Cyanobacterial blooms produce nuisance metabolites (e.g., cyanotoxins and T&O compounds) thereby posing water quality management issues for aquatic sources used for potable water production, aquaculture, and recreation. A variety of in-lake/reservoir control measures are implemented to reduce the abundance of nuisance cyanobacteria biomass or decrease the amount of available phosphorus (P). This presentation will provide a review of the performance of chemical, physical, and biological control strategies implemented for in-lake/reservoir management of cyanobacterial blooms. Findings from a survey of drinking water utilities is further analyzed to elucidate if current control strategies for cyanobacterial blooms meet utility needs. Research gaps in successfully implementing control programs in drinking water sources are further highlighted.