REPORT TO THE MAINE LEGISLATURE
On the
IMPLEMENTATION OF THE NUTRIENT MANAGEMENT PROGRAM

February 15, 2011

Maine Department of Agriculture, Food & Rural Resources

Division of Agricultural Resource Development

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EXECUTIVE SUMMARY

In accordance with 7 MRS §4213, this report is presented to the Joint Standing Committee on Agriculture, Conservation and Forestry. It describes the status of the Nutrient Management Program and the development and accomplishments of the program.

The purpose of the Nutrient Management Program is to address non-point source pollution from farms, as well as from "point source" concentrated animal feeding operations (CAFOs), by promoting best management practices on Maine's farms, and by ensuring the implementation of those BMPs through a variety of efforts. Since the inception of the program, there have been 740 nutrient management plans developed covering 151,457 acres and 113,362 animal units. Of these 740 plans, 133 plans have expired and require follow-up to determine if they need to be updated. Another 112 will expire in 2011 and may need to be updated as well. The development and implementation of Nutrient Management Plans requires specialized technical assistance and knowledge. There have been 182 individuals in Maine who have qualified as Certified Nutrient Management Planning Specialists. Most of these individuals are not available to prepare and certify Nutrient Management Plans. In fact it was estimated that only about 16 planners are available to assist farms on an unrestricted basis.

During 2010 and early 2011, eight major training events (three were multiple days) were approved by the Department, for a total of 31 nutrient management recertification credits offered. Seventy-nine individuals received a total of 165 credits. These programs were held either in conjunction with a Soil and Water Conservation District, the Maine Compost Team, the University of Maine Cooperative Extension (UMCE), the Natural Resources Conservation Service (NRCS), or independently by the Department. Notable training events included a No-till & Manure Usage workshop, a two-day training event sponsored by NRCS and 12 presentations given at the Agricultural Trades Show in Augusta on a variety of subjects.

During 2005, the legislature reinstated the Nutrient Management Coordinator position and a new coordinator was employed in October of that year. Reinstatement of this position was essential for keeping important aspects of the program moving forward.

Probably one of the more significant aspects of the Nutrient Management Law is the financial burden placed on farmers with its implementation. To mitigate this impact, a Nutrient Management Grant Program was established to help farmers comply with the Nutrient Management Law. Subsequently, in the year 2000, the 119th Legislature appropriated $2.5 million to provide farmers with funding for manure storage and handling systems. In 2002 and again in 2003, voters approved an additional $2.0 million and $1.0 million, respectively, for funding additional projects. To date, 119 farms in 12 counties have been awarded grants on a cost-share basis. An additional grant program, Phase II Supplemental, was initiated in October 2006. Details of this program will follow in this report. Unfortunately, sufficient grant funds are not available to meet all needs.

The Nutrient Management Loan Program provides farmers with low-interest (2%) loans when grant funds must be supplemented to cover the cost of a project, or when a project is not eligible for a grant. The Loan Fund has been poorly utilized for reasons to be explained below, and changes to this program that would allow funding for resolving a broader array of environmental issues were proposed in 2006. A special effort was made at the Agricultural Trades Show in January 2011 to introduce each presentation during the Nutrient Management Program with a brief description of the loan program and its benefits. Revisions to Maine's tax laws allow farmers to exempt manure storage structures from property taxes, as well as to take a sales tax

exemption on materials used in construction of manure storage or handling systems. These tax provisions are not well known, are underutilized and may require new, creative ways to promote them.

Concentrated Animal Feeding Operations (CAFOs) must comply with federal and state regulations and, if required, obtain a combined Livestock Operations Permit/Maine Pollutant Discharge Elimination System (LOP/MEPDES) Permit from the Department of Agriculture and the Department of Environmental Protection (DEP). Seven farms had originally been inspected and issued Provisional Livestock Operations Permits. The provisional permits now have expired and were replaced with finalized permits. Fifteen farms have been issued either finalized or provisional LOPs, and one application currently is undergoing a review. Four LOP applications are under development, and five farms are being evaluated regarding their requirement to apply for an LOP. It is likely that these farms will not require a MEPDES permit. A high priority was placed on getting as many of these farms as possible into compliance in 2010.

Three Maine farms underwent "CAFO" inspections in late 2005 and 2006 and three more were inspected in 2008 by the Environmental Protection Agency (EPA), the Maine Department of Environmental Protection (DEP) and the Maine Department of Agriculture. Two more CAFO inspections on Maine farms were conducted by EPA in 2009. The farms inspected in 2008 included one poultry farm and two large dairy operations, while the 2009 inspections consisted of one dairy and one poultry farm. During the fall of 2010, DEP and Department staff conducted MEPDES inspections on four large dairy farms. In 2010, there were no EPA CAFO inspections in Maine. This probably was a reflection of enhanced focus by the EPA on some of the other New England states during this time period. Since Environmental Protection Agency rules regarding permitting of livestock facilities continue to evolve, this will require additional coordination between the Department, DEP and EPA.

Reinstatement of the Nutrient Management Coordinator position is keeping all aspects of this program moving forward. The "Nutrient Management Rules" (Ch. 565) and nutrient management-related "Rules for the Disposal of Animal Carcasses" (Ch. 211), and the "Rules Regarding the Disposal of Cull Potatoes" (Ch. 600) all require updating. The "Rules for the Agricultural Compliance Program" were completed, and public hearings were held in January 2007, with final adoption in May 2007. A wide-ranging revision to the Carcass Disposal Rules was completed in 2010. After an extensive review process, the rule is expected to go through the rulemaking process and be adopted in 2011. Training and certification of Nutrient Management Planning Specialists also must continue.

Follow-up on the Loan Program, tax exemption provisions and other aspects of this program, is essential. A new initiative for establishing and implementing a Phase IV Nutrient Management Grant Program was initiated in 2009, but will continue to require a substantial investment of time and personnel resources if it is to become a reality. A request for $3 million for agricultural water (irrigation) projects and for nutrient management grants was included in the Governor's bond package for 2009 but only the irrigation funds survived the legislative process. During 2010, a bond initiative provided $1 million to the Department for additional irrigation projects.

Rapidly changing policy positions by EPA and USDA's Natural Resources Conservation Service (NRCS) continue to require close scrutiny by the Department. In addition, it is still unclear what the impact of the newly adopted EPA rules regarding CAFOs and AFOs (Animal Feeding Operations) will be. The revisions to the EPA's CAFO rules have been adopted and the state

must continue to evaluate these revisions to determine what the changes may mean for Maine producers. In addition, conflicts with state law and rules must be identified and addressed.

Moreover, our long-standing federal partner for providing technical support to farms, USDA's NRCS, has moved to the privatization of technical assistance in addition to providing it by their own employees in some situations. Private Technical Service Providers (TSPs) have been available for writing Comprehensive Nutrient Management Plans (CNMPs), and for other projects, with funding from USDA's Environmental Quality Incentives Program (EQIP). The formula for providing this cost share has changed to a fixed amount rather than a percent of cost approach.

A conflict is brewing over posted road ordinances between farmers and municipalities, particularly where ordinances are inconsistent from town to town. This conflict may result in legislation submitted by one or more parties in the future if these conflicts can not be resolved another way.

BACKGROUND

The Nutrient Management Law, originally passed in 1998, required the Department of Agriculture to establish rules for conducting a Nutrient Management Program and to adopt standards for Nutrient Management Plans. These actions were completed by December 15, 1998 and were ratified by the Legislature the following Spring. In addition, amendments to the Nutrient Management Law were made in 1999, 2001 and again in 2002. These were necessary as the development of the program required additions to the rules to describe specific processes or simply to correct or change the existing rules to better reflect how the program was working in reality.

These changes included giving the Commissioner the authority to revoke certifications and permits and to issue provisional permits for certain livestock operations. They also included tax exemptions for manure storages, appeals processes, and defining nutrient management plans as confidential business information. However, recently adopted Rules by EPA require that CAFO nutrient management plans be submitted to the EPA with the permit application and be available for public review. The most recent changes were added to define the recertification process for Nutrient Management Planning Specialists.

After the rules were approved, the Department began implementation of the various elements of the program based on the timeline set in legislation. The primary areas of implementation were the training and certification program for Nutrient Management Planning Specialists, establishment of the Nutrient Management Review Board, issuance of variances, enforcement of the winter spreading ban and the establishment of a permitting program. In addition, it was necessary to develop a data management system (which requires additional modification), to identify funding sources for manure storages, and to negotiate agreements with the Maine Department of Environmental Protection (DEP) about how the Nutrient Management Program would interface with DEP programs that had overlapping or similar jurisdictions. All these important components of the program have been successfully addressed, and ongoing efforts continue to identify areas of the program requiring modifications to meet future goals.

IMPLEMENTATION/ONGOING EFFORTS

The implementation of the Nutrient Management Program truly is being accomplished through a partnership approach. Many players have roles in making the various pieces of the program work. The Department of Agriculture has, of course, taken a leadership role in developing and coordinating the different components of the program. The University of Maine Cooperative Extension (UMCE) has had a primary role in conducting certification training workshops for consultants, farmers and agency people. They also have worked in concert with the Department to develop the outline of a nutrient management plan and guidance materials to assist planners who develop plans.

The USDA Natural Resources Conservation Service (NRCS) continues to be a strong partner by having many of their professional staff trained and certified for preparing Comprehensive Nutrient Management Plans (CNMPs). During the early development of this program, NRCS provided a liason person to work with the Department on technical aspects of the program. NRCS also assisted the department by providing technical assistance for the very successful Nutrient Management Grant Program during Phases I, II, and III, and the recently concluded Phase II Supplemental. Additionally, they have worked closely with Department staff incorporating the requirements of the State's Nutrient Management Law and Rule into the NRCS requirements for Comprehensive Nutrient Management Plans. The possibility of having state certified nutrient management planners authorized to approve or update federal CNMPs is still being discussed by the Department and NRCS as a measure to fill the gap created by insufficient numbers of NRCS personnel.

The UMCE county offices and the Soil and Water Conservation Districts (SWCDs) have hosted workshops and training sessions, and have been paramount in delivering information to farmers throughout the state. The Maine Department of Environmental Protection (DEP), the Finance Authority of Maine (FAME) and the Maine Municipal Bond Bank all have been partners with the Department putting together and administering the Nutrient Management Loan Program. The private sector also has taken an interest in the program. Several private firms have trained individuals to write and certify nutrient management plans to assist farm operations that need Livestock Operations Permits or guidance with the Nutrient Management Grant Program.
Without the commitment and hard work by so many individuals and agencies, it would not be possible to continue implementing such a far-reaching program. The main components of the program are described below, with recent achievements included for each of them.

Update of the Nutrient Management Law and Rules

In 2001, the Department proposed and adopted amendments to the Nutrient Management Law and Rules to enable the Commissioner to issue variances on the implementation dates of the Nutrient Management Law. The Nutrient Management Rules also have been amended through rulemaking to reflect changes made to the Nutrient Management Law, and include the process by which the Commissioner can issue variances on Nutrient Management Law implementation dates. Other changes included in the rules were an appeal process for variances, a process for revocation of Nutrient Management Planner Certification, revocation of finalized or provisional Livestock Operations Permits, and some changes in Concentrated Animal Feeding Operations (CAFO) designation. Rulemaking in 2002 added a recertification process enabling Certified Nutrient Management Planning Specialists to aquire recertification credits and keep their certification valid.

The Nutrient Management Rules again need to be updated based on legislative changes adopted in 2003, the recently adopted revisions to the federal CAFO rule, and on other recently identified concerns. These updates must include changes in the status of compost and other soil amendments as they relate to the Nutrient Management Law. In addition, a number of inconsistencies between the law and rules have been identified over time and need to be corrected at the time of the next rulemaking.

Nutrient Management Planner Training and Certification

An important component of the Nutrient Management Program is the availability of Certified Nutrient Management Planning Specialists (CNMPS) who can prepare and certify Nutrient Management Plans for Maine's farming community.

The University of Maine Cooperative Extension has made a major commitment to develop and deliver training sessions to prepare farmers, consultants and agency people for this certification. There are two categories of certification, a private one for farmers who want to prepare and certify their own plan, and a commercial/public one for people who want to be able to prepare and certify plans for anyone requesting it. Certification as a Nutrient Management Planning Specialist requires that an individual pass a certification exam administered by the Department. Applicants who do not pass the exam are allowed to retake it three weeks after failing the original exam. Once an applicant has passed the exam, he/she is issued a certificate that is valid for five years.

The data for 2010 indicate that 182 individuals have been certified as Nutrient Management Planning Specialists by the State of Maine. Of this number, 59 were farmers and the remaining 123 were either agency personnel or private consultants. There are 29 people who qualify as Nutrient Management Planning Specialists because they have been certified by the American Agronomy Society as Certified Crop Advisors (CCAs), Certified Professional Agronomists (CpAGs), or by other organizations. This makes a total of 182 people who have been qualified to write and approve nutrient management plans in this State. The number of people with up-to-date certifications, however, has declined over recent years. Of the 59 farmers who had passed the certification exam, only three were still certified in 2010. This probably reflects the fact that many have been able to get their plans prepared by NRCS or with financial assistance from NRCS, and many of these farmers required CNMPs to participate in the NRCS Environmental Quality Incentives Program (EQIP). Of the 123 people with commercial/public certifications, only 67 were still certified in 2010, and only 45 of these certified planners are potentially available to certify plans. The number of planners who qualify because of their CCA certification is difficult to keep up-to-date because the certification is done by another program, and their certifications are on a different time cycle (2 years vs. 5 years) from the Nutrient Management Program certifications. At the time of this report, only 12 of the Maine Nutrient Management Certifications are through CCA or CpAG certifications. Nineteen individuals certified in Maine as CCAs or CpAGs are not involved with the Maine program.

A further break-down of certified planner categories is as follows:

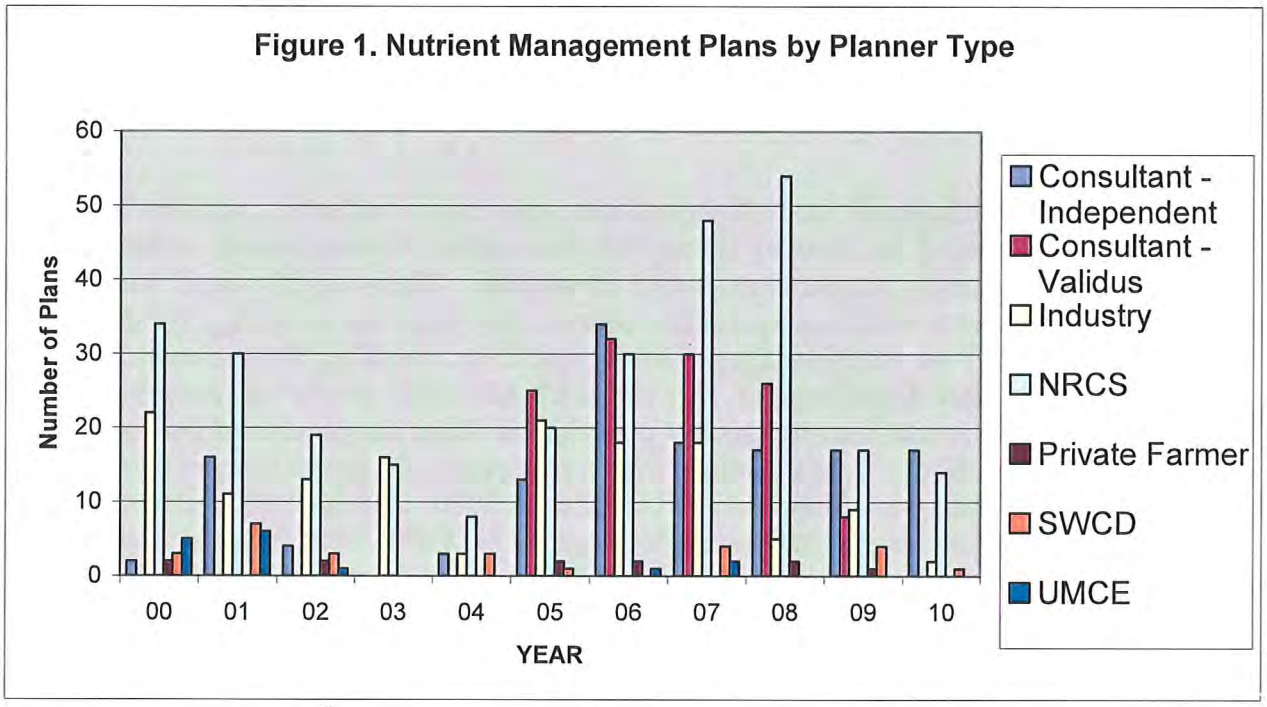
-Planners for whom this is a part of their normal workload - 9

- Planners working for private sector companies such as fertilizer companies or residuals management companies. These people may be available only to customers of the company - 5

- Extension Educators working for UMCE. These planners are available on a very limited basis - 3

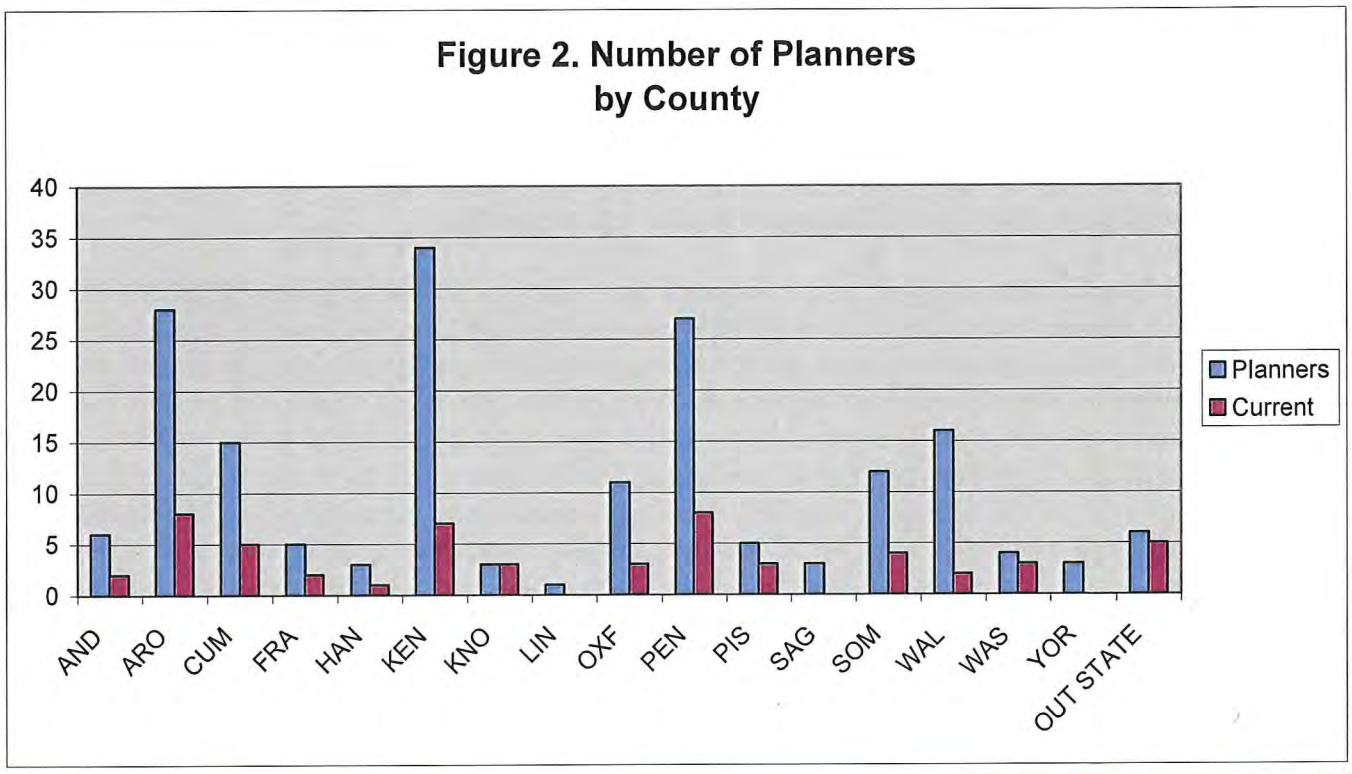
As noted above, there are a fairly large but variable number of NRCS employees who are certified to write plans, and who may occasionally develop or certify a plan in connection with an EQIP project. Between 2000 and 2010, 289 nutrient management plans (39% of all plans) were prepared by 45 different NRCS employees. Twenty of these planners prepared only one or two plans over that time period. For a complete breakdown of plans prepared by type of planner see Figure 1. One notable time span was 2005 through 2008, when there was a peak of planning activity. During that time span 423 plans were written. Of these, 152 were written by NRCS and another 113 were written by Validus, which is a consulting firm under contract with NRCS. The 265 plans accounted for by NRCS and Validus was approximately 63% of all the plans prepared during that time period. Other independent consultants prepared a fairly consistent number of plans between 2005 and the present. Even as the total number of plans certified declined in 2009 and 2010, the number prepared by the independent consultants held steady.

Figure 1. Nutrient Management Plans by Planner Type



The most recent record of Certified Nutrient Management Planning Specialists by county (2010) is detailed in Figure 2. In 2007, during the peak of nutrient management planning activity, there was a concentration of certified planners in Kennebec, Aroostook and Penobscot Counties. Each of these counties had 25 or more persons certified to prepare Nutrient Management Plans. A further look at Figure 2, however, reveals that even in these three counties, the number of planners that had up-to-date certifications in 2010 was fewer than ten in each county. Some counties like Lincoln, Sagadahoc and York do not have any planners with up-to-date

certifications. In fact, there are more out of state planners (five) with current certifications than in all but four counties.



Recertification Process

The recertification process is the logical continuation of the initial certification process described above. The intent is to have the planners attend events on topics relating to Nutrient Management issues, to expand their knowledge, and keep them updated on new research and development. Nutrient Management Planning Specialists that are certified through the State of Maine must acquire 6 recertification credits per 5 years for a private license and 10 recertification credits per 5 years for a commercial/public license.

The Department has established a process that enables planners to receive credits for approved events, and for events to be considered for recertification credits. The process for requesting recertification credits and for obtaining informational flyers has been developed and now is in place. The rulemaking to formalize the process was completed, and the amended rules were formally adopted in May 2002. The database for keeping track of the credits has been developed but has been problematic, and needs revisions to make it useful for keeping track of recertification credits and other data.

In 2010 and early 2011, eight major training sessions were held. Three of these sessions were all-day or multi-day events. A total of 31 credits were offered. Seventy-nine individuals received a total of 165 credits.

Notable training events included a No-till & Manure Usage workshop, a two-day training event sponsored by NRCS, and 12 presentations given at the Department's Agricultural Trades Show in Augusta. The trade show presentations covered a wide range of topics pertaining to nutrient

management, and included such diverse topics as: soils and hydrology, pathogen reduction in manure, compost management plans, results of carcass compost leachate trials and manure management in no-till systems. Attendance at the trade show presentations was high, despite blizzard conditions on the second day of the show.

Winter Manure Spreading Ban and Variances

The ban on winter manure spreading is effective December 1st of a calendar year through March 15 of the following calendar year. This restricts spreading during the time of the year when the potential for nutrients to reach water bodies is at its greatest.

The Department received only 2 requests for variances for the winter of 2002-2003. Both of these requests were approved and both were for a limited time to allow the manure level in a pit to be lowered to ensure that the pit would have sufficient capacity to get through the winter. This number of variance requests was significantly fewer than the 15 approved in 2001-2002. The number of winter spreading variance requests increased dramatically in 2003-2004 to 75. This was greater than the total number of requests for the three previous years. The increase occurred as a result of the unusually wet fall, which prevented many farms from getting equipment onto fields and prevented them from lowering manure storages enough to be able to accept the amount of manure that would be generated during the winter months. Many of these farms were able to get onto their fields for the first time in months just before the ban went into effect. Most of them needed several days of additional time to lower their storages sufficiently to get through the ban period. This startling increase in the workload at a critical time of the year put a severe strain on the Department personnel reviewing and approving requests. This was exacerbated by the fact that NRCS was unable to assist in the process. The result was that the normal process for issuing variances had to be abbreviated. Had a mechanism been in place that would have allowed the Commissioner to move the spreading ban date ahead about two weeks when extreme conditions warrant it, this situation could have been handled much easier. The Nutrient Management Review Board, however, decided that the present system is working satisfactorily and, therefore, a Rule change was not needed at that time.

The 2004 season enjoyed drier field conditions which resulted in no requests for variances. In contrast, the spring and fall seasons of 2005 exhibited excessive rainfall making most field activities, particularly the emptying of manure storage facilities, generally impossible. Consequently, during the winter of 2005-2006, 65 variances were granted that allowed spreading until December 31, 2005. Several producers were granted brief extensions for spreading into early January 2006. Two requests were denied because criteria established for granting a variance were not met in these situations. The spring, summer, fall, and early winter seasons of 2006-2007 manifested some of the heaviest rainfall on record resulting in extremely wet and soft field conditions. These ubiquitous, wet field conditions, coupled with unseasonably warm temperatures and no permanently frozen ground until mid January 2007, prohibited many farms from emptying manure storage facilities prior to the winter spreading ban period. Consequently, the largest number of requests to date, 83 spreading variances and, subsequently, 15 extensions for spreading into January 2007, and 3 extensions into February were granted. Two requests were denied because criteria established for granting a variance were not met by these farms.

Throughout 2007, the compliance officers visited as many farms as possible who had requested spreading variances. The purpose was to see how they were planning to avoid the need for variances in the future. The visits encouraged farms to focus on timely spreading and advance planning.

The summer and fall of 2007 proved to be more conducive to field work in general, which allowed most farms to empty their storages before the winter spreading ban period. As a result of the better weather conditions and the additional effort to raise awareness, only four farms sought and received variances to spread beyond the December 1 deadline. Deep snow conditions eventually ended spreading activities. Some field stacking continued as a way to divert manure from storages that still had insufficient freeboard to make it through the winter.

The number of requests for spreading variances rose again in 2008 to 43 with five seeking extensions. All the requests were granted. Most of the requests were based on problems faced with spreading on wet fields during the fall.

The number of requests for spreading variances in 2009 dropped to 21. Only three farms requested an extension. All three were granted but only two of the extensions were actually used. Most of the requests were based on problems faced with spreading on wet fields during the fall. The summer of 2009 was unusually wet, making any kind of field work nearly impossible in June and July. Despite the wet conditions, most farms were still able to complete the fall spreading before the December 1 cut off date. Approximately six of these spreading variances were granted because either fall rain had added significant quantities of water to storages, and land conditions were suitable for spreading in December, or unusually dry conditions in March enabled certain farmers to prepare land for planting or to clean out storages earlier than usual, all of which could be done in an environmentally-sound manner.

Overall, the weather during the fall of 2010 was typical for Maine. Although there were rainy periods, conditions were suitable to allow most farms to lower their manure pits sufficiently to allow them to get through the winter. Only sixteen requests for spreading variances were made and all of them were granted. The latest date granted for spreading was December 31st, and most farms completed their spreading activities by that date. However, at least one variance was not utilized by the farm since field conditions were not conducive to spreading during the variance period.

Nutrient Management Plans

The mandatory Nutrient Management Plan is a key element of the Nutrient Management Law. A Nutrient Management Plan is a management tool designed to evaluate the amount of nutrients needed compared to those available on a farm. The plan also includes setbacks from sensitive resources and existing uses, erosion control best management practices (BMPs) and provisions for manure storage for a minimum of 180 days production of manure.

A farm operation is required by legislation to develop and implement a Nutrient Management Plan if:

- the farm confines and feeds 50 animal units or more at any one time
- the farm stores or utilizes more than 100 tons of manure or compost per year, not generated on that farm
- the farm is the subject of a verified complaint of improper manure handling (i.e. checked and confirmed by the Department of Agriculture) or
- the farm stores or utilizes regulated residuals

Nutrient Management Plans for most farms had to be completed and approved by January 1, 2001. The Department issued 40 variances on the completion date of January 1, 2001, mostly because of the high volume of plans our cooperators (SWCD, NRCS) had to complete on or around the deadline.

As of September 2001, three farms were known to be operating without a plan or a variance. Later that fall and into 2002, the Department and the Nutrient Management Review Board took steps that resulted in two of these farms voluntarily coming into compliance. One operation remained out of compliance until the fall of 2002, when enforcement actions were sought. The situation was resolved in court.

Farmers had until October 1, 2007 to fully implement their plans. This time span between development of a plan and full implementation allowed farmers to arrange financing, buy equipment and build or upgrade storage and handling systems that were needed to implement the plan. It was expected that those parts of the plans that did not require structural changes or major investments would be implemented as soon as the plan was approved. The time frame for full implementation of plans completed after the October 1, 2007 date has not been established either by legislation or rule. (Farms that began operation after 3/31/98 must have had a nutrient management plan completed and implemented before commencing operations.) The Nutrient Management Law will need to be amended to remove the past implementation dates and to establish a time frame for implementation of new plans. One logical scheme would be to require implementation of provisions of the plan that do not require capital investment within six months while those requiring capital investment may take 12 to 18 months to fully implement.

Many of the State's Nutrient Management Plans were developed in 2001 and were valid for five years; therefore, many plans required updating and recertification in 2006. This presented a challenge to certified planners for updating these plans in a timely manner. Consequently, 66 variances to nutrient management plan development were granted to keep the farmers in compliance with the Nutrient Management Law and to maintain their Right-to Farm protection while their plans were being updated. In 2010, 20 farms requested and were granted Nutrient Management Plan variances, most of which were intended to allow planners time to complete the updates.

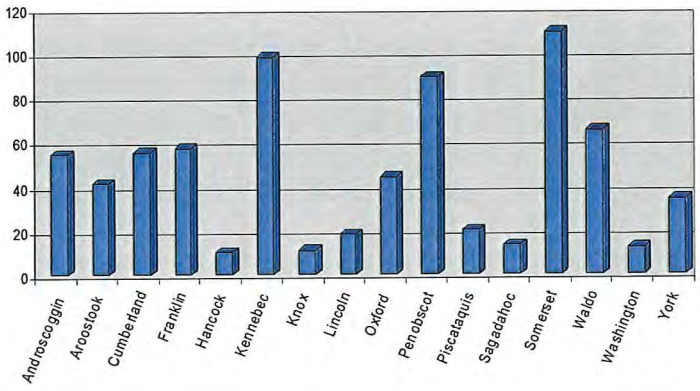
The original plans that were developed in 2001 and then updated and recertified in 2006 will be due again in 2011. According to the database, 112 nutrient management plans will expire in 2011.

A look at Figure 1 shows that there was a peak in planning activity between 2005 and 2008. The number of plans developed in 2009 and 2010 was significantly lower than these peak years. As the plans developed during the 2005 to 2008 window began to need updates (starting in 2010), we should see another increase in planning needs. This will likely lead to another surge in workload for the few Nutrient Management Planners available and may result in additional requests for variances over the next few years.

Considering both updated and new plans prepared, there were 117 plans certified in 2006, 120 in 2007 and 104 in 2008. The number declined to 56 in 2009 and to only 42 in 2010. Of those certified in 2010, 15 were new plans and 27 were updates of older plans.

The development and implementation of Nutrient Management Plans has resulted in a more effective use of nutrients, including manure, on agricultural land, and a reduction in the water quality impact of nonpoint source pollution associated with agricultural operations.

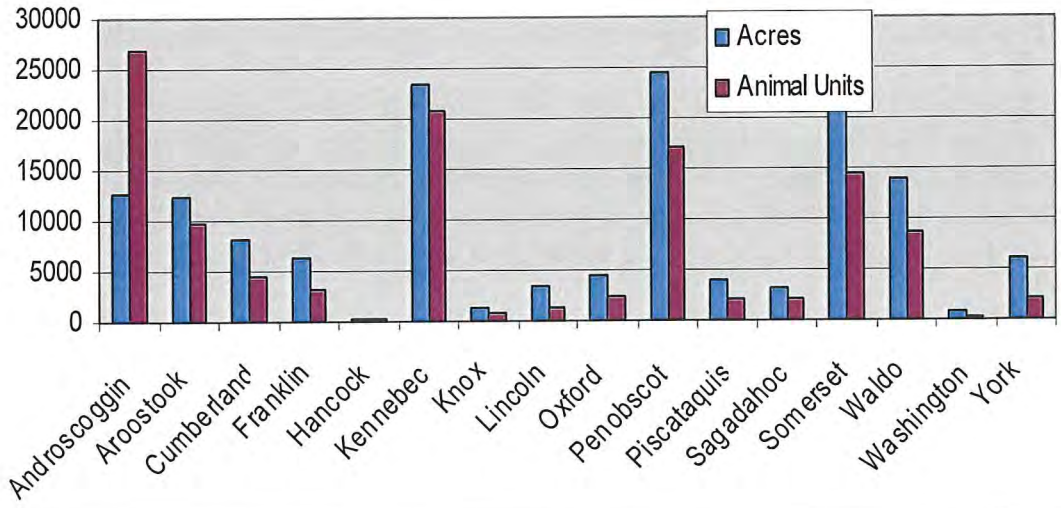
Figure 3. Nutrient Management Plans by County



Seven hundred forty Nutrient Management Plans have been developed throughout the State, and Figure 3 shows how these plans were distributed. Of these plans, 425 are up-to-date and 315 need to be updated. Among this latter group are 94 farms with fewer than 50 animal units. Most of these only had nutrient management plans in order to accept residuals or manure from other sources. Several other farms have gone out of business and no longer need nutrient management plans. Letters were sent out to 224 farms in 2010 that appeared to require plan updates to remind them to have their plans updated. From this mailing, and of the 91 farms that have responded so far, it has been determined that 65 farms no longer require a plan because the farm has downsized, gone out of business, no longer imports manure or regulated residuals, or the farmer has retired or died. As of December 31, 2010, it was determined that 26 of these farms still required a Plan, and these farms either have completed their Plan updates or have been granted a variance. One hundred-thirty-three farms still have not responded to their letter and require follow-up by the Department.

In 2010, 20 farms without current plans were granted variances to allow them more time to develop and implement, or to update their plan. The Department anticipates that a larger number of farms may be requesting variances in 2011 and during the next few years as a result of the

Figure 4. Acreage and Animal Units Covered by NMPs by County



update notices that were sent out.

Note that the total number of Certified Nutrient Management Planning Specialists in Figure 2 has a similar distribution to the distribution of farms with plans in Figure 3, indicating that there were more planners in the areas with the greatest need at one time. This is probably no longer true when looking at the current distribution.

The 740 plans cover a total of 151,457 acres (up from 149,881 acres) and 113,362 animal units (down from 115,291 animal units), where one animal unit is equal to 1,000 pounds live weight. Figure 4 shows how these totals are distributed throughout the counties. Table 4 (at the end of the report) has a complete breakdown of animal units and acreage by county, while Table 5 shows the changes between 2009 and 2010 for each county as well as the state totals.

A quick look at Table 5 reveals that Waldo County had the largest drop in the number of up to date plans (-15) and the largest increase in expired plans (+15) of all counties. Other counties with notable changes in up to date plans were Kennebec (-11), Cumberland (-10) and Franklin (-9). Overall, there was a net increase of six in the number of farms with nutrient management plans. Seven counties had an increase in number of plans while three counties saw a net reduction in the number of plans.

Comparison of acreage versus animal units for the different counties reveals that there are some significant differences in the number of animal units supported per acre. An interesting point here is the number of animal units and acreage managed under Nutrient Management Plans in Androscoggin County, which houses two of the three largest poultry operations in the state. Since manure production from the number of animal units in this county exceeds the land base for spreading, some of the nutrients produced have to be exported to other counties to be utilized where there are suitable soils that need those extra nutrients. Most other counties have about 1.5 to 2 acres per animal unit except Kennebec County which has only about 1.1 acres per animal unit. This suggests that some farms in Kennebec County may not have enough spreadable land for the manure produced and so may need to export manure. In fact, recent changes in manure management techniques at these large poultry farms have resulted in significant quantities of manure being exported to New Hampshire and Vermont for utilization.

A 2010 review of the farms with expired NMPs indicates that of the 315 expired plans, 221 actually had 50 animal units or more and approximately 40 percent of these were concentrated in three counties, Kennebec, Penobscot and Somerset. This analysis suggested that additional effort was needed in these three counties to bring more farms into compliance. (Note: Table 4. at the end of this document has a complete breakdown of up-to-date and expired plans by county.)

These data illustrate how the information from Nutrient Management Plans may provide information needed for planning purposes. On a local scale, the farmers can make an informed decision on how and where to utilize the nutrients to minimize the impact on water quality. On a larger scale, the areas with a deficit of nutrients can be compared to those with excess nutrients to determine the potential for moving nutrients to those areas that need them.

In 2009 the Department received 11 requests for variances from the requirement to have a current nutrient management plan. Most of these requests were made by farms that were in the process of having a plan developed but it had not been completed because of a backlog of work for the planners. All 11 requests were granted in order to give the planners time to complete the plans. In most cases, the variance was valid for only three months or less. A few of the

variances were for five or six months. Only one variance had to be extended beyond six months due to complications with obtaining all the materials needed to complete the plan. During 2010, 20 variances were granted. The length of time for which these variances were granted averaged approximately six months, but one extended into September 2011. The increased length of time granted for certain variances resulted from the fact that planners were overwhelmed with requests to update farmers' expired plans, or Plans that were pending expiration. Consequently, planners required more time to complete the updates. This surge in requests primarily came about as a result of the letters that the Department had sent to farmers with expired Plans, or to farmers who had Plans pending expiration within the following six months. Another complicating factor was the onset of winter, which resulted in frozen ground, thereby making the collection of soil samples essentially impossible. In order to minimize these impediments in the future, the Department will be monitoring Plan expiration dates closely, and providing farmers with sufficient advance notice that their Plan will be expiring soon, which should result in a reduced burden on planners, and timely Plan updates.

Nutrient Management Plans for Fish Hatcheries

The Maine Department of Agriculture is charged by the legislature with implementing a law that requires fish hatcheries to have nutrient management plans for the fish 'manure' and waste feed from the hatcheries. The interest in the development of nutrient management plans for fish hatcheries once again resurfaced in 2008 and 2009. Work with hatcheries continues to be a small but on-going part of the items addressed under the Nutrient Management Program. Department staff provided technical assistance to two hatcheries trying to deal with nutrient management issues in 2009, but no assistance was requested in 2010. The guidance document that was developed, for use by fish hatcheries in preparing plans formed the foundation for working with these hatcheries.

One continuing need is the development of rules for nutrient management plans for fish hatcheries. The guidelines that are now in place are an interim measure that may suffice until rules can be developed and which are serving the need quite well. In order to develop the rules, a stakeholder process will need to be set up. This process will probably require a considerable amount of staff time.

FINANCIAL ASSISTANCE

To comply with the winter manure spreading ban described in the Nutrient Management Law, producers either need to have a manure storage facility that meets the requirements of the Department, or have identified suitable stacking sites where manure can be stored until it can be spread. These requirements have placed a significant financial burden on most Maine farmers who require such facilities. For this reason, the Department of Agriculture helped develop a Nutrient Management Grant Program and a Nutrient Management Loan Program, intended to help farm operations comply with the Nutrient Management Law.

Nutrient Management Grant Program

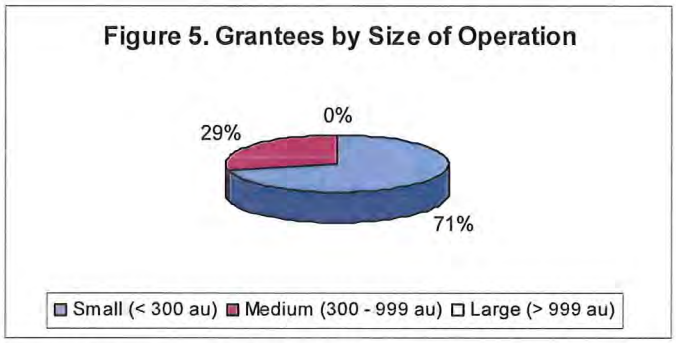
The purpose of this program is to help Maine farmers comply with the Nutrient Management Law by providing cost sharing for manure storage and handling systems. This program has been implemented in three major phases plus a supplemental phase and a fourth phase has been proposed, all of which are discussed below:

Phase I - Nutrient Management Grant Program

The Nutrient Management Grant Program funds for Phase I were appropriated by the 119th Legislature in the year 2000. A total of $2.5 million was allocated in 2001 to facilitate the construction of new or retrofitting of existing manure storages and handling facilities on Maine's farms. The Department received a total of 145 proposed projects, with a total cost for all projects submitted of $15.4 million ranging from $5,500 to $1.19 million per project. Some projects were not eligible to receive 100% funding as they exceeded the maximum allowed reimbursement because certain equipment requested was ineligible. Low-priority projects, although potentially environmentally beneficial, could not be funded.

Of the $7.3 million in grant requests for approvable projects, the Department was able to fund just over $2.3 million. The amount available covered only one third of the total requested amount for that round of funding. As a result, the Department sought additional funds to expand the grant program and was successful in getting $2.0 million approved as part of a bond package. This was used to establish the second round of grants (identified as Phase II to distinguish it from the original round of grants).

Figure 5. Grantees by Size of Operation



Phase II – Nutrient Management Grant Program

The Phase II process was similar to Phase I in that an RFP was issued, grant proposals were accepted and a review and ranking process was followed. The applications were reviewed, prioritized and recommended for funding by the Nutrient Management Review Board. Funding was committed to 44 projects in Phase II. Five grantees eventually declined the funds that were earmarked for their projects. The funds that were declined equaled $299,745, and were reallocated to the Phase II Supplemental grant program discussed below. Thirty-three farms completed construction and requested their funds, one initiated construction and received partial payments, and three did not requested any funds (see Table 1 below). According to the contracts for the projects, all the projects had to have been completed by a certain date. Since these four projects had not been completed and no extensions were requested, the contracts expired. The farms subsequently received letters indicating that the funds were no longer available for the project.

Figure 4 shows the distribution of projects under Phase II according to the size of the operation, where one animal unit (AU) is equal to 1,000 pounds of live animal body weight. Twenty-nine of the funded projects were on smaller farms (<300 AU), while 12 projects were on medium size (300 – 999 AU) farms. There were no projects on large operations in this round of grants. This distribution is similar to that observed for Phase I, which had 26 on small farms, 12 on medium farms and two on large farms. In Phase II, almost $1.1 million (57%) in funding went to small farms and the remaining 43% went to medium size farms. Again, no funds were awarded to large farms in this round.

Phase III Nutrient Management Grant Program

In November 2002, Maine voters approved another bond issue that contained $1.0 million for the Nutrient Management Grant Program. These funds were used to provide grants under Phase III of the program. Due to changes in the NRCS EQIP rules and policies, a number of changes were made to the Phase III Program to make the two programs work together efficiently. The Nutrient Management Review Board and Department staff met several times with NRCS to discuss changes to the EQIP program in order to develop recommendations on any changes that were needed for Phase III.

Among the changes recommended were:

- *Increase the percent of cost share from 75% to 90%
- *Increase the maximum amount of Nutrient Management grant funds for any project from $100,000 to $125,000
- *Give equal weight to requests for solid and liquid systems
- *Allow innovative systems for managing manure to qualify for the program
- *Allow construction of compost pads
- *Restrict applicants to those who do not have a valid contract for a Nutrient Management Grant
- *Place more emphasis on environmental benefits in the ranking system
- *Give some credit to those who are willing to invest larger share of their own money into the project in the awarding of points in the ranking system
- *Rearrange the application form to make it clear which costs are eligible for funding under this program and which are not

The RFP for Phase III of the Nutrient Management Grant Program was announced in December 2003. The signup period extended from January 1 to February 13, 2004. During this time, the Department received 29 applications for Phase III grants. These applications were reviewed by a subcommittee of the Nutrient Management Board, rated according to criteria set out in the RFP and ranked in order of priority for funding. Funding was committed to 21 projects for a total planned expenditure of $1,276,639. Twenty projects were completed, while 1 farm had begun its project and received partial payments. One farm declined the funds that were allocated for its project, $125,000.

Eighteen funded projects were on smaller farms (<300AU), while 3 projects were on medium size farms (300-999AU). A larger percentage (86%) of Phase III farms was in the small farm category than was the case in Phase II, which was 71%. Medium size farms comprised only 14% of the Phase III total compared with 29% for Phase II. $1,023,815 was allocated to small farms, while $252,824 was designated for medium size farms. Seven of the State's counties were represented in Phase III, and corresponding funds awarded are depicted in Table 1.

Grant funds awarded for Phases I, II, III and Phase II Supplemental are summarized in Table 1. It should be noted that the grand total of grant funds awarded in Table 1, $6,110,030.00, is inconsistent with the amount of funds appropriated from the general fund and from bonding, which was $5,500,000.00. The reason for this apparent inconsistency is that of these funds, $610,030, were not utilized by some recipients in earlier phases and were reallocated.

Finally, the distribution of projects throughout the state for Phases I, II and III is depicted in Figure 5, while the distribution of funds is displayed in Figure 6. Note that Aroostook County had the most projects funded (12), while Waldo, Penobscot, Somerset and Franklin were close behind with 10,10, 9 and 8 projects, respectively. The distribution of funds around the state was similar but not identical to the distribution of projects. Aroostook County was awarded 21 % of the funds, while Penobscot, Somerset, Franklin and Androscoggin received 19%, 14%, 13% and 12%, respectively. It is interesting to note that, while Waldo County scored near the top in terms of number of projects, it garnered only 9% of the funds. This is a reflection of individual project

Table 1. Grant Funds Awarded by County

County	Phase 1	Phase 2	Phase 3	Phase 2 Supplemental	Phases 1, 2 ,3 & 2 Supplemental
Androscoggin	$267,993.00	$125,760.00	$261,500.00	$80,000	$735,253.00
Aroostook	$160,200.00	$406,639.00	$275,015.00	$74,338	$916,192.00
Cumberland	$26,920.00	$35,000.00			$61,920.00
Franklin	$88,000.00	$196,196.00	$211,406.00		$495,602.00
Kennebec	$500,762.00	$129,600.00	$124,509.00		$754,871.00
Knox-Lincoln	$19,868.00	$58,767.00		$40,000	$118,635.00
Oxford	$295,238.00				$295,238.00
Penobscot	$571,257.00	$379,362.00	$218,535.00	$120,561	$1,289,715.00
Piscataquis	$198,594.00			$19,400	$217,994.00
Somerset	$188,781.00	$265,662.00	$168,906.00	$11,350	$634,699.00
Waldo	$92,617.00	$266,660.00	$16,768.00	$19,350	$395,395.00
York	$89,770.00	$45,000.00		$40,000	$174,770.00
Totals	$2,500,000.00	$1,908,646.00	$1,276,639.00	$424,745	$6,110,030.00

size and, generally, indicates the magnitude of farm manure storage requirements.

Although they are not depicted in Figures 5 and 6, the awards from Phase II Supplemental alter the distribution of funds slightly as Penobscot, Androscoggin and Aroostook Counties received the largest shares in this round of funding.

Figure 6

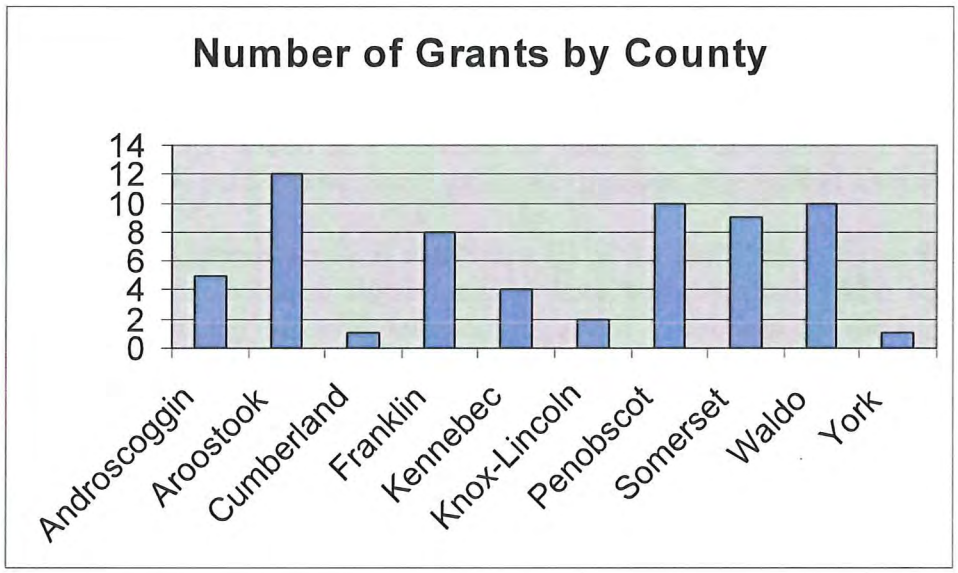
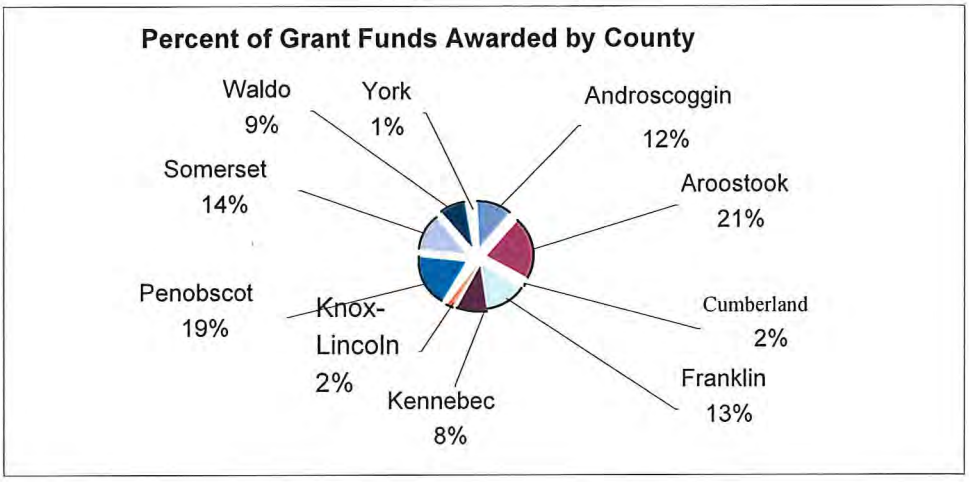


Figure 7



Phase II Supplemental Nutrient Management Grant Program

During mid 2006, it was determined that some monies in the Phase II and Phase III programs would not be utilized as planned. This was the result of the farmers going out of business, completing their project under budget, or canceling their project. Consequently, $424,745 became available for funding additional projects. This "new" grant program was called "Phase II Supplemental" in recognition of the fact that most of these funds originated from the earlier Phase II program. The Nutrient Management Review Board decided that projects funded under Phase II Supplemental should attempt to resolve environmental problems of either immediate or long-term concern, and that eligibility for funding be expanded to include a broader array of projects than had been the case in the past. Accordingly, a "request for proposals" was issued that included a listing of eligible projects, applicant eligibility criteria, and criteria for prioritizing funding of projects. The application period was October 1 through November 17, 2006. Fifty-seven applications were received, which far exceeded expectations, and many farmers, mindful of the small amount of funds available, decided not to apply for a grant. These 57 proposals represented $3.4 million in total project costs. Grant funds requested equaled $1.8 million, with only $424,745 available for disbursement from Phase II Supplemental. A sub-committee of the Nutrient Management Review Board reviewed each proposed project, evaluated it based on previously established criteria, prioritized the projects, and selected 15 grantees. The full Nutrient Management Review Board and the Commissioner approved the sub-committee's selections for funding. These projects are located in nine Maine counties from York to northern Aroostook. The grant totals from Phase 2 Supplemental for each county are listed in Table 1. Department staff met with these farmers and NRCS personnel for reviewing construction of these projects and for contract initiation. Given the number of applicants for this small pool of funds, there appears to be an enormous need for funds to resolve nutrient management and environmental concerns.

As of February 2009, all but one of the farms with Phase II Supplemental funds had completed their projects. The one remaining project was given a one year extension. The project was

completed bringing to a close the Phase II Supplemental process. No grant funds remain available in the Nutrient Management Grant Program.

Proposed Phase IV Nutrient Management Grant Program

Despite accomplishments realized from the previous Nutrient Management Grant Programs and from other projects, many farms in Maine, whether small, mid-size or large, continue to have nutrient management-related problems that must be addressed. In 2006/2007, NRCS estimated that the average cost per livestock farm in Maine for meeting its nutrient management-related needs was $200,000 - $250,000. NRCS also estimated that $50,000,000 would be required to meet the total need for Maine livestock farms and, as suggested in the discussion of the Phase 2 Supplemental grant program, this is a very conservative estimate. Conservation requirements of vegetable or crop farmers were estimated to be $5,000,000-$10,000,000. Although these estimates are now three to four years old they still are reasonable estimates of the current conservation funding requirements for Maine farms.

Manure storage structures and milk house waste handling systems were constructed across the State by means of funds provided in Phases I, II and III of the Nutrient Management Grant Program as outlined above, and also by funding through USDA's EQIP program administered by NRCS. Although these grant programs achieved substantial progress for helping farmers comply with legal requirements in Maine's Nutrient Management Act, it is clear that much more nutrient management conservation work needs to be done.

Accordingly, in January 2006, the Nutrient Management Review Board decided that the Department should seek additional monies for a Phase IV Project through a bond issue. This proposed Phase IV Project would be similar to that of Phase III, but eligibility for funding would be expanded to include more nutrient management-related conservation practices similar to those offered in Phase II Supplemental. These projects could include: roofs for new or existing manure storage structures and livestock heavy-use areas; feed storage areas to include silage leachate, filter strips, diversions or high-flow, low-flow devices; and water control in barnyards to include roof run-off management and other pertinent practices. Compost pads, slaughterhouse waste utilization and on-farm carcass disposal, or other practices as deemed appropriate, also will be considered. Since every situation is unique, appropriate environmental remediation systems must be selected that achieve on-site specific goals.

In 2007, the Department included a request for funds for nutrient management purposes in a larger environmental bond. Because bond funding had been provided for nutrient management in the past, but not for some of the other requests, the legislature chose not to include the nutrient management request in the bond issue that went to the voters in November 2007.

The Department submitted another request, this time for $5 million to the Governor to be included in a bond package to be considered by the legislature in 2009. This request was combined with a request for water quality (irrigation) funds. This combined package was presented to the legislature at the lower level of $3 million for both purposes. The package as approved by the legislature included the water quality funds ($1.5 million) but not the nutrient management funds. The package was approved by referendum in November 2009.

The Department is has discussed submitting a similar request to the legislature in 2011; yet, given the current fiscal situation, approval probably is unlikely. If this request were approved by

the legislature, it would go to the voters in the fall of 2011, and if approved, would be available the following spring.

Nutrient Management Loan Program

The Nutrient Management Loan Program originally made available to farmers a total of $6 million for financing the construction or improvement of manure and milk room waste containment and handling facilities, and associated costs. It was considered a good supplement to the Nutrient Management Grant Program when grant funds did not cover the total costs of a project, or when a project was not eligible for a grant.

The Department of Agriculture continues to cooperate with DEP, the Maine Municipal Bond Bank and the Finance Authority of Maine (FAME) to deliver this program to farmers. FAME administers the Loan Program using funds provided from the State Revolving Fund made available by DEP and EPA. The Program offers a low interest rate loan (2%) for a maximum loan of $350,000. In 2002, there were fourteen (14) closed applications (up from 11 the previous year) for a total of $1,927,797 (up from $956,993 in 2001). There were no expenditures from the loan fund for nutrient management projects during either 2003, 2004 or 2005. However, in 2006, one loan was finalized for $165,000. There were no requests for loan applications in 2007 and only one at the start of 2008. There were no applications for loans in 2009 or in 2010. Currently, there are eleven active loans which represent an expenditure of $873,709. $665,739 is available in the loan fund. Substantial, additional monies could be appropriated to this fund if needed, although there are no pending applications at this time.

The potential benefit of this loan fund is that it offers a significant means of providing large amounts of relatively low-interest capital for enhancing the viability of an important segment of Maine agriculture. Outreach to the agricultural community through workshops, promotional factsheets or brochures, or by increased interaction with local soil and water conservation districts may have an impact on the use of the loan program in the future. Current economic conditions and the continued availability of funds through the USDA EQIP program are likely to continue to dampen interest in a loan program.

The Department has taken a leadership role coordinating discussions with DEP, FAME and others to broaden the scope of this loan program to include eligibility, not only for manure-related structures, but also for equipment or projects that directly impact agricultural non-point source pollution reduction.The Nutrient Management Review Board directed the Department to pursue expanding funding eligibility for this program similar to that proposed in the Phase IV project discussed above. In late fall 2006, the Department submitted 17 additional practices to DEP for review and approval for funding by the loan program. These practices have also been submitted to EPA for approval. The EPA met with Department staff and made farm visits in 2007 to view some of the additional practices being proposed for inclusion in the program. As of December 2010, the EPA has not made a final decision on which practices it would approve.

At least one large dairy farm has expressed an interest in obtaining a large loan from this fund for developing an anaerobic digestion project. This proposed facility would generate electricity for use on the farm and for export, and also would yield significant environmental benefits. Unfortunately, since the farm is defined as a concentrated animal feeding operation and, therefore, is considered a potential "point source" of pollution, it is ineligible for receiving these funds, because this fund was established to address "non-point sources" of potential pollution.

Continued availability of the loan program may be in jeopardy unless there is an increased utilization of these funds soon. Attendees to the Nutrient Management Program talks during the 2011 Agricultural Trades Show were encouraged to consider utilizing this program, and to inform others for whom the program might be of benefit. Future increased awareness of the loan program, coupled with an enhanced selection of options from which to choose for conducting environmental remediation projects, may encourage more farmers to take advantage of this opportunity.

Tax Exemptions

Maine tax law contains two provisions that allow farmers to claim tax exemptions for manure storages. One provision exempts manure storages from property taxes because they are pollution control structures. To qualify, a nutrient management plan must have been written and approved for the farm. The second provision allows farmers to take a sales tax exemption on materials used to construct a manure storage or handling system. This provision has not been widely used and is another program that must be promoted.

In 2007 and again in 2008, the Department received only one request for the sales tax exemption each year, while only one farm sought the sales tax exemption in 2009. In 2010, the number of sales tax exemption requests was only three. However, Department staff have met with personnel in the sales tax division of Maine Revenue Services to determine what is needed to formalize the process of applying for and approving this exemption. Several years ago, the sales tax division accepted the task of developing a special form that farmers could complete when seeking this exemption. This process has not been completed and requires additional follow-up.

The use of the property tax exemption has also been limited, with only two requests in 2003, which was the same as in 2002. The number of requests in 2004 increased to seven. There were four requests in 2005, and no requests were received in either 2006 or 2007. Only one farm requested assistance from the Department in obtaining the property tax exemption in 2008 and none did so in 2009. In 2010, only two farms requested Department assistance for obtaining the property tax exemption. These have been handled through an informal process of communication between the agencies. Unfortunately, this informal process has proven cumbersome and inefficient. Neither local town officials nor Maine Revenue Service personnel adequately understand or have sufficient procedures in place to appropriately administer this program. This exemption has worked in these limited cases only because the Department's staff were able to act as liaison between the parties on an ad hoc basis to effect a positive outcome for the farmer.

These two provisions in Maine tax law, enacted to help the State's farmers successfully compete in the marketplace and survive economically, clearly are underutilized. At this point, it is not clear if farms are not taking advantage of these opportunities or if they have been able to access the exemptions without Department involvement. (In some cases, it appears that they have been getting the exemptions from the vendors without proof of qualification.) This is another arena in which the Nutrient Management Coordinator will need assistance to promote the use of these tax exemptions and to provide education, coordination and guidance for farmers and public officials. Given time, the Coordinator may explore options such as combining these efforts with other farmland protection programs in the Department.

COORDINATION WITH DEP PROGRAMS/JOINT LOP/MEPDES PERMITS

The Maine Nutrient Management Program requires a livestock operation to obtain a Livestock Operations Permit (LOP) if it meets one of the following conditions:

- The operation is new with 300 or more animal units (AU) or is expanding to greater than 300 AU.
- The operation meets the 1998 EPA definition of a Concentrated Animal Feeding Operation (CAFO) (1000 AU), or is designated as one by the Department.
- The operation plans to expand beyond its land base for spreading or its current manure storage capacity.

The permit is mandatory for a livestock operation meeting the criteria outlined above to operate in the State. Additionally, for operations meeting the 1998 EPA definition of a concentrated animal feeding operation (CAFO)[1], a Maine Pollutant Discharge Elimination System (MEPDES) permit also may be required. The Maine Department of Environmental Protection has been given the authority to issue MEPDES permits by the EPA. The Departments of Agriculture and Environmental Protection cooperated to develop general language and conditions for developing a joint LOP/MEPDES application procedure for those operations, whereby the operator comes to the Department of Agriculture and initiates both permits with only one application process. These cooperative efforts facilitate the process, both for the applicant and for the issuing authorities.

This process appears to be working reasonably well. As of February 2009, DEP had issued MEPDES Permits to two Maine dairy farms and one beef farm, and was in the process of developing four more. No MEPDES permits were issued in 2010, maintaining the total number of farms in Maine with permits at seven. As of February, 2011, there are no permits pending, and the Department is unaware of any farms that meet existing criteria that would require them to apply for a MEPDES permit.

EPA revised rules that govern National Pollutant Discharge Elimination System (NPDES) permits related to CAFOs in 2003. These proposed changes were challenged immediately by both environmental and agricultural industry groups. The U.S. Court of Appeals for the Second Circuit issued rulings regarding these issues in 2005. These rules were finally adopted by the EPA in December of 2008. It remains to be seen how the administering agencies (DEP and EPA) interpret and implement the new provisions of the rule. The Department still is uncertain what impact these changes will have on Maine farmers, and we are not sure how many farm operations in Maine will ultimately be required to obtain a MEPDES permit. Once this is clarified, the Department may need to seek legislation that would address conflicts between Maine law and the new rule, and also address discrepancies that exist between Department and DEP Rules.

LIVESTOCK OPERATIONS PERMITS

1 An operation is considered a CAFO under the Nutrient Management Rules if:

- It confines more than 1,000 animal units
- It confines between 301 and 1,000 animal units and that may or does discharge to the waters of the United States
- It has been designated a CAFO by EPA or its delegated permitting authority.

As of December 31, 2002, seven farm operations had been identified as needing a Livestock Operations Permit. These facilities were inspected and issued provisional permits. These provisional permits allowed the farm operations the opportunity to meet the requirements for obtaining a full permit and to fulfill the requirements of the law. However, the complexity of these permits required the availability of substantial blocks of time to work on them effectively and efficiently. During 2008, the Department sent letters to the largest and otherwise highest priority farms, encouraging them to start the application process. Application packets were sent to 14 farm operations to initiate the process. As of February 2009, four had completed the process and were issued an LOP.

For the year 2009, the Department set a high priority on getting as many of the remaining eligible farms permitted as possible in the next calendar year. To this end, another set of 17 letters and applications were sent to the top priority farms on the list. Visits to these farms by the compliance officers were scheduled soon after the letters were sent out to follow up with the farms and to answer any questions the farmers had about the process. As a part of this process, the Department reviewed the farms to determine whether MEPDES Permits might also be required. If the farm appeared to need a MEPDES permit, the Department provided them with the joint application material and consulted with DEP on the application and permitting process.

By February 2011, fifteen additional, finalized or provisional LOPs had been issued, four applications were under development by the farmer, and one application was in the office pending review by the Department. Of the original 61 farms on the LOP list of potential permittees, 36 have been determined not to require an LOP because the farm had down-sized, had gone out of business, or was determined by the Department to be grandfathered by statute. Three farms on the list appear not have a legal requirement to apply for a permit, but the farmer currently is deciding whether to proceed with the permitting process should he/she expand the operation and require a permit in the near future, and three farms are under evaluation by the Department to determine if a permit is required.

The Department stands ready to advise the farms on the process and to assist them with submission requirements. Nutrient management planners are also working with some of these farms to assist in data collection and submission of the applications.

History: LOP Appeal

In March of 2003, the Department issued its first full Livestock Operations Permit (LOP) to DeCoster Egg Farms. Soon after the issuance of the LOP to DeCoster Egg Farms, a group of citizens in Turner formally filed an appeal to the issuance. A hearing was scheduled before the Nutrient Management Review Board for June 2003, but was delayed at the request of the appellant. It was postponed until after September 1, 2003 and then rescheduled for March 2004. The primary issue raised was the effectiveness of odor and insect control BMPs.

The outcome of this hearing was that the Nutrient Management Review Board upheld issuance of the LOP, but with additional conditions. The appellant filed an appeal in Superior Court regarding this ruling, as well as a civil suit against DeCoster. In February 2004, the petitioners appeal was denied by Superior Court and the Board's ruling was sustained. The civil suit also has been resolved

NUTRIENT MANAGEMENT REVIEW BOARD

The Nutrient Management Review Board is a seven-member Board, with each member representing a different aspect of the agricultural community and the public. The Nutrient Management Review Board's duties include approving rule changes, hearing appeals on permit or certification decisions made by the Commissioner, and making recommendations to the Commissioner on issues pertaining to nutrient management. The Board is staffed by the Department's Nutrient Management Program Coordinator. The Board was more active in 2003 than in the previous year, but again activity had to be limited since there was no Nutrient Management Coordinator available to work on issues that needed Board attention. The three areas of focus for the Board in 2003 were the Nutrient Management Grant Program, enforcement of the Nutrient Management Law and addressing the appeal to the Livestock Operations Permit that was issued to DeCoster Egg Farms. The Board reviewed the changing rules and policies regarding the NRCS EQIP program and recommended several significant changes for the Nutrient Management Grant Program (See section on Phase III of the Grant Program). In 2004, the Board's activity was quite limited with most of its time devoted to the DeCoster appeal and to the Nutrient Management Grant Program.

During 2005 and early 2006, the Board's activities and concerns centered on recertification training for Nutrient Management Planners, issuance of variances to the winter spreading ban and the decline in availability of farm technical assistance from NRCS. Establishment of a Phase IV component of the Nutrient Management Grant Program was a top priority, along with expansion of eligibility of projects covered by the Nutrient Management Loan Program.

In January 2006, the Board issued a ruling regarding the use of Algefiber on farms. Algefiber, comprised of perlite and spent seaweed, is a by-product of carrageenan production and has agricultural value as a weak liming agent and soil conditioner. Carrageenan is a food additive used in ice cream, toothpaste and hundreds of other products. The Board ruled that Algefiber is not a regulated residual as defined by the Nutrient Management Law and, therefore, a Nutrient Management Plan is not required by farms utilizing this product. However, farms operating with a Nutrient Management Plan still must consider Algefiber's nutrient contribution when the "whole-farm nutrient balance" is calculated.

Later in 2006, much of the Board's time involved planning for the Phase II Supplemental and Phase IV grant programs, revisions to the loan program, and issues related to livestock operations permits, and proposed changes to EPA's CAFO rule. Interaction with DEP personnel regarding agricultural compliance issues associated with certain livestock farms, the proposed Agricultural Compliance Rule, winter spreading variances and avian influenza considerations also were important agenda items. Reinstatement of the Nutrient Management Coordinator position has effected increased activity in all of these areas.

The Nutrient Management Review Board met only twice in 2007. The primary decisions made by the Board in 2007 related to the Nutrient Management Grant Program. In late January (January 31), a sub-committee of the Board met to review and score the grant applications using pre-assigned ranges of ranking points. The full Board approved their selections on February 12, 2007. Although the Board was updated on a number of other important developments in the nutrient management arena, no other policy actions or decisions were required.

The Nutrient Management Review Board was once again called on to conduct an appeals hearing

in 2008. In this instance, the owner of a small livestock operation had lodged a complaint against a neighboring horse owner. The livestock owner alledged that manure stacking by the horse owner was causing flooding on his land. The case was investigated by the Ag Compliance Officer and other Department staff, and recommendations were made to the horse owner. The livestock owner was not satisfied that the changes went far enough and appealed to the Board. Following two days of hearings, the Board ruled that the Department had acted properly but did impose some additional conditions for the horse owner.

The year 2008 saw a number of significant nutrient management issues discussed by the Board. Some of these were:

- Issues with the nutrient management database
- Issues relating to conflicts between the new organic certification standards for livestock and nutrient management BMPs and animal health concerns. Specifically, the requirement for year-round outdoor access for livestock may be in conflict with BMPs to protect water quality
- Legislation affecting the regulation of agricultural composters
- Legislation that changed the cull potato statute
- The looming conflict between Maine law and federal rules regarding confidentiality of nutrient management plans for CAFOs
- Farm energy audits and 'green power' initiatives
- New informational brochures on nutrient management, carcass disposal, the agricultural compliance program and others
- Nutrient management issues and plans for fish hatcheries
- Development of carcass disposal plans for catastrophic losses. These plans primarily focus on composting
- A joint meeting between the NM Board and the Agricultural Water Management Board to discuss the proposed Atlantic Salmon listing

The activities of the Board in 2009 were limited to the two meetings required by law. At one point early in the year, an appeals hearing was scheduled to hear an appeal by a farm that disputed the Department's determination that a livestock operations permit was required for that operation. The hearing was postponed and was not re-scheduled. Subsequently, the Department decided to vacate its determination that the farm apply for a Livestock Operations Permit, and also decided to refer the matter to DEP for their consideration and appropiate resolution.

Issues of concern that were addressed at the 2009 Board meetings included:

- Issues with the nutrient management program database
- Wrap up of the nutrient management grant program Phase II Supplemental
- Need for a Phase IV of the nutrient management grant program and a bond issue
- Issues with the nutrient management loan program
- Concerns about the impact of new EPA regulations on farms regarding air quality
- Review of the status of livestock operations permits and the higher priority placed by the Department on their issuance
- Update on compost research activities and site development at Highmoor Farm
- Increased interest by the ag community about composting food and fish residuals and the increase in development of compost management plans
- Status of winter spreading variance requests
- Change in the cost share process for the development of Comprehensive Nutrient Management Plans (CNMPs) through NRCS

- The Good Agricultural Practices (GAP) program and its impact on nutrient management in Maine.
- Development of carcass disposal plans for catastrophic losses. These plans are primarily focused on composting.
- Issues with local ordinances that establish different standards for posting roads than the state standards.
- Ag energy issues associated with anaerobic digestion, farm energy audits and alternative energy sources.

In 2010, the Nutrient Management Review Board saw an increased level of activity. In addition to the two regularly scheduled board meetings, the Board held three meetings to discuss policy issues associated with the proposed changes to the carcass disposal rules (Chapter 211) At these meetings, the Board focused on a variety of issue areas and made recommendations to the Department on how these issues should be handled in the rule.

Other issues and topics addressed by the Board in 2010 included:

- Coyote bait sites and the potential conflict with the carcass disposal rules
- Recent composting activities
- Livestock Operations Permits/MEPDES Permits
- Carcass disposal issues
- Variances (both winter spreading and Nutrient Management Plan)
- The need for improvements to the Nutrient Management/Ag Compliance Program Database
- DeCoster manure handling changes
- DeCoster carcass disposal issues
- Nutrient Management statute and rule changes
- Ag compliance cases
- Right-to-Farm issues
- Ag energy issues
- Certification Training Manual update
- DEP Chapter 583 Rule: Nutrient Criteria for Surface Waters
- Letters to farms with expired NMPs or to those with NMPs that were pending expiration

AGRICULTURAL COMPLIANCE PROGRAM

The Nutrient Management Program works in very close collaboration with the Agricultural Compliance Program. The Agricultural Compliance Program investigates and addresses all agriculturally based complaints including odors, insects, improper manure handling, water contamination, improper disposal of farm wastes, cull potatoes and animal carcasses. The Department of Agriculture also cooperates with other agencies when complaints are associated with other regulated materials and activities on the farm.

In 2005, the Department's two Agricultural Compliance Officers, who cover the entire State, investigated and resolved a record number of formal complaints. Approximately 240 initial and repeat visits were conducted regarding specific issues involving complex agricultural or environmental situations. During 2006, the Agricultural Compliance Officers conducted approximately 180 initial and repeat visits, a smaller number than was the case in 2005. This

reduction in visits was the result of vacancies in both the Compliance Officer and Compliance Supervisor positions following a retirement and a resignation. Significant amounts of time also were required for follow-up of several complex, on-going compliance issues.

In 2007, both positions were once again engaged in compliance work since one had been filled in September 2006 and the second was filled in February 2007. The number of initial and repeat investigations conducted jumped to over 280. Some of the increase was due to the backlog of cases from the previous year as well as the steadily growing number of new complaints (169) that came in during the year.

Complaint investigation continued at the same pace in 2008 with 170 new complaints. Of these, 35 (20.5%) were related to animal welfare, which appears to be a growing source of complaints. Ground and surface water complaints together accounted for only 19 (11.2%) of the new complaints. Very few of the complaints were from counties 'Downeast'. Washington and Hancock Counties together only generated five complaints (2.9%). York, Kennebec, Androscoggin and Aroostook, on the other hand, all had over 20 complaints each. In fact, the seven counties that comprise the I95 corridor accounted for 119 (70%) of all the complaints received.

New complaint numbers in 2009 dropped to 140 but this was offset by the number of more complex and time consuming cases that required multiple follow up visits. In total, 115 follow up site visits had to be made, bringing the total number of investigations to 255. In fact, the top eight cases required a total of 73 site visits by the compliance officers. Some of these cases are still on going.

Once again, the number of new complaints dropped in 2010 to 115. Looking at Table 2 below shows that there were variations among the different counties, with some having reductions and others having increases in numbers of new cases. The most notable increase was in Aroostook County which went from 10 cases in 2009 to 26 in 2010. Many of these were investigations of cull potato piles. The most notable drop in cases was in Waldo County where only four new cases were investigated in 2010 compared to 17 in 2009.

Another way to look at these numbers is by grouping the county numbers by investigation areas. For the purposes of the Agricultural Compliance Program, the state was broken up into three investigation areas using county boundaries. The northern and eastern counties were grouped into one investigation area (Area #1). This area included Aroostook, Washington, Hancock, Waldo, Penobscot, Piscataquis and Knox Counties. The central area (Area #2) included Lincoln, Sagadahoc, Kennebec and Somerset Counties. The southern and western area (Area #3) was comprised of Franklin, Oxford, Androscoggin, Cumberland and York Counties.

Table 3 below shows that the number of new cases in Area #1 was roughly the same in 2010 as in 2009. The significant increase in cases in Aroostook County was just about offset by drops in numbers in Waldo and Hancock Counties.

The numbers of new cases in the central area (Area #2) dropped by 10, largely due to a drop from 11 to 2 new cases in Somerset County.

Finally the numbers of new cases in the southern and western part of the state (Area #3) dropped by 12 overall as a result of a small increase in York County that was more than offset by drops in numbers of new cases in Cumberland, Oxford and Androscoggin Counties.

The trend toward cases that required multiple follow up visits continued in 2010. Nineteen cases required three or more staff visits. One long-standing difficult case in central Maine (animals at large) required at least ten visits by various Department staff before it was finally resolved. Another difficult water quality situation in Cumberland County also resulted in ten Department staff visits and is still on-going. Overall, 95 follow up visits were made by staff members during the year. Most of these were made by the Agricultural Compliance Officer (31; 32.6%), and the Agricultural Compliance Supervisor (55; 57.9%), although other staff were also involved at times as well.

Table 2. COMPLAINTS INVESTIGATED BY COUNTY

COUNTY	2010 TOTAL	2010 NEW	2009 NEW
ARO	38	26	10
PEN	28	17	16
KEN	23	15	14
YOR	22	12	6
CUM	36	9	16
LIN	9	6	6
OXF	14	6	11
AND	19	5	11
WAL	6	4	17
WAS	4	4	4
KNO	4	3	3
FRA	4	2	4
HAN	2	2	9
SOM	2	2	11
PIS	1	1	1
SAG	1	1	3
TOTAL	213	115	140

Table 3. NEW COMPLAINTS INVESTIGATED BY INVESTIGATION AREA

COUNTY	2010 NEW	2009 NEW	CHANGE
ARO	26	10	
PEN	17	16	
WAL	4	17	
WAS	4	4	
KNO	3	3	
HAN	2	9	
PIS	1	1	
AREA #1	57	60	-3
KEN	15	14	
LIN	6	6	
SOM	2	11	
SAG	1	3	
AREA #2	24	34	-10
YOR	12	6	
CUM	9	16	
OXF	6	11	
AND	5	11	
FRA	2	4	
AREA #3	34	48	-12
TOTAL	115	140	-25

Animal welfare complaints continued to be a significant segment of the complaints in 2010. Complaints about animals at large also required a considerable amount of staff time in 2010, both in terms of number of visits and number of man hours spent.

The Compliance Officers also inspect and provide technical assistance to farms seeking Livestock Operations Permits and/or MEPDES Permits, and Nutrient Management Plans. They also conduct farm visits to evaluate applications submitted requesting variances for applying manure to fields during the prohibited spreading period of December 1 through March 15.

Since 2007, the compliance officers have also been asked to assist with deer farm inspections. Additional training was needed to familiarize them with deer farm licensing requirements. During 2010, 63 deer farms were inspected and licensed by the compliance officers and the program manager. There also currently are ten licensed commercial large-game shooting areas in the state, plus one that has been given a provisional license in Piscataquis County. These areas are inspected and licensed by the deer farm program manager.

In connection with the Compliance Program, the Department of Agriculture assists new operations upon request in developing best management practices (BMPs), and works with towns and the agricultural community to address issues associated with the Right to Farm Law, new developments and municipal ordinances. As a part of the effort to provide education to the public about the compliance program, the Department has developed an agricultural compliance program brochure that explains how the program is structured and the types of activities involved. This brochure has been distributed at the Agricultural Trades Show and at a number of other public venues.

This process is extremely efficient at correcting improper manure handling situations on farms where a problem has been reported and verified. In recent years, the Department of Agriculture has resolved many ground and surface water related complaints. This effort is ongoing and continues to be very successful, both for the farming community and for the general public.

One area of concern, however, is the rapidly increasing number of complaints about manure issues against non-commercial farm operations. More and more problems are being identified where there is only one to a half-dozen animals (often horses) generating manure that is not being stored or managed properly. Many of these situations cannot be defined as a commercial farm and so did not come under the authority of the Right to Farm Law. Changes to the Manure Law, 17 MRS §2701-B, made by the Legislature in 2003 enable the Department to address manure-related complaints on these small operations with the same enforcement capabilities it has on larger farm operations. Clearly, the Nutrient Management Program is dependent upon these Compliance Officers to act as field personnel for providing essential services to farmers and others.

COMPLIANCE AND ENFORCEMENT ACTIVITIES

Overall, 2007 was a hallmark year for resolving long standing compliance cases. Long term issues on four farms in Kennebec, Lincoln and Penobscot Counties received a lot of attention from the Department that year. Two of these cases were brought to a successful resolution, while substantial progress was made with the others. One of these cases was expected to escalate in 2010 when the operation indicated its intent to appeal the Department's decision that would require that farm to apply for a livestock operations permit. Subsequently, as noted earlier,

the Department decided to vacate its determination that the farm apply for a Livestock Operations Permit, and also decided to refer the matter to DEP for their consideration and appropiate resolution. The case involving the second operation also has been resolved. Two other large cleanup cases were identified on farms in Oxford and Penobscot Counties, which continue to be a focus of the Department.. In addition, situations on smaller operations in Aroostook and Hancock Counties are likely to be issues that the Compliance Program may be dealing with for some time.

Perhaps the most notable case involved a central Maine dairy farm that was designated a CAFO by DEP and issued a MEPDES permit in August 2006. This farm had a history of water quality and other violations going back to at least 1998. In late fall 2006, the provisional LOP of this farm was revoked by the Department of Agriculture for failure to comply with provisions of its permit. The farm appealed the revocation to the Department and requested a hearing. The appeal of the Department's revocation of the provisional LOP was denied. The farm appealed this decision to the Nutrient Management Review Board. Upon further review of this matter, the Department determined that this farm's provisional livestock operations permit had expired prior to the revocation hearing; therefore, an appeal to the Nutrient Management Review Board of the Department's previous decision was moot.

Beginning in the fall of 2006 and into 2007, the Department, DEP, EPA and the U. S. Department of Justice (DOJ) cooperatively initiated enforcement actions against the farm for multiple and continuing water quality violations. After several months of unsuccessful efforts to get the farm to comply with permit conditions and orders from the EPA and the court, the farm operation was shut down by the owner. The farm's financial backer then took over the operation and initiated a clean up operation. This was completed in the summer of 2007. In 2008, the new owner of the farm appeared to have come to an agreement with an existing farm operation to start up a dairy operation after correcting a number of deficiencies at the facility. As of February, 2010, the farm was still not in operation because contractual issues had not been resolved. However, in the late fall of 2010, the farm owner and a potential lessee of the farm reached an agreement, and dairy cattle were moved onto the farm in early December 2010.

The years 2009 and 2010 saw a shift toward more complex, multifaceted compliance situations that required multiple visits by the Compliance Officers (and others). One example was a case in southern Penobscot County that resulted in multiple trips to address both animal-at-large and animal welfare issues. A recurring compliance situation in Hancock County involved animal health, animal welfare, solid waste and animals-at-large issues. A Franklin County case involved animal welfare issues, water quality, nutrient management and rights of way issues. A case in Lincoln County involving both pigs and chickens, included food, shelter and animal welfare issues. Another southern Penobscot County case involved a long standing problem with manure management and discharges to a brook. This case did result in a successful cleanup effort in 2009; however, the farm now is out of business. A Waldo County case involving animal welfare concerns actually resulted in the involvement of the State Police. And finally, a situation in southern Androscoggin County involved repeated neighbor complaints about a variety of issues including spreading manure and spoiled silage, truck noise, odors, dogsled trials, dead animals, solid waste and more. It was an interesting year!

MUNICIPAL ORDINANCES

Every municipality has a mandatory shoreland-zoning ordinance, which regulates activities within the shoreland zone (including agriculture). A code enforcement officer enforces the ordinance. Many municipalities have other ordinances, which regulate agriculture outside the shoreland zone. A municipality that is proposing to adopt an ordinance that could impact agriculture by restricting the use of BMPs is required to send a copy of the ordinance to the Department for review. Subsequent to this review, the Department notifies the municipality with its findings regarding the potential impact of the proposed ordinance on agriculture. The Department, therefore, is aware that some ordinances make it very hard for farmers to have a sustainable agricultural operation if an ordinance is too stringent (e.g., number of animal units allowed), and works with municipalities to resolve any issues. In 2008, the Department did reviews of nine town ordinances under the 'Right to Farm Law'. The Department reviewed a similar number (eight) of proposed ordinances in 2009, and assisted another five municipalities who requested guidance related to agriculture-related ordinance development. In 2010, the Department reviewed another six proposed ordinances and provided feedback to the communities. In addition, the Nutrient Management Coordinator provided information and advice to another two communities who sought assistance from the Department in evaluating a potential ordinance change.

A recent trend in this area is the adoption of ordinances that are more stringent than state standards regarding posted roads. Towns have proposed or adopted ordinances that extend the time period that roads are posted (some to 365 days!). Others greatly limit weights that can be carried. In many cases, these restrictions severely impact farms that must use those roads. In 2008, the Department was subpoenaed to court to testify in one of these cases. The Department argued that imposition of these restrictions was impacting the farm's ability to implement BMPs and that the town's ordinance might not be applicable to farm trucks under the 'Right to Farm Law'. Proponents of the stricter road postings argue that the 'Right to Farm Law' only applies to what takes place on the farm itself. Meetings with the Maine Municipal Association resulted in a commitment by MMA to develop a model ordinance that would help promote uniformity among towns. The Department needs to follow up with MMA to see what progress has been made on this front. This issue may appear before the Legislature if it continues to be unresolved in the future.

Several other types of municipal ordinances were reviewed by the Department in 2009. These ordinances covered a wide range of agricultural issues including barking dogs, animal husbandry, shoreland zoning, fur farms, dog kennel exclusions, wellhead protection, sludge spreading and horses in pasture versus in paddocks. In 2010, ordinances dealing with animals at large, water source protection and agriculture in general were being proposed and required input from the Department.

CONCLUSIONS AND FUTURE CHALLENGES

One conclusion drawn from an overview of the Nutrient Management Program is that the program has come a long way since its inception in 1998. Today, Nutrient Management Plans are a normal part of doing business for many farms. We have gone through two update and renewal cycles and are starting into the third generation of Nutrient Management Plans. Larger farms have accepted the need for Livestock Operations Permits and the process for issuing them is well under way. The Department and DEP have developed a good working relationship when

it comes to issuing MEPDES permits, and on most other matters. The Nutrient Management Board has gone through rulemaking, dealt with appeals from several quarters and managed the application process for $5.5 million in Nutrient Management Grants. In short, the program has moved from an idea to an established and maturing program.

Another conclusion is that it may be time to re-assess the program to see if some potential areas for expansion of the program need to be pursued. This may mean the Nutrient Management Board forming a stakeholder group to evaluate issues such as the type and size of farms that should be required to have nutrient management plans. Is it time to require nutrient management plans for crop farms or livestock farms smaller than 50 animal units? Is there legislation that would be needed? What rule changes are needed to bring the program up to date with current federal and state laws? It is just as true today as when the program was first initiated, that there is a lot of work to be done.

Rulemaking

The Department has three sets of rules that have some impact on the Nutrient Management Program and some of these will require rulemaking in the near future. The Carcass Disposal Rules (Ch 211) were last revised in 1996, and many new BMPs have been developed that should be reflected in the rules. Over the course of the year 2010, a major re-drafting of the rule was completed. Significant input into the policy issues associated with the rule was obtained from the Nutrient Management Review Board. Three issue-oriented meetings were held with the Board. The recommendations from these meetings were used to formulate the language that had policy implications. At the time of this report, the draft rule was being distributed to various constituent groups for feedback prior to going into the formal rulemaking process.

Among other things, the Carcass Disposal Rules were amended to include an enforcement section based on the penalty structures authorized by the legislature in the Animal Health Laws and the Maine Agriculture Protection Act. In addition, the new rules incorporated standards and siting requirements for many new technologies and disposal techniques that were unknown or in their infancy at the time of the previous revision. It is anticipated that the rulemaking and adoption process will be completed in 2011.

The rules for the Right to Farm Law, now more appropriately entitled "Rules for the Agricultural Compliance Program (Chapter 10)", were more than 20 years old and very obsolete. New rules that contain the processes for complaint investigation, as well as BMP development and enforcement, were drafted and presented to the agricultural community in January 2007. The "Rules for the Agricultural Compliance Program" essentially outline procedures that have been utilized by the Department's compliance officers for many years, but now are more clearly defined. These Rules also provide a firm, legal basis for problem solving under the laws which they are intended to support, such as the Manure Law, the Nutrient Management Law, and other laws related to water quality issues. The Rules were finalized and adopted in May, 2007.

Some important changes to the Cull Potato Law were made in 2008. These allowed the Department to hold any responsible party (not just the landowner) responsible for clean up of illegal cull potato piles. It also authorized the Department to adopt rules and BMPs for the management of cull potato piles. These changes, however, will necessitate revisions to the Cull Potato Rules (Ch 600) as well.

The Nutrient Management Rules (Ch 565) also must be revised to reflect changes made to the law in 2003 and to correct inconsistencies that have come to light as the rules are being applied. At this point, the revision of this rule looks to be a large and time consuming task. Based on current staff workloads, and preliminary work that must be completed, it will probably be 2012 before this rulemaking process will begin.

Initiation of a Phase IV Grant Program

Substantial progress has been made in recent years addressing non-point source pollution from agriculture. The Nutrient Management Program has been a major factor in this success. The Department is addressing the need for expansion of the Nutrient Management Grant Program into a Phase IV project to facilitate the construction of new or retrofitting of existing manure storage and handling facilities. The Phase IV project also proposes to expand eligibility of funding to include a broader array of practices for reducing non-point source pollution involving silage leachate, feed storage areas, heavy use areas and contaminated water runoff from barnyards, among others. As outlined above, the most likely funding mechanism for this endeavor would be through a bond package. If funding is successful, additional coordination with other agencies will be essential.

Follow-up on Nutrient Management Loan Program

The Nutrient Management Loan Program is the most underutilized tool available to farmers in the nutrient management arena. Yet, its potential benefit to Maine agriculture is highly significant. Additionally, the scope of this program is in the process of enhancement to include funding for additional types of pertinent equipment and projects, similar to those proposed in the Phase IV initiative, that are not allowed at this time. This is another activity that could yield substantial benefits to farmers and to Maine's environment. This expansion depends on a positive response from the US EPA, which provided the original funds from which the loans are made. Since nearly three years have passed without a response to a request from the Department, it may be time to pursue other avenues for getting a reply from the EPA. Involvement by Maine's congressional delegation may eventually be needed if other avenues fail to yield a response.

Follow-up on Nutrient Management-Related Tax Exemptions

The two provisions in Maine tax law related to nutrient management also are underutilized. One provision exempts manure storages from property taxes because they are pollution control structures. Neither local town officials nor Maine Revenue Service personnel adequately understand or have sufficient procedures in place to appropriately administer this program. The other provision allows farmers to take a sales tax exemption on materials used to construct a manure storage or handling system. Unfortunately, both provisions are little used. This is another arena in which the Nutrient Management Coordinator can assist to provide education and coordination if these provisions are to have wider use. Some other programs that might be able to cooperate would be the Department's farmland protection and Farms for the Future programs or organizations outside the Department.

Follow-up on Livestock Operations Permits

In 2009, the Department set a higher priority on completing Livestock Operations Permits as quickly as possible. Because of the higher priority being placed on completing LOPs, the Nutrient Management Coordinator spent a higher proportion of his time in 2009 and 2010 on the LOP development process. As discussed above, the issuance of LOPs is almost completed for the farms known to require these permits.

Programmatic Changes in Nutrient Management Planning

Continuing changes in USDA and EPA rules and policies continue to create a constantly evolving environment. Keeping up with these changes is very challenging and time-consuming. Comprehensive Nutrient Management Plans are required for all farms that receive Environmental Quality Incentive Program (EQIP) funds; however, farms participating in certain other USDA programs are not subject to this requirement to receive benefits. All elements outlined in a farm's CNMP must be addressed in order for that farm to be considered in compliance with their plan and remain eligible for full USDA program benefits. While many of the provisions in the new USDA guidelines for CNMP development are similar to the State guidelines, there are a number of important differences. The Department does not plan to seek legislation or undertake additional rulemaking at this time to bring the State guidelines into line with these federal guidelines because the process for developing State NMPs generally is neither as complex nor as costly as that for developing more elaborate CNMPs. Rather, the Department prefers to encourage as many small farms as possible to develop a Nutrient Management Plan for their operation by maintaining the simpler requirements for NMPs.

The Department also is faced with adjusting to new EPA guidelines for defining or designating CAFOs, and determining if these changes will result in issuing permits to more farms in Maine - a complex and time-consuming process for limited Department staff. This may mean additional meetings with DEP to discuss any new procedures for defining or designating CAFO, and perhaps for the development of a new agreement between the agencies on how this is to be done. Complicating these issues is the fact that EPA's positions continue to evolve regarding its approach to regulating CAFOs and Animal Feeding Operations (AFOs). Some of EPA's rules and procedures were challenged, and the U.S. Court of Appeals for the 2nd Circuit issued rulings affecting some of these issues. Nevertheless, the revised CAFO Rule was adopted on December 20, 2008.

One issue of paramount concern for many livestock farmers in Maine and across the United States is the shift by the 2nd Circuit Court and EPA to require that CAFO nutrient management plans, now considered to be confidential documents in Maine, be open to public review as part of the MEPDES permitting process. These rulings by the court will play an important role in future EPA procedures and requirements. Consequently, EPA is rethinking its approach as to what is the best way to regulate these operations and the standards to which they should be held. In the past, enforcement activities were a primary focus. During the past few years, a welcome shift toward an attitude of problem solving through encouraging and providing enhanced technical assistance to farmers seemed to be receiving more emphasis; however, during 2009 and 2010, there was a renewed emphasis to gain enhanced compliance in certain areas of the country and on types of enterprises where enforcement of environmental laws has been inconsistent. Unfortunately, the source for the additional technical assistance that will help farmers to comply with these laws remains elusive.

All of these potential changes create uncertainty and confusion when Department program administrators attempt to formulate policies that are in the best interests of agricultural producers and of the State's natural resources. Adequate staffing, which currently does not exist, is essential to keep up with continuing policy changes at the federal level.

Expansion of Nutrient Management Plans to Include Routine and Emergency Carcass Disposal

In recent years, there has become a greater awareness of the need for better planning when it comes to disposing of animal carcasses. The recent outbreaks of Foot and Mouth Disease in Korea and Japan highlighted the need to be prepared for large- scale emergency carcass disposal events. The Nutrient Management Board has endorsed the concept of requiring large farms to have an emergency carcass disposal plan. Those farms that are required to have a Livestock Operations Permit will now need to have an emergency carcass disposal plan as one of the conditions of their permits.

The Nutrient Management Review Board has also endorsed the concept of requiring that routine carcass disposal plans become a normal part of a nutrient management plan. This will be the first significant change to the nutrient management plan content since the inception of the program in 1998. Nutrient Management Planning Specialists will need to be trained in this new subject area in order to fulfill the new requirement.

Technical Assistance

One of the most serious challenges facing the Department and Maine agriculture is the shrinking pool of technical specialists available to apply conservation and nutrient management practices to the land. Our partner, NRCS, on whom farmers, landowners, soil and water conservation districts and others have relied for expertise and assistance, has incurred personnel attrition through retirements and inadequate funding, which is a loss of technical expertise vital for guiding and applying conservation projects to the land. These employees are not being replaced, and their experience and knowledge cannot be replaced quickly. Many federal "farm bill" projects have taken priority over those of nutrient management. All of these situations have left NRCS with limited ability to provide technical assistance to farms that are not locked into EQIP contracts. Consequently, there has been a major shift away from providing technical assistance for applying practices to the land by federal employees, and toward an emphasis on contract administration with private technical service providers or other specialists. Yet, there remain a myriad of specialized NRCS programs that benefit the farming community with technical assistance and funding for meaningful projects.

The University of Maine Cooperative Extension System, another valuable partner essential for providing expertise in a myriad of disciplines to landowners, to this Department and to others, also is experiencing a fate similar to that of NRCS. The local soil and water conservation districts, from which considerable expertise is available to farmers and others, generally are dependent upon interaction with NRCS, Extension and other organizations to have viable outreach programs. Although highly motivated to provide the highest quality customer service, which they do, most soil and water conservation districts do not have adequate financing or staff to expand their programs at this time.

At a time when nutrient management programs and their implications for agricultural pollution reductions from CAFOs are the number one priority of the Environmental Protection Agency, it is incongruous that sufficient technical expertise is unavailable to meet demand. This trend of decreased expertise available to apply conservation practices to the land continues. In order to meet goals promulgated by the Maine Legislature and by federal authorities, additional resources from these sources are needed.

Consequently, it is clear that additional technical expertise must be obtained from sources other than that of our traditional partners. Fortunately, a few private-sector technical service providers (TSPs) and others are available to meet planning needs in some situations, but with the current extraordinary demands on the federal budget, decreased federal funding for conservation programs seems to be the current trend. Nevertheless, the Department must continue to be proactive by providing innovative leadership and by developing the capability of meeting expanding, essential needs not being achieved by other entities. The acquisition of technical staff by the Department, particularly for providing engineering and other technical assistance in the areas of nutrient management, water quality, agronomy and in other related disciplines has been considered by the Department recently. One proposal included having as many as four technical positions created by the legislature and placed in Soil and Water Conservation District offices in key locations around the state. Unfortunately, the current fiscal status of the State makes this undertaking problematic for the foreseeable future.

One change that may affect the ability of farms to access planning assistance is the change in the formula for cost sharing on plan development. Until recently, NRCS was able to provide 75% of the cost of developing a plan and the farmer was expected to cover the remaining 25%. Under the revised policy, meant as a cost containment measure, NRCS will pay a flat rate, often based on animal units and acres. The farmer would pay any additional costs not covered by the flat rate amount. This may result in higher costs for the farmer and discourage them from accessing this service.

Partnership Agreement with NRCS

During 2003, the Department discovered that some fundamental changes were happening within our long-standing conservation partner, NRCS, some of which have been described above. Those changes were impacting how the two agencies were interacting while trying to deliver conservation programs to the farm community. These changes were causing confusion about what roles and services each agency would be providing. Talks were begun between the Commissioner and the State Conservationist for NRCS and their staffs to sort out this relationship. Subsequently, in December 2004, a new written and formalized Memorandum of Understanding was established between NRCS and the Department "for their cooperation in the conservation of Maine's natural resources". No changes to the working agreements have been made since 2004. Recently, some agricultural and conservation constituents have expressed their sentiments that the partnership agreement and the working relationship between the agencies should be revisited. It may be time for these agencies to map future joint activities that successfully and efficiently deliver conservation programs to the public with the limited personnel and financial resources that presently are available.

The NRCS State Conservationist for the State of Maine was promoted to another position within the agency in 2008. Now that the new, permanent State Conservationist, Juan Hernandez, has

settled in, the Department has been developing a new working relationship that will include learning which priorities will be uppermost for the agency under this new leadership.

Evolution/Future Challenges of the Nutrient Management Program

The concept of nutrient management planning has been accepted quite readily by farmers, considering that the number of plans adopted to date, 740, far exceeds expectations. Farmers realize that the Nutrient Management Rules were developed by Maine farmers and others who understand the problems faced by Maine agriculture, and that they specifically relate to Maine's landscape and climate. This program has proven to be beneficial to farmers (and to others) both economically and environmentally. Another extremely important result of Maine's proactive approach to regulating itself in the nutrient management arena has been, for the most part, the preemption of certain restrictive regulatory mandates from EPA.

The apparent acceptance of nutrient management planning by the agricultural community suggests consideration of, perhaps, reducing the Nutrient Management Plan activation thresholds to fewer than 50 animal units, or of reducing the manure or compost importation levels to less than 100 tons. Perhaps all cropland or certain small livestock operations should be considered for mandatory nutrient management planning? As previously mentioned, small livestock operations, particularly horses, are becoming an increasingly common source of complaints and potential environmental impairment. The network of certified planning specialists for preparing these Nutrient Management Plans would have to be expanded to achieve such an ambitious goal.

An important step forward in the nutrient management arena would be to conduct an overview of the sources, availability, and fate of nutrients in the State. Questions to be asked and answered include: where are nutrients generated; where are the utilization locations; which residuals, e.g., sludge, wood ash, Nvirosoil, Algefiber or other soil amendments are being spread and where, and what is their source. Manure, compost and chemical fertilizers should be considered. Some sites are licensed by DEP for spreading, yet these sites may not need additional nutrients for optimal productivity. Currently, there are insufficient staff available to do an extensive review of nutrients in the State, but an overview study of this type might make a good summer project for an intern or a master's program this topic. However, a first step has been taken by getting the Maine composters mapped using a GIS system.

Changes in the DEP solid waste rules have resulted in more interest in agricultural composting of food and fish wastes. This has led to more requests for technical assistance from the Department and for more compost management plan development. The increase in the development of Comprehensive Nutrient Management Plans and Livestock Operations Permits has led to the request for more guidance in developing carcass disposal plans. Both of these tasks have consumed considerable staff time in the last year and promise to continue needing that level of input.

Nutrient Management Program Staff

The Department has undergone many changes during the past year or two. Of note, has been the consolidation of the Nutrient Management and Agricultural Compliance Program staff into a new division called Agricultural Resource Development. Staff of the former Marketing and Production Development group also are part of this new division. At the present time, the Nutrient Management staff are comprised of a nutrient management coordinator, an agricultural

resources management coordinator, and the state soil scientist. The Ag Compliance Program consists of an agricultural compliance supervisor and an agricultural compliance officer. These two compliance program staff cover the entire State investigating agricultural complaints and other matters. The compliance officer position currently is vacant, but the Department hopes to receive authorization to fill the position soon. These staff share an administrative assistant with other members of the division.

Nutrient Management Data Base

One key tool in the management of the Nutrient Management Program is the Nutrient Management Data Base. The data base is used to keep track of nutrient management plans, certified Nutrient Management Planning Specialists, agricultural complaints, recertification credits and other data for the program. The data base has a number of deficiencies that limit its usefulness for managing and reporting data. Staff have to conduct a hands-on evaluation of the data base and its capabilities in order to determine revisions needed to make it more useful. One potential change might be to remove the recertification credits aspect from this database and track them by hand, or by using a simpler system such as a spread sheet.

Table 4. Nutrient Management Plans by County - January 2010

	EXPIRED PLANS				UP TO DATE PLANS				ALL PLANS			
Farm County	Number of Farms	Animal Units	Acres	<50 AUs	Number of Farms	Animal Units	Acres	<50 AUs	Number of Farms	Animal Units	Acres	<50 AUs
ANDROSCOGGIN	20	4603	3612	6	36	23424	10245	8	56	28027	13857	14
AROOSTOOK	14	3514	3615	1	32	6014	8703	9	46	9528	12318	10
CUMBERLAND	20	1255	2766	12	41	4118	6771	16	61	5373	9537	28
FRANKLIN	15	976	1299	7	43	2305	5067	24	58	3281	6366	31
HANCOCK	4	35	115	4	6	122	59	5	10	157	174	9
KENNEBEC	28	2421	4700	6	80	17555	21160	31	108	19976	25860	37
KNOX	5	265	552	2	7	457	910	3	12	722	1462	5
LINCOLN	10	360	1429	7	8	1075	1973	2	18	1435	3402	9
OXFORD	13	623	1099	7	33	1922	3545	23	46	2545	4644	30
PENOBSCOT	31	3753	5294	13	60	13665	20437	19	91	17418	25731	32
PISCATAQUIS	10	597	1661	7	10	1518	2112	5	20	2115	3773	12
SAGADAHOC	3	495	531	0	10	1081	2042	3	13	1576	2573	3
SOMERSET	37	2897	6831	14	43	8895	13681	13	80	11792	20512	27
WALDO	13	1280	2694	6	56	7517	11436	23	69	8797	14130	29
WASHINGTON	11	235	549	9	1	11	150	1	12	246	699	10
YORK	14	593	1745	10	26	1710	3098	14	40	2303	4843	24
TOTALS	248	23902	38492	111	492	91389	111389	199	740	115291	149881	310

Table 5. Changes in Nutrient Management Plan Numbers Between 2009 and 2010

	EXPIRED PLANS				UP TO DATE PLANS				ALL PLANS			
Farm County	Number of Farms	Animal Units	Acres	<50 AUs	Number of Farms	Animal Units	Acres	<50 AUs	Number of Farms	Animal Units	Acres	<50 AUs
ANDROSCOGGIN	2	-68	552	2	-3	-532	-1100	0	-1	-600	-548	2
AROOSTOOK	5	2099	2474	0	-2	-2006	-1990	3	3	93	484	3
CUMBERLAND	8	347	960	-4	-10	-1482	-1961	-2	-2	-1135	-1001	-6
FRANKLIN	11	296	1247	8	-9	-538	-956	-5	2	-242	291	3
HANCOCK	1	15	11	0	1	26	19	2	2	41	30	2
KENNEBEC	9	1236	3099	-1	-11	-1366	-2500	-5	-2	-130	599	-6
KNOX	1	12	23	0	-1	-12	-23	-1	0	0	0	-1
LINCOLN	1	90	225	-5	-1	-90	-225	0	0	0	0	-5
OXFORD	4	246	618	-1	-4	-310	-522	-3	0	-64	96	-4
PENOBSCOT	4	358	1400	-2	-3	-898	-1143	-1	1	-540	257	-3
PISCATAQUIS	0	-70	0	-2	0	-27	10	0	0	-97	10	-2
SAGADAHOC	2	0	26	2	-2	0	-26	-2	0	0	0	0
SOMERSET	3	-418	161	-6	-2	1116	1076	-3	1	698	1237	-9
WALDO	15	1962	3017	-1	-15	-1962	-3017	-7	0	0	0	-8
WASHINGTON	0	0	0	0	1	71	169	0	1	71	169	0
YORK	1	-24	113	-7	0	0	-161	0	1	-24	-48	-7
TOTALS	67	6081	13926	-17	-61	-8010	-12350	-24	6	-1929	1576	-41