This tool helps you evaluate in-lake management strategies that prevent future HCBs or intervene in active blooms. Select criteria appropriate for your water body to see strategies that may be useful for you. Clicking on individual strategy names will take you to the appropriate fact sheet to learn more.

Select the criteria that describes your needs, situation and/or water body:					
Strategy Type		**Waterbody Type**		**Type of HCB**	
☐	Intervention	☐	Pond	☐	Planktonic
☐	Prevention	☐	Lake or Reservoir	☐	Benthic
		☐	River		

Management Strategy	Documented Effectiveness	Depth	Surface Area	Trophic State	Turbidity
Acidification	Planktonic - Limited; Benthic - Limited	Shallow	Small	Any Trophic Status	Generally Clear
Artificial circulation and mechanical mixers	Planktonic - Substantial; Benthic - Not Applicable	Deep	Small or Large	Any Trophic Status	Clear to Turbid
Barley and rice straw	Planktonic - Substantial; Benthic - Limited	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid
Clay and surfactant flocculation	Planktonic - Substantial; Benthic - Limited	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid
Copper algaecides	Planktonic - Substantial; Benthic - Substantial	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid
Dredging	Planktonic - Limited; Benthic - Limited	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid
Floating wetlands	Planktonic - Limited; Benthic - Limited	Shallow	Small or Large	Eutrophic	Clear to Turbid
Food web manipulation	Planktonic - Substantial; Benthic - No Available Data	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid
Hydraulic flushing	Planktonic - Substantial; Benthic - Limited	Shallow	Small or Large	Eutrophic	Clear to Turbid
Hydrodynamic cavitation	Planktonic - Emerging; Benthic - No Available...	Shallow	Small	Any Trophic Status	Clear to Turbid
Hypolimnetic oxygenation and aeration	Planktonic - Substantial; Benthic - No Available Information	Deep	Small or Large	Any Trophic Status	Clear to Turbid
Hypolimnetic withdrawal and drawdown	Planktonic - Substantial; Benthic - Limited And Mixed	Deep	Small or Large	Any Trophic Status	Clear to Turbid
Microbial biomanipulation	Planktonic - Emerging; Benthic - No Available...	Shallow or Deep	Small	Eutrophic	Clear to Turbid
Monitored natural attenuation	Planktonic - Substantial; Benthic - Emerging	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid
Nanobubbling	Planktonic - Emerging; Benthic - No Available...	Shallow or Deep	Small or Large	Eutrophic	Clear to Turbid
Nanoparticles	Planktonic - Emerging; Benthic - No Available Supporting Field Data	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid

Organic biocides	Planktonic - Emerging; Benthic - Limited	Shallow or Deep	Small	Any Trophic Status	Clear to Turbid
Ozonation	Planktonic - Limited; Benthic - No Available Information	Shallow or Deep	Small or Large	Any Trophic Status	Generally Clear
P-binding compounds	Planktonic - Substantial; Benthic - Limited	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid
Peroxide	Planktonic - Substantial; Benthic - No Available Supporting Field Data	Shallow	Small	Any Trophic Status	Clear to Turbid
Shading with dyes	Planktonic - Limited; Benthic - No Available Supporting Field Data	Shallow or Deep	Eutrophic	Any Trophic Status	Clear to Turbid
Skimming/Harvesting	Planktonic - Limited; Benthic - No Available Supporting Field Data	Shallow or Deep	Small or Large	Any Trophic Status	Clear to Turbid
Ultrasound	Planktonic - Limited/Emerging; Benthic - Limited	Shallow	Small	Any Trophic Status	Clear to Turbid
UV exposures	Planktonic - Limited; Benthic - No Available Supporting Field Data	Shallow	Small	Oligo- or Mesotrophic	Generally Clear

Notes:	
Strategy Type	
Intervention:	an in-lake strategy that may be implemented to provide immediate relief for an ongoing bloom or if certain key thresholds have been crossed (cell counts, visual, taste and odor, cyanotoxin concentration, etc.); thresholds may be specific to the water body or site.
Prevention:	an in-lake strategy that may be implemented prior to some key threshold being reached to decrease the likelihood or intensity of a future bloom.
Documented Effectiveness	
Substantial:	multiple conclusive studies support this method.
Limited:	few conclusive studies support this method, or there are multiple inconclusive studies.
Emerging:	new area of research (post-2015).
Water Body Characteristics	
Shallow:	light penetration to the bottom; typically average depth of about 10 feet or less.
Deep:	experiences thermal stratification; typically depths greater than 10 feet.

Small:	less than 600 acres (Cael, Heathcote, and Seekell 2017).
Large:	greater than 600 acres (Cael, Heathcote, and Seekell 2017).
Eutrophic	Rich in nutrients and so supporting a dense plant population
Oligotrophic	Relatively low in plant nutrients and containing abundant oxygen in deeper parts
Mesotrophic	Intermediate level of productivity
Water Body Type	
Lake/Reservoir:	shallow shoreline area that may support rooted plant growth and a deeper portion where sunlight does not penetrate to the bottom; frequently stratifies during the summer.
Pond:	shallow standing water in which light penetrates to the bottom, potentially supporting rooted plant growth; lack of thermal stratification and presence of muddy sediments.
Bay/Estuary:	body of water partially enclosed by land that is directly open, or connected, to the ocean, where one or more streams or rivers enter and mix freshwater with seawater.
River:	natural flowing water channel, usually freshwater, flowing toward an ocean, sea, lake, or another river.