Highlight: California, Nevada Lakes Warming Rapidly

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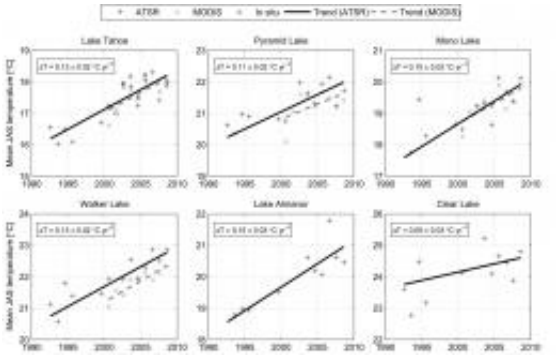
California's Mono Lake was one of the six lakes included in a new study of warming in large lakes in California and Nevada. Image credit: Philipp Schneider

(PhysOrg.com) -- A new JPL study examines the impact recent variability in climate is having on the surface temperatures of large lakes in California and Nevada.

Recent climate variability is causing a number of large lakes in California and Nevada to warm rapidly, according to a new NASA study.

Thermal infrared imagery from NASA's Moderate Resolution Imaging Spectroradiometer on board NASA's Terra and Aqua satellites and from the European Space Agency's series of Along-Track Scanning Radiometers were used to quantify changes in the thermal behavior of

six large lakes in California and Nevada (Lake Tahoe, Mono Lake, Pyramid Lake, Walker Lake, Lake Almanor, and Clear Lake).



Satellite-derived annual average lake surface temperatures of the July/August/September period for the six study sites. Trend lines were computed separately for each sensor series using weighted linear regression. Image credit: NASA/JPL

The results found that between 1992 and 2008, the average nighttime temperatures of these lakes during the months of July, August and September increased at an average rate of 0.11 Kelvin (0.2 degrees Fahrenheit) per year. Results were validated against direct, ground measurements made at Lake Tahoe, on the California/Nevada border. Such rapid warming is expected to have a significant impact on lake ecosystems.

More information: Satellite observations indicate rapid warming trend for lakes in California and Nevada, Geophys. Res. Lett., 36, L22402, doi:10.1029/2009GL040846

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