

SYSTEM DIMENSIONS	CHEMICAL AND PHYSICAL	BIOLOGICAL COMPONENTS	HUMAN USES
Extent Pattern	Nutrients, Carbon, Oxygen Contaminants <b>Physical</b>	Plants and Animals Communities Ecological Productivity	Food, Fiber, and Water Recreation and Other Services

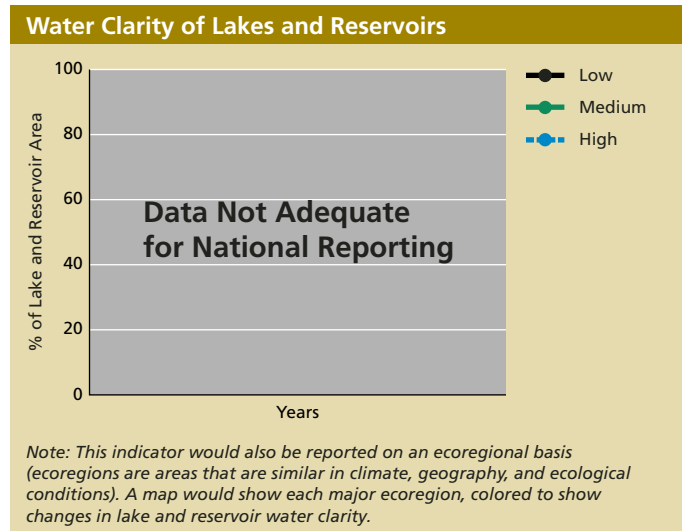
## ⊖ Water Clarity

### What Is This Indicator, and Why Is It Important?

This indicator would report the percentage of lake and reservoir area with low-, medium-, and high-clarity water (ponds are not included because of their shallow depth). A map would show regional patterns of change.

The simplest method for measuring clarity is to lower a standard painted disk (a “Secchi disk”) until it cannot be seen; the clearer the lake or reservoir, the greater the “Secchi depth” (SD). Using this method, ranges for SD would be: low clarity (SD less than 3 feet), medium clarity (SD 3–10 feet), and high clarity (SD greater than 10 feet).

Water clarity is important both to people and to ecological functioning—people like clearer water to swim in, to drink, and for esthetic reasons, and aquatic plants need light to grow and fish and other animals need light to feed and reproduce. Lakes and reservoirs can become cloudy when streams and runoff carry silt, clay, and organic materials into them. Runoff may also add phosphorus and other nutrients to lake or reservoir water; these nutrients fuel algae growth (see Phosphorus in Lakes, Reservoirs, and Large Rivers, p. 141), which also reduces water clarity.



### Why Can't This Indicator Be Reported at This Time?

Although considerable amounts of water clarity data are available from various sources, some areas are heavily sampled, while in other areas few or no lakes are tested. Thus, the available data do not provide representative coverage at a national level.

It is important to track water clarity through time, because lakes and reservoirs in different regions have different degrees of natural clarity. By tracking clarity over time, it will be possible to identify areas with declining or improving clarity and to distinguish these from naturally cloudy or clear areas.

The technical note for this indicator is on page 250.