

REPORT TO

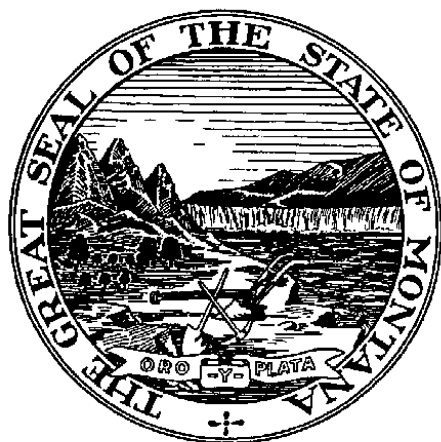
ENVIRONMENTAL QUALITY COUNCIL ON

PESTICIDE AND GROUND WATER ENFORCEMENT

PROGRAMS

PURSUANT TO TITLE 75, CHAPTER 1, PART 3,

SECTION 314



MONTANA DEPARTMENT OF AGRICULTURE

RON de YONG, DIRECTOR

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Montana Department of Agriculture

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PESTICIDE PROGRAM

The Montana Department of Agriculture (MDA) enforces the Montana Pesticide Act (MPA), Title 80, Chapter 8, MCA, and portions of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Enforcement of the federal law is accomplished through a cooperative agreement with the U.S. Environmental Protection Agency (EPA). This agreement provides primacy to Montana acting through the MDA to enforce pesticide use regulations.

Since FY-2000, the MDA has entered into an annual cooperative agreement with the United States Department of Agriculture (USDA) to inspect application records involving the use of restricted use pesticides by private farms. The MDA conducts approximately 65 initial (new) inspections and 5 follow-up inspections from the previous year. Follow-up inspections are those inspections where the applicator was found to be in non-compliance the previous year. The MDA and USDA agree that the USDA will handle any formal enforcement actions resulting from these inspections.

1a. Activities and Efforts Taking Place to Promote Compliance Assistance and Education

Pesticide program staff have undertaken many activities to promote compliance within the pesticide use community. These activities include providing information and education, technical assistance, conducting sampling and inspections, investigating complaints and issuing enforcement actions consistent with statute.

Information/Education

The pesticide program promotes education to ensure that dealers and applicators are qualified. As required under 80-8-109, MCA, the MDA develops and conducts appropriate educational programs for individual pesticide use categories. The educational programs inform individuals working with pesticides of the correct methods for formulating, applying, storing, disposing, handling and transporting pesticides. These trainings also include information on proper sale/application record keeping.

The MDA conducts these educational programs for pesticide dealers, commercial applicators and governmental applicators in cooperation with MSU Extension Service. The MDA also provides "initial" training and testing for both commercial applicators and private farm applicators. Subject to available funds, the MDA and MSU Extension Service establish programs for the general public and retailers on pests, pesticide use safety and alternative pest control methods. A variety of training manuals are available to provide education on pesticide sales, handling, use, application, and disposal. Passing a qualification exam given by the MDA is required for licensing of commercial and governmental applicators. An 80 percent or higher score on the examination is required for an applicator to be "certified" and qualified to use "restricted use" category pesticides. A 70 percent score on the examination only qualifies an applicator to use "general use" pesticides. Once licensed, all of these individuals must obtain re-certification training credits to remain qualified to obtain a license.

The education component gives the MDA an opportunity to encourage participants to comply with pesticide laws by discussing reasons for the law, training individuals on how to comply with farm worker safety and help them understand each specific element of pesticide law. The information provided informs participants of the consequences of noncompliance including the potential detrimental environmental effects from illegally used, stored or sold pesticides.

Technical Assistance

The MDA assists the regulated community and the general public by providing information and technical expertise on pesticide related issues and is able to provide a certain level of one-on-one personal assistance to members of the regulated community. This assistance is available at field offices and from Helena-based Agricultural Specialists, through formal training sessions, testing, routine inspections and compliance assistance inspections.

New to the pesticide program in 2006-2007, was the start of a Pesticide Intern program. During the summer months, the MDA hires two interns to travel the state and deliver informational material to retailers of pesticides that helps promote program goals and requirements. Over this biennium, interns visited more than 550 retail establishments. The program was very well received and we hope to continue the program in 2008 and 2009.

Sampling and Inspections

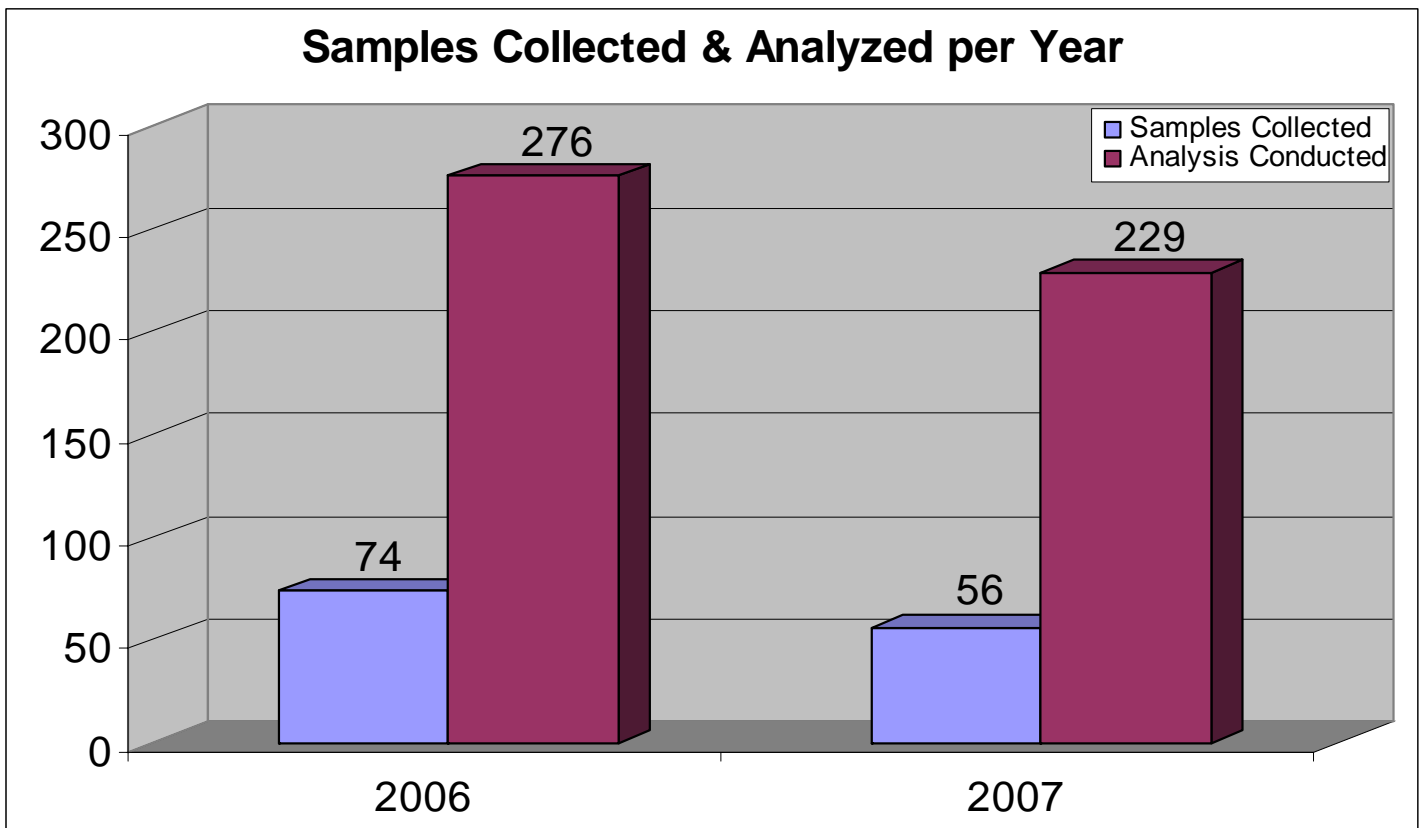
The Legislature established authority to sample (Section 80-8-302, MCA); inspect (Section 80-8-304, MCA) and analyze pesticides or devices distributed within the State of Montana to determine whether such pesticides or devices meet the minimum standards listed on the label. The Analytical Laboratory Bureau, located on the Montana State University campus, performs the chemical analyses for the MDA, Extension Service and the general public.

The inspection and investigation authority granted under Section 80-8-304, MCA, allows department staff or an authorized agent, upon reasonable cause, with a warrant or consent of the inhabitant or owner, to inspect or investigate. Compliance assistance (CA) inspections of licensed dealers and applicators are routinely conducted. Although discretionary, a licensee is eligible for CA through their first inspection. Routine inspections are conducted every 5-6 years thereafter. Routine inspection goals are determined prior to the inspection year and average approximately 750 inspection events per year. The routine inspections are conducted with commercial/government applicators, dealers and permitted farm applicators. In addition to the routine inspection program, inspections are conducted with individuals upon the receipt of a complaint (for cause) or if there is reason to believe that someone is in noncompliance with the pesticide laws, the label directions or is in violation of the Federal Worker Protection Standard (WPS).

The number of complaint investigations varies from year to year because pesticide use varies greatly with weather conditions, pest outbreaks, rainfall, crop types and commodity prices. The number of complaints, reports of damage and referrals from other agencies also vary from year to year for the same reasons. Routine marketplace inspections are conducted at retailers to verify that products offered for sale meet the pesticide law registration requirements.

The Legislature also established the authority under Section 80-8-304, MCA, to take residue samples related to either routine inspections or complaint investigations. The number of residue samples per year varies according to the number of inspections/investigations conducted during the use season. The number of samples collected per investigation depends on the number of pesticides involved in the investigation and the scope of the investigation. Analytical results become part of the evidence for enforcement related issues.

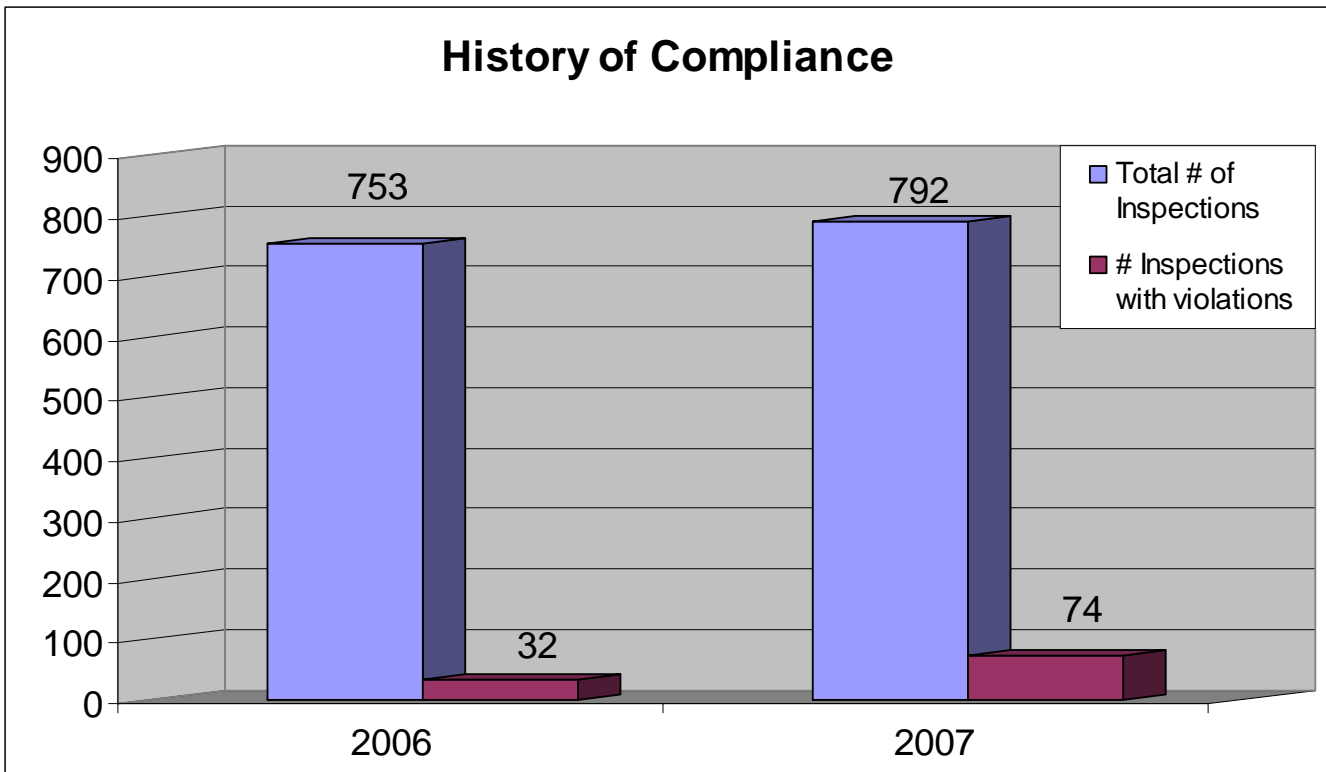
The following graph depicts the number of enforcement samples collected (blue) and the number of analysis conducted (red) during 2006-2007:



History of Compliance

The MDA conducts comprehensive inspections and investigations. Inspections and investigations cover such topics as use, selling, labeling, registration, storage, records and licensure compliance. Therefore, one inspection can result in multiple violations in any of the above categories.

The graph on page 4 illustrates the number of inspections conducted yearly and the number of inspections that resulted in one or more violations. These data indicate that about 90 to 95 percent of pesticide applicators and dealers are in full compliance. The increased number of non-compliance issues found in 2007 was a direct result of the summer Intern program. Non-compliances mainly meant dealing with older, unregistered pesticides that were being offered for sale. With MDA's assistance, retailers were quick to correct any non-compliance issues.



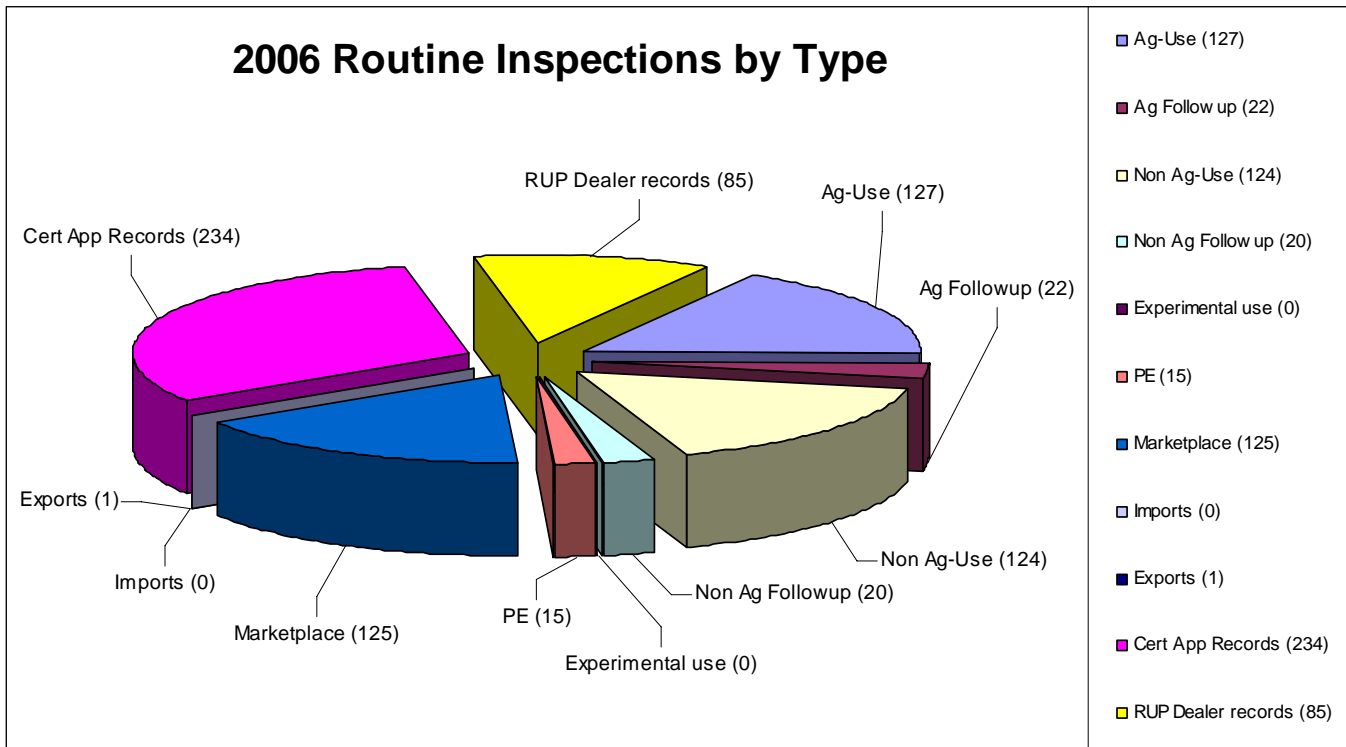
Private Applicator Records Inspection

In FY 2006 and FY 2007, inspections were conducted to check records of restricted use pesticide applications that were conducted by private farm applicators. This program is unique in that it allows for compliance assistance during the inspections to help applicators reach the record keeping goals of USDA. Approximately 50 percent of those inspected for the first time needed some type of compliance assistance during the inspections to meet law record requirements. Overall compliance, including those reaching compliance with assistance, averages 80-90 percent. The program is funded through a Cooperative Agreement between the USDA and MDA. MDA staff conduct approximately 65 of these inspections per year following guidelines set forth by the USDA.

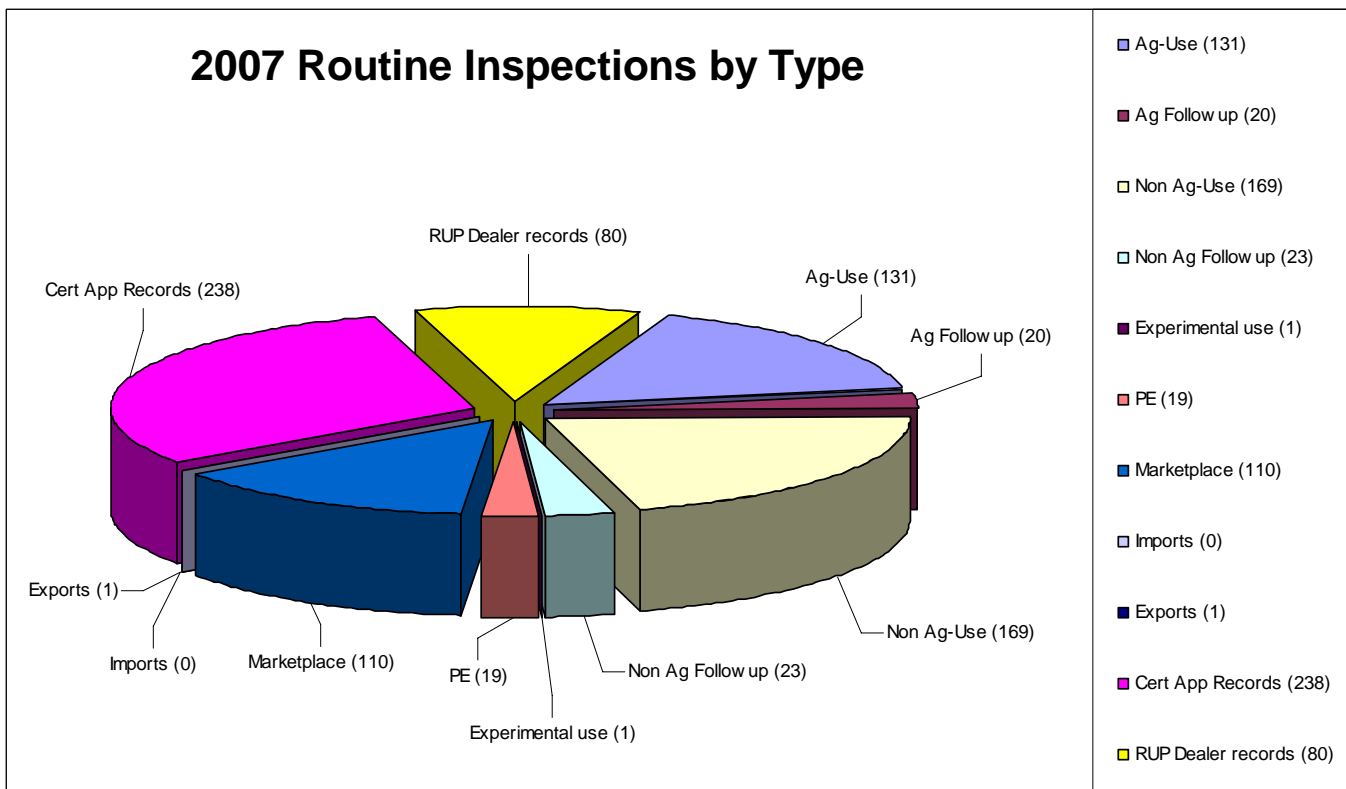
Routine Commercial, Governmental and Marketplace/Dealer Inspections

The following charts represent the number of routine inspections conducted in fiscal years 2006 and 2007. The inspections are classified according to the licensee type (marketplace, agricultural applicator, non-agricultural applicator, etc.) or by purpose of the inspection. For example, follow-up inspections are “for-cause” inspections, usually a citizen tip or complaint. Generally, the number of inspections is the result of an effort to meet department goals and generate a uniform enforcement presence in the regulated community. For the two years demonstrated in the graphs on the next page, the distribution of inspections among various parts of the regulated community has remained relatively constant.

2006 Total: 753



2007 Total: 792



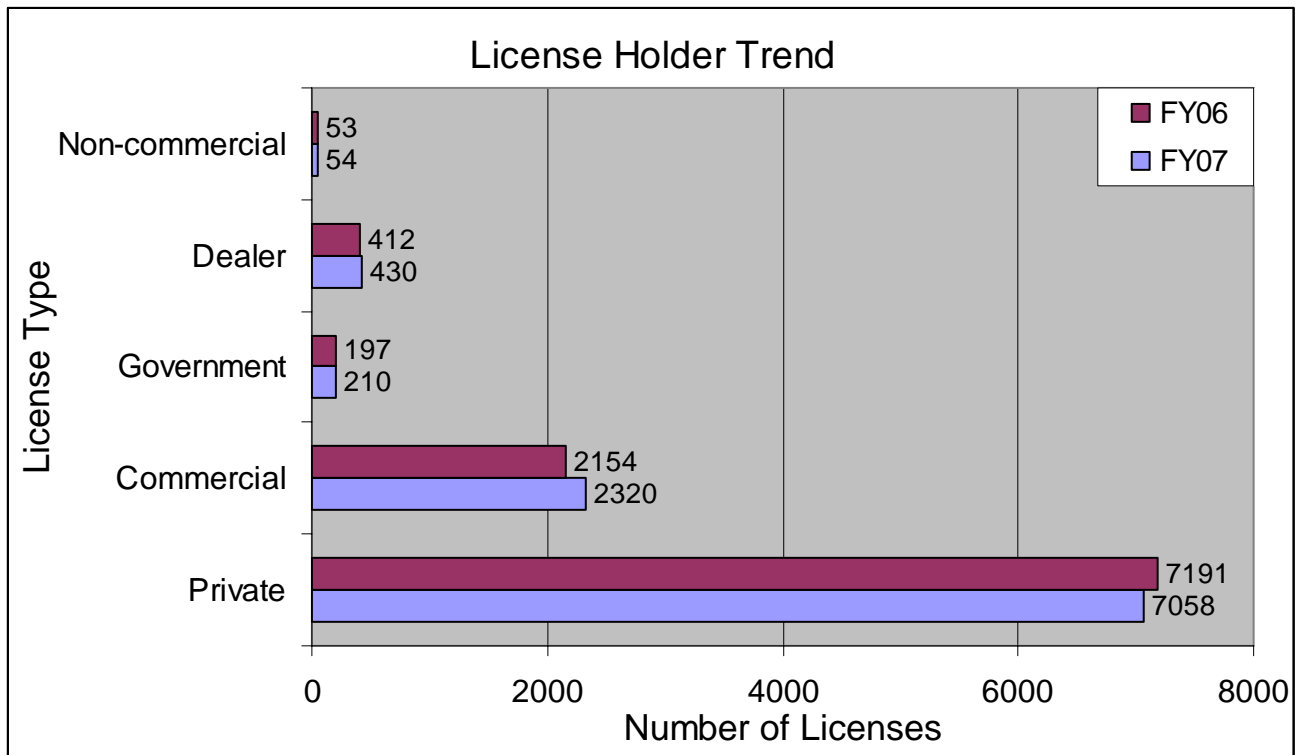
1b. The Regulated Community and Portion in Compliance

Pesticide manufacturers and formulators are businesses that repackage or actually produce pesticides. They can be identified because they are required to register as a Producer Establishment with the EPA. Approximately 119 Producing Establishments are currently registered with EPA and doing business in Montana. The MDA conducts between 15 and 25 inspections per year that specifically target these facilities.

Pesticide dealers are required to become licensed. The number of licensed pesticide dealers has remained stable during 2006 and 2007 ranging from 412 to 430, respectively. Dealers who sell pesticides for home, lawn and garden use only are not required to be licensed; however, they remain part of the regulated community. On average, staff conducted approximately 200 routine dealer/marketplace inspections each year.

Commercial and governmental applicators are also required to obtain a Montana license. Commercial applicators are persons who apply pesticides for hire, and governmental applicators are persons who apply pesticides for a public entity for whom they are employed. Operators are persons who apply pesticides under the supervision of a certified or licensed applicator. The supervising applicator is required by law to train and license their operators. The number of people licensed as pesticide applicators and operators in 2006 and 2007 has seen a slight increase (see following chart).

Non-commercial applicators are individuals who cannot be classified as a commercial, public utility, or governmental certified applicator, or who cannot be classified as a private applicator and who choose to use restricted use pesticides. A certified non-commercial applicator may only use restricted use pesticides on lands owned, rented, or leased by his employer or himself/herself. The total number of people licensed as non-commercial applicators in 2006 and 2007 has basically remained the same. (see following chart).



Farm applicators are required to obtain a license only if they wish to apply “restricted use” pesticides. The license is good for 5 years and requires 6 credit hours of recertification training over that period to remain qualified. Montana maintains a yearly average of approximately 7,000 licensed private (farm) applicators. There are an unknown number of people who apply general use pesticides such as home lawn and garden products to their own property and are not required to become licensed.

As of July 1, 2007, the total number of licensed applicators and dealers in Montana was approximately 10,072.

1c. Number, Description, Method of Discovery

During FY 2006 and 2007, the number of investigations averaged between 25-35 per year. Most pesticide use violations are discovered through complaint investigations resulting from tips and complaints. Case significance or severity depends on a number of factors including the type of violation and potential or actual occurrence of harm from pesticides. Each case has its own unique set of circumstances and is investigated according to Standard Operating Procedures.

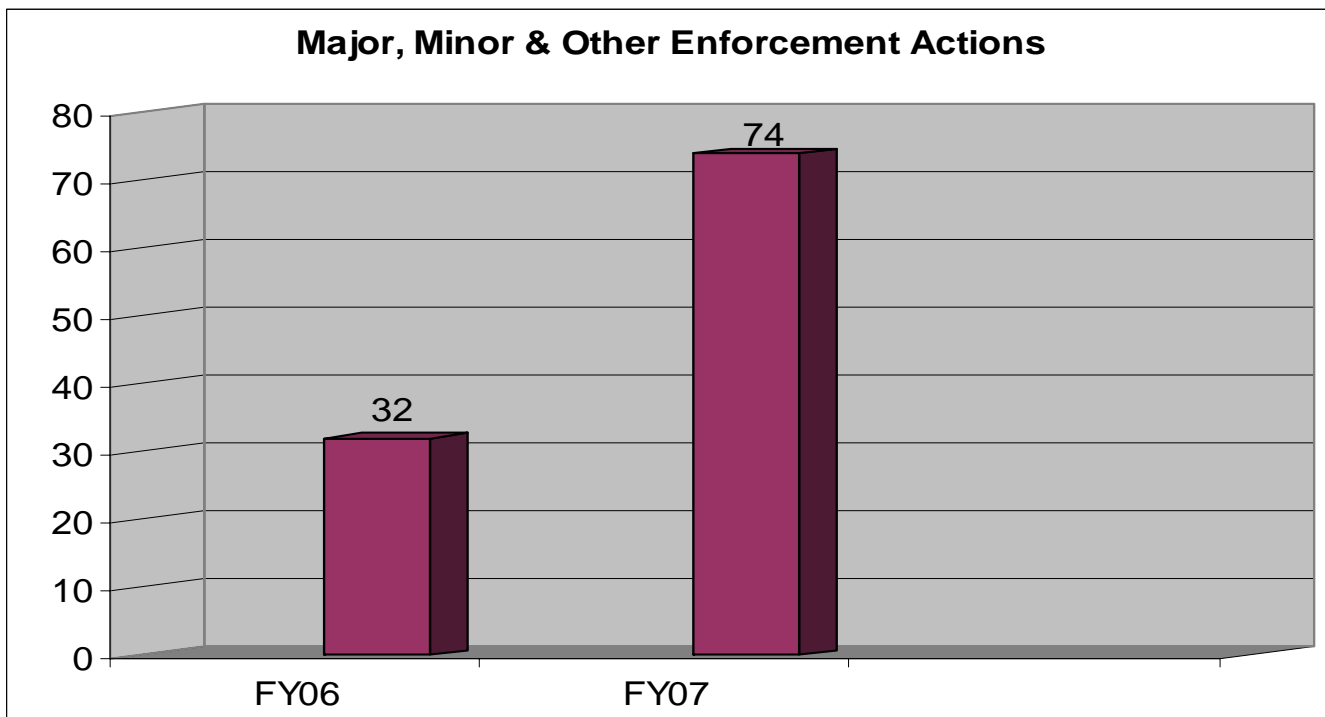
Significance of Noncompliance and Enforcement Options

Section 80-8-211, MCA, establishes violations that are cause for revoking or modifying a license. Section 80-8-303, MCA, authorizes the MDA to embargo pesticides that are adulterated, misbranded, or not registered. Section 80-8-304, MCA, authorizes compliance orders requiring a person to correct violations and clean up pesticide spills. Upon completion of the investigation, a review process determines if there is sufficient evidence to support enforcement action. Section 80-8-306, MCA, authorizes written warnings and administrative civil penalties, and enables the department to seek judicial civil penalties or criminal penalties.

Minor violations often involve general use pesticides or record keeping violations that do not result in harm to humans or the environment.

The Montana Pesticide Act defines major or serious violations that are subject to civil penalties in Section 80-8-306 (5)(e), MCA. The Act specifically states that the MDA, in determining an appropriate amount of civil penalty, is required to consider the effect on the persons ability to continue in business, the degree of harm, certain gravity factors associated with the violation, and the degree of care taken by the offender. The MDA considers all of these factors when determining the amount of the civil penalty for a violation. All enforcement actions are subject to appeal (or can be contested) according to provisions of the Montana Administrative Procedure Act.

The charts below combine both major and minor violations as well as other enforcement actions taken by the department for FY2006 and FY 2007.



The increased number of violations in 2007 reflects the number of non-compliance issues found by the Pesticide Interns during retailer visits. Most of these violation dealt with state pesticide registration issues.

1d. Unresolved Noncompliance Issues

Very few cases go unresolved past the fiscal year end. On an average, only 5-7 cases are in what would be called "unresolved" status. Generally, these are cases resulting from complaints received by the department late in the use season and are in the final stages of completion or are contested and in negotiation for settlement.

GROUND WATER PROTECTION PROGRAM:

The Montana Agricultural Chemical Ground Water Protection Act (MACGWPA) was enacted in 1989. Program accomplishments include:

- Adoption of rules.
- Increased capacity of statewide ground water monitoring system.
- Promotion of research of Montana's aquifers.
- Building cooperative working relationships with private and government groups.
- Completion of a General Management Plan for state driven pesticide-groundwater issues and a Generic Management Plan for federally mandated pesticide-groundwater management plans. Both of these documents are meant to serve as the foundation for Specific Agricultural Chemical Management Plan (SMP) and Pesticide Management Plans (PMP's).
- Repeal of a Specific Management Plan to protect groundwater in the area of the Fairfield Bench.
- Major river system-associated ground water monitoring projects.
- Relational database of monitoring results.

1a. The Activities and Efforts Taking Place to Promote Compliance Assistance and Education

The Ground Water Protection program has undertaken the following to promote compliance with the statutory goals of the program:

Information/Education

The ground water program promotes research and technical assistance. The department is dedicated to providing information and assistance to prevent ground water contamination by agricultural chemicals. Through education and outreach, the department provides information on ground water and agricultural chemical characterization, Best Management Practices (BMP) and Specific Management Plans (SMP). These plans provide for the management of agricultural chemicals to prevent, minimize and mitigate their presence in ground water. The department is involved in an ongoing process of identifying environmentally sensitive areas, soil, and aquifers. Information about agricultural chemicals in Montana ground water is provided through analytical results from the MDA's statewide monitoring program. Public meetings and pesticide certification training are used as a venue to inform the public about the locations and extent of the vulnerable or sensitive aquifers in Montana. Special project reports, detailing our monitoring of major river systems for pesticides and nitrate, are available on our web site.

It is the public policy of the state, Section 80-15-103, MCA, to protect ground water from impairment, allow for the proper use of pesticides and to provide education and training to pesticide applicators and the general public. As required under Section 80-15-106, MCA, the department is required to develop and conduct appropriate educational programs. Ground water protection is a component of all pesticide applicator training, which assures that dealers and applicators have the necessary knowledge to safely apply pesticides in Montana. The MDA provides education and training for commercial, non-commercial and governmental

applicators and the general public on ground water protection, agricultural chemical use, and the use of alternative agricultural methods.

The MDA, in cooperation with MSU Extension Service, provides initial and recertification training and testing of farm applicators. One of the major topics covered during the pesticide recertification training courses is how to protect Montana's ground water from pesticide or fertilizer contamination. A variety of training manuals are available at a nominal charge to provide education on agricultural chemical handling, use, application, and disposal. The Montana General Agricultural Chemical Ground Water Management Plan is a comprehensive strategy for Montana to protect ground water from agricultural chemicals. The Generic Management Plan discusses the philosophy; requirements, development and implementation of federally mandated management plans and outlines the process to be used in their development.

The "*Pesticide and Fertilizer Use Around the Home, Effects on Water Resources and Alternatives to Chemical Controls*" pamphlet, developed in cooperation with MSU Extension Water Quality Program, provides information to homeowners on good stewardship practices to protect ground and surface water resources from lawn and garden chemical impacts.

Technical Assistance

The position of the MDA, as guided by the Montana constitution and statute, is that agriculture and ground water in the state can be protected. The department dedicates most of its assistance efforts to prevention of ground water contamination by agricultural chemicals through the use of MDA, EPA, and MSU Extension Service bulletins, brochures, reports, other training aids, participation in educational programs, direct contact with the regulated community, and sharing our analytical data with other agencies and organizations working to protect Montana's water quality.

The Montana Agricultural Chemical Ground Water Protection Program (MACGWPA) is presently a research and technical assistance program. General statewide ambient ground water monitoring for contamination by agricultural chemicals has been ongoing since 1984, before the law was passed. The MACGWP Act required the development of the General Management Plan principally as a tool to identify environmentally sensitive areas, soils, and aquifers and to develop Best Management Practices for the use of agricultural chemicals in Montana.

Section 80-15-202, MCA, directs the MDA to conduct monitoring to determine if agricultural chemical residues are present in ground water resources and to determine the likelihood of agricultural chemicals to enter ground water. The department initiated a ground water monitoring program in 1984. The department established a Permanent Monitoring Well network in 1991. The network has grown from the initial eight dedicated monitoring wells to its present size of 44. Wells are located in areas that are representative of Montana agricultural production, as well as areas with extensive noxious weed management. The department also conducts project specific monitoring to augment permanent well monitoring efforts, generally as a response to new scientific research or to meet state identified needs.

Monitoring results indicating the presence of an agricultural chemical are evaluated to determine an appropriate response. An appropriate response may include well owner notification, recommendations, additional monitoring, referral to the Department of Environmental Quality, referral for enforcement action, investigation or study, and development

of a Montana Specific Agricultural Chemical Ground Water Management Plan (SMP) pursuant to Section 80-15-212, MCA. Monitoring activities and data are also incorporated into technical, educational and compliance assistance activities to promote awareness and resource stewardship.

Inspections

The Act allows routine inspection of persons subject to the Specific Management Plans. The MDA has authority (Section 80-15-401, MCA) to sample, conduct inspections, collect samples for analysis, inspect monitoring equipment, and inspect and copy records required by the Montana Agricultural Chemical Ground Water Protection Act. The MDA can investigate conditions relating to compliance with agricultural chemical labels, management plans, monitoring requirements, groundwater protection requirements and violations of plans or compliance orders. The MDA Laboratory Bureau located on the Montana State University campus conducts laboratory analysis for the MDA, MSU Extension Service and the public.

Specific Management Plans (SMP)

Section 80-15-212, MCA, requires the MDA to adopt "Specific Agricultural Chemical Ground Water Management Plans" when necessary to protect groundwater. The 2005 Legislature passed HB 107, which clarified conditions requiring a Specific Management Plan (SMP). This gave the department more flexibility in addressing the presence of low level of agriculture chemicals in ground water through educational measures to prevent, minimize and mitigate pesticide presence in ground water that would be more appropriate and cost effective than development of a Specific Management Plan under administrative rule. Under provisions of HB 107, a SMP is required when an agricultural chemical is found at 50 percent of the concentration level believed to cause a human health risk.

To date, the department has adopted one SMP, which was developed under provisions prior to passage of HB 107. That SMP was for the wild oat herbicide imazamethabenz-methyl, and it applied to persons in the Fairfield Bench area who use this pesticide. The SMP established voluntary procedures, because of the low levels of chemical present on the bench, including irrigation management, chemical rotation, calibration, integrated pest management and record keeping. The SMP was evaluated in 2005. Statistical analysis of four years of monitoring data showed that levels of imazamethabenz-methyl did not increase in the area. A survey of users showed that Best Management Practices (BMP) have been implemented by a majority of producers. The Voluntary Advisory Committee for the SMP found that the educational approach of the SMP was successful for the Fairfield community. ARM 4.11.1201 through 4.11.1209 relating to the specific agricultural ground water management plan was repealed on August 26, 2006.

1b. The Size and Description of the Regulated Community and the Estimated Proportion of that Community that is in Compliance

The Size and Description of the Regulated Community

All persons licensed as pesticide dealers, fertilizer dealers, commercial, government and farm pesticide applicators and an unknown number of persons who sell or apply general use pesticides and fertilizers but are not required to be licensed are regulated. In general, they are required to use agricultural chemicals in a manner that does not violate ground water standards or result in ground water impairment.

The regulated community is not as easily identifiable as with other programs. The regulated community is essentially the landowners above the potentially affected aquifer or the person(s) who use agricultural chemicals that could contaminate an aquifer. These include chemical applicators, chemical dealers or manufacturers (through spills and mishandling) and individual landowners. Pesticide dealers, fertilizer dealers, and some pesticide applicators are required to be licensed by the MDA and would be identifiable for training and possible regulation. The same is true for landowners who desire training on ground water pollution prevention techniques or Best Management Practices (BMPs) and Best Available Technology (BATs).

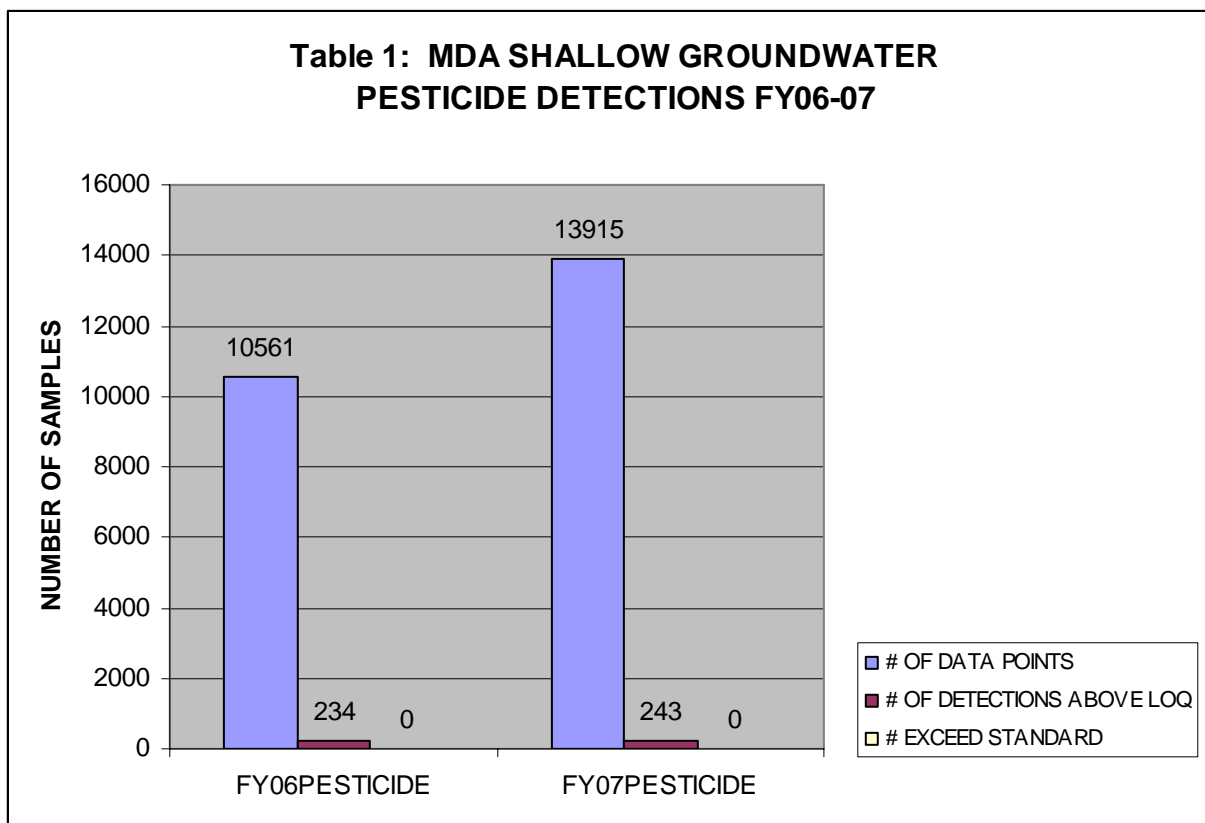
1c. The Number, Description, Method of Discovery and Significance of Non Compliances, Including those Non Compliances that are pending

Number, Description and Significance of Noncompliance

Since the Act became effective, the MDA has issued four Administrative Orders requiring cleanup of pesticide spills, sampling soils and ground water, and some soil removals. These orders were issued using authority of the Montana Pesticide Act. The department has issued informative letters to fertilizer facilities where soils may be contaminated with high levels of nitrate that have the potential of impacting ground water. The letters provided information to improve operational activities to minimize further contamination. The information contained Best Management Practices for handling and storage containment of fertilizers.

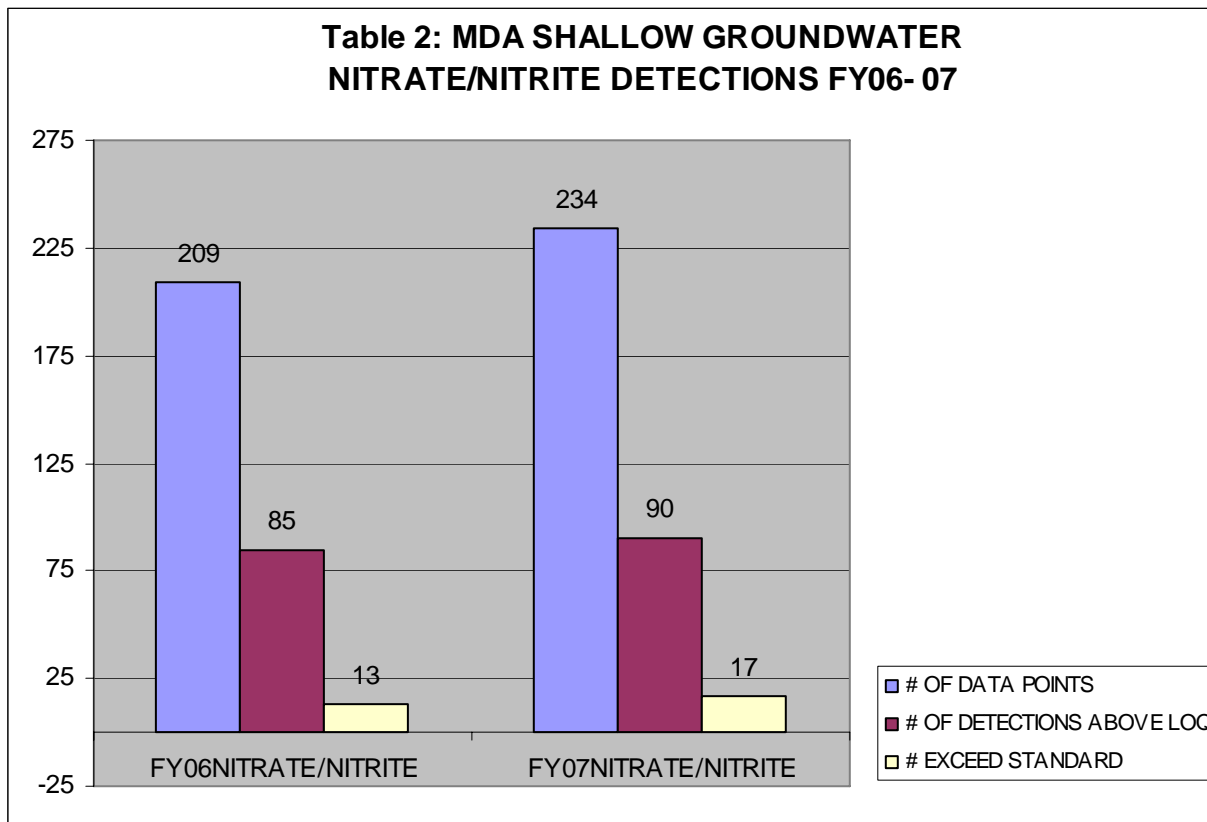
Pesticide Detections

In 2006, the department began using a new method for pesticide analysis called the Universal Method, which our laboratory developed for the groundwater program. This method, while reducing our recovery rates, allows us to verify the presence of many pesticides at part per trillion concentrations. Therefore, our detections of pesticides has greatly increased. To date, none of the verified non-point source detections for pesticides from ambient monitoring of ground water have exceeded, or approached, a Montana Water Quality Standard. In Table 1, the number of data points, detections and standard exceedences are represented. In both 2006 and 2007, only 2% of our analyses for pesticides resulted in a detection above our laboratories limit of quantification (LOQ).



Nitrate Detections

As shown in Table 2, in FY06, 41% of our analyses contained nitrate detections, and 15% of those exceeded the drinking water standard. In FY07, 38% of our analyses contained nitrate detections and 19% of those exceeded the drinking water standard. When it is unclear whether nitrate concentrations are due to fertilizer or another source of impairment, the department works with the Montana Department of Environmental Quality to identify the source. At this time the program is analyzing nitrate occurrences and concentrations which we suspect are related to fertilizer or land management practices, for prioritization and follow up activities.



Method of Discovery

Monitoring results are used to determine if a pesticide is present in ground water resources. Additional sampling is conducted to verify all initial detections. Verified detections are further evaluated to determine the relative health and environmental risk that an agricultural chemical presence represents. The Department of Environmental Quality is responsible for development of human health and environmental standards. The relative significance of an agricultural chemical residue in ground water is related to the percentage of the Montana Water Quality Standard met. The Department of Agriculture determines the source(s), extent and magnitude of impaired or contaminated ground water. Dependent upon the contamination source, (i.e., point or non-point source) the Department discusses and implements an appropriate enforcement and/or mitigation response.

1d. Description of How the Department has addressed the Non Compliance Identified in Subsection (1)(c) and a List of the Non Compliance Left Unresolved

At the time of this report, there are no significant non-compliance issues related to non-point source ground water contamination from agricultural chemicals.