

Table 10-2. Aquatic herbicides permitted for use in Michigan and the plants they are designed to control. (From Michigan DNR, 1980).

Plant Species	Copper Sulfate ¹	Chelated Copper "Cutrine Plus"	Amine Salts of Endothall "Hydrothol"	Dipotassium Salts of Endothall "Aquathol"	"Diquat" ²	2,4-D	"Aquazine" ³
ALGAE							
Planktonic	X	X	X				X
Filamentous	X	X	X		X		X
Chara, Nitella	X	X	X				X
MACROPHYTES							
Submergents							
Curly leaf pondweed			X	X	X		X
Sago pondweed			X	X	X		X
Large leaf pondweed			X	X	X		X
Naiad			X	X	X	X	X
Buttercup					X		
Coontail			X	X	X	X	X
Milfoil			X	X	X	X	X
Elodea			X		X	X	
Wild celery			X		X	X	
Emergents							
Water lily						X	
Arrow weed						X	
Cattails					X	X	
Bulrush						X	
Free Floating							
Duckweed					X		

¹NEVER IN TROUT PONDS! Trout may be killed. May also kill organisms that fish eat in other ponds.

²Diquat products are restricted for all aquatic uses, except in small ponds such as farm ponds that have no outflow and are under the control of the user. This means that you must be licensed by the Michigan Dept. of Agriculture as a certified aquatic pest control applicator to purchase and use this material in all water bodies except small ponds. Diquat is the only "Restricted Use" pesticide on the chart. All others are "General Use" (even though amine salts of endothall, "Hydrothol", can only be used for macrophyte control by certified applicators).

³May be used only ponds having NO outlet. This product is identical to "Simazine," however, Simazine may not bear a label for use in ponds. THIS CHEMICAL KILLS TREES NEAR PONDS WHEN ABSORBED INTO THEIR ROOTS.

Table 10-3. Waiting periods for uses of ponds following treatment with chemicals to control aquatic plants (from Michigan Dept. of Natural Resources 1982 guidelines based on information from chemical product labels). THIS TABLE IS ONLY A GENERAL GUIDE FOR PRELIMINARY PLANNING. Because the information may be out of date or may not apply to certain formulations you may have obtained, FOLLOW THE WAITING-PERIOD RESTRICTIONS ON THE LABEL OF THE CHEMICAL CONTAINER. Never use chemicals from a container that lacks an up-to-date commercial label stating restrictions for the specific use you intend. The waiting periods referred to are for chemical dosages on label instructions. DO NOT EXCEED DOSAGES IN THE INSTRUCTIONS.

Common name of chemical product	Type of pond use				Eating of fish from the pond
	Household use	Irrigation of plants	Livestock watering	Swimming	
Copper sulfate	no waiting	no waiting	no waiting	no waiting	no waiting
Citrine Plus	no waiting	no waiting	no waiting	no waiting	no waiting
Hydrothol	14 days	14 days	14 days	24 hours	3 days
Aquathol	14 days	14 days	14 days	24 hours	3 days
Diquat	14 days	14 days	14 days	10 days	no waiting
2, 4-D	21 days	21 days	21 days	no waiting	no waiting
Aquazine*	12 months	12 months	12 months	no waiting	no waiting

*Identical to "Simazine," however, Simazine may not bear a label for use in ponds. WARNING: THIS PRODUCT IS VERY TOXIC TO TREES. IT KILLS TREES NEAR PONDS WHEN ABSORBED INTO THEIR ROOT SYSTEMS.

swans must be provided with some open water and shelter in winter (or kept in a barn), and they may then need supplemental feeding which adds nutrients to the pond.

Ducks and geese that eat plants aren't suitable for pond weed control. They obtain much food through supplemental feed or by foraging outside the pond, bring the nutrients to the pond as feces, and increase the plant problem.

Algae typically replace the higher aquatic plants consumed by animals used to control pond plants. In some cases, dense blooms of planktonic algae may be more tolerable than large weeds.