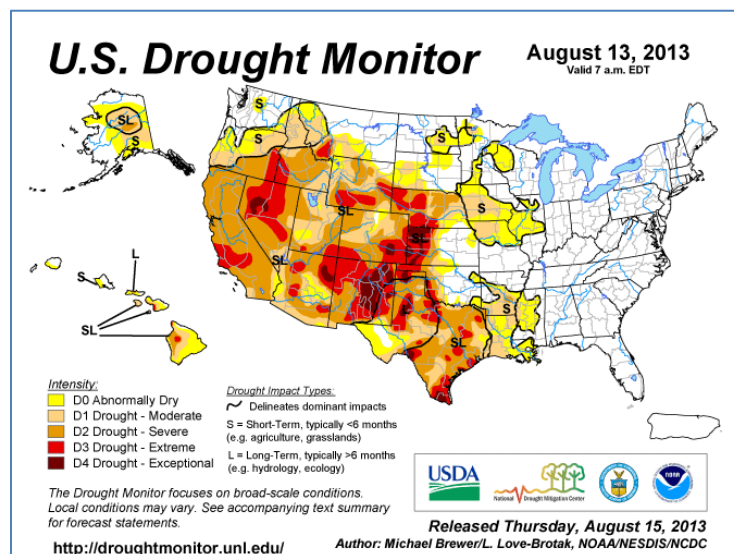


Drought and Wildfire

The Southwestern United States has a long history of drought. Tree-ring records show periods of extended drought in the paleo climate. More recently, several Western states, including Arizona, New Mexico, and Texas, have been suffering through a long-term drought. This drought has led to parched landscapes, livestock sell-offs, and concerns about providing adequate water supplies for all users. Many of the states affected by this long-term drought have adopted policies to conserve water resources in the event of a shortage. These drought restrictions are often composed of several stages that correspond to various levels of suggested or enforced water restrictions. Restrictions often target outdoor watering, such as sprinklers for turf, and can limit watering to certain times of day, certain days of the week, or ban it outright.



Another alarming consequence of long-term drought is the heightened risk of wildfires. The Southwest US has experienced a growing numbers of large wildfires that have destroyed life, property, and even drinking water supplies as rainfall carries ash into waterways after the fire has been contained. Several factors, including a long practice of fire suppression, a deadly infestation of bark beetles, and a growing number of communities built along the urban-wildland interface, have made their own contributions to the size and risk posed by naturally-occurring wildfires. Forests and landscapes in the Southwest are adapted to occasional burning, which helps keep trees from choking one another, enriches the soil, and creates patches of open meadowland interspersed with forested areas. The past fire suppression policies followed by public land managers for many decades have resulted in forests overloaded with fuels and no open spaces to check the spread of flames from tree to tree.

The legacy of these policies, combined with the long-term drought and often high temperatures of the past decade have resulted in over 60 “mega-fires” over 100,000 acres in size in the last 10 years. While naturally-occurring and naturally-conducted fires have ecological benefits, these mega-fires burn so quickly and so thoroughly that scientists fear the forests they destroy may never come back. Water harvesting, both active and passive, can help maximize local water resources. Storing rainfall in the soil or in tanks can supplant potable water used for irrigation, helping a landscape survive watering restrictions. This in turn can help keep the urban environment as wet and green as possible, perhaps acting as a buffer against fire danger.



Quick Resource

December 2013

Further reading and resources:

- http://droughtmonitor.unl.edu/DM_west.htm
- <http://www.climas.arizona.edu/sw-climate/drought-monitoring>
- <http://www.circleofblue.org/waternews/2013/world/new-mexico-drought/>
- <http://www.bloomberg.com/news/2013-08-16/drought-induced-curb-on-lake-powell-water-is-first-ever.html>
- <http://www.theatlantic.com/technology/archive/2013/07/the-southwests-forests-may-never-recover-from-megafires/277545/>
- http://www.hcn.org/issues/43.17/good-policy-and-good-intentions-wont-stop-big-destructive-wildfires/article_view?b_start:int=0
- <http://www.predictiveservices.nifc.gov/outlooks/outlooks.htm>



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