

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:					
<b>Strategy Type</b>		<b>Waterbody Type</b>		<b>Type of HCB</b>	
<input type="checkbox"/>	Intervention	<input type="checkbox"/>	Pond	<input type="checkbox"/>	Planktonic
<input type="checkbox"/>	Prevention	<input type="checkbox"/>	Lake or Reservoir	<input type="checkbox"/>	Benthic
		<input type="checkbox"/>	River		

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

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

<b>Notes:</b>	
<b>Strategy Type</b>	
<b>Intervention:</b>	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.
<b>Prevention:</b>	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.
<b>Documented Effectiveness</b>	
<b>Substantial:</b>	multiple conclusive studies support this method.
<b>Limited:</b>	few conclusive studies support this method, or there are multiple inconclusive studies.
<b>Emerging:</b>	new area of research (post-2015).
<b>Water Body Characteristics</b>	
<b>Shallow:</b>	light penetration to the bottom; typically average depth of about 10 feet or less.
<b>Deep:</b>	experiences thermal stratification; typically depths greater than 10 feet.

<b>Small:</b>	less than 600 acres ( <a href="#">Cael, Heathcote, and Seekell 2017</a> ).
<b>Large:</b>	greater than 600 acres ( <a href="#">Cael, Heathcote, and Seekell 2017</a> ).
<b>Eutrophic</b>	Rich in nutrients and so supporting a dense plant population
<b>Oligotrophic</b>	Relatively low in plant nutrients and containing abundant oxygen in deeper parts
<b>Mesotrophic</b>	Intermediate level of productivity
<b>Water Body Type</b>	
<b>Lake/Reservoir:</b>	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.
<b>Pond:</b>	shallow standing water in which light penetrates to the bottom, potentially supporting rooted plant growth; lack of thermal stratification and presence of muddy sediments.
<b>Bay/Estuary:</b>	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.
<b>River:</b>	natural flowing water channel, usually freshwater, flowing toward an ocean, sea, lake, or another river.