

TAHOE:
**STATE
OF THE
LAKE**
REPORT
2019

CLARITY

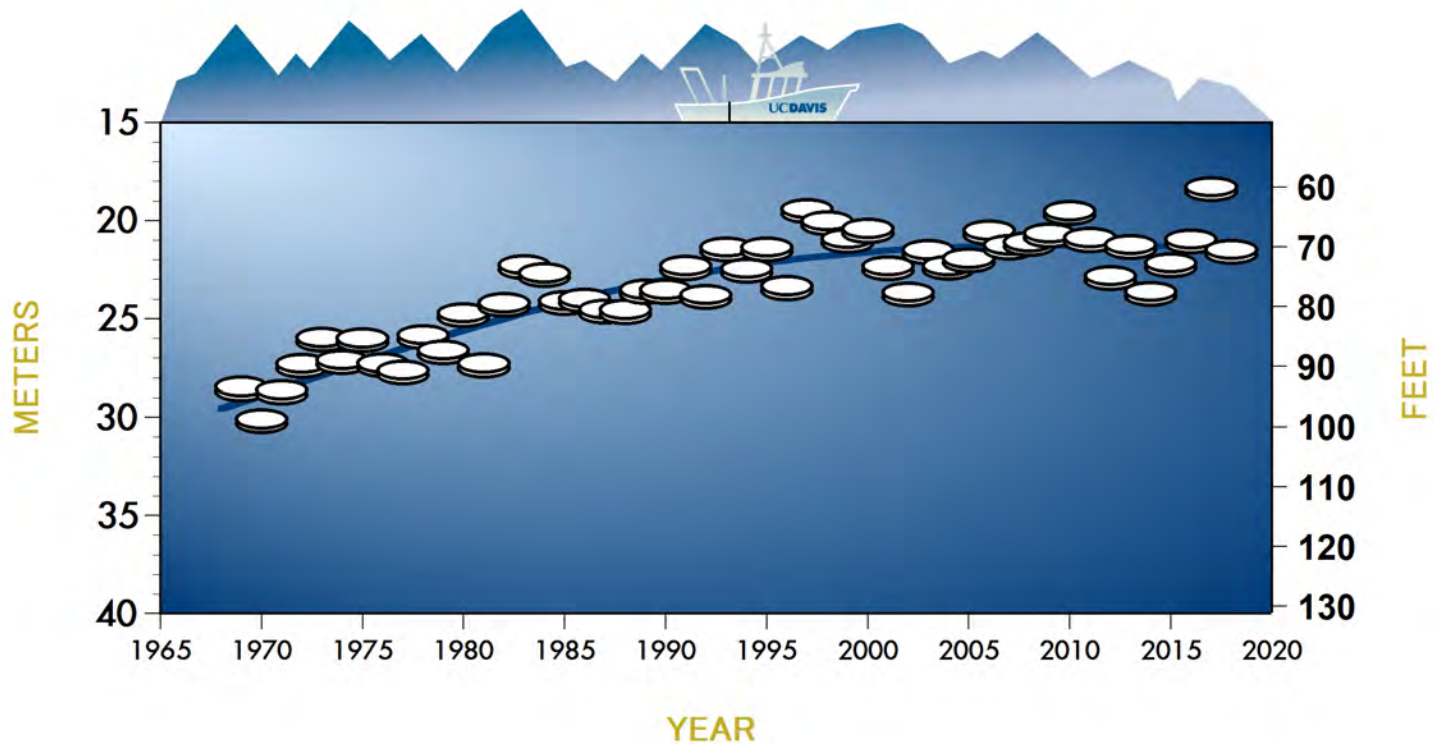
Annual average Secchi depth

Yearly since 1968

The Secchi depth is the depth at which a 10-inch white disk, called a Secchi disk, remains visible when lowered into the water. In 2018, the annual average Secchi depth was 70.9 feet (21.6 m), a 10.5-foot increase over the previous year. The annual average clarity in the past decade has been better than the prior decade.

The highest individual value recorded in 2018 was 100.0 feet (30.5 m) on March 6, and the lowest was 50.0 feet (15.2 m) on July 27. The increase this year is largely attributable to a return to more normal conditions, following the five-year drought and the heavy snow year that ended it. While the average annual clarity

is now better than in preceding decades, it is still short of the clarity restoration target of 97.4 feet (29.7 m) set by federal and state regulators, a goal agencies and the Tahoe Basin community continue to work toward.



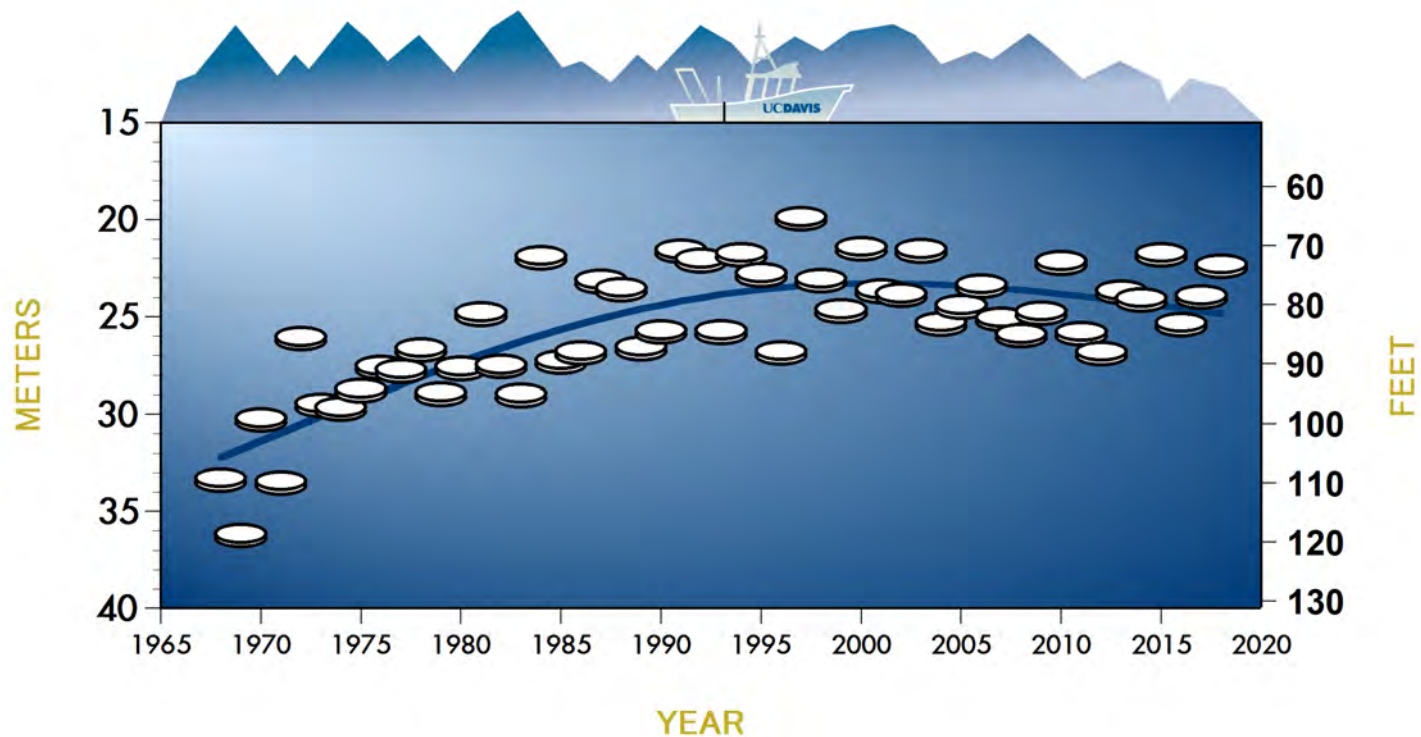
Winter Secchi depth

Yearly since 1968

Annual winter (December-March) Secchi depth measurements from 1968 to the present indicate that winter clarity at Lake Tahoe is showing an overall improvement. In 2018, winter clarity

decreased by 5.2 feet. This was largely the result of the carryover of conditions from the previous year's extremely low clarity. The winter average of 73.5 feet (22.4 m) was still well above the worst winter

average, 65.6 feet (20.0 m), seen in 1997. Winter precipitation was close to the long-term average.



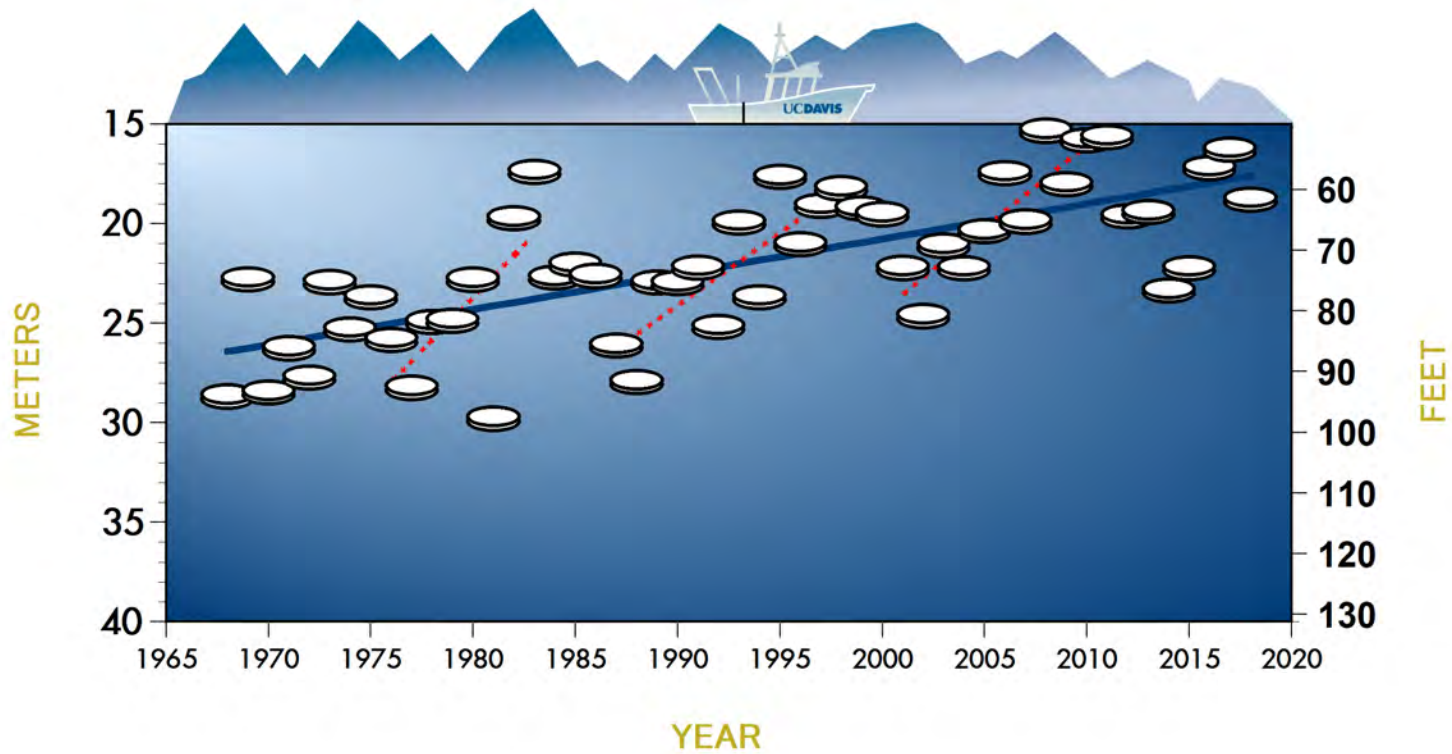
Summer Secchi depth

Yearly since 1968

Summer (June-September) clarity in Lake Tahoe in 2018 was 61.7 feet (18.8 m), an 8.2-foot increase from 2017. The cause of the improvement was a return

to more normal summer conditions. Summer is typically the season of poorest clarity. The long-term summer trend is dominated by a consistent degradation

but with a noticeable 10-15 year cyclic pattern. The red dashed lines are linear regressions for the periods: a) 1976 to 1983, b) 1987-1998, and c) 2001 to 2011.



Individual Secchi depths

2016, 2017, 2018

Here, the individual Secchi depth reading from the Index station on the west side of the lake for 2016, 2017, and 2018 are plotted.

Secchi values can be seen to sometimes vary considerably over short time intervals. This figure makes clear the abnormal conditions for 2017 that were

carried through into early 2018, and were responsible for the low Secchi depth values in winter.

