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The Color of Lakes

Satellites, space stations and other airborne vehicles provide stunning images of the Earth. The image below was taken from the International Space Station and shows Lake Tahoe and Mono Lake on December 3, 2020.

Lake Tahoe (far left), the largest sub-alpine lake in North America, is known for its stunning blueness. It's low concentrations of nutrients lead to low algal concentrations. This is one of the causes for Lake Tahoe's clarity and color.



Mono Lake (far right) on the eastern side of the Sierra, is a saline (two-and-a-half times saltier than seawater), closed basin lake. This fishless lake supports a large population of

brine shrimp (*Artemia*). When the populations of shrimp are low, the algae can thrive and turn the lake green as is evident in the image.



A photo taken by TERC researcher Brant Allen three weeks later at Mono Lake shows how the greenness of the lake has persisted. The white lines seen on the lake surface are evidence of spiral like motion just under the lake's surface. Look for similar "Langmuir spirals" on the surface of Lake Tahoe next time there are sustained high winds.

Learn More

Additional images taken by astronauts and cosmonauts can be viewed at the NASA/JSC Gateway to Astronaut Photography of Earth (https://eol.jsc.nasa.gov).

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