



Department of Environmental Quality, Water Bureau

**PESTICIDE APPLICATION
TO SURFACE WATERS OF THE STATE OF MICHIGAN**

Permits are required by Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and Part 33, Aquatic Nuisance Control, of the NREPA (Part 33).

AQUATIC NUISANCE CONTROL GENERAL PERMIT

**GENERAL PERMIT NO. ANCG10-96
AQUATIC NUISANCE CONTROL ACTIVITIES FOR CANALS AND MARINAS
LOCATED ON THE GREAT LAKES AND CONNECTING WATERS**

Date Effective: January 1, 2010

Date Expires: December 31, 2010

In compliance with the provisions of Part 33 of the NREPA, pesticides are authorized to be applied to waters of the state (waterbody) for the control of nuisance aquatic plants and algae in accordance with the requirements and conditions set forth in this Aquatic Nuisance Control General Permit.

The applicability of this General Permit shall be limited to chemical treatment of a waterbody which will not negatively impact human health and will have no more than minimal short-term adverse impacts on the natural resources and environment.

In order to have authorization to chemically treat waters of the state under this General Permit, the permittee must be issued a Certificate of Coverage (COC) by the Michigan Department of Environmental Quality (DEQ). The following will be identified in the COC:

- COC number
- date effective / issued
- expiration date
- permittee name and address
- specific waterbody name and location for which authorization to chemically treat is granted

The terms and conditions of this General Permit shall apply to the permittee for the identified waterbody on the effective date of a COC issued by the DEQ.

The provisions of this General Permit are severable.

All contact with the DEQ as required by this General Permit shall be with the DEQ representative identified in the COC, Aquatic Nuisance Control and Remedial Action Unit, Water Bureau, DEQ, located at 525 West Allegan Street, Lansing, Michigan, 48913, telephone 517-241-7734, facsimile 517-335-4381, and/or e-mail: deq-lwm-anc@michigan.gov.

Section A. Qualified Sites

A canal or marina qualifying for approval to be chemically treated under this General Permit must meet all of the following criteria:

- an individual canal system or marina facility (commercial or municipal) contiguous to a Great Lake or the connecting waters (Detroit River, Lake St. Clair, St. Clair River or St. Mary's River)
- dredged from uplands or leased state bottomlands enclosed by a breakwater
- minimal to no flow conditions expected within the canal or marina
- has no contiguous wetlands associated with the canal or marina
- is not associated with a designated trout stream
- does not have federal or state endangered, or threatened species pursuant to Part 365 of the NREPA, or critical habitat, associated with it
- has been identified by the DEQ and the Department of Natural Resources as having minimal resource value to the state

The current list of approved canals/marinas is available from the DEQ upon request or can be downloaded from the Aquatic Nuisance Control website at <http://www.michigan.gov/deqinlandlakes>.

Section B. Authorizations and Coverage Provisions

1. Authorized Areas

Chemical treatment for control of nuisance aquatic plants and algae is authorized only to waters of the state as defined by this General Permit, specified by the issued COC, and identified on the treatment map(s) submitted with the application and/or on file with the DEQ.

Areas where chemical treatment for control of nuisance aquatic plants and algae is undertaken must be either under the legal control of the permittee or the party(ies) who has/have granted the permittee permission to do the treatment.

2. Chemical Application

Follow all pesticide label instructions to protect self, others and the environment. The label is provided with the pesticide container. It explains how to use the pesticide safely, effectively, and may suggest ways to avoid unintended impacts to human health and the environment. Read and understand the label before mixing or applying any pesticide. Most labels list a toll-free number for consumers. Pesticide labels are federally-approved legal documents and their requirements are enforced under both federal and state laws.

The applicant may apply only those specific chemical products that are approved by the DEQ. If only an active ingredient is approved in the tables below, consult the list of DEQ-approved aquatic pesticides and related products to determine if the brand name product you wish to use is approved. This list is available from the DEQ upon request or from the website <http://www.michigan.gov/deqinlandlakes>.

The application of chemical products to the qualified sites is restricted to the products in the following table, at the stated maximum application rates. The necessary application rate may be lower than the maximum rate listed in the table, and may depend on the target species, the timing of the treatment, the use of additives such as surfactants, and various site conditions (refer to the product label).

Category	Active Ingredient	Brand Name : Maximum Application Rate
Algae Control	chelated copper	Airmax Algae Defense, K-Tea, Symmetry NXG: 0.7 gal/acre-foot (planktonic/filamentous algae) 1.7 gal/acre-foot (macroalgae) Algi-Cure, Algimycin PWF: 1.06 gal/acre-foot (planktonic/filamentous algae) 2.13 gal/acre-foot (macroalgae) Captain, Cutrine-Plus: 0.6 gal/acre-foot (planktonic/filamentous algae) 1.2 gal/acre-foot (macroalgae) Cutrine Plus Granular: 60.0 lbs/acre Formula F-30 Algae Control: 2.0 gal/acre foot
	chelated copper (incl. surfactant)	Cutrine Ultra: 0.6 gal/acre-foot (planktonic/filamentous algae) 1.2 gal/acre-foot (macroalgae)
	copper sulfate	All approved products (unless specified below): 2.6 lbs/acre-foot (planktonic/filamentous algae) 4.4 lbs/acre-foot (macroalgae) EarthTec: 0.33 gal/acre-foot (planktonic algae) 0.55 gal/acre-foot (filamentous algae/macroalgae)
	endothall	Hydrothol 191: 2.2 pints/acre-foot Hydrothol 191 Granular: 11.0 lbs/acre-foot
	hydrogen dioxide	GreenClean Liquid Broad Spectrum Algaecide/Bactericide: 1.2 – 30.0 gal/acre-foot
	sodium carbonate peroxyhydrate	GreenClean Granular: 17.0 lbs/acre-foot (maintenance) 170.0 lbs/acre-foot (heavy growth) GreenClean PRO: 9.0 lbs/acre-foot (maintenance) 90.0 lbs/acre-foot (heavy growth) Pak 27 Algaecide: 16.9 lbs/acre-foot Phycomycin SPC Algaecide & Oxidizer: 100.0 lbs/acre-foot
	Submerged Plant Control	2,4-D – granular
chelated copper		Copper-EDA, Current, Harpoon, Komeen, Airmax PondWeed Defense: 3.3 gal/acre-foot Nautique ¹ : 3.0 gal/acre-foot
diquat dibromide		Knockout ^{1,2} , Littora ^{1,2} , Redwing ^{1,2} , Reward ^{1,2} : 2.0 gal/acre Weedtrine D ^{1,2} : 10.0 gal/acre
endothall		Aquathol K: 1.9 gal/acre-foot Aquathol Super K Granular: 13.2 lbs/acre-foot Hydrothol 191: 1.0 gal/acre Hydrothol 191 Granular: 162.0 pounds/acre-foot
imazamox		Clearcast ¹ : 69.0 oz/acre-foot
triclopyr		Renovate 3 ¹ : 2.3 gal/acre-foot Navitrol DPF, Renovate OTF: 67.0 pounds/acre-foot

(continued)

Category	Active Ingredient	Brand Name : Maximum Application Rate
Floating/ Emergent Plant Control	2,4-D – granular	Aquacide: 22.0 lbs/acre Navigate: 200.0 lbs/acre
	diquat dibromide	Knockout ^{1,2} , Littora ^{1,2} , Redwing ^{1,2} , Reward ^{1,2} : 2.0 gal/acre Weedtrine D ^{1,2} : 3.75 gal/acre
	glyphosate	All Approved Products ¹ : 6.0 pints/acre
	glyphosate (including surfactant)	GlyphoMate 41: 8.5 pints/acre ShoreKlear-Plus: 2.6 gal/acre
	imazamox	Clearcast ¹ : 64.0 oz/acre
	imazapyr	AquaPier ^{1,2} , Habitat ^{1,2} : 6.0 pints/acre
	triclopyr	Renovate 3 ¹ : 8.0 quarts/acre Navitrol DPF, Renovate OTF: 67.0 pounds/acre
Additives ¹	n/a (adjuvants, sink/drift control)	AGRI-DEX: 4.0 pints/acre Cygnet Plus: 2.5 pints/acre-foot (submergent) 1.0 pint/acre (emergent) PolyAn: 1.0 gal/acre-foot TopFilm: 1.0 pint/acre
	n/a (tracer dye/colorant)	All Approved Dye Products: 0.01 gal/acre-foot (submergent) 0.33 to 1.0 ounce per gallon concentrate (emergent)

¹ Certain herbicide labels require or strongly recommend the use of additives to aid herbicide uptake, improve effectiveness, and minimize non-target impacts.

² Certification requirements may apply. See below in Section B4.

3. Treatment Intervals

The products approved for use in Section B(2) of this General Permit have a minimum length of time required between each treatment in the same area(s) of impact, in accordance with the federal product label.

Active Ingredient	Minimum Treatment Interval ¹
2,4-D	14 days minimum between treatments (Navigate) 21 days minimum between treatments (Aquacide)
chelated copper	7 days minimum between treatments (except Komeen and Nautique: 4 weeks minimum; Copper-EDA, Current, Formula F-30, Harpoon, PondWeed Defense: 10 days minimum)
copper sulfate	7 days minimum between treatments
diquat dibromide	14 days minimum between treatments
endothall	5 days minimum between treatments
glyphosate	24 hours minimum between treatments
hydrogen dioxide	48 hours minimum between treatments
imazamox	No label requirement
imazapyr	10 days minimum between treatments
sodium carbonate peroxyhydrate	48 hours minimum between treatments
triclopyr	10 days minimum between treatments

¹ Refer to the federal product labels for annual limits on applications.

4. Special Conditions

General

Multiple products with the same active ingredient are approved by this General Permit. Consult the federally-approved product labels to ensure that the total amount of the active ingredient applied does not exceed the amount allowed by label application rates and/or active ingredient concentration for the target species and site conditions.

Upon receipt of written notification from the DEQ, the permittee may be required to do any of the following:

- Conduct the chemical treatment only when a DEQ representative is present.
- Notify the DEQ a minimum of three working days prior to application of chemical(s).
- For a permittee who is a licensed commercial pesticide applicator but who does not have a DEQ-approved Emergency Notification Procedure on file with the Aquatic Nuisance Control and Remedial Action Unit, submit an accurate map or written description of the exact locations where each herbicide was applied to the DEQ within 24 hours of the completion of each treatment.
- In addition to the normally required notification, also notify other person(s) specified by the DEQ.
- Satisfy additional reporting requirements (instead of, or in addition to, the requirements listed below in Section C).
- Any other requirements determined by the DEQ as necessary to protect the natural resources or the public health, to prevent economic loss or impairment of recreational uses, to protect non-target organisms, or to help ensure control of the aquatic nuisance.

Outlet Setback

Do not chemically treat within **50** feet of any outlet or opening to the Great Lakes or connecting waters.

Specific Products

2,4-D and Endothall

Do not apply granular endothall or granular 2,4-D products within 75 feet of ANY active drinking water well OR within 250 feet of wells less than 30 feet deep. Distances are measured from the well location not from the shoreline. Wells and isolation distances are not necessarily shown on the treatment map. Prior to treatment, locate the water wells and observe the appropriate isolation requirements. If well location and/or depth are unknown, then assume the full 250-foot isolation distance.

The use of Hydrothol 191 Granular to control submerged macrophytes is restricted to a one-time only treatment after July 15. Treatment shall not exceed a total maximum area of 10 percent of the canal or marina, and shall also not exceed 20 feet of canal frontage per residentially developed parcel, or no more than 30 percent of the near-shore frontage for marinas. Near-shore frontage is defined as areas less than 5 feet deep.

The use of Hydrothol 191 Granular herbicide has been approved at a rate in excess of 0.3 parts per million (ppm), and may be toxic to fish under certain conditions. Treatment is suggested only by a certified pesticide applicator. Apply product evenly in narrow margins or stripes to control target plants so fish are not killed. Apply product from the shoreline out so fish are not trapped.

Chelated Copper

Treatment of wild celery (*Vallisneria americana*) with a chelated copper herbicide product may occur no more than two times per year.

Colorants

The use of water dyes allowed by this General Permit excludes water dyes that are labeled as herbicides (e.g., Aquashade, Admiral, Pond Care Algae Blocker).

Diquat Dibromide

The diquat dibromide products are listed on the Michigan Department of Agriculture's restricted use pesticide list. You must be a certified applicator to purchase and use these products in waters of the state.

Imazapyr

Application of Habitat or AquaPier (imazapyr) can be made only by federal or state agencies, such as Water Management District personnel, municipal officials and the U. S. Army Corps of Engineers, or those applicators who are licensed or certified as aquatic pest control applicators and are authorized by the state or local government.

Surface Water Intakes (Drinking Water)

Several federal product labels, including those for 2,4-D, glyphosate, imazamox, imazapyr, and triclopyr, require setback distances from active surface water intakes used for potable drinking water. Such intakes exist in the Great Lakes and connecting waters and serve as drinking water sources for some communities. Refer to the specific product label for setback requirements or guidelines prior to application of these products. Contact your local water authority if you are unsure about the local drinking water source. Potable water intakes which are no longer in use, such as those replaced by connections to wells or a municipal water system, are not considered to be active potable water intakes. This federal label restriction does not apply to intermittent, inadvertent overspray of water in terrestrial use sites or when the target plants are not in standing water and there is no hydrological surface connection to the intake.

5. Notification and Posting Requirements

The applicant is required to notify, in writing, an owner of any waterfront property within 100 feet of the area of impact, not less than seven days, and not more than 45 days, before the initial chemical treatment. Requirements for written notification are provided in Section 324.3310(h) of Part 33. If the owner is not the occupant of the waterfront property or the dwelling located on the property, then the owner is responsible for notifying the occupant.

Notice of the chemical application must be posted prior to each chemical application, in accordance with Section 324.3310(d) of Part 33. Alternate posting may be reviewed on a case-by-case basis by DEQ upon written request from the applicant. Water use restrictions listed on the label for the specific product (i.e., trade name) used shall be included on the posting sign. In addition, a 24-hour water use restriction for swimming/entry shall be indicated on the signs for each chemical application of 2,4-D, chelated copper herbicides, diquat dibromide, endothall, glyphosate, hydrogen dioxide, imazamox, imazapyr, sodium carbonate peroxyhydrate, and triclopyr.

Section C. Reporting and Record Keeping

1. Environmental Impacts

The applicant is required to immediately contact the DEQ, Water Bureau, at 517-241-7734 if any fish or wildlife damage or significant non-target plant impacts occur in association with any chemical application.

2. Treatment Report

A treatment report, on the approved DEQ form (form number EQP 2792-1), must be returned postmarked no later than November 30 of the year this General Permit is in effect, even if treatment is not undertaken. Blank forms can be downloaded from the website <http://www.michigan.gov/deq/inlandlakes> or are available upon request. Submit completed and signed report to:

AQUATIC NUISANCE CONTROL AND REMEDIAL ACTION UNIT
WATER BUREAU
DEPARTMENT OF ENVIRONMENTAL QUALITY
PO BOX 30273
LANSING MI 48909-7773
FAX: 517-335-4381
E-MAIL: DEQ-LWM-ANC@MICHIGAN.GOV

3. Record Retention

The applicant shall obtain and maintain written permission from each bottomland owner in the area of impact for 1 year from the expiration date of the General Permit, unless exempt under Section 324.3308 of Part 33. The records shall be made available to the DEQ upon request.

Section D. Liability

1. Noncompliance

Initiation of any work on the permitted project confirms the applicant's acceptance and agreement to comply with all terms and conditions of this General Permit. Noncompliance with these terms and conditions, and/or the initiation of other regulated activities not specifically authorized by this General Permit, shall be cause for the modification, suspension, or revocation of the COC, in whole or in part. Further, the DEQ may initiate criminal and/or civil proceedings to correct project deficiencies, protect public health and natural resource values, and secure compliance with statutes.

The issuance of this General Permit does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other DEQ permits, or approvals from other units of government as may be required by law.

2. Property Rights

This General Permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights.

3. Indemnification

The applicant shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents and representatives for any and all claims or causes of action arising from acts or omissions of the applicant, or employees, agents, or representatives of the applicant, undertaken in connection with this General Permit. This General Permit shall not be construed as an indemnity by the State of Michigan for the benefit of the applicant or any other person.

Steven E. Chester, Director
Department of Environmental Quality

By: Richard M Hobria

Date: 12/18/09

Richard M. Hobria, Chief
Aquatic Nuisance Control and Remedial Action Unit
Water Bureau