

SHARE:

[Join Our Email List](#)



Happy Birthday Father Pietro Angelo Secchi



Next week on Tuesday June 29, we celebrate Father Angelo Secchi's 203rd birthday. To honor him, we have declared the day to be Secchi Day 2021. Secchi was a brilliant scientist who literally invented the field of astrophysics, founded the Vatican Observatory, and was the leading voice of science for the Vatican. He also, without knowing it, became integral to Lake Tahoe and efforts to maintain its clarity.

Secchi realized that the depth to which you can view a white object under water is a reliable way to quantify clarity. Since then, a simple white disk, a "Secchi disk," is used in lakes around the world and is the most common (and important) lake measurement. At Tahoe, a 10" white Secchi disk is lowered into Tahoe's blue waters over 25 times each year. This simple measure has provided an unbroken historical record of clarity change for over 50 years.

Why is the "Secchi depth" so important? Clarity is an indicator of lake health. It alters the way in which lake water are warmed, which then changes the types of phytoplankton and zooplankton are most "at home" in the lake. The restoration of Lake Tahoe is predicated on returning the lake's Secchi depth to 97.4 feet by 2076.

For more information on Angelo Secchi, see <https://www.americamagazine.org/arts-culture/2018/07/26/angelo-secchi-jesuit-father-astrophysics>



At Lake Tahoe, the causes of clarity decline are complex. The inflow of very fine sediment particles and nutrients plays a major role and has accelerated with watershed development since the 1960s. Additionally, climate change has produced warming conditions that favor the growth of very small algae that greatly reduce clarity in some years. Changes in the lake's ecosystem, particularly those associated with the introduction of the *Mysis* shrimp and the disappearance of the native *Daphnia*, are also believed to be important, as it eliminated the lake's natural self-cleaning mechanism.

[Learn More](#)

Questions? Email tercinfo@ucdavis.edu

