How oceans impact Western reservoirs and rivers

By Emily Benson, High Country News

As Houston cleans up after Hurricane Harvey and Hurricane Irma barrels through the Caribbean and Florida, this year's Atlantic hurricane season offers a stark reminder of the power of oceans over weather. But ocean influences aren't limited to the Atlantic. Last winter, rain and snow drenched California, much of it the result of "atmospheric rivers," storms that channeled water from the Pacific straight to the Sierra and across the West. Torrents of rain flooded cities and damaged dams, but also helped end five years of drought in the Golden State.

In a region that relies heavily on snowmelt to supply homes and irrigate fields, Western water managers need to know how much precipitation they can expect in the coming years. While scientists understand the broad strokes of how wet and dry periods are driven by energy traveling through the atmosphere, new research is refining that understanding – something that may ultimately help officials trying to fill the reservoirs and rivers of the West.

The world's oceans and its atmosphere are tightly connected. Because of that link, and global forces like wind and ocean currents that shuttle energy through the atmosphere, far-flung ocean conditions can influence weather.

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