

WATER CLARITY & TURBIDITY

What are water clarity & turbidity?

Water clarity is a measure of how much light penetrates through the water column. Sediment, plankton, and other organic materials can become suspended in the water. These floating particles make the water less clear and block light from traveling through water. Turbidity is a measure of the cloudiness of the water itself.

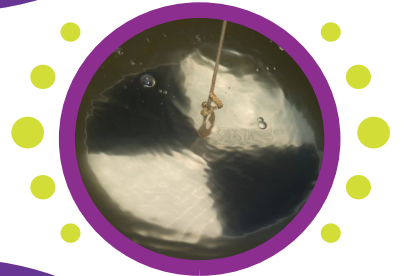
How are they measured?

Water clarity (m) is measured in the field using a Secchi disk attached to a drop line. A transparency tube can be used to measure clarity when a sample site has a current that is too fast or a depth that is too shallow for a Secchi disk to function properly. **Turbidity** (JTU) is measured in the field, with a kit, by comparing the cloudiness of a water sample to a standardized amount of turbid water.

What can water clarity & turbidity tell us about the Bay?

Clear water is critical for the growth and survival of aquatic species. Aquatic grasses and other plants grow best in clear water because sunlight can pass through the water column to deeper depths and support photosynthesis. Fish, crabs, and other aquatic organisms also rely on clear water to see the environment, catch prey, and breathe.

Poor water clarity and high turbidity are usually caused by a combination of excess suspended sediments in the water, due to runoff from land, and growth of phytoplankton, which is fueled by nutrients.



A Secchi disk on a drop line (top) and a transparency tube (bottom) can be used to measure water clarity (M. Rath, UMCES). Middle: A Secchi disk is lowered into the water until the depth where the black and white disk can not be seen (A. Jones).