

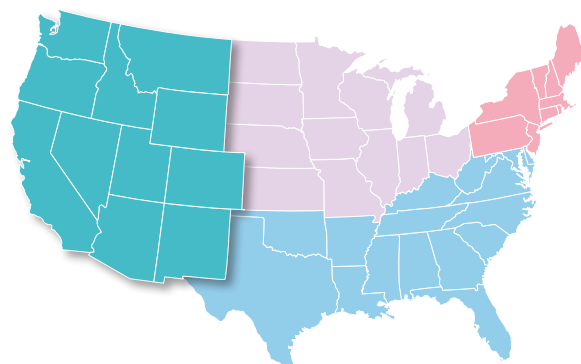
# Focus on the West

**An equitable transition away from fossil fuels to clean energy sources will improve health, save lives, and promote equity.** Momentum for action on climate change is growing, and promising climate solutions are available to protect Western residents from the health crisis of climate change.

## Climate change is harming the health of residents in the West.

Climate change is impacting Western residents' health and livelihoods by worsening several climate-sensitive hazards that are common to the region, including extreme heat, wildfire, drought, and flooding.

- **Extreme weather:** The West is experiencing more extreme weather events like heavy rain and flooding.<sup>1</sup> In June 2022, **Montana** experienced severe floods that devastated many communities.<sup>2</sup> Heavy rain can lead to more floods and landslides in areas recently affected by wildfires.<sup>3</sup> In July 2022, **New Mexico** communities, still recovering from historically large fires, experienced devastating flooding.<sup>4</sup>
- **Drought:** As of July 2022, over 70% of the Western region was experiencing drought,<sup>5</sup> with parts of the region in a megadrought.<sup>6</sup> Heat and drought conditions are threatening community water supplies across the Southwest.<sup>5</sup> Drought worsens air and water quality; increases lung, heart, and infectious diseases; and harms mental health.<sup>7-10</sup> Drought particularly harms Indigenous and rural communities.<sup>11,12</sup>
- **Wildfire:** Wildfires are increasing and the Western region is the most heavily burdened by wildfire smoke exposure.<sup>13</sup> Wildfires now contribute nearly half of particulate matter in some Western regions.<sup>14</sup> Smoke from wildfires may be more harmful to health than other sources of air pollution,<sup>15</sup> and it is associated with multiple health impacts<sup>16,17</sup> and increased mortality.<sup>18</sup> Wildfires and smoke disrupt education and recreation. The health and economic impacts from wildfires in the region are growing.<sup>19</sup>



- **Heat:** The West suffered intense heat waves in 2021 and 2022.<sup>20</sup> The three U.S. cities with the greatest rise in average summer temperatures — Reno and Las Vegas, **Nevada**, and Boise, **Idaho** — are in the West.<sup>21</sup>

## The majority of voters in all Western states are worried about climate change.

Over half of voters in all Western states worry that climate change will harm people in the U.S. There is broad public support for climate change action across the Western region, and multiple and vigorous mitigation and adaptation efforts in Western states are now underway. Over 70% of Western voters are supportive of climate policies such as providing tax rebates for electric vehicles and solar panels. Across the region, over half of voters believe Congress and local governments should do even more on climate change.<sup>22</sup>

## States across the Western region are taking action on climate change.

Climate solutions are available today that will protect our health by ending our dependence on fossil fuels and slowing climate change. States across the West are working together to transition to clean and renewable energy and prepare communities to withstand climate change harms. These efforts will improve health now while creating a safer, healthier future.

- **Investing in climate change and health: California** is making historic investments in climate change mitigation and adaptation. The 2023 budget will bring total climate investments to nearly \$54 billion, including millions of dollars for state, tribal, and local health agencies to increase climate and health resilience and expand the climate health workforce.<sup>23</sup>

- **Decarbonizing the energy sector: California, Colorado, Hawaii, Nevada, New Mexico, Oregon, and Washington** all have 100% clean or renewable electricity commitments to be achieved by 2040 - 2050.
- **Reducing the impacts of extreme heat:** Phoenix and Tucson **Arizona** are investing in tree equity to mitigate urban heat islands, improve air quality, and spur job creation in neighborhoods disproportionately impacted by heat.<sup>24</sup>
- **Prioritizing equity:** In 2021, **Colorado** passed the Environmental Justice Act which created an Environmental Justice Action Task Force and Advisory Board to address environmental health inequities in the state.<sup>25</sup> **Washington** passed the Healthy Environment for All Act in 2021, which established an Environmental Justice council and directs state funding to communities disproportionately harmed by pollution.<sup>26</sup>
- **Leading at the local level:** City- and county-led efforts are also catalyzing change. The Los Angeles 100% Renewable Energy Study is an analysis of investments that could enable Los Angeles to reach a 100% renewable energy power system by 2045.<sup>27</sup> Climate Ready Missoula is an example of a multifaceted cooperative involving city and county governments, businesses, and organizations to address climate change across many sectors in **Montana** where state policies are less favorable to climate change action.<sup>28</sup>

Several national and regional coalitions, such as the U.S. Climate Alliance and We Are Still In, provide opportunities for state leaders to learn from one another and work together to advance climate solutions. Programs and policies in the West can serve as examples for local and state governments across the U.S. For more information on climate policy solutions that can protect health and equity, read the **2022 Lancet Countdown U.S. Policy Brief**.

The *Lancet* Countdown U.S. Brief is supported by a diverse group of health experts from over 80 U.S organizations. This document is supported by data and recommendations from the **2022 Lancet Countdown U.S. Policy Brief** and global report, and prior years' reports. Additional region-specific information was obtained from the **Fourth National Climate Assessment**. The Western region includes **Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming**.

## References

- Swain DL, Langenbrunner B, Neelin JD, Hall A. Increasing precipitation volatility in twenty-first-century California. *Nature Clim Change* 2018; **8**: 427–33.
- National Oceanic and Atmospheric Administration. Selected Significant Anomalies and Events: June 2022. 2022. <https://www.ncei.noaa.gov/sites/default/files/extremes-202206.png>.
- Huang X, Swain DL. Climate change is increasing the risk of a California mega-flood. *Science Advances* 2022; **8**: eabq0995.
- Romero S. How New Mexico's Largest Wildfire Set Off a Drinking Water Crisis. *The New York Times*. 2022; published online Sept 26. <https://www.nytimes.com/2022/09/26/us/new-mexico-las-vegas-fire-water.html>.
- NOAA, NDIS. Western Drought Status Update. National Integrated Drought Information System, 2022.
- Williams AP, Cook BI, Smerdon JE. Rapid intensification of the emerging south-western North American megadrought in 2020–2021. *Nat Clim Chang* 2022; **12**: 232–4.
- Vins H, Bell J, Saha S, Hess JJ. The mental health outcomes of drought: A systematic review and causal process diagram. *International Journal of Environmental Research and Public Health* 2015; **12**: 13251–75.
- Sugg M, Runkle J, Leeper R, et al. A scoping review of drought impacts on health and society in North America. *Climatic Change* 2020; **162**: 1177–95.
- Jalalzadeh Fard B, Puvvula J, Bell JE. Evaluating changes in health risk from drought over the contiguous United States. *International Journal of Environmental Research and Public Health* 2022; **19**: 4628.
- Wang Y, Xie Y, Dong W, Ming Y, Wang J, Shen L. Adverse effects of increasing drought on air quality via natural processes. *Atmospheric Chemistry and Physics* 2017; **17**: 12827–43.
- Lancet* Countdown, 2021: 2021 *Lancet* Countdown on Health and Climate Change Policy Brief for the United States of America. Salas RN, Knappenberger P, Hess JJ. *Lancet* Countdown U.S. Policy Brief.
- NOAA, NIDIS. Drought Conditions for Tribal Nations. [Drought.gov](https://www.drought.gov/tribal). <https://www.drought.gov/tribal>.
- Burke M, Heft-Neal S, Li J, et al. Exposures and behavioural responses to wildfire smoke. *Nat Hum Behav* 2022; 1–11.
- Burke M, Driscoll A, Heft-Neal S, Xue J, Burney J, Wara M. The changing risk and burden of wildfire in the United States. *Proceedings of the National Academy of Sciences* 2021; **118**: e2011048118.
- Aguilera R, Corringham T, Gershunov A, Benmarhnia T. Wildfire smoke impacts respiratory health more than fine particles from other sources: Observational evidence from Southern California. *Nat Commun* 2021; **12**: 1493.
- Heft-Neal S, Driscoll A, Yang W, Shaw G, Burke M. Associations between wildfire smoke exposure during pregnancy and risk of preterm birth in California. *Environmental Research* 2022; **203**: 111872.
- Zhou X, Josey K, Kamareddine L, et al. Excess of COVID-19 cases and deaths due to fine particulate matter exposure during the 2020 wildfires in the United States. *Sci Adv* 2021; **7**: eabi8789.
- Chen G, Guo Y, Yue X, et al. Mortality risk attributable to wildfire-related PM2.5 pollution: A global time series study in 749 locations. *The Lancet Planetary Health* 2021; **5**: e579–87.
- Stowell JD, Yang C-E, Fu JS, Scovronick NC, Strickland MJ, Liu Y. Asthma exacerbation due to climate change-induced wildfire smoke in the Western US. *Environ Res Lett* 2021; **17**: 014023.
- NASA Earth Observatory. A July of Extremes. 2022; published online Aug 2. <https://earthobservatory.nasa.gov/images/150152/a-july-of-extremes>.
- 2022 Summer Package. Climate Central, 2022 <https://www.climatecentral.org/climate-matters/2022-summer-package>.
- Marlon J, Neyens L, Jefferson M, Howe P, Mildener M, Leiserowitz A. Yale Climate Opinion Maps 2021. Yale Program on Climate Change Communication. 2022; published online Feb. <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>.
- Newsom G. California State Budget 2022-23. <https://www.ebudget.ca.gov/FullBudgetSummary.pdf>.
- Two Arizona cities take major steps towards realizing tree equity. *American Forests*. 2021; published online Oct 4. <https://www.americanforests.org/article/two-arizona-cities-take-major-steps-towards-realizing-tree-equity/>.
- Buckner J, Winter F, Weissman M, Jackson D. Environmental Justice Disproportionate Impacted Community. <https://leg.colorado.gov/bills/hb21-1266>.
- Environmental Justice. Washington State Department of Health. <https://doh.wa.gov/community-and-environment/health-equity/environmental-justice>.
- Cochran J, Denholm P, Mooney M, et al. Executive Summary. In: LA100: The Los Angeles 100% Renewable Energy Study. Golden, CO: National Renewable Energy Laboratory, 2021. <https://maps.nrel.gov/la100/>.
- Climate Ready Missoula. 2022. <https://www.climatereadymissoula.org>.