



Cape Cod Cranberry Growers' Association

GROWER ADVISORY

2007 Groundwater Protection Regulations

The Groundwater Protection Regulations from the Massachusetts Department of Agricultural Resources (MDAR) are intended to prevent contamination of public drinking water supply wells through regulating the application of pesticide products on the Groundwater Protection List within primary recharge areas. A primary recharge area is either an "Interim Wellhead Protection Area" (IWPA) or a "Zone II." Primary recharge areas are updated yearly by the state. The pesticide groundwater protection regulations ONLY apply to public drinking water wells that pump greater than 100,000 gallons of water per day.

For simplicity, all mention of primary recharge areas noted in this advisory will be referred to as "Zone II" areas.

STEP 1: DETERMINE IF YOUR CRANBERRY BOG IS IN A ZONE II AREA

If you have had a determination made in the past, it is important to note that new wells can be created and new Zone II areas delineated. It's also possible for a bog that was previously in a Zone II area to no longer be in one. That is why it's critical to take a look at the Zone II maps to see if your bogs fall in/out of the new areas. However, as of March 2007, no Zone II areas effecting cranberry acreage have changed since the 2006 maps were created. If this should change during the year, CCCGA will update our maps accordingly.

CCCGA has created hard copies of these maps and they are available for viewing at the following locations:

- UMass Cranberry Station, East Wareham
- DeCran Ag Supplies Inc., Rochester
- R.A.S.P. Inc., Carver
- R.F. Morse & Son Inc., West Wareham

The maps are also available on the CCCGA web site at http://www.cranberries.org/growers/alerts_zone2.html. Growers can have an individual Zone II determination made for their bogs by contacting the Plymouth County Conservation District office at 508-295-5151 or the CCCGA office at 508-759-1041.

In addition, the Massachusetts state web site has a valuable online mapping tool that can be downloaded to your computer. Then users can overlay aerial photography with various data layers, including Zone II areas. This tool plus other valuable information about Groundwater Protection can be found at <http://www.mass.gov/agr/pesticides/water/index.htm>.

Lastly, your local Board of Health should have maps available and the Department of Environmental Protection (DEP) Southeast Regional Office can also help determine if you are in a Zone II area by calling them at 508-946-2700.

STEP 2: CRANBERRY PESTICIDES ON THE GROUNDWATER PROTECTION LIST

Cranberry compounds on the 2007 Groundwater Protection List

The Groundwater Protection List refers to a list of pesticide active ingredients that could potentially impact groundwater due to their chemical characteristics and toxicological profile.

COMPOUND	AVAILABLE PRODUCTS	REQUIRED CONDITIONS
CHLOROTHALONIL	BRAVO, ECHO, EQUUS, CHLOROTHALONIL 720	You cannot use Chlorothalonil products in a Zone II area unless you can document that you have tried alternatives in the past, at this same location and they failed.
PRONAMIDE	KERB Verify that Section 18 has been approved prior to use!	Kerb is often the only viable product to control dodder in cranberries. You cannot use Kerb in a Zone II area unless you can document that you have tried Casoron in the past at this same location and it failed.
THIAMETHOXAM	ACTARA	Actara is the only viable alternative for managing resistant cranberry weevil and is allowed in a Zone II area.
METHOXYFENOZIDE	INTREPID	This compound CANNOT be used in Zone II areas. There are available alternatives.
SIMAZINE	CALIBER, PRINCEP	This compound CANNOT be used in Zone II areas. There are available alternatives.

REMEMBER:

To help ensure continued availability of pesticides on the Groundwater Protection List, please be sure to complete and submit all paperwork on time.

Details can be found in Steps 3-5 of this advisory.

STEP 3: REQUIREMENTS FOR EXISTING PRODUCING CRANBERRY BOGS

- The cranberry bog must have greater than 50% foliar ground cover (most established cranberry beds meet this requirement)
- There is no viable alternative for the use of the pesticides on the Groundwater Protection List
- The pesticide to be applied must be part of an Integrated Pest Management (IPM) plan from MDAR approved sources. These sources include:
 - Use of the 2007 Cranberry Chart Book published by the UMass Cranberry Station
 - UMass Extension IPM fact sheets, specific to the target pest
- An IPM program designed specifically for compliance with the Groundwater Protection Regulations
- A copy of the 2007 UMass Cranberry Chart Book and/or a letter from the UMass Cranberry Station, showing you have confirmed that your conditions allow the application
- Documentation that other alternatives tried in the past have failed to control the pest (detailed IPM records should meet the requirements)

The MDAR does not require the submission of IPM plans for approval. Instead the applicator should maintain a copy of their IPM plan in their records. The plan should be specific to the pest problem requiring management with a pesticide on the Groundwater Protection List and include the following information:

- The name of the applicator
- The location (IWPA, Zone II and property) and dates of the application
- A problem statement which outlines the reason for using the pesticide product on the Groundwater Protection List
- An account of the method used by the applicator to identify the problem (i.e. IPM scouting records or fruit rot records from prior harvest). Any laboratory diagnosis of the pest problem must also be maintained
- An account of the IPM measures that have been taken to manage the problem (i.e. late water, sanding, etc.)
- A letter or statement from the UMass Cranberry Station stating that there is no viable alternative to the use of product on the Groundwater Protection List to control the particular pest problem or a copy of the 2007 UMass Cranberry Chart Book

STEP 4: REQUIREMENTS FOR NEW PLANTINGS

For a pesticide product which is soil applied or applied to an area with less than 50% foliar ground cover (new planting), the applicator must ensure that the following two requirements are met:

- There is no viable alternative for the use of the pesticides on the Groundwater Protection List
- A Pesticide Management Plan (PMP) for that use pattern has been approved by the MDAR. Note that a PMP is different from an IPM plan. A PMP is developed specifically for new plantings in a Zone II area. Contact the CCCGA office to learn more about applying for a PMP.

Pesticide Management Plan

The regulations require that the following information be submitted as part of a Pesticide Management Plan:

- Name and EPA registration number of pesticide used
- All maps necessary to identify the anticipated use site
- Written evaluations of alternative control methods including economic ramifications
- Information on the target pest, method of application, rate of application, irrigation practices (if any), crop and the percent of ground cover
- Storage, handling and loading procedures
- The specific department approved IPM program that has been adopted
- Site specific data – top soil horizon depth; depth to seasonal high water table; NRCS soils hydrologic group; percent organic matter soil test results; monitoring data from wells on site including a list of wells
- Other data which supports a finding that the anticipated use site is not a highly vulnerable site
- All data must be referenced

The MDAR, DEP and the Department of Public Health will then review the plan. MDAR must respond within 60 days of the receipt of a completed Pesticide Management Plan. The application will be approved by MDAR only if all of the following conditions are met:

- The anticipated use site is not a highly vulnerable site, i.e.:
 - A soil with a top soil horizon of 15 percent or less in soil organic matter
 - An area where the depth to the aquifer is less than 15 feet
 - An area where the depth to the fractured bedrock or seasonable high water table is less than 4 feet
- There is unlikely to be an unreasonable adverse effect on the environment
- There is no viable alternative control method
- The product has not been detected as a result of a groundwater monitoring program

STEP 5: SUBMISSION FORM REQUIREMENTS

The MDAR must be notified of any applications of a product on the Groundwater Protection List **within 10 days of the end of each month**. This form should include all applications made during that month. You do not need to include chemicals that are not on Groundwater Protection List (see Step 2 above). You may use one form to report multiple applications that occurred in the same month.

The submission form is attached to this advisory and can also be found on the CCCGA web site on the “Forms” page at <http://www.cranberries.org/growers/forms.html>. There is also an online submission form, as well as a printable form, on the MDAR web site at <http://www.mass.gov/agr/pesticides/water/cranberry/advisory.htm>.

Cranberry Growing Region

**Municipalities which contain “Zone II” areas within their boundaries
(includes IWPA >100,000 g/day)**

Acushnet	Easton	Mashpee	Raynham
Barnstable	Falmouth	Mattapoissett	Rehoboth
Bourne	Foxborough	Middleborough	Rochester
Brewster	Halifax	Nantucket	Sandwich
Bridgewater	Hanover	Norfolk	Scituate
Carver	Hanson	Norton	Sharon
Chatham	Harwich	Norwell	Taunton
Dartmouth	Kingston	Orleans	Wareham
Dennis	Lakeville	Pembroke	Wrentham
Duxbury	Marion	Plymouth	Yarmouth
East Bridgewater	Marshfield	Plympton	

For More Information Contact:

<p>Gerard Kennedy, Environmental Analyst MDAR Pesticide Bureau 251 Causeway Street Suite 500 Boston, MA 02114-2151 Phone: 617-626-1773 Email: Gerard.kennedy@state.ma.us Web: www.state.ma.us/dfa/pesticides/water</p>	<p>Jeff LaFleur, Executive Director Brian Wick, Regulatory Services Cape Cod Cranberry Growers’ Association 3203-B Cranberry Highway East Wareham, MA 02538 Phone: 508-759-1041 Email: jlafleur@cranberries.org bwick@cranberries.org Web: www.cranberries.org</p>
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The information in this guide is provided by the Cape Cod Cranberry Growers’ Association as a service to its members. The information represents our interpretation of the state requirements and by no means is intended to act as a substitute for reading and following the specific regulatory requirements.

The Massachusetts Pesticide Control Act and
Prevention of Non-point Source Contamination of Drinking Water Supplies
may be viewed in their entirety by consulting the

**Massachusetts General Laws, Chapter 132B
333 Code of Massachusetts Regulations (CMR) 12.00**

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