

NEWSLETTER

Pesticide Services



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Environmental Code of Practice for Pesticides Amended

The *Environmental Protection and Enhancement Act* - Environmental Code of Practice For Pesticides has been amended. The amendments include:

- Streamlining Pesticide Use Approvals by expanding existing Code provisions for pesticide application within 30 horizontal metres of an “open body of water” (see article following);
- Streamlining pesticide applicator certification by recognizing an intermediate pesticide applicator status (see **Authorized Assistant** article);
- Requirements for aircraft to be calibrated on a regular basis to ensure application accuracy;
- Accommodating updates requested by industry associations; and
- Providing clarification to reflect organizational changes within Alberta Environment.

Amendments have been made to allow for the same (or enhanced) level of environmental protection with less administration, to acknowledge changes requested by industry to enhance pesticide risk management, and to update and clarify provisions identified by Department staff.

Amendments are effective June 12, 2001. It is recognized that in some instances proponents regulated by the Code may have developed and implemented operating procedures and practices to reflect Code amendments prior to this date.

Queen's Printer has published the amendment to the Code. Copies of the amended Code are available on the Queen's Printer website, and on the Alberta Environment Pesticide Management website at <http://www.gov.ab.ca/env/protenf/pesticide/> under the heading “Legislation”.

Code change notices are being sent to all Industrial Class Pesticide Applicator Certificate holders as this is the industry sector most affected by the Code amendments.

Pesticide Applications Within 30 Horizontal Metres of An Open Body of Water

Code provisions that came into effect in 1997 allowed the use of several herbicides up to 5 horizontal metres from the bed and shore of an open body of water. Most herbicide applications were limited to a maximum of 30% of the treatment area (on a hectare basis) using hand-directed application equipment. Broadcast spraying of glyphosate up to 5 metres from an open body of water was allowed for forestry applications, maintained trails, and industrial areas.

Code amendments include:

- the identification that herbicide applications are to be conducted as part of an integrated vegetation management program with the objective of controlling target vegetation. This was the intent of previous Code provisions, but not clearly stated.
- the allowance of lower risk herbicides up to 1 metre from the bed and shore of an open body of water using hand-directed equipment provided that no more than 10%

of an area is treated (on a 100 square metre basis). There is a continuation to allow lower risk herbicides and moderate risk herbicides up to 5 metres from the bed and shore of an open body of water using broadcast application equipment provided that no more than 30% of an area is treated (on a 100 square metre basis).

- for purple loosestrife control, applications of triclopyr are allowed within the bed and shore area (provided that no applications are made to standing water). In the zone 0-5, metres 10% of the land area can be treated; in the zone 5-30 metres, 30% of the land area can be treated.
- the allowance for broadcast applications of glyphosate on trails, industrial sites, etc. located in a manner that maintaining them as vegetation-free will not result in an adverse effect, regardless of distance to water. The major impact on water would be the non-vegetated disturbance.

Authorized Assistants

In response to a request from the Alberta Agricultural Fieldmen Association, and in cooperation with the Industrial Vegetation Management Association of Alberta, Alberta Environment will offer an alternative for seasonal employees required to perform pesticide applications without on-site supervision on a daily basis. The "authorized assistant" category will be intermediate between the non-certified assistant (no training) and the fully certified applicator. A certified applicator will be fully responsible for the pesticide application activities of authorized assistants.

Each "authorized assistant" will be required to complete training on legislation and safety, pass an examination, and complete an experience checklist with their supervising certified applicator. Authorized assistants must be trained by a recognized trainer (i.e. someone trained by Alberta Environment). Alberta Environment provided courses for persons wishing to become trainers during the Spring of 2001 as a "pilot". Courses were targeted to "Industrial" and "Forestry" class applicators. The program will be evaluated at the end of the 2001 pesticide application season and, if deemed successful, will be offered to other pesticide application sectors over the next several years. Requirements for "authorized assistants" are outlined in the newly amended *Environmental Code of Practice for Pesticides*.

Filling Spray Tanks From Water Bodies - Licences under the *Water Act*

A **Licence** under the provincial *Water Act* is required for any water withdrawal from any slough, lake, creek, river, stream or other natural water body. Pending duration of diversion and use, Temporary Diversion Licences may be granted. There is a Statutory Right for household purposes, as defined in the *Water Act* up to 1,250 cubic metres of water per year for which no licence is required. Where water, used for household purposes, is required for spraying pesticides on the household user's own lands, no licence is required. Also if landowners have existing licences or where there are exemptions [*Water (Ministerial) Regulation, Schedule 3*] from requiring licences, water may be diverted and used for pesticide application without further authorizations. There

is also an exemption for water withdrawals up to 5,000 cubic metres per project per year from water bodies in the province's Green Area [*Water (Ministerial) Regulation*, Schedule 4].

Although water withdrawals associated with pesticide application activities tend to be very limited, there are no specific exemptions provided in the *Water Act* for other possible water withdrawals involving small water volumes. Given the very dry conditions and low water supplies throughout much of Alberta this year, public scrutiny over water withdrawals is much higher than in previous years. Pesticide application services can expect to be challenged on their diversion and use of water without appropriate authority particularly where other users were denied permission.

For this year, avoid withdrawals from natural water bodies. Use municipal water sources as much as possible. Representatives from the Industrial Vegetation Management Association will be meeting with *Water Act* representatives this fall to determine whether a formal exemption for pesticide application services can be addressed through provincial legislation (possibly through the *Environmental Code of Practice for Pesticides*).

In the interim, anyone wishing to withdraw water from a natural source should contact the appropriate Regional office of Alberta Environment from the list provided at the end of this newsletter. There may be an exemption available for some water bodies that are not considered critical to regional water management demands. Pesticide Services will be required to obtain a Temporary Diversion Licence for areas identified as water short areas by Regional staff where water mastering has been implemented.

A notice will be sent to all **Industrial** Class pesticide applicator certificate holders regarding any exemptions that may be available for specific regions – details were not established for each region at the time this newsletter was printed.

Tank Filling at Municipal Water Supplies

Many operators, for several different reasons, will use a municipal water supply outlet to fill their nurse or pesticide spray tanks. Concerns expressed to Alberta Environment about some operators relate to the unclean nature of the units that are filling at the stations, overfilling, and inattention to proper backfill prevention procedures.

It is recommended that:

- nurse tanks be used whenever possible rather than direct filling into spray tanks.
- where direct tank filling is the only option, clean equipment before filling at municipal sources to prevent introducing (or any perception of introducing) pesticide residues into the watering area.

Pesticide applicators and mixer/loaders are reminded that Section 8 of the Pesticide Sales, Handling, Use and Application Regulation 24/97 requires that there be:

- 1) an air gap maintained between the water point and the tank (used to hold, mix or apply a pesticide),
- 2) someone over the age of 16 years present at all times during the filling procedure, and
- 3) consent provided by the owner of the watering point for filling a spray tank.

Failure to adhere to these basic requirements, intended to prevent contamination at these water sources, may lead to the loss of an operator's filling privileges.

Operational Changes

Pesticide Applicator **Certificates** of Qualification are issued **to individuals** to acknowledge they have successfully demonstrated they are familiar with Alberta legislation, pesticide safety issues and technical knowledge regarding pest control. Pesticide Service **Registrations** are issued **to companies** that provide a pesticide application service as part of their operation.

If you have made changes to your operation and forgotten to notify Alberta Environment you may have unwittingly invalidated your Pesticide Service and/or Vendor Registration. Registrations, when issued, require that the operator notify Alberta Environment in regards to changes in the certified applicators or dispensers and the type of service activity provided (e.g. landscape, industrial, agriculture, etc.), operation location, and insurance coverage. Check your registration and ensure that the information reflects the current information about your operation. Please contact a regional office or the Regulatory Approvals Centre at 780 427-6311 if there have been changes since issuance of your registration. The Department mails registration renewal applications approximately 6 months prior to expiry and if these are returned to us because your address changed you may not be aware that your operation registration is expiring and you will be in the position of operating illegally.

All pesticide applicator certificate holders should contact 1-800-661-3495 if they have moved their home mailing address to ensure they receive information on their certificate renewals.

Pesticide Sector Survey Summaries

In spring of this year the Landscape pesticide application industry was surveyed on their pesticide use practices. The information received from this survey is being reviewed and a summary should be released in the fall.

A reminder to all those applicators and services providing "Industrial Class" pesticide applications. A survey for this industry sector will be mailed out in early 2002. A component of the survey will request pesticide use information for the year 2001. Please keep this in mind with respect to your record keeping this year.

Mobile Storage Facilities

In response to concerns expressed by industrial class applicators and Alberta Environment inspectors, clarification is provided in a new guideline document regarding pesticides stored on mobile facilities. All operators are encouraged to develop their secondary containment on vehicles or trailers that will accommodate 110% of the volume being stored. In these guidelines, it is recognized that this is not practical for a number of operations away from home base for on larger projects for periods up to 90 days. These

operations may now consider secondary containment that will allow for the volume of the largest container plus 10% of the total pesticide (liquid) in storage. This is explained in more detail, with other requirements, in the “Guidelines for Mobile Pesticide Storage Facilities” available on the website at <http://www.gov.ab.ca/env/protenf/pesticide> or by requesting a copy from any regional Alberta Environment office.

Supreme Court Decision – Municipal Pesticide Bylaws

The Supreme Court ruling of June 28, 2001 clarified that municipalities have the legal ability to make bylaws respecting the use of pesticides on private property under the “general welfare” provisions conferred by most provinces to municipalities for bylaw-making purposes. Many municipalities have policies in place governing pesticide use on public property. Only a few municipalities (e.g. Hudson, Quebec and Halifax, Nova Scotia) have enacted bylaws restricting pesticide application on private property.

The Supreme Court ruling did not address issues concerning pesticide safety nor the wisdom of enacting pesticide bylaws. The ruling addressed only the legal matters related to municipalities restricting activities that are regulated under federal and provincial laws where the municipality believes that further restrictions are in the best interests of its citizens.

Re-evaluation of Organophosphate Pesticides

In June of 1999, the federal Pest Management Regulatory Agency (PMRA) announced the commencement of a re-evaluation of organophosphate pesticides. The re-evaluation is necessary to examine older active ingredients under current scientific approaches to ensure they continue to meet modern health and environmental safety. It is expected over the next several years, you will hear about some of these pesticides in the media and be asked by your clients about some of their uses being removed. To ensure you are clear on which pesticides are currently being reviewed, the following list (of active ingredients) will help:

- Acephate
- Chlorpyrifos
- Dichlorvos
- Ethion
- Fenthion
- Methamidophos
- Oxydemeton-methyl
- Phosmet
- Terbufos
- Azinphos-methyl
- Coumaphos
- Dimethoate
- Ethyl parathion
- Fonofos
- Methidathion
- Phorate
- Propetamphos
- Tetrachlorvinphos
- Bensulide
- Diazinon
- Disulfoton
- Fenitrothion
- Malathion
- Naled
- Phosalone
- Sulfotep
- Trichlorfon

Whenever changes to the registration status of any pesticide is to occur, the federal PMRA will develop a regulatory document outlining the changes, and it will be posted on their website at <http://www.hc-sc.gc.ca/pmra-arla/> Click on "What's New" to keep abreast of regulatory happenings.

The first two active ingredients to undergo changes to their registrations are outlined below.

Changes to the Registration Status of Chlorpyrifos

On September 28, 2000, the federal Pest Management Regulatory Agency (PMRA) released a "Re-evaluation Note" REV2000-05 on chlorpyrifos. The note confirmed that the PMRA was following the lead of the United States Environmental Protection Agency (US EPA) and removing some uses that pose an unacceptable risk to human health (especially children). Under the new approaches used in risk management, an additional safety factor was applied to the existing safety factor for chlorpyrifos. As a result, some uses did not meet the new safety factor and will be removed. Following is a list of the uses that are to be removed from all chlorpyrifos labels (dates listed are consistent with accepted US EPA timelines):

- Registration of all Domestic class products will be discontinued. Retail sales of Domestic class products are to end **December 31, 2001**.
- Registration of residential uses (both indoor and outdoor) will be removed from Commercial class products. Retail sales of Commercial class products with claims for uses in and around residences and other areas where children may be exposed will be discontinued **December 31, 2001**.
- Registration of uses of Commercial class products in areas such as schools and playgrounds will be discontinued **December 31, 2001**.
- Use of chlorpyrifos on tomatoes will be discontinued and a Maximum Residue Limit (MRL) of zero will be established for tomatoes. This will eliminate commercial use of chlorpyrifos on tomatoes in Canada and prevent import of chlorpyrifos treated tomatoes. Use on tomatoes ended **December 31, 2000**.
- MRLs for apples and grapes will be lowered to be consistent with new lower tolerances proposed in the US. Although Canada does not have chlorpyrifos registered for use on these commodities, the lower MRL will still allow for continued imports of treated apples and grapes from the US and other countries that meet the new standard.

All Commercial class products will carry a label warning against use in and around residences and other areas where children may be exposed. The mosquito use pattern has been maintained for public health reasons. Other agricultural uses are not affected at this time, however, the PMRA will continue to assess (together with manufacturers and users), possible risk mitigation measures for the remaining agricultural uses.

NOTE: Applicators are advised against "stockpiling" product that may have label claims with these use patterns. A reasonable amount of time will be provided for applicators to use existing product in order to avoid disposal costs. Although a definite date after which "use" will not be legal has not been set (at the time of printing of this newsletter), it is expected applicators will have one additional year after the discontinuation dates to use existing product stocks.

Changes to the Registration Status of Diazinon

On December 22, 2000, the federal Pest Management Regulatory Agency (PMRA) released a "Re-evaluation Note" REV2000-08 on diazinon. The note confirmed that the PMRA was following the lead of the United States Environmental Protection Agency (US EPA) and removing some uses that pose an unacceptable risk to human health (especially children). Under the new approaches used in risk management, an additional safety factor was applied to the existing safety factor for diazinon. As a result, some uses did not meet the new safety factor and will be removed. Following is a list of the uses that are to be removed from all diazinon labels (dates listed are consistent with accepted US EPA timelines):

- Domestic and Commercial diazinon products for indoor uses will be phased out starting in 2001, when production of these products will end. Sales of diazinon products for use indoors will virtually end in 2001 with provision for a small amount of carryover into 2002.
- Domestic class products for use by home-owners on lawns will be virtually phased out by 2002, with a small provision for carryover into 2003. This is one year earlier than in the US.
- Commercial class products for use by pest control operators on residential and other lawns, will be virtually phased out by 2003, with provision for a small carryover to 2004.
- Some agricultural uses will be phased out in Canada, but the details of this action are still under review. For the remaining agricultural uses, it is expected there will be additional risk mitigation measures applied.

Re-evaluation of Lawn and Turf Uses of Pesticides

In the past year there has been an increase in concern on the part of the public regarding the urban use of pesticides, particularly for lawn care. In view of the interest in the use of pesticides on turf, the federal Pest Management Regulatory Agency is undertaking a priority re-evaluation of the lawn and turf uses of the most commonly used insecticides (chlorpyrifos, diazinon, malathion, carbaryl), and the most commonly used herbicides (2,4-D, MCPA, dicamba, mecoprop). This re-evaluation will focus on the assessment of risks resulting from the treatment of lawns, including residential lawns, and lawns/turf in parks, playgrounds, playing fields, etc. Particular emphasis will be given to infants and children. It will not include sod farms or golf courses at this time. Where re-evaluation is ongoing involving the organophosphates, 2,4-D and MCPA, data that may be used in the evaluation for lawn/turf uses will also be used in the larger overall evaluation of those groups of active ingredients.

Excerpted from: Re-evaluation Note. REV2000-04. "Re-evaluation of Lawn and Turf Uses of Pesticides". Pest Management Regulatory Agency. September 27, 2000.

Mercury Based Fungicides

Due to environmental and health concerns associated with all mercury based products, and the fact that alternative products are available for all turf uses, the federal Pest Management Regulatory Agency took action to discontinue the registrations of the remaining mercury based fungicides in 1995. Any person who may have stocks remaining of the following products are advised that **sales and use of the following mercury based fungicides after December 31, 2000 is illegal:**

- Calo-clor Turf Fungicide (PCP #3294)
- Clean Crop PMA-10 Fungicide Solution (PCP #9569)
- Scotts Proturf Broad Spectrum Granular Fungicide (PCP #11339)
- PMAS Turf Fungicide (PCP #16834)

Remaining stocks must be disposed of through properly approved hazardous waste brokers or through local "Toxic Roundups" in your area.

Regulatory Status of Lindane Seed Treatments

In the fall of 1999, a special review of lindane was initiated by the federal Pest Management Regulatory Agency. Lindane was already under re-evaluation in the United States (under the *Food Quality Protection Act*), and it was evident that no further importation of Canadian seed treated with lindane into the United States would be allowed. At the request of Canadian canola growers, Canadian registrants of lindane agreed to voluntarily remove canola/rapeseed claims from labels of registered canola seed treatments containing lindane by December 31, 1999. The agreement also indicated that **all commercial stocks containing lindane for use on canola and lindane treated canola seed are not permitted for use after July 1, 2001.** Alternative products, including imidacloprid (Gaucho) and thiamethoxam (Helix) are now registered as replacements to lindane.

Federal Pest Management Regulatory Agency Launches "Healthy Lawns" Initiative

In the fall of 2000, Charles Caccia, tabled a report to the House of Commons Standing Committee on the Environment and Sustainable Development, entitled *Pesticides: Making the Right Choice For the Protection of Health and the Environment*. The report was critical of the current pesticide regulatory system, particularly focusing on the overuse of domestic pesticides for "aesthetic" reasons. Partly in response to that report, the federal PMRA responded by developing an action plan in consultation with the provinces and territories to help Canadians to begin to reduce their reliance on pesticides in the urban setting. The "Healthy Lawns" strategy will help reduce Canadians' reliance on pesticides for lawn care. Based on integrated Pest Management (IPM) principles, the "Healthy Lawns" strategy will place particular emphasis on pest prevention, the use of reduced risk products and the application of pesticides only when necessary. A "Healthy Lawns" website has been established to house educational materials and programs on healthy lawn practices that homeowners can use. The website can be accessed at <http://www.healthylawns.net/>

Farm Pond Algae Control With Barley Straw

Algal growth during the summer season in farm ponds can pose a number of problems. The algae that grows in ponds used for irrigation can clog pumps, block filters, cause odour problems, and is generally considered to be unsightly. These algae blooms seem to be more severe in ponds that have high levels of nutrients that can be associated with runoff from production fields.

The straw does not kill the algae that are already present, rather it prevents the growth of new algal cells, similar to a pre-emergent herbicide. The anti-algal activity is only produced when the straw is rotting in a well oxygenated environment.

The amount of straw needed is based on the surface area of the pond. The volume of water seems to make no difference in the performance of the straw. As a rule of thumb 0.5 - 1.5 oz. of barley straw per 10 square feet of surface area will provide good activity against the algae. Higher rates have been shown to provide better algae control if the problem is severe. However, too much straw can deoxygenate the water. It is best if the straw is applied loose so that water can move freely through it. A cage similar to a crab cage works nicely. Floats should be attached to the cage to keep them at the surface for maximum efficiency. It is also better to use multiple cages. The more points that the barley straw extract can emanate from, the better the control.

As far as timing goes, it is best to apply the straw in the fall or early spring. This will give the straw a chance to rot and get ahead of the spring/summer algae blooms that cause most of the problems for irrigation ponds. When barley straw is applied to a pond it generally takes 6-8 weeks for the straw to become effective at water temperatures below 50° F (10° C). When the water temperatures are 68° F (20° C) or above it only takes 1-2 weeks for the treatment to become effective. Once active the straw will remain effective for about 6 months.

To this point there have been no negative side effects recorded. There have, however, been observations of increased invertebrate populations and improvement of gill development in fish from ponds where barley straw is applied.

Taken from: University of Maryland Co-operative Extension Service, Green Industry News, Vol. 4 No. 5, 1998. Website: <http://www.agnr.umd.edu/users/cmrec/3-7art2.htm>
The original paper "Control of Algae Using Straw", Information Sheet 3, IARC Centre for Aquatic Plant Management, Reading, UK. 1999. The paper is available from the Aqua Botanic website (a site dedicated to aquatic plants and aquascaping):
<http://www.aquabotanic.com/straw.PDF>

Submit application to or obtain further information or clarification from:

Office of the Regional Support Manager
Northwest Boreal Region
Bag 900-5, Provincial Building
9621 – 96 Avenue
Peace River, Alberta T8S 1T4
Telephone: (780) 624-6167
Fax: (780) 624-6335

Office of the Regional Support Manager
Northeast Boreal Region
111, 4999 – 98 Avenue
Edmonton, Alberta T6B 2X3
Telephone: (780) 427-5296
Fax: (780) 422-0528

Office of the Regional Support Manager
Northern East Slopes Region
52322 Golf Course Road
Stony Plain, Alberta T7Z 2K9
Telephone: (780) 963-6131
Fax: (780) 963-4651

Office of the Regional Support Manager
Parkland Region
5th Floor, 4920 - 51 Street
Red Deer, Alberta T4N 6K8
Telephone: (403) 340-7654
Fax: (403) 340-7662

Office of the Regional Water Manager
Bow Region
200, 3115 - 12 Street, NE
Calgary, Alberta T2J 7J2
Telephone: (403) 297-6582
Fax: (403) 297-2749

Office of the Regional Water Manager
Prairie Region
200 – 5 Avenue, S Provincial Building
Lethbridge, Alberta T1J 4L1
Telephone: (403) 382-4254
Fax: (403) 381-5337

Licensing and Permitting Standards Branch
Water Management Division
9th Floor, Oxbridge Place
9820 – 106 Street
Edmonton, Alberta T5K 2J6
Telephone: (780) 427-8985
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