, which means that the air absorbs water from lakes, soil and plants, further drying out the remaining water supplies. In addition to all of this, the rest of California has had very little rain, and current patterns suggest little rain to come in the future.

1. News, A. B. C. (n.d.). California drought deepens as wet season is anything but. ABC News. <https://www.nytimes.com/2021/10/21/us/california-drought.html#after-top>
2. Karlamangla, S. (2021, October 21). How Did California's Drought Get So Bad? The New York Times. <https://www.nytimes.com/2021/10/21/us/california-drought.html#after-top>
3. How Does Elevation Affect Precipitation? (n.d.). Reference.com. <https://www.reference.com/science/elevation-affect-precipitation-62f3b503d418b51f>

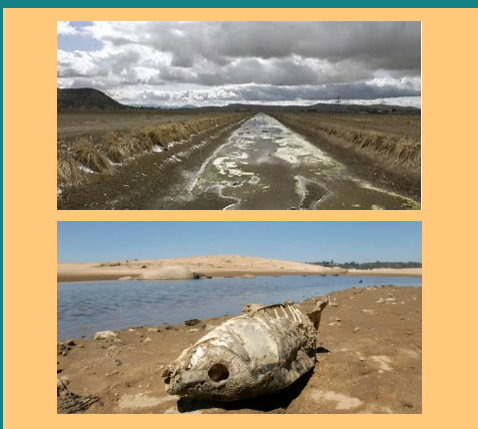


Vocab:

- Drought- A lack of rainfall that creates a water shortage.
- Snowpacks- Dense snow that becomes compressed by its own weight.
- Arid- A dry and barren environment.
- Fallowed- When an area of farmland is left uncultivated.

The Damage

These droughts have caused a decrease in agricultural production in California. It's estimated that Californian farmers fallowed 130k acres of land and lost \$300million due to droughts last year alone. Salmon are threatened by droughts as well because of their need to travel to spawning grounds. Droughts also cause many animals, such as waterfowl, that typically live around water to crowd together over increasing small water bodies, which contributes to the spread of disease.



[The Klamath Basin's Water Crisis Is a Growing Disaster for Waterfowl. \(2022, March 11\). Audubon. https://www.audubon.org/news/the-klamath-basins-water-crisis-growing-disaster-waterfowl](https://www.audubon.org/news/the-klamath-basins-water-crisis-growing-disaster-waterfowl)
[Yeager, J. \(n.d.\). STUDY: South Valley farms fallowed 129K acres of land, lost \\$294M due to 2021 drought. VisaliaTimesDelta.com. Retrieved April 5, 2022, from https://www.visaliatimesdelta.com/story/news/2022/03/18/south-valley-farms-drought-economy-jobs-california/7079238001/](https://www.visaliatimesdelta.com/story/news/2022/03/18/south-valley-farms-drought-economy-jobs-california/7079238001/)

Solutions

The California government has offered a tax rebate on houses that replace their grass with a more water-conservative landscape. Governor Newsom also authorized an executive order that would streamline water distribution processes, provide water to at risk communities, and mitigate the environmental damage of the drought. A problem like this requires coordination though, and many Californians would have to cut their water usage by 15% to reach pre-drought levels of water supply.



[Amid drought crisis, Newsom pushes Calif. water suppliers to ramp up conservation efforts. \(n.d.\). MSN. https://www.msn.com/en-us/news/us/amid-drought-crisis-newsom-pushes-calif-water-suppliers-to-ramp-up-conservation-efforts/ar-AAVCZtO?ocid=BingNewsSearch](https://www.msn.com/en-us/news/us/amid-drought-crisis-newsom-pushes-calif-water-suppliers-to-ramp-up-conservation-efforts/ar-AAVCZtO?ocid=BingNewsSearch)

[News, A. B. C. \(n.d.\). California drought deepens as wet season is anything but. ABC News. https://abcnews.go.com/Technology/wireStory/california-drought-deepens-wet-season-83819775](https://abcnews.go.com/Technology/wireStory/california-drought-deepens-wet-season-83819775)

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Charities and Relief Organizations

Here are a few organizations that are working to alleviate the damages of the heavy droughts:

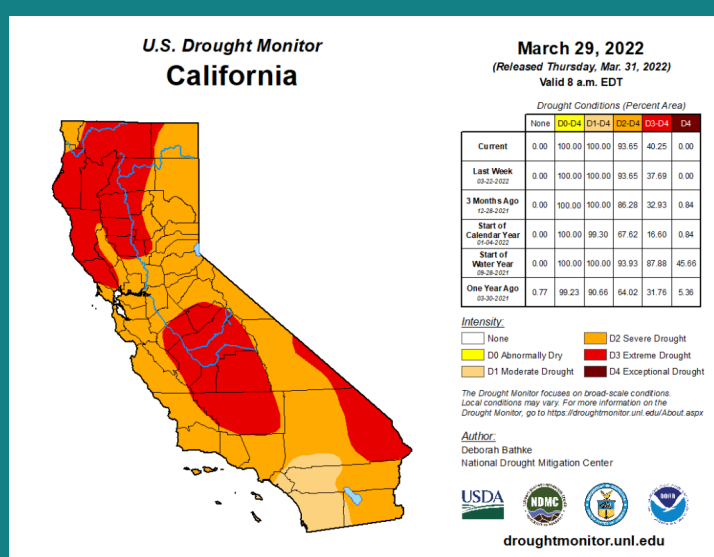
- <https://saveourwater.com/> - This website is tailored for California residents who want to find ways to regulate their water consumption.
- https://www.waterboards.ca.gov/water_issues/programs/grants_loans/caa/dw_droughtfund/ - This organization's goal is to provide water, in many different forms to underequipped communities.
- Keep Our Planet Wild | World Wildlife Fund
- https://support.worldwildlife.org/site/SPageServer?pagename=main_monthly&src=AWF22070Q18299A01179RX&ga=2.268962995.370805340.1649122441-1145324659.1646749500 - The World Wildlife fund isn't relegated to California, but it is a good way to help the environment survive human damages.

What Could Happen and What Can Be Done?

Droughts will remain a persistent problem, especially in more arid areas, until the climate change itself is dealt with. The melting of snowpack and the lack of rain/snowfall all has to do with rising temperature facilitated by global warming.

If significant action isn't taken and droughts become a more permanent factor in the near future, our wildlife will be drastically affected, and our farms will diminish their production.

Climate change is a difficult issue because it requires all of us to put in an effort to allay our carbon output. It's prudent to try to minimize electrical output and car use as much as possible while also supporting more sustainable products. Raising awareness and political organizing are also great actions to take.



Visuals

This map shows the extent of drought severity across the state; the deeper the shade of red, the worse the drought is.

What We Learned?

The four of us all coalesced our knowledge on a notes document that contain a variety of different sources and information. We learned a lot about just how bad California's droughts could be. Importantly, we also learned about California's water supply and how it is affected by the rising temperatures. We also managed to apply a lot of what we had previously learned. Specifically, our past knowledge about Salmon and water crises in general helped us a lot.