

TAHOE:  
STATE  
OF THE  
LAKE  
REPORT  
2008

**CLARITY**

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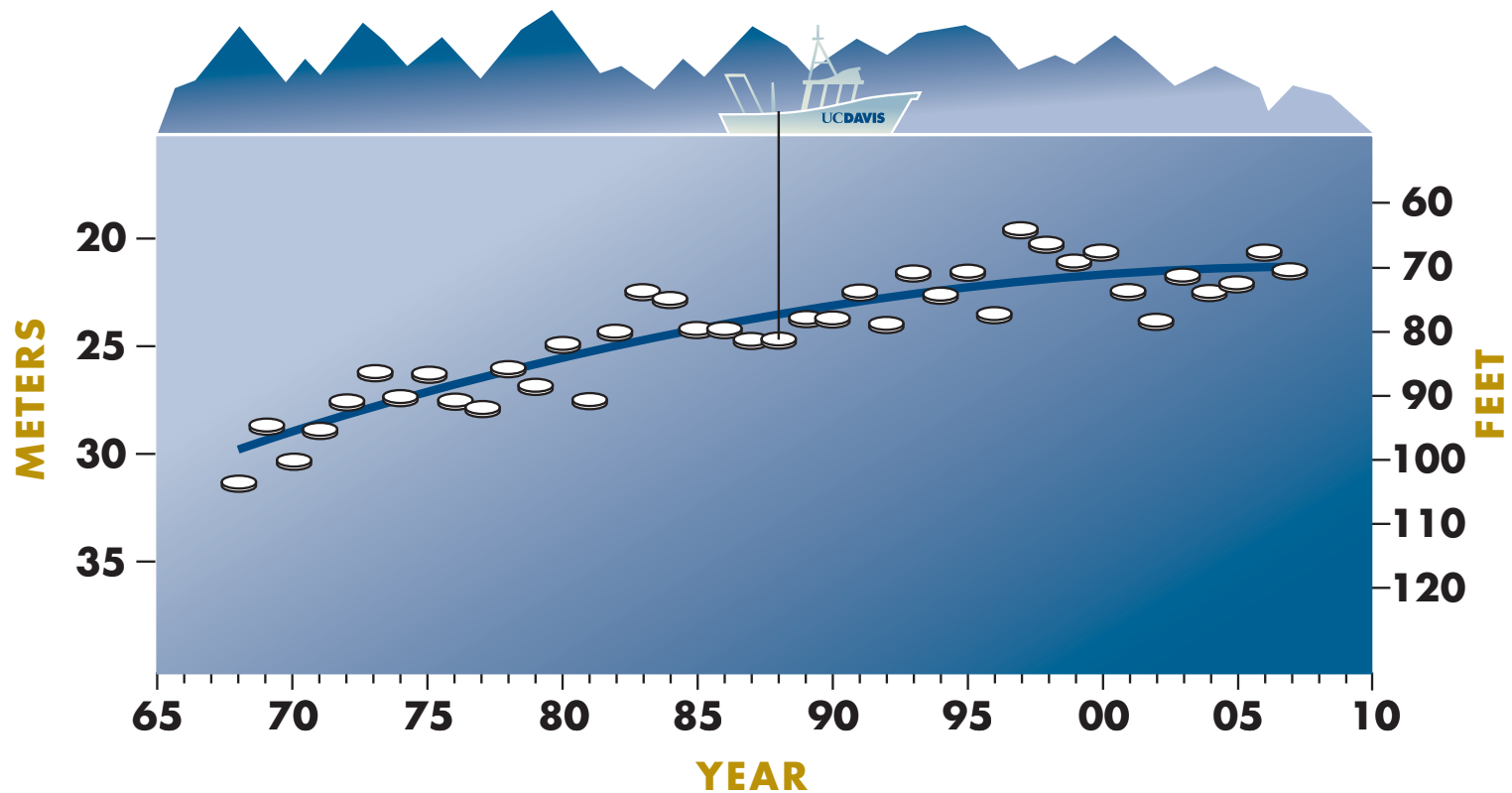
**Annual average Secchi depth**

**Yearly since 1968**

Secchi depth (the point below the lake surface at which a 10-inch white disk disappears from view) is the longest continuous measurement of Lake Tahoe clarity. The annual Secchi depth is the average of 20 to 25 readings made throughout the year. While lake

clarity has improved for brief periods since 1968, the overall long-term trend has been decline. In the last seven years, Secchi depth measurements have been better than predicted by the long-term linear trend. Statistical analysis suggests that the decline in Lake

Tahoe's clarity has slowed significantly, and is now better represented by the curve below than a straight line. In 2007, the Secchi depth was 70.1 feet, 2.4 feet deeper than last year.

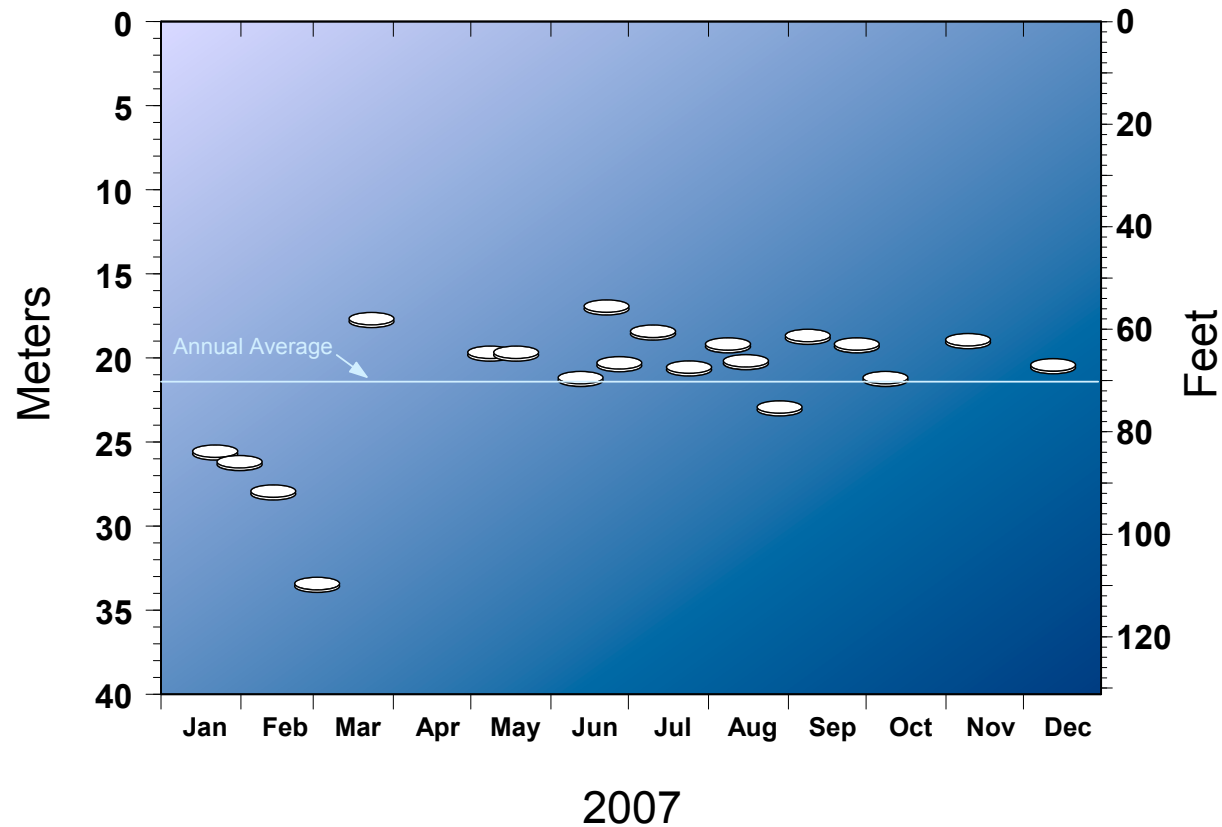


## CLARITY

### Secchi depth measurements

In 2007

The deepest Secchi depth readings (the clearest water) typically occur in winter and spring. In 2007, the deepest reading was 109.9 feet on March 2nd.



## CLARITY

### Penetration of photosynthetically active radiation

In 2007

Photosynthetically active radiation (PAR) is that part of solar radiation used for photosynthesis. The black line below shows the depth at which PAR is 1% of its level on the lake surface, known as the euphotic depth.

PAR penetration varies throughout the year, but is usually deepest in the summer when the sun is highest in the sky. In 2007, euphotic depth suddenly increased in early March, corresponding to the onset of deep mixing when

clear bottom water is brought to the surface (Fig. 8.9). This year, the maximum Secchi depth reading was 109.9 feet on March 2nd.

