

**FACT SHEET**

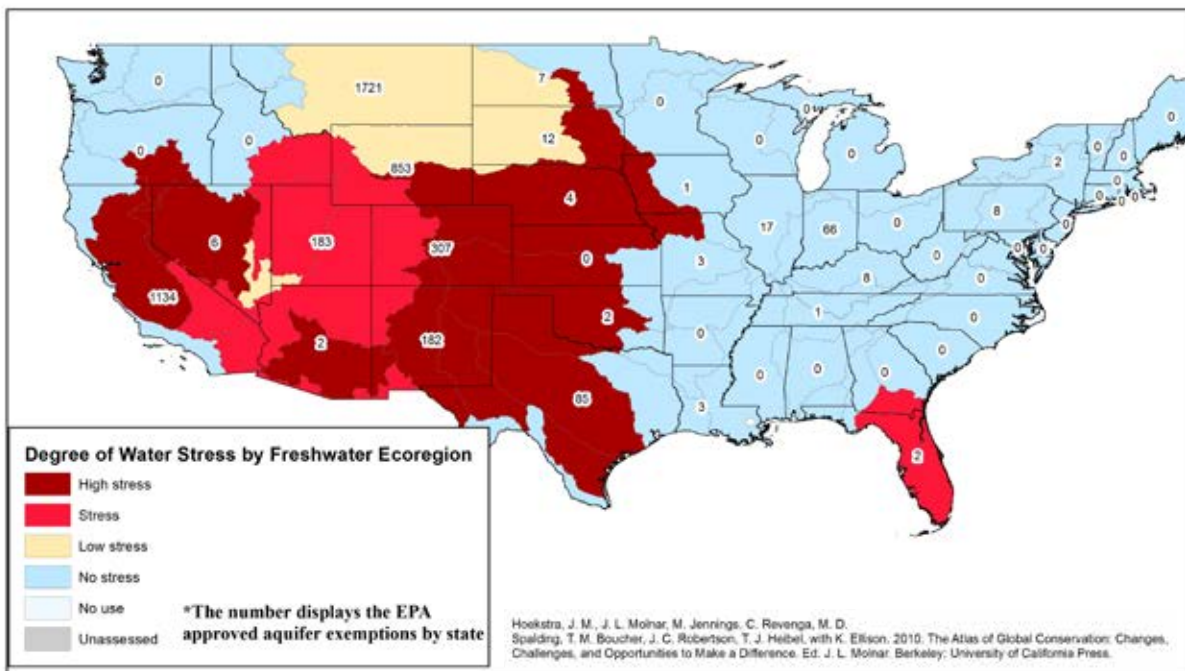
# EPA MUST STOP ALLOWING INDUSTRY TO DESTROY POTENTIAL GROUNDWATER SOURCES

Almost half of the U.S. population depends on groundwater for drinking water.<sup>1</sup> Groundwater in the United States is protected by the federal Safe Drinking Water Act. Among other things, this law is designed to prevent the oil, gas, and nuclear industries from using underground drinking water sources—known as aquifers—as a place to dump potentially harmful chemicals and waste through a process called underground injection. But a little-known program administered by the U.S. Environmental Protection Agency (EPA) is exempting large swaths of the nation’s aquifers from this important law, and endangering drinking water sources.

Written in the early 1980s, the EPA’s rules allow the intentional contamination of aquifers. Back then, the EPA reasoned that certain drinking water sources were too salty to be used as drinking water or were not likely to ever be needed. Today, however, the demand for clean water has dramatically increased, while supply is threatened due to climate change, drought, growing population, pollution, and inadequate regulations. This disparity between supply

and demand is driving communities around the country to transport water across long distances, drill deeper and deeper wells, and treat lower quality water. Modern technologies make it easier and cheaper to make salty water drinkable. Therefore, many groundwater supplies that were once thought unusable or unnecessary are now viable and vital.

## AQUIFER EXEMPTIONS ARE CONCENTRATED IN AREAS EXPERIENCING WATER STRESS<sup>2</sup>



Unfortunately, the EPA has already authorized the contamination of thousands of aquifers that might otherwise potentially provide drinking water. Instead, many will be used to the benefit of the oil and gas industry as it disposes of dangerous wastes and extracts fossil fuels. Aquifers are also used to mine uranium for use in nuclear power plants, which leaves the aquifer heavily contaminated with uranium and other toxic heavy metals. Once contaminated, these aquifers may never again be usable as drinking water.

To make matters worse, the EPA has granted the majority of aquifer exemptions in areas experiencing moderate or severe water stress—such as California, Colorado, New Mexico, Texas, Utah, and Wyoming.

On March 23, 2016, NRDC submitted a formal petition urging the EPA to repeal or amend the aquifer exemption rules to protect drinking water sources and uphold the Safe Drinking Water Act. The petition demonstrates that the existing rules have allowed the contamination of numerous aquifers that could have provided drinking water, and maybe even some that are currently being used as drinking water. The petition also shows that:

- Growing demand and shrinking supply means that aquifers will be increasingly important in the coming decades. More than 100 U.S. counties now use salty groundwater to supply at least 20 percent of their total water supply.<sup>3</sup> By 2010, the use of salty groundwater in the U.S. was almost 3.3 billion gallons per day, more than five times higher than in 1985, and this trend is expected to continue.<sup>4</sup>
- Many communities are going to great lengths and extraordinary expense to meet the demand for water, including pumping water across hundreds of miles and building large facilities to treat groundwater. For instance, California built nine plants to treat salty groundwater between 2006 and 2013, more than tripling

the state's capacity. Another 20 such plants are planned or in construction.<sup>5</sup> Likewise, El Paso, Texas spent about \$90 million to build one of the largest groundwater treatment facilities in the country, which opened in 2007.<sup>6</sup> Furthermore, a planned pipeline to pump groundwater 300 miles from eastern Nevada to Las Vegas is projected to cost billions of dollars.<sup>7</sup>

- The impacts of climate change are likely to further exacerbate water shortages in many areas with the greatest need. For instance, scientists believe that climate change has aggravated California's historic drought.
- The EPA's assumptions about how far water contamination will travel underground are arbitrary and contaminants are likely reaching far beyond those bounds. EPA data show that more than half of all aquifer exemptions assume that contamination won't travel more than a quarter mile underground, even though the EPA's own technical panel has refuted this assumption.

NRDC's petition urges the EPA to repeal or amend its aquifer exemption rules to protect all potential drinking water sources. At a minimum we urge that the EPA:

- Change the rules that allow underground drinking water sources to be sacrificed without adequate evidence that they are not currently in use or will not be used in the future.
- Eliminate the provision that allows aquifers to be exempted just because they contain minerals or could be used for energy production.
- Ensure that existing exemptions are revisited and that any future decisions are based on the best current science.
- Provide the public with full information about the locations of these exemptions, as well as notice and the opportunity to comment on any future decisions.

#### ENDNOTES

- 1 National Ground Water Association, 2010. Groundwater Facts, <http://www.ngwa.org/Fundamentals/use/Pages/Groundwater-facts.aspx>; Maupin, M.A., *et al.*, Estimated use of water in the United States in 2010: U.S. Geological Survey Circular 1405, 2014, pp. 12, 14, <http://pubs.usgs.gov/circ/1405/pdf/circ1405.pdf>.
- 2 The data on the number of aquifer exemptions was obtained from the EPA, after a Freedom of Information Act request by NRDC. Data on ecoregions and water stress was taken from Hoekstra, J.M., *et al.*, The Atlas of Global Conservation: Changes, Challenges, and Opportunities to Make a Difference (Molnar, J.L., Ed.) 2010.
- 3 U.S. Geological Survey, Estimated Use of Water in the United States, County-Level Data for 2010, <http://water.usgs.gov/watuse/data/2010/>. The figure was calculated by dividing total saline groundwater withdrawals (column DF) by total county withdrawals (column DM).
- 4 Maupin, Estimated use of water in the United States, at Table 14, Page 45.
- 5 State of California, *California Water Plan: Update 2013*, Bulletin 160-13, 2013, pp. 10-25, tbl. 10-4, 10-27, tbl. 10-6, [www.waterplan.water.ca.gov/cwpu2013/final/](http://www.waterplan.water.ca.gov/cwpu2013/final/).
- 6 Texas Water Development Board, Worth Its Salt: El Paso Water Utilities Kay Bailey Hutchinson Desalination Plant, January 2014, [www.twdb.texas.gov/innovativewater/desal/worthitsalt/doc/Worth\\_Its\\_Salt\\_Jan2014\\_KBH.pdf](http://www.twdb.texas.gov/innovativewater/desal/worthitsalt/doc/Worth_Its_Salt_Jan2014_KBH.pdf).
- 7 Fort, D., Nelson, B. Pipe Dreams: Water Supply Pipeline Projects in the West, June 2012, pp. 9. <http://www.nrdc.org/water/management/files/Water-Pipelines-report.pdf>.