

Projected U.S. water use likely to increase as climate warms

January 29 2013

Despite increases in efficiency, water demand in the United States is likely to increase substantially in the future if climate continues to warm, new projections indicate. Brown et al. project future water use to 2090 based on past trends from U.S. Geological Survey water use data from 1960 to 2005 and trends in efficiency. They project U.S. water demand under climate change scenarios using three different global circulation models; they ran each model for three different global socioeconomic scenarios adapted from the scenarios used by the Intergovernmental Panel on Climate Change (IPCC).

They project that with no climate change, because of increasing efficiency, water demand in the United States over the next 50 years would stay within 3 percent of current demand, even with an expected 50 percent increase in population. The projections varied between the different [climate models](#) and emissions scenarios, but most show that if there is climate warming, projected water demand would rise substantially. This increased demand would be due mainly to increases in the need for water for irrigation as rising temperatures increase evapotranspiration. Electricity generation for additional air conditioning as temperatures rise would also contribute to increased water demand, though to a much lesser extent.

The authors caution that projected increased demand under climate warming may lead to unsustainable water use even if available water supplies do not diminish as climate warms.

More information: Projected freshwater withdrawals in the United States under a changing climate, *Water Resources Research*, [doi: 10.1002/wrcr.20076](https://doi.org/10.1002/wrcr.20076), 2013 [onlinelibrary.wiley.com/doi/10 ... /wrcr.20076/abstract](https://onlinelibrary.wiley.com/doi/10.1002/wrcr.20076/abstract)

Provided by American Geophysical Union

Citation: Projected U.S. water use likely to increase as climate warms (2013, January 29)
retrieved 15 July 2024 from https://phys.org/news/2013-01-climate_1.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.