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# Pesticide Regulation

March 2006

## Major Findings:

- Like most states, Minnesota relies on the federal pesticide registration process to help ensure that pesticide use will not have unreasonable adverse effects.
- The Minnesota Department of Agriculture's licensing of pesticide applicators and dealers and regulation of pesticide storage facilities meet or exceed federal and state laws.
- The department imposes numerous enforcement actions, including monetary penalties, for law violations, but it does not fully evaluate their consistency or effectiveness.
- Pesticide application information in Minnesota is not sufficiently available to all people who could be affected by pesticide applications.
- The department has a reasonable process for investigating cases alleging human or animal exposure to pesticides, but methods for collecting pesticide application records are not always thorough.
- The department has a program to collect waste pesticides, but it only partially fulfills its statutory obligation.
- The department has done a good job monitoring the use of agricultural

pesticides and their effects on groundwater and surface water, but it has not done enough to monitor the use and effects of nonagricultural pesticides in urban areas.

## Key Recommendations:

- The Department of Agriculture should evaluate the consistency and effectiveness of all of its enforcement actions.
- The Legislature should require advance notice by land managers about pesticide applications toxic to bees and require the department to evaluate the merits of extending this requirement to other similarly risky situations.
- For certain investigations, the department should examine pesticide application records in person.
- The department should ensure that waste-pesticide disposal options exist statewide.
- The department should develop and implement a consistent approach to monitor urban pesticide use biennially, as state law requires.
- The department should increase its monitoring activities to include surface water sites in sensitive urban areas and, at the least, test the samples for nonagricultural pesticides.

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**Overall, the Minnesota Department of Agriculture does a good job regulating and monitoring pesticides, but improvements are needed.**

## Report Summary

A complex array of state and federal laws provides the framework for how Minnesota regulates pesticides. The Department of Agriculture is the state's lead agency for enforcing pesticide requirements. In fiscal year 2005, the department spent \$10.7 million to regulate pesticides—most of it coming from fees paid by the pesticide industry.

### **Minnesota Relies Heavily on the Federal Government to Impose Pesticide-Use Restrictions**

Like nearly all states, Minnesota requires that pesticide products be registered in the state prior to their distribution or sale. The Department of Agriculture relies on the federal registration process to help ensure that pesticides will not have unreasonable adverse effects on the environment or human health in Minnesota.

Although the department can request any relevant information when registering pesticide products and can impose additional use restrictions, the department did so only three times in the last 15 years. The department should develop criteria to identify when it would be appropriate to review product information in greater detail before registering products.

### **The Department Meets or Exceeds Federal and State Requirements on Licensing Pesticide Applicators**

The department tests and certifies pesticide applicators, licenses dealers, and enforces safeguards for storage facilities. Its state plan for certifying applicators sets stricter controls than federal law in several ways.

### **The Department Cannot Evaluate the Consistency or Effectiveness of All of Its Enforcement Actions**

The department imposes numerous enforcement actions for pesticide violations, ranging from relatively mild written advisories to serious monetary penalties. Over the past five years, the rate of enforcement actions per investigation and the proportion with monetary penalties increased.

The department takes certain steps to make its enforcement actions, particularly monetary penalties, consistent, but it cannot

evaluate whether its enforcement actions overall are fair and deter violators. It should determine the consistency and effectiveness of all of its enforcement actions, which will require improving its database. Department staff acknowledge the limitations of their existing information system and are in the process of replacing it.

### **Information on Certain Pesticide Applications Is Not Sufficiently Available**

Information on pesticide applications comes from records maintained by pesticide applicators and, in limited circumstances, by advance notice of a pesticide application or the posting of warning signs at application sites. Federal and state laws regulate application records, and, in Minnesota, these records are generally not available to the public. Only the department, customers, physicians, and veterinarians have legal access.

Minnesota requires that residents near application sites receive advance notice about pesticide applications only prior to mosquito or gypsy moth treatments or when other applications are made to reduce public health risks. Unlike certain other similar states, Minnesota does not require advance notice to beekeepers for the application of pesticides toxic to bees. Some beekeepers have suffered losses due to pesticide applications.

The Legislature should require land managers to provide advance notice about pesticide applications toxic to bees when nearby beekeepers formally request notification. Further, it should ask the department to evaluate the feasibility of extending the requirement to other applications that could threaten human health or pose serious economic harm.

### **Investigations Are Generally Reasonable But More Rigorous Verification of Application Records Is Sometimes Needed**

Minnesota statutes prohibit applying pesticides beyond the intended site or in a manner that endangers humans or wildlife. Since 2000, the department has investigated more than 90 cases alleging human or animal exposure to pesticides, and its process is generally reasonable. An important part of the department's

**The department should develop criteria for when it will review federally-approved pesticide products in greater detail.**

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**For certain cases, department inspectors should review pesticide application records in person.**

investigations is interviewing pesticide applicators and reviewing application records. In some cases, however, inspectors asked for faxed copies of application records and did not seek the records in person. Due to the adversarial nature of some cases, this method could produce incomplete investigations.

The department should determine when its inspectors must make independent, in-person verifications of pesticide applications. This is particularly important for cases where the actual pesticide application or its date is in question.

#### **Waste Pesticide Disposal Is Not Available Statewide as Required**

Statutes require that the department operate a program to collect waste pesticides generated in the state and designate a place at least every other year for residents of each county to dispose of unused pesticides. From 1989 through 2003, the department held one-day events at which farmers and agricultural businesses could drop off unwanted pesticides.

In fiscal year 2004, the department made changes and sought cooperative agreements with county household hazardous waste programs to collect agricultural waste pesticides along with waste pesticides that counties were already collecting from households. However, one-third of Minnesota's 87 counties, many of them highly agricultural, have declined to participate. In fiscal years 2004 and 2005, the allotments for waste pesticide disposal were not fully spent.

The department should ensure that disposal options exist statewide, as required by law. It could seek to expand contracts in counties that agree to accept agricultural waste pesticides from outside their boundaries or revise its funding formula to encourage nonparticipating counties to enroll.

#### **The Department Does Not Adequately Monitor Urban Pesticide Use**

Minnesota statutes require that the Department of Agriculture monitor rural and urban pesticide use on a biennial basis. The department monitors rural pesticide use—defined as both the amount of pesticides used and the management techniques employed—in various ways.

Most importantly, in January 2005, the department released its first report on the amount and type of pesticides used on four major crops in Minnesota. In early 2006, it expects to issue its first report on the techniques that corn farmers statewide use to manage pests and pesticides.

In contrast, the department has not conducted similar statewide surveys that measure the amount of pesticides used in urban areas, nor does it have a process for doing so. With the exception of two statewide surveys of school districts in the early 2000s, most of the department's work regarding urban pesticide use has focused on isolated surveys of pest management practices in particular watersheds.

Monitoring urban pesticide use is not a simple task, and there are few if any models for the department to emulate. While a complete accounting of all urban pesticide use is impractical, the department could consider monitoring certain types of nonagricultural pesticide applications, such as those made in buildings or to lawns and gardens by hired applicators. Alternatively, it could survey school districts about the amounts and types of pesticides they use. As another option, the department could collect product sales data during the registration process in such a manner that would allow staff to estimate the amount of nonagricultural pesticides distributed in the state.

#### **The Department Recently Expanded Groundwater Monitoring Into Urban Areas**

The Department of Agriculture established its central sand plains groundwater monitoring network in 1999. It currently consists of 86 sites with 193 specialized, dedicated monitoring wells in an area of heavy agricultural use and high soil sensitivity to pesticides. At about the same time, the department also set up a natural springs monitoring network in southeastern Minnesota that now consists of six springs.

In 2004, the department began expanding its groundwater network. By late 2005, the department had installed or constructed 40 additional groundwater monitoring wells in southwestern, south central, northwestern, and west central Minnesota. The department anticipates drilling more wells in north central, east central, and northwestern Minnesota in 2006. Also, in

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**While the department has good methods for measuring rural pesticide use, it needs some for pesticides in urban areas.**

**As it has for groundwater, the department should expand its activities for monitoring surface water into urban areas.**

2004 and 2005, it expanded its groundwater monitoring activities into urban areas by analyzing samples collected by the Minnesota Pollution Control Agency from the Twin Cities, Rochester, and St. Cloud areas.

### **Surface Water Monitoring Is Still Focused on Agricultural Areas**

The department established an automated surface water monitoring network in 1990, focusing on watersheds most sensitive to agricultural pesticides. The number of sites has fluctuated over the years, largely in response to budget concerns and changing priorities. In 2005, the department maintained automated sampling stations on five rivers and streams, all located in agricultural areas in southeastern and south central Minnesota.

In 2002, the department began expanding its surface water program by manually collecting samples from other agricultural areas. By 2005, it was collecting additional samples at 51 largely agricultural sites throughout a large part of the state. Because it does not collect water samples from urban areas, the department does not analyze any of its surface water samples for pesticides commonly used in urban areas.

Given the department's limited resources, it was correct to initially focus water monitoring efforts in the most sensitive agricultural areas of the state. The department's recent decision to expand groundwater monitoring into urban areas will provide a more complete picture of groundwater and pesticides. Similar information about the condition of surface

water, however, is lacking, and we recommend that the department likewise expand its surface water monitoring activities into highly sensitive urban areas and test samples from these areas for nonagricultural pesticides.

### **The Department Aggressively Developed Best Management Practices But Now Needs to Evaluate Them**

The department considers developing voluntary best management practices when specific pesticides are frequently detected in groundwater or when their concentrations in surface water exceed 10 to 50 percent of the appropriate water standard. In 2004, the department adopted groundwater best management practices for five agricultural pesticides, surface water best management practices for two agricultural pesticides, and one set of general herbicide best management practices. The department now needs to evaluate their effectiveness.

The full evaluation report, *Pesticide Regulation*, includes the Department of Agriculture's response and is available at 651-296-4708 or:

**[www.auditor.leg.state.mn.us/  
ped/2006/pesticide.htm](http://www.auditor.leg.state.mn.us/ped/2006/pesticide.htm)**

## **Summary of Agency Response**

*In a letter dated February 15, 2006, Agriculture Commissioner Gene Hugoson said he was gratified with the evaluation's finding that, overall, the department does a good job regulating and monitoring pesticides, and he agreed "there are opportunities for improvement as noted in the report." He wrote that the department takes very seriously its pesticide responsibilities and accepts the ten recommendations directed to it in the report. He said the department has already "taken steps to implement several" of the recommendations, while "others will take more time to implement." He noted that the eleventh recommendation, requiring advance notice for certain pesticide applications, "is likely to be controversial, as some stakeholders will question the need for and value of such a requirement. However, the MDA will work with the legislature to provide information and resources to support informed debate."*