

Pesticide Use In and Around Golf Course Ponds and Streams: What Superintendents Need To Know

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Introduction

Challenged by floating green algae slime pea soup green water, pesky cattails, or submersed pond weeds? Or maybe an unidentified growth in your pump station or that rotten egg smell neither nor your membership can stand? The maintenance of your lake or pond, whether for irrigation or aesthetic reasons, often presents unique pest management challenges to superintendents.

Vegetation in and around water is a subspecialty that always requires the implementation of integrated pest management (IPM). A superintendent's best bet is to use IPM to indentify an acceptable threshold of weed presence and then select from a tool box of biological, mechanical, operational and chemical control options. Don't forget to monitor pest pressure along the way and change your plan as needed. Remember: Just because it is the 3rd Monday of the month, this doesn't mean you need to make a pesticide application.



The Chemical Tool Box: Three Rules to Follow

Rule #1: Read the Label

No excuses here. Reading and following the label is the mantra we have to follow religiously. Label compliance along with strict adherence to California Department of Pesticide (CDPR) licensing, reporting and personal protection rules is also a must.

Going "off-label" is not only illegal, but may risk the health and safety of you and your employees. Plus, if you are going "hot" (i.e. applying at a higher rate than described on the label), you are likely to be wasting material and money. "A little is good, a lot is better" doesn't apply to pesticide use.

Rule #2: Get a Permit:

California's Aquatic Pesticide Permit

Applying pesticides to water may require a permit. The one that superintendents need is the statewide general National Pollutant Discharge Elimination System (NPDES) permit for the Discharge of Aquatic Pesticides for Aquatic Weed Control in Waters of the United States.

This permit, in place as a result of a fish kill due to the misuse of aquatic pesticides in the Talent Irrigation District in Oregon in 1996, is currently being revised by the State Water Resource Control Board staff. Although under revision, it is still active and available for use by aquatic pest managers throughout the state.

You need this permit if you make an intentional application of pesticides to "waters of the United States" which include:

- All interstate waters and waters currently used, used in the past, or susceptible to use in interstate commerce;
- All interstate waters including interstate wetlands;
- All other waters, including intrastate lakes, rivers, streams, intermittent streams, wetlands, wet meadows, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - ~ Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - ~ From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - ~ Which are used or could be used for industrial purposes by industries in interstate commerce.
- Tributaries to waters of the U.S.
- Wetlands adjacent to waters of the U.S.

Examples of "waters of the U.S." in Northern California include any of our major rivers (Russian, Feather, Bear, American, Napa, San Joaquin, Merced, etc.), the Delta and of course the Pacific Ocean. As "waters of the U.S." are defined above, no sane superintendent is likely to make a pesticide application to these waterbodies. The catch, however, is the "tributary" concept. Because many Northern California golf courses have creeks, streams and ponds that drain directly to, or are tributary to a "water of the U.S.", this permit may apply to those courses and the treatment of pests in these golf course waterbodies. Think connectivity here. If you are hydrologically connected to a "water of the U.S.", you need to consider this permit.



Put another way, if you are “hydrologically isolated”, this permit probably doesn’t apply to you.

In addition to paying a \$1,500 annual fee, permit holders are required to collect representative samples, analyze them for the pesticide used in and just outside of the treated area, and prepare a report. The annual cost for complying with this permit depends on the number and type of pesticide applications being made.



The list of pesticides approved for aquatic use in California is limited to the following ten (10): 2,4-D, acrolein, copper, diquat, endo-thal, glyphosate, fluridone, imazapyr, sodium carbonate peroxyhydrate and triclopyr. Non-ionic surfactants are also allowed. Special circumstances apply to the use of acrolein and copper that includes California Environmental Quality Act (CEQA) compliance and the pre- and post-season assessment of biological resources.

Permit Benefits

So what do you get out of this permit except a divot in your budget? Simply put: protection. The citizen lawsuit provision of the Clean Water Act provides an opportunity for anyone (read environmental advocacy groups) to sue you if they feel you have adversely impacted water quality. Although not bullet-proof Teflon, the permit provides significant defense against such a suit.

Speaking of lawsuits, since 2002, a variety of lawsuits have resulted in confusion regarding the need for the aquatic weed permit. Earlier this year, the U.S. Supreme Court refused to hear further bellying, effectively putting an end to the debate and once and for all stating that a permit is, in fact, needed.



What About the Rest of the U.S.?

Although not likely to affect us in California, the United States Environmental Protection Agency (USEPA) just published a draft of their nationwide permit intended for use in states without an existing permit. See: http://cfpub.epa.gov/npdes/home.cfm?program_id=410. Because California has had a permit in place since 2002 and the California permit appears to be more stringent than the proposed EPA permit, California will likely keep their permit and not adopt the EPA permit.

The Crystal Ball: What Does the Future Hold?

Because SWRCB staff are currently working on a new permit, potential changes are ahead. Its best to stay informed. You can join the SWRCB “aquatic weed control” list serve by going to: http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml.

Learn more at: http://www.swrcb.ca.gov/water_issues/programs/npdes/docs/aquatic/permit.pdf.

Rule #3: Injunction Dysfunction: Be Aware of Gobys and Frogs

Heads-up Bay Area Superintendents. Last month, the U.S. District Court for the Northern District of California issued an injunction that protects 11 federally listed threatened or endangered species, including the tidewater goby, from 75 pesticides in 8 Bay Area Counties as a result of a suit by the Center for Biological Diversity (CBD). The injunction requires the use of no-spray buffer zones. Find out if your course lays within an affected area at: <http://137.227.242.165/sfb/index.html>. Details on the list of pesticides and species can be found at <http://www.epa.gov/espp/litstatus/factsheet.html>.

Similarly, in 2006, the same U.S. District Court issued an injunction related to another CBD action. This time, buffer zones are needed for the use of 66 pesticides in parts of 33 counties to protect the Red-legged Frog. Find out about the list of pesticides and if your course is within one of the areas requiring protection at: <http://www.epa.gov/espp/litstatus/redleg-frog/steps-info.htm>.

About the Author: Michael Blankinship has been a GCSAA member since 2001, is a DPR licensed pest control advisor and a California registered professional civil engineer. His Davis-based consulting firm solves problems related to permitting, compliance, water quality and natural resource management for golf course owners and operators throughout the Western U.S. Learn more at www.h2osci.com. Reach Mike at (530) 757-0941 or mike@h2osci.com.

