
Livestock Nutrient Management Program

**Report of Program Activities
January 1 - December 31, 2008**



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Acronyms used in this report:

AFO	Animal Feeding Operation
CAFO	Concentrated Animal Feeding Operation
EPA	Environmental Protection Agency
MOU	Memorandum of Understanding
NMP	Nutrient Management Plan
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service (a branch of the US Department of Agriculture)
RCW	Revised Code of Washington
TMDL	Total Maximum Daily Load
WSDA	Washington State Department of Agriculture
WSU	Washington State University

Definitions of Key Terms

Source: Concentrated Animal Feeding Operation (CAFO) National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit, effective 7/21/06, issued by the Department of Ecology.

"**Animal feeding operation**" or "AFO" means a lot or facility that meets both of the following conditions:

- (a) It has animals (other than aquatic animals) that have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period; and
- (b) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility where animals are confined.

"**Concentrated animal feeding operation**" or "CAFO" means an AFO that meets the size threshold of a Large CAFO or that is determined by Ecology to be a significant contributor of pollutants to waters of the state. A large CAFO dairy stables or confines 700 or more mature dairy cows, whether milked or dry.

"**Manure**" is defined to include manure, bedding, compost, and raw materials, or other materials commingled with manure or set aside for disposal or process wastewater.

"**Process Wastewater**" means water directly or indirectly used in the operation of the CAFO for any or all of the following: Spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other CAFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding.

Executive Summary

WSDA's Livestock Nutrient Management Program carries out the state's dairy nutrient management program and coordinates with the Department of Ecology on the regulation of those dairies and other Concentrated Animal Feeding Operations (CAFOs) that hold a National Pollutant Discharge Elimination System (NPDES) permit.

This report summarizes the inspection and enforcement activities of the Livestock Nutrient Management Program in 2008. It also summarizes the significant activities and issues the program was involved with during the year.

There were 465 dairies listed with the Livestock Nutrient Management Program at the end of 2008, a net decline of 52 dairies (10%) from the start of the year. WSDA inspectors conducted 257 routine dairy inspections during 2008, with 73% of these inspections conducted within 22 months of the previous routine inspection, the program's inspection interval goal. For many facilities not receiving a routine inspection within 22 months, inspectors had been on site recently for some other reason and were familiar with conditions. For others, inspectors re-arranged schedules, when possible, so that a higher risk facility was inspected within the interval and a lower risk site was postponed.

In 2008, inspectors found 325 (96%) of the 340 dairies they inspected through routine or other inspections had no discharges and were in compliance with their nutrient management plans. Fifteen facilities had a combination of site or implementation problems that required formal enforcement. Of the 325 compliant dairies, 40 (12%) had some minor issues that resulted in a warning letter from their inspector.

WSDA responded to 46 complaints about dairies in 2008, an increase of one from 2007. In all, 25 of the 55 total compliance actions taken were the result of inspections prompted by these complaints. During the year, enforcement was taken on nine discharges to waters of the state. This compares to 11 documented discharges in 2007. Most water quality complaints related to manure applications to fields. Other complaints involved storage of manure or silage, or animals with access to surface water. WSDA also responded to 23 non-dairy livestock complaints.

Ecology is the agency that administers the Concentrated Animal Feeding Operation (CAFO) permits. WSDA provides technical assistance to Ecology by reviewing permit documents and inspecting facilities operating under permit. The number of dairies and feedlots covered by general or individual permits declined from 31 at the end of 2007 to 22 at the end of 2008. Coordination between the two agencies on CAFOs and other livestock-related water quality issues is guided by a memorandum of understanding.

Other significant program activities in 2008 included work related to anaerobic digesters, TMDL planning and implementation, responding to non-dairy AFO complaints, and administrative challenges.

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The WSDA Livestock Nutrient Management Program has a biennial budget for 2007-2009 of \$1,198,600. The two funding sources are the Water Quality Account and the Water Quality Permit Account.

Livestock Nutrient Management Program and Performance Measures

The mission of the Livestock Nutrient Management Program is to protect water quality from livestock nutrient discharges and to help maintain a healthy agricultural business climate. This is to be achieved through clear guidance, education, technical assistance, equitable enforcement of state and federal water quality laws, and good communication with industry, related agencies and other stakeholders.

The program has four key strategies:

- ◆ Carry out the regulatory and inspection program for dairies under the Dairy Nutrient Management Act.
- ◆ Coordinate with the Department of Ecology on technical issues and field inspections of dairies and other livestock facilities required to hold a CAFO permit.
- ◆ Coordinate with the Department of Ecology on livestock-related water quality complaints.
- ◆ Coordinate with technical and educational agencies and the industry to assist livestock producers in better protecting the state's water quality.

Current performance measures for the program are:

Table 1. Program Performance Measures

Measure	Target	2007	2008
Percent of routine dairy inspections conducted within 22 months of the previous inspection	95%	86% 241 of 281 inspections (corrected)	73% 188 of 257 inspections
Percent of inspected dairies with no enforcement action as a result of any inspection	90%	96% 351 of 366 facilities	96% 325 of 340 facilities
Percent of formal enforcement actions issued within 30 days of field recommendation	85%	69% 23 actions 25-day average (2 were non-dairy AFOs)	71% 15 actions 36-day average

Livestock Nutrient Management Program Update

The Washington State Department of Agriculture (WSDA) established the Livestock Nutrient Management Program in 2003 when it assumed the responsibility to carry out the Dairy Nutrient Management Act, Chapter 90.64 RCW. The program also assists the Department of Ecology (Ecology) in the regulation of those dairies and other Concentrated Animal Feeding Operations (CAFOs) that hold a National Pollutant Discharge Elimination System (NPDES) permit.

Expansion of WSDA's nutrient management authority and responsibilities to cover non-dairy operations, anticipated by legislation enacted in 2003 and 2005, has not occurred. WSDA is responsible only for the state dairy program and has not been given authority to inspect or to take compliance actions on non-dairy livestock operations. Ecology continues to be responsible for administering the CAFO Permit and addressing non-dairy livestock operations. WSDA and Ecology coordinate on non-dairy livestock complaints and WSDA staff provide field and technical assistance to Ecology on permitted CAFO facilities.

Staff from both agencies, at the regional level and at headquarters, also coordinate livestock-related efforts in watersheds and on common issues. Both agencies operate under the same federal and state water quality laws and have the same basic objective: to protect the waters of the state from livestock-related pollutants. Coordination between the two agencies is guided by a memorandum of understanding (MOU). Discussions on updating the MOU were a focus in 2008.

Dairy Nutrient Management Requirements

The Dairy Nutrient Management Act, enacted in 1998, requires all licensed dairy farms to develop and implement nutrient management plans to prevent the discharge of livestock nutrients to surface and ground water. Nutrients of concern are nitrogen, which can impact both surface and ground water quality, and phosphorus, which is primarily of concern for surface water. In general, those practices that control these nutrients also control bacteria, another major pollutant associated with livestock operations.

WSDA's goal is to inspect each dairy at least once every 22 months. Inspectors evaluate the facility and site conditions, nutrient management practices and record keeping for any risk of nutrients or bacteria impacting surface or ground water quality.

A dairy farm may be required by Ecology to obtain an NPDES CAFO permit if it has a discharge. For those dairies operating under a CAFO permit, WSDA inspectors evaluate compliance with permit conditions and coordinate with Ecology on permit administration, including nutrient plan review and compliance. Currently, 12 dairies are covered by the CAFO permit with one additional dairy currently in the permitting process.

The number of cow dairies declined again in 2008. At the end of 2007, there were 517 dairies listed with the Livestock Nutrient Management Program with about 250,000 milking and dry

cows. By the end of 2008, program records showed there were 465 dairies and 244,000 animals. Though the number of dairies dropped 10 percent, the number of animals remained about the same.

Implementation of Dairy Nutrient Management Plans

The Dairy Nutrient Management Act requires that all dairies develop and implement a nutrient management plan (NMP or plan) after they receive their dairy license. The minimum requirements for the plan were established by the Conservation Commission in 1998 in accordance with the Act and require use of the Natural Resources Conservation Service practice standards. Newly licensed dairies have six months to develop a NMP and an additional 18 months to implement the plan. Plans are required to be consistent with the site conditions, size and management practices of the dairy. When they are out of date and no longer are consistent with the operation, plans need to be evaluated and updated to ensure they are still protective of water quality. If implementation of a plan results in a discharge it is required to be updated.

The dairy program was set up to make use of the technical assistance and planning capabilities of the local Conservation Districts. Dairies may also hire consultants to help with planning or with plan implementation. Local Conservation Districts must approve each dairy plan as meeting all minimum plan requirements. The District and the producer must both certify that the plan is fully implemented. Plan implementation includes having all facility elements in place as well as carrying out all identified management activities and record keeping. State and federal cost-share programs have provided assistance to operators to develop and implement their plans.

A file review made in early 2008 of WSDA's administrative records identified errors that had resulted in incomplete records and faulty tracking of plan certification. That problem was addressed and an improved system has been established. As of the end of December, 89% of active dairies have certified plans. Of the 50 without plans, 25 are newer dairies still in the planning and implementation process and 25 dairies are under compliance actions for lack of certification.

When an NMP is updated to address changes or make improvements, the current statute does not specifically require Conservation Districts to approve or certify the updated plans. Some districts have chosen to approve updated plans as well as new plans. New and updated plans are reviewed by WSDA inspectors during their inspections. Where updates have not been approved, the inspectors have to take additional time to check various calculations within the plan to ensure that it has been updated appropriately. Assessing plan implementation is a core element of every routine inspection.

Inspection Activity

Routine inspections are the backbone of the program. These are conducted on a regular basis throughout the year. WSDA inspectors also respond to complaints related to both dairies and non-dairy livestock operations. They also conduct lagoon assessments in the fall and provide technical assistance inspections on request. During 2008, WSDA inspectors conducted 257 routine dairy inspections, responded to 69 complaints, covered 122 facilities during the fall lagoon assessment, and provided 14 technical assistance inspections.

Regardless of the reason for being on site, inspectors will record any issues they identify, document any needed follow-up actions and timelines, and discuss these with the operator. The inspection notes are important, not only for the operator after the inspection, but for future site reviews to ensure progress is made and to support future compliance actions, if necessary. Inspectors work with the operator to help identify and better understand the reasons behind compliance issues to aid in solutions or prevention in the future.

Routine Inspections

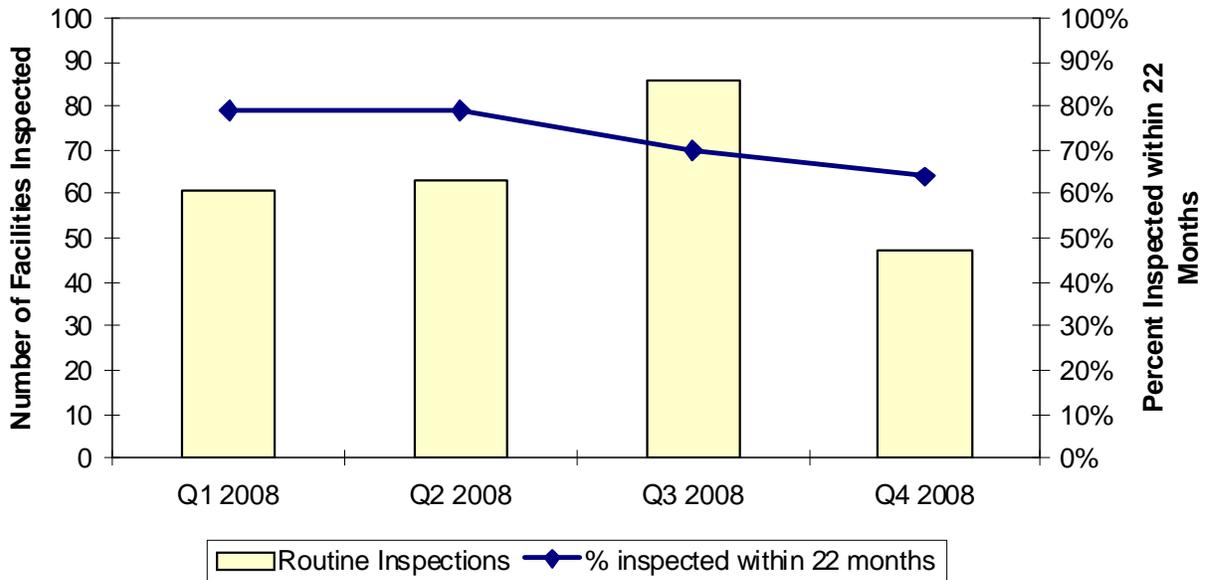
The routine inspection interval goal is 22 months. Using this interval means that a facility will be inspected at different seasons of the year over time. With the reduction in the number of dairies, the goal of a shorter interval is possible with existing staff. However, in the last year, only 73% of all routine inspections were completed within the 22-month interval and 82% were completed within a 24-month interval. Many of the 'late' inspections occurred during the fall and winter. A number were postponed past the interval due to flood or snow conditions. Some postponements were related to other staff workload, such as working on compliance cases or assisting Ecology with permit-related technical issues. However, a number of those past due during 2008 had recently received a non-routine inspection, so staff were familiar with facility conditions. Whenever possible, when inspectors have to postpone inspections due to scheduling issues, they push back facilities that have recently been seen or that have had no past compliance issues in order to get to those that have had issues in the past. Figure A shows the number of routine inspections conducted by quarter and the percent of facilities whose inspections were completed within the 22-month interval in 2008.

There are two primary elements of every inspection. The first is to look for any evidence of a discharge or a site condition with the potential to discharge. The second is to evaluate implementation of a dairy's nutrient management plan. By keeping the plan current with facility size and operations and by properly following the plan practices, operations should not pose a risk to water quality. Proper site and field management activities prevent surface water runoff, and keeping manure applications at agronomic rates prevents nutrients from leaching below the crop root-zone to ground water or nutrients and bacteria from running off the fields. Keeping records of manure applications and proper soil and manure testing are key management tools to ensure agronomic applications from year to year. Inspectors spend at least half of the inspection time reviewing records with operators and discussing their meaning and use.

Inspectors document any conditions that create a high potential to discharge. To ensure timely follow-through by the operator, inspectors schedule follow-up inspections. In addition, inspectors may refer the operator to the local Conservation District for technical assistance to address implementation or plan issues. Where operators do not follow through, compliance actions may be taken.

In 2008, inspectors found 325 (96%) of the 340 dairies they inspected through routine or other inspections had no discharges and were in compliance with their nutrient management plans. Fifteen facilities had a combination of site or implementation problems that required formal enforcement. Of the 325 compliant dairies, 40 (12%) had some minor issues that resulted in a warning letter from their inspector.

Figure A. Routine Inspections by Quarter, 2008



Lagoon Assessments

Assessing lagoons across the state is a regular fall activity for the program. The purpose of the assessments is to check whether operators have managed their lagoons so they are ready for the rainy fall and winter seasons. This includes reviewing the general condition of the lagoon dike, the extent of solids left and how much capacity will be available for winter. Assessment work is generally accomplished in one or two days in a region. The inspectors sometimes work together in an area to reach more facilities. Doing the assessments early in the fall gives an operator time to address any identified problems and to make additional, agronomic applications to further lower lagoon levels. These are also a yearly reminder for operators of the importance of planning ahead and having good year-round lagoon management.

WSDA inspectors select specific facilities that require additional oversight and random facilities in targeted counties or watersheds. Usually letters are sent to all operators in the selected areas several weeks ahead of time. The notification letter provides a date or dates on which the inspector might show up and explains that not all operators notified will be visited. This year, letters were sent to all dairies because WSDA had two documents to provide to all operators. One document was a summary of the lagoon assessments done in 2007 and the other was a fact sheet regarding management of silage to prevent runoff. The fact sheet covered the impacts to water quality from leachate discharge and provided guidance on how to check for and recognize if a leak is occurring or has occurred.

The lagoon assessments generally do not take much time. However, this year some took longer as some producers made use of the inspectors' visit to talk about other issues. In a few cases the inspectors noticed other issues that required time to talk with the operator. In one area, a

common issue related to their nutrient management plans and fall applications was identified and explained to the producers. The inspector is now working with the local planner to get plan improvements and related work with producers taken care of prior to next fall.

In 2008, west-side facilities were selected for lagoon assessment in Clark, Cowlitz, Grays Harbor, King, Pacific, Pierce, Skagit, Snohomish, Wahkiakum and Whatcom counties. On the east side, lagoons were assessed in Adams, Franklin, Grant, Spokane, Stevens and Yakima counties. WSDA visited a total of 122 facilities and assessed 261 lagoons. This is many more than last year when 84 facilities were visited and 164 lagoons were assessed.

Of the 122 facilities visited, there were three (2%) that required follow-up by inspectors compared to 7% that required follow-up in 2007. More than a third of the facilities assessed needed additional pump down of at least one lagoon with proper applications made before the season was over. This was slightly more than last year. Many producers were delayed in making fall applications due to the late summer growing season which delayed crop harvests. Solids management and conditions of lagoon dikes were slightly better than last year.

Inspection Findings

The following five items are areas of facility and nutrient management that inspectors have spent the most time addressing with producers in 2008. These are the same main items addressed in 2006 and 2007 although the relative frequency has varied.

Requirement: NMPs require soil and manure testing and record keeping for proper field applications.

Common Problems:

1. Regular testing and record keeping is not always done.
2. Information is not always used properly from one year to the next to adjust field applications to control or reduce nitrogen or phosphorus levels in the soil.

WSDA Action: Inspectors spend at least half of their inspection time with producers going over this information and its use. Missing records are documented during the inspection and follow ups are made by the inspector to ensure that needed records are being collected. Operators that have difficulties in managing application rates and using their test results are referred to their Conservation District or consultant for additional technical assistance if they still have questions when the inspection is completed. Warning letters are issued if the operator is slow to respond. Missing records when combined with concerns for nutrient balance on the farm or evidence of over applications can result in a Notice of Correction.

Requirement: Field applications need to be made at agronomic rates (the rate at which nutrients will not leach below the root zone of the crop and will be fully taken up by the plants) and need to comply with timing restrictions or buffer requirements for each field to prevent runoff.

Common Problem: Applications have been made too heavily, at the wrong time, under poor weather conditions or on inappropriate fields. Application setbacks may have been reduced or ignored.

WSDA Action: Inspectors discuss the importance of the timing of applications, conditions of fields or buffer areas and maintaining setbacks for water quality protection

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with operators during all routine inspections. Operators with issues are referred to their Conservation District or consultant for needed assistance when appropriate. When setbacks and application schedules are not followed but risk to water quality is low, warning letters are sent. Where the risk of a discharge is high, a Notice of Correction is issued. Facilities with a history of over-applications are targeted for annual review of whole season crop records in the fall. In areas where application issues are more common, the inspector may drive through the area to survey field activity during appropriate times of the year. Poor field applications were associated with four of the nine discharge violations. Two of those resulted in penalties. One facility is already under permit, the other is being considered for permit coverage by Ecology.

Requirement: NMPs must be current with the number of animals and acreage available for applications or the amount of manure exported.

Common Problem: Operations change over time so plans get out of date and the nutrient balance becomes uncertain. There may be operational changes in manure management that affect the form or concentration of nutrients, there may be excess nutrients compared to available acres to apply to and arrangements to export nutrients off site may be inadequate or uncertain.

WSDA Action: Inspectors refer the operators of these facilities to their Conservation District to get their NMP reviewed and updated, and to better document both their export arrangements and the transfers that take place. Inspectors will do follow up inspections to verify any specific issues have been addressed in the interim while the plan is being updated. When inspectors find that the requested review and update has not been started, completed or did not adequately address necessary issues, they will spend additional time reviewing more closely the available facility data. Depending on the level of uncertainty and potential to affect water quality, warning letters or Notices of Correction are issued. Where serious issues exist related to the plan, inspectors do discuss the issues with the local Conservation District, or when applicable with the operator's consultant. These interactions have been helpful in getting plan improvements.

Requirement: Proper lagoon management requires maintaining the integrity of the lagoon dike and retaining full lagoon capacity. Capacity is maintained through proper solids management and properly emptying the lagoon during the application season.

Common Problems:

1. Allowing damage to dike conditions due to damage from solids removal, overgrazing and not controlling burrowing rodents. In addition, if vegetation is not controlled, potential leaks may be difficult to detect.
2. Letting solids accumulate or not pumping liquid levels down.

WSDA Action: Inspectors stress the importance of year-round management of the lagoon structure and solids content. They also discuss the capacity of the storage system compared to the number of animals and area of impervious surface that drains to the lagoon. Operators are referred to their Conservation District for assistance in repairing structural issues or for storage and management review. Follow up inspections are made where needed and may include both late fall and spring visits when the application season begins. Notices of Correction have been issued for lagoon issues. Discharges from

lagoon mismanagement have resulted in penalties in the past but not during 2008. The fall lagoon assessment activity was developed to proactively address lagoon management issues.

Requirement: Facility infrastructure, such as gutters, curbs, pumps and pipes, must to be managed and regularly maintained to protect water quality.

Common Problem: Some operators have created or increased the risk of having a discharge through management decisions or lack of proper maintenance.

WSDA Action: Inspectors identify problem areas for repair or improvements with attached timelines and follow-up visits appropriate to the seriousness of the problem. If needed, the operator is referred to their Conservation District or their consultant for assistance. Warning letters and escalating compliance actions are sent when an uncorrected problem is likely to eventually cause a discharge. These compliance actions have included orders and penalties in situations where discharges did occur.

Observations

Many operators quickly adjust to necessary changes to their management to protect water quality. There are, however, some facilities that have difficulty making and sustaining the changes, or keeping important water quality considerations in mind when making decisions. In many cases where producers have faced difficult decisions, repeated visits by inspectors with focused discussions have paid off with producers making better choices for water quality protection. Enforcement actions are taken when needed to push a producer forward. While inspectors can continue to make follow-up inspections related to high-risk concerns and enforcement actions, there are limits to the time available to meet the full array of potential follow-up needs.

To help ensure they are managing appropriately to protect water quality, operators need to keep their nutrient management plans current with their operation size, fields and management. Producers are responsible for their own compliance but the state dairy program was set up to rely on local Conservation Districts to provide needed technical assistance and planning. Over time, CDs have had to adjust their priorities to take advantage of funding opportunities and other local issues and that has periodically resulted in fewer resources available for dairy work. Planning and technical assistance by the federal Natural Resources Conservation Service staff that was available in the early days of the program is now far more limited and narrowly focused.

Operators needing additional technical assistance or planning updates are referred by inspectors to their local Conservation Districts for that work. Depending on its resources and priorities, a district may or may not be able to help a producer who contacts them for help. Some operators now make use of services provided by private consultants instead of using the districts or to fill in when district staff are not available. When operators do not respond to referrals for technical assistance and depending on the severity of the issue, they may face compliance actions.

Complaint Response and Investigation

Dairy Complaints

WSDA inspectors respond to all dairy-related water quality complaints as well as other water quality complaints that appear to involve Animal Feeding Operations (AFOs). Most complaints come from the general public but some come from local health departments or other local agencies. The complaints may be received directly by WSDA staff or may be referred from Ecology to WSDA through Ecology's complaint tracking system. When received directly, WSDA staff forward the complaint information to the Ecology complaint system for tracking.

WSDA staff investigates complaints by conducting on-site inspections or, in some cases, by first contacting the local Conservation District for information. If the complaint indicates a possible discharge, a field investigation is always initiated. When problems are documented and follow-up is needed, the inspectors conduct follow-up inspections and may proceed with compliance actions. The operator is also referred to the local Conservation District, if appropriate, for technical assistance. Complaints that relate to air quality, odor or flies are referred to the local air authority or health department and the facility is often referred to the local Conservation District for assistance on these areas as well. WSDA also responds to operator-reported discharges and conducts joint inspections with EPA, on request.

Non-Dairy Complaints

When a complaint is for a non-dairy AFO or appears to involve manure management, WSDA is generally sent the complaint referral through Ecology's complaint tracking system. When time is available, WSDA may proceed with the initial response. Some Ecology regional offices have field staff that may spend time on livestock issues while others do not. WSDA staff may coordinate with local Ecology staff on who has time to respond. Depending on circumstances at the time, there are occasions when neither agency is able to respond.

Depending on county ordinances, some non-dairy, non-CAFO complaints can be handled locally. Inspectors coordinate with the local agencies to ensure that they refer these complaints to the local authority.

WSDA staff does not have any legal authority over non-dairy facilities but, if access is granted, WSDA may provide technical assistance regarding compliance with water quality laws. In addition, staff can refer the facility to a Conservation District for technical assistance and may writing warning letters if appropriate. Where enforcement action appears necessary, the problem must be referred back to Ecology and their staff will make a decision on whether to follow up or not.

Complaint Data Summary

In 2008, WSDA responded to 46 complaints about dairies. Of these complaints, 30 were discovered to have valid water quality-related issues and resulted in 25 compliance actions. The most common water quality complaints continued to be related to manure applications to fields. Other complaints involved storage of manure or silage, or animals with access to surface water. WSDA inspectors also responded to 23 complaints about non-dairy AFOs. There were 45 dairy complaints in 2007, 28 complaints in 2006 and 37 complaints in 2005.

Compliance Activity

There are four enforcement tools used by the program when a violation occurs or there is a risk to water quality. Minor problems are noted on inspection reports and may trigger issuance of a warning letter.

- **Warning Letter**

A warning letter is a letter issued by an inspector to inform a facility that it poses a risk to water quality. Problems that may prompt a letter include: needing an updated plan to better address current activities or not following certain elements of the Nutrient Management Plan, such as those related to soil testing, proper records, or using buffers. A warning letter is an informal action providing documentation for both the operator and WSDA that there are problems that need to be addressed. Warning letters can also be used for administrative purposes when operators miss the deadlines for getting plans approved or certified or for submitting their biennial registration.

When violations are discovered and investigated, or a serious potential to pollute is identified, the inspectors make a recommendation for enforcement and send their report and applicable documentation to the Olympia office for final decisions and administrative enforcement actions. WSDA uses enforcement tools from Chapter 90.48 RCW, Water Pollution Control, and also complies with Chapter 43.05 RCW, Technical Assistance Programs, to insure proper process is followed when taking enforcement actions and to encourage voluntary compliance when possible.

- **Notice of Correction (NOC)**

A Notice of Correction is issued under Chapter 43.05 RCW, Technical Assistance Programs. An NOC notifies the operator that they have a violation of some type and sets out steps and a time frame in which to fix the problem. It provides the same notification process step as a Notice of Violation (NOV) under Chapter 90.48 RCW. As with the NOV, this compliance action is not appealable. However, if corrections are not made, then either an order or a penalty may be issued, and these are both appealable actions. An NOC may be issued when a minor discharge occurs, when permit conditions are violated, or when circumstances pose a continuing or serious potential to discharge to waters of the state. A Notice of Correction may also be issued when operators have not responded to administrative notices regarding their plan approval, plan certification or registration.

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The program switched from using the NOV to using the NOC in late 2008. The Technical Assistance Program statute requires WSDA programs to use the NOC prior to taking any penalty action. The Livestock Nutrient Management program was the only WSDA program that did not use the NOC. The program had made use of the NOV to maintain consistency with the Department of Ecology actions under Chapter 90.48 RCW. However, since the NOC serves the same procedural step as the NOV, the department decided that consistency with Chapter 43.05 RCW and the other WSDA programs was important. Therefore the switch was made.

- Administrative Order

An Administrative Order can be issued after an NOC to ensure that necessary compliance action is taken. It is used when issues identified by an NOC are not addressed or are repeated. The Administrative Order requires specific actions in specified timelines by the producer to regain compliance, stop a discharge, or prevent future discharges. A variety of requirements, depending on circumstances, may be included. An Immediate Action Order may be issued in emergency circumstances without prior issuance of an NOC. Orders can be appealed to the Pollution Control Hearings Board (PCHB).

- Civil Penalties

Civil penalties can be issued for a discharge of pollutants or lack of compliance with an Administrative Order, and for violations of both Chapter 90.48 RCW, Water Pollution Control, and Chapter 90.64 RCW, Dairy Nutrient Management. Where a discharge is causing or may cause significant harm to the environment or public safety, a penalty may be issued for the discharge. Under Chapter 43.05 RCW, if the discharge is not so serious, then an NOC must be issued. Any penalty after the NOC would be for continuing to discharge or for not responding completely to requirements of the NOC.

The amount of the penalty for violations of Chapter 90.48 RCW is based on the severity of impacts, the cause, action taken by the operator, and history of the facility. The statute allows for a penalty of up to \$10,000 a day per violation. The program uses a matrix to aid in setting an appropriate penalty. These penalties can be appealed to the PCHB. The producer may also request relief of the penalty amount from the department prior to appealing to the PCHB. Where a discharge is relatively small, the statute allows a penalty for first-time offenders to be waived.

Civil penalties can be issued under Chapter 90.64 RCW when operators fail to register or miss the deadlines for getting nutrient management plans approved or certified. The statute sets a single penalty of \$100 for failure to register and a penalty of \$100 per month (with a cumulative maximum penalty of \$5,000) for failure to meet plan deadlines.

Enforcement Actions Taken

During 2008, formal enforcement actions were taken against 15 dairies for environmental issues. Nine of the actions were the result of discharges to waters of the state. The majority of violations and discharges occurred in the first five months of the year. Two civil penalties, for \$5,000 and \$7,000, were issued for discharges related to field applications. In addition, 40 warning letters were issued in 2008 for situations that posed a risk to water quality.

Table 2. Enforcement Actions Taken on Dairies, 2008

Enforcement Action	Number Issued
Warning Letter	40
Notice of Violation/Notice of Correction	13
Administrative Order	0
Civil Penalties	2
Notice of Correction, lack of plan certification	37

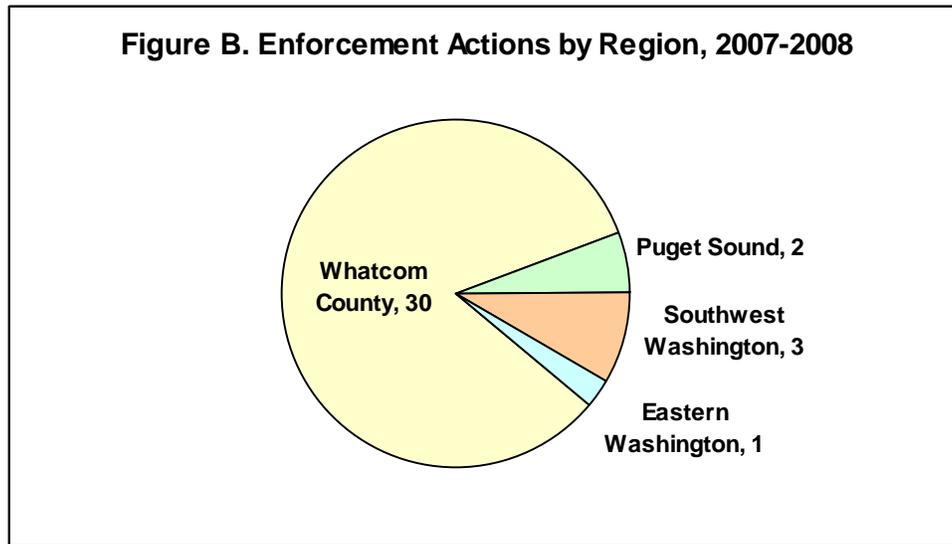
Whatcom County Compliance Issues

One of the factors resulting in passage of the Dairy Nutrient Management Act was the closure of shellfish beds at the mouth of the Nooksack River in Whatcom County. Since the program was implemented, and as nutrient management plans were developed and implemented, water quality in the river and marine waters of the shellfish beds improved to the point that shellfish harvesting is once again commercially viable. Much of the early improvement was credited to the dairy program and improved dairy management in the watershed.

Continued water quality monitoring related to both the water quality clean-up plan for the Nooksack River and the shellfish districts has shown the early steep decline in bacteria levels has stopped. More recent trends for bacteria levels have been static or increasing. While many things have changed in the county in the last 10 years that may contribute to the continuing water quality problems, the dairies are regularly identified as a major potential source.

Unfortunately, discharges from dairies in the watershed do occasionally cause shellfish harvest closures. A review of enforcement actions on dairies shows that most actions are taken in Whatcom County when compared to other areas of the state (Figure B). While Whatcom County had 28 percent of the dairies, it accounted for 66 percent of the violations in 2007 and 2008.

Whatcom County dairies have unique challenges due to geography, climate and the high number of dairies. Most dairies are located where it is relatively flat and there are many creeks and drainage ditches adjacent to facilities and fields. The topography combined with the county road systems makes many dairies, their fields and adjacent ditches clearly visible to neighbors and travelers. Between tribal and private shellfish growers and residential encroachment into agricultural land, there is close scrutiny of dairy operations and conditions.



The WSDA inspector in Whatcom County has worked closely with the Lummi Tribe, Whatcom Conservation District, Shellfish District committees, Ecology and the industry to identify and address problems. The fall lagoon assessments were first carried out in Whatcom County as a proactive measure to look at lagoon conditions and minimize the potential for full lagoons and out-of-season field applications. While that has been effective, more needs to be done.

There is interest by stakeholders in the area to meet in 2009 to discuss further strategies to maximize the available resources to achieve further improvements in water quality as related to dairy and other livestock operations.

Other Program Highlights

Grant Program

Civil penalties from violations of Chapter 90.64 RCW are used to provide grants for research or education activities that assist livestock operations to achieve compliance with state and federal water quality laws.

In 2008, WSDA provided an \$8,000 grant to Washington State University (WSU) to fund completion of a demonstration livestock composting project. The project had demonstrations on composting under both east-side and west-side conditions with field days for operators. In addition, a Web site was created with information on livestock composting, including information sheets for producers.

In 2007, WSDA provided funding to WSU to extend an existing research project from two years to four years. This \$36,000 grant has allowed WSU to continue working through two additional crop years on an existing Ecology project to address cycling of nitrogen from crop to animals and back to fields. The combined project looks at nitrogen levels in the soil and potential losses to ground water. The grant will be completed in spring 2009 and a final report on the findings of the last four years will be prepared and made available.

The balance in the grant program's account as of December 31, 2008, was \$64,920. When the final moneys are paid out on the awarded grants, approximately \$59,000 will remain in the account for future grants.

Rulemaking

Disclosure of Nutrient Management Information

This rule, developed in 2007, has been folded into an update of the agency's rule on Public Records, WAC 16-06. The CR-102 was issued on November 19, 2008. The CR-102 starts the public review process of the proposed rule language. A public hearing was scheduled for January 7, 2009, with written comments accepted until January 8. WSDA intended to adopt the final rule on January 12, 2009.

Enforcement and Penalty Matrix

WSDA plans to organize an advisory committee in 2009 to discuss development of a rule that will review the matrix the program uses to establish penalty amounts. The rule may also address related enforcement procedures.

Program Funding and Staffing

Program Funding

The WSDA Livestock Nutrient Management program has a biennial budget for 2007-09 of \$1,198,600. The program has two primary funding sources:

- \$1,143,000 from the Water Quality Account; and
- \$55,600 from the Water Quality Permit Account.

The program also has authority to expend up to \$59,000 during the biennium from the Livestock Nutrient Management Account to provide grants for research or education activities. Moneys in the account are from penalties levied by WSDA under the Dairy Nutrient Management Act.

Program Staffing

Program funding supports six staff: a program manager, one support staff and four field inspectors. One of the inspectors is the program's lead inspector. This position is responsible for some inspections, for preparing compliance documents, and providing support and guidance to the other field staff. The lead inspector also works closely with Ecology permit staff on permit administration and coordination. All staff work closely together to identify and address field and technical issues that arise and ensure consistency on common issues across the state.

Technical Expertise

The program has supported training to obtain and maintain expertise related to nutrient management and water quality. Building and retaining that expertise is important for the program to properly identify and address technical issues related to nutrient management. It has also been invaluable in working with operators in the field during inspections as well as working with partners on technical issues. In addition, one field inspector has maintained certification as a crop advisor throughout their four years with the program. A second inspector received this certification in 2008. Inspectors also have expertise in water quality sampling protocols, digesters and working on Total Maximum Daily Loads (TMDLs).

Customer Feedback

A survey was mailed to 50 randomly selected operators during the fall. The survey had seven items related to the performance of inspectors in the field. A total of 25 (50%) of the surveys were returned. Respondents gave inspectors high marks on all questions. Two key survey items were:

Question	Response
The inspector seemed knowledgeable regarding nutrient management and water quality laws. ('5' = all the time)	4.8 average (All responses were 4 or 5)
The inspector listened and heard their concerns and needs. (yes or no)	Yes marked by all respondents

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Although respondents had the choice to remain anonymous, most included their name. There were no differences in the views of those who had seen an inspector only once in the last 22-24 months compared to those who had seen an inspector more than twice in the previous six months (5 of the 25 respondents).

Significant Activities and Issues in 2008

Responding to Non-Dairy Complaints

Identifying the priorities and expectations for coordinating responses to non-dairy complaints is a big part of the ongoing MOU discussions with Ecology. During 2008, WSDA continued to coordinate with Ecology on administering the CAFO permit for dairies, which included investigating complaints regarding permitted operations, dairy and non-dairy. Ecology continues to be responsible for water quality enforcement actions for non-dairy animal feeding operations (AFOs) and all other non-point livestock-related issues. The two agencies coordinate complaint responses through Ecology's complaint tracking system. Because of WSDA's expertise and field presence, WSDA continued to handle some complaints regarding non-dairy AFOs.

Program Administrative and Enforcement Challenges

WSDA's administration of the Dairy Nutrient Management Act (Chapter 90.64 RCW) continues to be complicated by the nature of the statute, which has not been updated since 1998, when the requirement for dairy nutrient management plans was established.

For example, while the statute is clear about the process for a dairy's initial plan, it does not specifically address how to handle plan updates. Nor is it clear on which agency is responsible for addressing plan update issues, whether to incorporate NRCS standards that have changed since the plan was first written, whether updated plans need to be approved and certified, or how to handle updated plans developed by dairies with the assistance of private consultants.

Enforcement authority is also complicated by statutory construction. The transfer of the program from Ecology to WSDA in 2003 was accomplished through a single section of law, which gave WSDA "all the powers, duties, and functions of the department of ecology pertaining to Chapter 90.64 RCW." By reference, WSDA was also given the enforcement authorities for dairies used by Ecology under Chapter 90.48 RCW, Water Pollution Control. However, the statute does not provide WSDA with the specific authority commonly found in other statutes it administers related to such things as right of entry and access to documents. The lack of direct, specific authority complicates WSDA's ability to effectively enforce the law.

WSDA spent time discussing these and other matters related to working under the current statute with the industry and other partners in 2008. WSDA will continue to work with stakeholders on areas where the statute might be updated in the future.

During the summer and fall, the inspectors revised and expanded the guidance documents for all inspection-related activities. This web-based resource for inspectors and office staff addresses procedures ranging from the initial inspection of a new dairy, to records review, water quality sampling, and preparing enforcement documents. It includes links to a wide variety of technical and legal resources for quick staff reference.

Review of Technical Assistance Referrals

Several years ago, WSDA worked with the conservation districts to develop a process to document WSDA referrals of dairies to the districts for assistance. The referrals were classified into four types with Type 4, updating an entire plan, the most time-intensive referral type. While the total number of referrals has been decreasing, Type 4 referrals have continued to be a significant workload.

Total referrals since 2006:	2006 – 119	(22 were Type 4)
	2007 – 88	(38 were Type 4)
	2008 – 61	(19 were Type 4)

Communication among the dairy, WSDA and the district about a referral and the time frame for providing the technical assistance have occasionally created issues. During 2008, the program worked with both the Conservation Commission and the Washington Association of Conservation Districts to review the status of referrals across the state. This information has been useful to help districts and the Commission plan budget needs for the future. It has also been helpful to improving communication between WSDA and district staff regarding technical assistance and planning issues. In addition, looking at the type of referrals and where there may be backlogs in some areas of the state has helped to identify needs for specific technical resources and how they might be shared or distributed among the districts.

Discussions between WSDA and Ecology on Overlapping Issues

In 2008, there were two topics related to dairy nutrient management that prompted continuing or new discussions between WSDA and Ecology. The topics involve situations where dairies take on activities that are typically regulated by Ecology or local health departments or where effective implementation of dairy nutrient management practices and plans relate to other water quality protection activities. This is particularly significant in watersheds where there is a water clean-up plan based on Total Maximum Daily Load (TMDLs) that relate to livestock pollutants.

Anaerobic Digesters

A considerable amount of time was spent in 2008 discussing issues related to on-farm anaerobic digesters operated by dairies and independently operated digesters that take manure from dairies and return solids or liquid back to dairies for use as bedding or for field application. WSDA has worked with the two existing dairies that have on-site digesters as well as the dairies working with proposed off-site digesters. Nutrient management plans need to be updated to account for the correct volume and nutrient levels in the liquid and solids coming from the digesters.

WSDA staff gave a presentation as part of a WSU-sponsored workshop in July to discuss the environmental and regulatory issues around digesters using non-manure materials. Staff also made a presentation on digesters and nutrient management plans at an EPA-sponsored workshop in October for operators interested in digesters. All staff have attended at least one of several meetings on digester issues organized by staff in the Governor's Office of Regulatory Assistance. These meetings related to specific digester proposals as well as inter-agency discussions on various regulatory approaches.

Ecology's Solid Waste and Water Quality programs as well as local health agencies become involved due to regulatory responsibilities when a digester begins to use materials (called feed

stocks) other than manure in the digester. This co-digestion causes the digester to be considered a solid waste handling activity under current regulations. In addition, subsequent use of the co-digested solids from the digester also falls under current solid waste regulations. The handling and use of the liquid output could require a state waste discharge permit if any discharges occur to waters of the state. The solid or liquid output that returns to dairies must be covered by the dairy's nutrient management plans to ensure proper applications.

Use of digesters for energy production has been encouraged under the state's Climate Change Initiative as well as the state's bioenergy programs. Finding common ground to ensure environmental and public health are properly protected while facilitating the development of appropriate projects has been the focus of many discussions among stakeholders.

Ecology's Solid Waste program took the lead in the fall to organize a broad stakeholder group to discuss the various issues and regulatory options. WSDA is participating in that group and coordinates internally among the animal health, bioenergy and the Livestock Nutrient Management staff.

TMDLs and Dairies

WSDA field inspectors have worked with regional Ecology staff on bacteria TMDLs where livestock activities may be contributors. They attend TMDL stakeholder meetings to discuss current status and activities. Where recent water quality sampling indicates there are problems, they have sometimes been able to respond in the field. Response includes field surveys to look for current conditions that could be causing a discharge or checking in on dairies in a specific area to review recent activity. Sometimes, staff have taken surface water quality samples to help narrow the potential source area. Sometimes they have assessed conditions at non-dairy facilities that appear to be potential sources.

There were some occasions during 2008 that resulted in major demands and expectations for time spent by WSDA inspectors to assist in these survey and sampling activities. This is appropriate work where there are numerous dairies in an area. However, where dairies are a minor land use and are low risk operations, time spent on these activities is taken from the program's core responsibility for dairies. This has resulted in staff working to balance their scheduled work with partnering on these regional activities.

Integrating priorities for TMDLs into the dairy program while continuing to meet our responsibilities specific to dairy nutrient management is another area subject to MOU discussions with Ecology.

On-Farm Processing on Small-Scale Dairies

As the number of small-scale milk producer/ processor operations has increased, questions have been raised as to whether these operations should be required to have a state waste discharge permit issued by Ecology. WSDA and Ecology began conversations in 2007 to develop a common understanding on how these operations should be regulated and to clearly communicate the agreed-upon approach to producers and local health departments. While this topic was not fully resolved during discussions in 2007, the priority to comprehensively address the issue further in 2008 was dropped for both agencies.

Compliance with the Federal and State CAFO Permit

The majority of facilities covered under the CAFO permit in Washington have been, and continue to be, dairies. Consequently, it is necessary to closely follow any actions on the federal level regarding CAFOs and the CAFO permit. Likewise, the program works closely with Ecology staff on implementation of the CAFO permit. This is important in order to include permit-related requirements for dairies in inspections and to assist Ecology with overlapping technical issues as needed. Under the MOU with Ecology, WSDA staff inspect the non-dairy permitted facilities as well as the dairies for both routine and complaint inspections. None of the non-dairy permitted facilities required routine inspections during 2008.

Federal Final CAFO Rule Issued

The changes to the federal CAFO rule, initially issued by EPA in 2004, were finalized October 31, 2008 and were effective on December 4, 2008.

So far, Ecology has confirmed that current permits will not be affected and the Washington CAFO general permit is not scheduled to be revisited until 2010 for a 2011 issue date. Many of the key elements in the final federal rule were already incorporated in the Washington CAFO general permit when it was issued in 2006. These include the requirement for nutrient management plans to be submitted with permit applications and the availability of those plans for public review during the permitting process. Other elements of the final federal rule changes will be reflected in any CAFO permit written after December 4, 2008.

Washington CAFO General Permit Status

After it was issued by the Department of Ecology in 2006, the Washington CAFO general permit was appealed to the Pollution Control Hearings Board (PCHB) as not meeting the requirements of state and federal law. The PCHB upheld the permit in 2007 but its decision was appealed and a Washington State Appeals Court hearing is scheduled on January 12, 2009. Until the case is decided, the 2006 permit will continue to be in effect unchanged.

General Permit Implementation

The 2006 CAFO General Permit required that all permit holders have a final nutrient management plan completed and implemented by January 21, 2008. As WSDA inspectors have inspected dairies holding current permits, they have reviewed the additional CAFO permit requirements with the operators.

A number of facilities did not get plans completed in January 2008 as required. Consequently, CAFO nutrient management plans continue to come in periodically. The WSDA regional inspector, as well as the lead inspector, continues to assist Ecology in reviewing the plans and making recommendations to Ecology on improvements if needed. During 2008, WSDA inspectors reviewed and commented on 21 plans. Some of the plans were revisions to previously submitted plans.

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WSDA coordinates closely with Ecology when taking enforcement actions on permitted dairies. WSDA inspectors also work with Ecology permit staff on verifying needed information on currently permitted facilities. In addition, WSDA provides information on non-permitted dairies that have a confirmed discharge to Ecology for consideration of coverage under the permit.

At the end of 2007, there were 21 dairies and 10 feedlots under permit. By the end of 2008, there were 11 dairies and 5 feedlots under the general permit and one dairy and 5 feedlots covered under individual permits. The application process to bring two poultry operations and a dairy operation under the general permit continues. Two dairies with discharges in 2008 are in the process of review and consideration by Ecology for permit coverage.