Table 2. At a constant pH, the value of ORP in chlorinated water increases as the concentration of free chlorine increases, indicating increasing sanitizing strength.

Measurements	Analysis	Significance	Cost	Example sources	Target range
Oxidation Reduction Potential (ORP)	On site ORP meter	Sanitizing strength of chlorine, chlorine dioxide, or ozone for oxidation of microbes.	$150 to $400	Various. For example, Extech or Hanna meters. Search online, e.g. www.specmeters.com, www.grainger.com, www.pulseinstruments.net	Typical target above 700 mV.
Dissolved Oxygen (DO)	On Site DO meter	Affects ORP (high oxygen is generally desirable) and microbial growth.	$150 to $250	Various. For example, Extech or Hanna meters. Search online, e.g. www.specmeters.com, www.grainger.com, www.pulse instruments.net	5-15mg/L for agricultural crops
Chemical Oxygen Demand (COD)	Laboratory	Total oxygen required to oxidize organic materials, microbes, and some nutrients. Affects sanitizing agent demand		Water testing labs	<30 mg/L for agricultural crops
Biological Oxygen Demand (BOD)	Laboratory	Oxygen required for decomposition of organics by microbes. Affects sanitizing agent demand, and also a measure of biological water quality.		Water testing labs	BOD5 <20 mg/L for agricultural crops