

**THE DEPARTMENT OF  
ENVIRONMENTAL QUALITY**

**REPORT ON THE EFFECTIVENESS  
OF THE PLANS IMPLEMENTED BY  
COMMERCIAL POULTRY  
PROCESSORS**

**TO THE GENERAL ASSEMBLY OF VIRGINIA**



**COMMONWEALTH OF VIRGINIA  
RICHMOND  
December 31, 2003**

December 31, 2003

## MEMORANDUM

TO: The Honorable Members of the General Assembly

FROM: Robert G. Burnley

RE: REPORT ON THE EFFECTIVENESS OF THE PLANS  
IMPLEMENTED BY COMMERCIAL POULTRY PROCESSORS  
PURSUANT TO SUBSECTION G OF §62.1-44.17:1.1

Pursuant to House Bill 1207, passed by the 1999 session of the Virginia General Assembly, the Department of Environmental Quality has reviewed the plans submitted by commercial poultry processors required by subsection G of §62.1-44.17:1.1. This report was produced with the assistance of the Department of Conservation and Recreation and the Virginia Department of Agriculture and Consumer Services. As prescribed by this legislation, I would like to offer this Report for your consideration.

This report is available from the Department of Environmental Quality's (DEQ) website at: <http://www.deq.state.va.us/regulations/reports.html>. A hard copy can be obtained by calling Scott Kudlas, Water Policy Manager, at (804) 698-4456.

## **Acknowledgement**

This report was prepared with the assistance of the Department of Conservation and Recreation and the Department of Agriculture and Consumer Services. Staff members that contributed to or reviewed this report are listed below.

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## **Executive Summary**

This report is an evaluation of the effectiveness of the plans of commercial poultry processors required by HB 1207. The report outlines measures and practices contained within the plans to meet the requirements of subsection G of § 62.1-44.17:1.1.

The poultry processors have implemented a cooperative approach to several of the requirements, and have joined in agreements with the Virginia Poultry Federation (VPF) and the Delmarva Poultry Industry (DPI) in a combined effort to fund, develop, and implement these requirements. VPF has been actively involved in establishing a poultry litter hotline and advertising program; education of growers, brokers, and end users on litter management; research; and development of a poultry litter transport matching grant program.

Additional requirements of Subsection G have been addressed by the commercial poultry processors on an individual basis. As an example, the use of phytase as a feed additive to reduce phosphorous in poultry waste has already resulted in significant success. Progress has been made on alternative uses for litter, ranging from the limited production of a high-grade fertilizer to the use of poultry litter in composting operations to produce soil amendments. Other discussions have included the use of poultry litter in energy production either through burning or gasification, but these discussions were delayed as a result of the Low Pathogenic Avian Influenza Virus outbreak.

## **Requirement for this report**

Chapter 1 of the 1999 Acts of Assembly (Item 4) requires:

*That on or before December 31, 2003, the Director of the Department of Environmental Quality, in consultation with the Director of the Department of Conservation and Recreation and the Commissioner of Agriculture and Consumer Services, shall report to the Governor and the General Assembly on the effectiveness of the plans implemented by commercial poultry processors pursuant to subsection G of § 62.1-44.17:1.1 in assisting poultry growers with whom they contract with the proper management, storage, disposal, and transportation of poultry waste, including excess poultry waste, for the protection of water quality.*

## **Virginia Code Requirements for Commercial Poultry Processor Plan Submittal and Content**

There are five commercial poultry processing companies operating in Virginia: Tyson Foods Incorporated, Cargill Turkey Products (formerly Rocco, Inc. turkey division), George's Foods LLC (formerly Rocco, Inc. chicken division), Perdue Farms Incorporated, and Pilgrim's Pride Corporation (formerly Wampler Foods, Inc.). All five commercial poultry processors submitted the required plans, which are on file with DEQ. Each of the commercial poultry processors is also required by the Code to submit an annual report on the activities that it has undertaken pursuant to the plan and any amendments thereto. The most recent annual status reports were received in January 2002 and are also on file.

## **Other Background Information**

Pursuant to Section 62.1-44.17.1:1 of the Code of Virginia (HB1207), the State Water Control Board adopted the VPA General Permit Regulation for Poultry Waste Management General Permit, VPG2, which became effective December 1, 2000. The regulation is currently under revision to comply with changes to the Federal NPDES Regulation and to standardize, where possible, existing state regulations concerning confined animal feeding operations. The general permit has a 10-year term and will expire on December 1, 2010. Poultry growers with 20,000 chickens or more or 11,000 turkeys or more were required to obtain coverage under the general permit. There are currently more than 1,000 poultry growers registered under the poultry waste management general permit. Because it is a requirement for registration, all permitted growers have a DCR-approved nutrient management plan (NMP) in place.

DEQ has the responsibility for inspecting each permitted grower annually for compliance under the general permit. Inspections performed consist predominantly of a visual inspection of facilities and a record keeping review. Most deficiencies identified during inspections thus far have been minor and related to record keeping. Overall compliance has been good and can be attributed, at least in part, to the outreach performed, mandatory training requirements, and other efforts of the various state agencies and private organizations involved.

## **Requirements of Subsection G and Evaluation of Effectiveness of Plans Submitted by Commercial Poultry Processors**

The requirements of Subsection G are noted below, followed by a discussion of actions taken by the poultry processors to comply with these requirements, and an evaluation of their overall effectiveness.

**G 1 - "Provide technical assistance to the poultry growers with whom it contracts on the proper management and storage of poultry waste in accordance with best management practices;"**

These are two methods that commercial poultry processors have used to provide technical assistance: by hiring new personnel to assist with environmental management activities, or training their current field technicians to respond to poultry growers' requests for assistance. Company service personnel visit farms on a regular basis, primarily to address production issues, but also to respond to questions about proper waste storage and management and mortality management.

Some of the companies distributed environmental management manuals to their contract growers to serve as a technical and policy manual that identifies proper storage and management of poultry litter. Much of the technical assistance has been provided through grower education on the requirements of the regulation, including proper waste storage, nutrient management, and mortality management.

Two of the companies initially contracted with third parties to write or update nutrient management plans for their contract growers. The other companies have utilized existing personnel to occasionally assist in NMP development by taking soil and waste samples, identifying waste storage sites, and collecting other necessary information for inclusion in the NMPs.

When DEQ has identified general compliance concerns or areas for improvement, poultry processor personnel have cooperated and communicated these concerns to their contract growers. As a result, inspections performed by DEQ personnel have noted a high rate of compliance with permit requirements.

**Evaluation:** Processors have generally complied with this section, although the level of assistance offered by the various processors has varied. DEQ feels that the success of the poultry waste management program so far is due to the cooperation received from processor staff in educating growers about regulatory requirements.

The establishment of future training sessions, in cooperation with DEQ, DCR, and Virginia Cooperative Extension (VCE), to educate growers about additional requirements established by the new Federal CAFO Rule, and changes to the current program would improve the technical assistance provided to growers. If processors do not wish to provide funding or personnel to actively write nutrient management plans for their respective growers, it would be very helpful if they would provide technical assistance with sampling manure and soil for analysis as required by the permitted poultry growers.

**G 2 - "Provide education programs on poultry waste nutrient management for the poultry growers with whom it contracts as well as for poultry litter brokers and persons utilizing poultry waste;"**

Education of Poultry Growers

Poultry processors have pursued many educational programs that were identified in their initial plans and some additional opportunities in successive years.

Plans and subsequent reports submitted by poultry processors have identified the poultry grower training program that was organized and undertaken by DEQ, DCR, VCE, the VPF, the Virginia Farm Bureau Federation (VFBF), and the poultry processors. A manual entitled Managing Dry Poultry Litter in Virginia: Training Manual was produced using funds provided by the Virginia Poultry Federation, and the printing services of the Virginia Farm Bureau Federation. DEQ purchased binders for the manuals and information that poultry growers would need to maintain compliance with the conditions of the permit. DCR and VCE provided electronic equipment for use during the training meetings and supplemental information to aid growers in their compliance efforts.

During the spring of 2001, poultry processors hosted twenty-two training sessions across Virginia that were attended by more than 1,100 poultry growers. These training sessions were highly successful in educating growers about the regulatory program, waste storage requirements, water quality, nutrient management, feed and litter additives, and mortality management. In addition, approximately two training programs are offered each year for newly permitted operations.

The poultry processors have held or sponsored other poultry grower education meetings since these initial training sessions. One example is the annual Poultry Production and Nutrient Management Symposium hosted by Rockingham County Extension Service. Many of the companies have continued education of their contract growers through their annual grower meetings, newsletters and by sponsoring local VCE educational meetings.

Education of Brokers and Others

On behalf of the poultry companies, the VPF has held three meetings to educate poultry litter brokers on their responsibilities under the regulatory program, and to encourage participation in the poultry waste matching grant pilot program.

The poultry processors, through VPF, have also sponsored the production of a brochure entitled Poultry Litter as a Fertilizer and Soil Amendment, for distribution to poultry litter brokers and end users of litter.

**Evaluation:** The educational programs established for poultry growers have been largely successful.

However, there has been limited success on programs for litter brokers and end-users of poultry litter. The success of these efforts was limited due to the outbreak of the Low Pathogenic Avian Influenza Virus. Due to biosecurity concerns about the spread of the disease, any unnecessary contact between poultry growers and other individuals was discouraged. Now that the outbreak has passed, there could be more educational efforts for poultry litter brokers. Broker compliance with their requirements in the regulation has been minimal and needs to be increased. Also, the distribution of educational materials to potential end-users of litter, especially those in areas without concentrations of poultry litter, could be increased. This could coincide with increased awareness and funding of the transportation matching grant program.

**G 3 - “Provide a toll-free hotline and advertising program to assist poultry growers with excess amounts of poultry waste to make available such waste to persons in other areas who can use such waste as a fertilizer consistent with the provisions of subdivision C 2 or for other alternative purposes;”**

The VPF, acting on behalf of the poultry processors, established a toll-free litter hotline program in February 2000 at (888) 433-2451. The hotline rings at the VPF office in Harrisonburg, VA where the VPF staff receives and logs the calls and attempts to match sellers and purchasers based on their location and the amount and type of litter involved. Also, a list of litter brokers and haulers is provided as necessary. In the three years of operation the hotline has received 130 calls and reports assistance with the transfer of up to 21,760 tons of litter. VPF indicates that they have been advertising the program and the hotline in the Country Folks Farm Chronicle since February 2000.

Mixed reports have been received regarding the poultry litter hotline. The lack of utilization of the litter hotline may be in part caused by the fact that there are already established litter markets that utilize existing relationships between poultry growers, litter brokers, and end users. However, some commentors indicated that there is a need for more timely information on the hotline and that the hotline was often only able to provide the names of brokers to prospective purchasers of litter. DCR has suggested to the integrators that one possible solution is having the service representatives from each company fill out a weekly sheet indicating who had litter to sell and who had sold litter so that each poultry company could provide a weekly update to the hotline. To date, it does not appear that this suggestion has been implemented. A significant commitment by the companies to assist in maintaining the location and quantity of available litter could greatly increase the viability of the hotline in providing a service to those selling poultry litter.

The Delmarva Poultry Industry, Inc. has maintained a toll free litter hotline for several years - at (800) 878-2449. When the number is called, the DPI office is reached and DPI staff determine the appropriate contacts in Delaware or Maryland for litter purchasers or sellers in order to arrange for transport under the matching grant programs in those states. According to their staff, there has been little or no interest on behalf of Virginia buyers or sellers of litter. The probable cause for this is that Virginia has no matching grant program for litter produced on the Eastern Shore. A major barrier to such a program would be the Maryland and Delaware transportation matching grant programs that currently fund at high levels. At current funding levels, their programs would financially out-compete any attempt at establishing a program to transport litter from Virginia's Eastern Shore into Maryland or Delaware. Likewise, the barrier to movement of litter from the Eastern Shore to Virginia's Coastal Plain is the high truck transport cost (including any toll charged by the Chesapeake Bay Bridge-Tunnel).

**Evaluation:** The VPF poultry litter hotline has been established and appears to have facilitated the transfer of some litter. A viable poultry litter trade already exists; therefore, use of the hotline may not result in additional success unless development of new markets occurs. It may also be the case that more active participation by the processors in the maintenance of the litter inventory available on the hotline could improve usage. Due to the barriers mentioned for Virginia's Eastern Shore, the development of alternative uses to land application in that part of the Commonwealth should be pursued.

**G 4 - “Participate in the development of a poultry waste transportation and alternative use equal matching grant program between the Commonwealth and commercial poultry processors to (i) facilitate the transportation of excess poultry waste in the possession of poultry growers with whom it contracts to persons in other areas who can use such waste as a fertilizer consistent with the provisions of subdivision C 2 or for other alternative purposes and (ii) encourage alternative uses to land application of poultry waste;”**

Only approximately one-third of all poultry litter generated on regulated poultry operations are used on the permitted poultry farms operations. Based on the nutrient management plans submitted to DCR for approval of Virginia Pollution Abatement Poultry Waste Management permits, the 1082 regulated poultry operations statewide produce approximately 577,000 tons of poultry litter. Approximately 427 of the 1082 poultry operations do not have any land in their nutrient management plan and therefore must transfer all of the poultry litter generated to other farming operations for use as a fertilizer or other alternative use. The remaining 655 poultry operations use approximately 166,000 tons of poultry litter for fertilizer on their permitted operations leaving 411,000 tons of the approximately 577,000 tons needing to be transferred to other farming operations.

In 2001, a committee was formed that included members from DCR, the poultry companies, VPF, VFBF, and VCE to discuss potential poultry waste transport programs and alternative use projects. The committee met several times in 2001 but the outbreak of avian influenza delayed the final development of a project until the spring of 2003.

The Poultry Litter Application Cost-Share Pilot Project began accepting applications in March 2003. The project has a limited total budget of \$50,000 with \$25,000 from the poultry companies and \$25,000 from Water Quality Improvement Funds (WQIF). The project targets moving litter from Rockingham and Page counties to the counties of Frederick, Clarke, Warren, Rappahannock, Culpeper, Madison, Orange, Greene, Albemarle, Nelson, Amherst, Rockbridge, Louisa, Fluvanna and Botetourt. The program requires a nutrient management plan on the receiving farm with phosphorus applications limited to soil test recommendations for the crop rotation and is only available to first-time users of litter. Once the cost-share application has been approved and the litter has been applied, the producer can request a cost-share reimbursement of \$6.00 per acre. As of October 2003, a total of 15 applications have been approved totaling \$8,150. Of these 15 applicants, only two have requested cost-share reimbursement totaling \$1,110.

The DCR believes the funding level of \$6.00 per acre has been too low to attract adequate interest. This funding level correlates to approximately \$2.00 to \$3.00 per ton on average. Maryland and Delaware have established a maximum cost-share rate of \$18.00 to \$20.00 per ton which may have many prospective litter purchasers hoping to receive Maryland or Delaware litter rather than Virginia litter. DCR and the poultry integrators recently reached a consensus on an increased incentive of \$10.00 per acre. In addition, DCR is negotiating with the USDA Natural Resources Conservation Service to offer a more widespread litter transport incentive using federal funds.

The Poultry Waste Management Act required "That the Director of the Department of Conservation and Recreation, with the consultation of the Director of the Department of Environmental Quality and the Commissioner of Agriculture and Consumer Services, shall, by December 20, 1999, recommend to the Governor, the Senate Committee on Agriculture, Conservation and Natural Resources, the House Committee on Conservation and Natural Resources, and the House Committee on the Chesapeake and Its Tributaries ways that the Commonwealth should assist poultry growers and processors to improve the economic feasibility of transporting and selling poultry waste, and pursue alternative uses for poultry waste, including the establishment of the equal matching grant program referred to in subdivision G 4 of § [62.1-44.17:1.1](#)." The report to the Governor and General Assembly by DCR entitled Means to Improve the Economic Feasibility of Transporting and Selling Poultry Waste and Pursue Alternative Uses of an Equal Matching Grant Program contained the following recommendation:

*"Establish a pilot poultry manure transport cost-share program in cooperation with poultry processors to encourage the transport of poultry manure from poultry production areas into areas where the nutrients can be applied properly using nutrient management practices. Cost-share funds should be derived from equal matching contributions from poultry processors and state appropriations as stipulated by §62.1-44.17:1.1 of the Code of Virginia. After two full years of implementation, a major reassessment should occur based on implementation to date.*

*Projected state cost-share appropriations to implement such a program are estimated at \$399,000 per year for FY02 and beyond. This funding level should result in capacity to facilitate the annual transport of approximately 125,000 tons of poultry manure. To operate the program, one full time position and associated funding would be necessary. If alternative use projects are not developed and implemented by FY03, the state appropriations to the cost-share fund would need to increase to \$600,250 per fiscal year in FY03 and continue thereafter.*

*No transport cost-sharing should be provided for manure shipped less than 26 miles. Manure shipped greater than 25 miles should be eligible for transport cost-share at a maximum rate of \$0.09 per ton-mile shipped in excess of 25 miles, to be capped a \$9.00 per ton. Using a total freight cost of \$0.12 per ton-mile, this equates to approximately 75% of the freight cost per mile in excess of 25 miles.*

*A maximum shipping distance eligible for cost-share should be established at 100 miles beyond the 25 mile radius resulting in a maximum cost-sharing rate for transport of \$9.00 per ton (\$4.50 state, \$4.50 processor)."*

Therefore, the current funding level and cost-share rate is far below the study's recommendations.

The current poultry litter cost-share program does not have provisions for alternative uses; however, one alternative use project was funded through WQIF. In FY 2000, the Harmony – Shenandoah Valley project received \$500,000 in WQIF funding and \$500,000 in matching funds from the former Rocco, Inc. The project goal was to produce a granulated, value added fertilizer product that is poultry litter based. The plant was designed to utilize a poultry litter gasification system to generate heat needed for the drying process. The gasification system has since been abandoned. The plant continued to process litter, but at levels significantly below those anticipated. The project anticipated utilizing at least 24,000 tons of Virginia litter annually. Since October 2001, 5,376 tons of Virginia poultry litter has been utilized in this project. The project is having significant financial difficulty because of limited markets and difficulty competing with the

cost of production for chemical fertilizers. Future viability of the project is unlikely.

VPF reports the recent development (2003) of poultry litter spreader grant agreements for the counties of Louisa, Madison, and Fauquier: "These and other counties just east of the Shenandoah Valley contain a lot of farmland that has not received significant poultry litter applications in the past and can appropriately utilize poultry litter as a soil amendment and fertilizer. Working with Virginia Cooperative Extension, the VPF identified a lack of spreading equipment as an impediment to use of poultry litter in these areas. The grants are intended to supply an economic means of applying poultry litter in these regions and thus stimulate demand for the transport and land application of litter from concentrated poultry producing areas to farming regions having soils and crops that would benefit from such application. The grant agreements are intended to contribute toward processors' compliance with subdivision G4 of the Virginia Poultry Waste Management Act."

These grants, funded by the VPF on behalf of the poultry processors, are intended to facilitate the transportation of poultry waste by reducing the associated costs of spreading litter (including the cost of the spreader and subsequent spreader maintenance). VPF reports that as of August 2003 the Louisa spreader had applied 1,100 tons of litter in that county.

**Evaluation:** The state and poultry integrators need to invest significantly more resources into developing viable alternative use projects and transport programs for poultry litter. Full funding at the levels suggested in the 1999 study entitled Means to Improve the Economic Feasibility of Transporting and Selling Poultry Waste and Pursue Alternative Uses of an Equal Matching Grant Program is still needed to begin balancing the nutrient surplus in some areas of the state.

***G 5 - "Conduct research on the reduction of phosphorus in poultry waste, innovative best management practices for poultry waste, water quality issues concerning poultry waste, or alternative uses of poultry waste; and"***

Since 2000, the poultry processors have funded, through VPF, research by Dr. Greg Mullins (VCE) on nutrient management and water quality, including the use of different management strategies and best management practices. A total of \$120,000 has been provided for this and other research.

Several companies have also funded studies or conducted internal research on the use of phytase in combination with feed reduction of phosphorus. Much of this effort is discussed in the next section.

Funded research has also been performed on the use of poultry litter amendments. For example, the use of alum has been studied for its ability to

reduce the availability of phosphorus in poultry litter, as well as its potential effects on crop yields.

**Evaluation:** Poultry processors have complied with this section. It must be noted that the outbreak of Low Pathogenic Avian Influenza Virus in 2002 delayed much of this research, therefore any results of research have also been delayed accordingly. Much of the research in this area is on-going and long-term.

**G 6 – “Conduct research on and consider implementation of nutrient reduction strategies in the formulation of feed. Such nutrient reduction strategies may include the addition of phytase or other feed additives or modifications to reduce nutrients in poultry waste.”**

Grains, such as corn, that are used for poultry feed contain significant amounts of phosphorus in the form of phytate molecules. Unlike ruminants, poultry do not have the ability to break down the phytate molecule and utilize this form of phosphorus in grain. As a result, significant quantities of mineral phosphorus must be blended into poultry feed to provide adequate levels of phosphorus in the diet. Phytase is an enzyme that allows poultry and other non-ruminant animals to break down the phytate molecule and utilize more of the phosphorus contained in grain. Therefore, a significant reduction in total phosphorus excreted in poultry manure is possible, due to reductions in mineral phosphorus contained in the feed ration.

Currently all of the major poultry companies operating in Virginia are using the feed enzyme phytase in some of their feed rations. DCR funded six phytase projects from WQIF during FY 98 and 99. Funding for these six phytase projects for the poultry industry totaled \$796,767.00 with at least an equal amount in matching contributions from the poultry companies. The WQIF incentive along with the poultry companies cooperation resulted in a more rapid adoption of this technology and greater phosphorus reductions compared to other states.

Collectively, the processors have made significant progress in this effort to reduce phosphorus used in feed rations, resulting in less phosphorus imported into Virginia and lower phosphorus concentrations in poultry manure.

The Virginia average values published in the Virginia Nutrient Management Standards and Criteria show a P<sub>2</sub>O<sub>5</sub> level in Virginia broiler litter of 4.34% on a dry weight basis and 4.87% for turkey litter. The current average P<sub>2</sub>O<sub>5</sub> level in Virginia broiler litter has decreased to 3.46% on a dry weight basis and 3.56% for turkey litter. This correlates to a 20% reduction in P<sub>2</sub>O<sub>5</sub> levels in broiler litter and a 26% reduction in turkey litter. The total phosphorus produced by the poultry industry was approximately 15,100,000 pounds. A 20% reduction in phosphorus levels equates to a reduction of 3,060,000 pounds of phosphorus statewide. Research conducted by Virginia Tech and the University of Maryland indicate a 30% reduction of phosphorus is possible on a commercial scale. If a 30%

reduction were achieved statewide, the total phosphorus produced by these farms would decrease by 4,530,000 pounds annually. This would be a tremendous source reduction of phosphorus for Virginia. Source reductions should be maximized because they reduce phosphorus imports to Virginia. DCR currently funds a manure sampling program in Virginia. Results of this sampling program indicate some poultry companies have already reached a 30+% reduction in phosphorus levels while other companies appear to have minimal reductions. DCR nutrient management staff has met with all of the integrator complexes statewide to discuss their level of phytase implementation and phosphorus reductions in feeds. The integrators have indicated they will look at their feeding levels and explore the possibilities of increased phytase usage to reach a 30% reduction statewide.

**Evaluation:** Great progress has been made in this area, and there could be further reductions in the levels of phosphorus in poultry feed. Research on feed reductions of phosphorus should be increased. Processors and the state should continue to monitor progress to achieve an industry-wide 30% reduction in poultry manure phosphorus content. Any attempts at making this data known to the public would have to involve all poultry processors, and results would have to be published as general data, to protect confidential business information of the individual processors.

## **Appendix A: HB 1207 (1999)**

## 1999 VIRGINIA ACTS OF ASSEMBLY -- CHAPTER 1

*An Act to amend the Code of Virginia by adding in Article 3 of Chapter 3.1 of Title 62.1 a section numbered 62.1-44.17:1.1, relating to poultry waste management.*

[H 1207]

Approved January 29, 1999

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Article 3 of Chapter 3.1 of Title 62.1 a section numbered 62.1-44.17:1.1 as follows:

§ 62.1-44.17:1.1. *Poultry waste management program.*

A. *As used in this section, unless the context requires a different meaning: "Commercial poultry processor" means any animal food manufacturer, as defined in § 3.3-884.18, that contracts with poultry growers for the raising of poultry.*

*"Confined poultry feeding operation" means any confined animal feeding operation with 200 or more animal units of poultry.*

*"Nutrient management plan" means a plan developed or approved by the Department of Conservation and Recreation that requires proper storage, treatment and management of poultry waste, including dry litter, and limits accumulation of excess nutrients in soils and leaching or discharge of nutrients into state waters.*

*"Poultry grower" means any person who owns or operates a confined poultry feeding operation.*

B. *The Board shall develop a regulatory program governing the storage, treatment and management of poultry waste, including dry litter, that:*

- 1. Requires the development and implementation of nutrient management plans for any person owning or operating a confined poultry feeding operation;*
- 2. Provides for waste tracking and accounting; and*
- 3. Ensures proper storage of waste consistent with the terms and provisions of a nutrient management plan.*

C. *The program shall include, at a minimum:*

- 1. Provisions for permitting confined poultry feeding operations under a general permit; however, the Board may require an individual permit upon determining that an operation is in violation of the program developed under this section;*
- 2. Provisions requiring that:*
  - a. Nitrogen application rates contained in nutrient management plans developed pursuant to this section shall not exceed crop nutrient needs as determined by the Department of Conservation and Recreation. The application of poultry waste shall be managed to minimize runoff, leaching, and volatilization losses, and reduce adverse water quality impacts from nitrogen;*
  - b. For all nutrient management plans developed pursuant to this section after October 1, 2001, phosphorus application rates shall not exceed the greater of crop nutrient needs or crop nutrient removal, as determined by the Department of Conservation and Recreation. The application of poultry waste shall be managed to minimize runoff and leaching and reduce adverse water quality impacts from phosphorous;*
  - c. By December 31, 2005, the Department of Conservation and Recreation, in consultation with the Department of Environmental Quality, shall (i) complete an*

*examination of current developments in scientific research and technology which shall include a review of land application of poultry waste, soil nutrient retention capacity, and water quality degradation and (ii) adopt and implement regulatory or other changes, if any, to its nutrient management plan program that it concludes are appropriate as a result of this examination; and*

*d. For all nutrient management plans developed pursuant to this section after December 31, 2005, and not prior thereto, phosphorous application rates shall conform to the provisions of subdivision 2 b of this subsection and shall be in accordance with other regulatory criteria and standards, if any, amended or adopted by the Department of Conservation and Recreation pursuant to subdivision 2 c of this subsection to protect water quality or to reduce soil concentrations of phosphorous or phosphorous loadings. The application of poultry waste shall be managed to minimize runoff and leaching and reduce adverse water quality impacts from phosphorous.*

*D. The program shall reflect Board consideration of existing state-approved nutrient management plans and existing general permit programs for other confined animal feeding operations, and may include such other provisions as the Board determines appropriate for the protection of state waters.*

*E. After October 1, 2001, all persons owning or operating a confined poultry feeding operation shall operate in compliance with the provisions of this section and any regulations promulgated thereunder.*

*F. Any person violating this section shall be subject only to the provisions of §§ 62.1-44.23 and 62.1-44.32 (a), except that any civil penalty shall not exceed \$2,500.*

*G. On or before January 1, 2000, or prior to commencing operations, each commercial poultry processor operating in the Commonwealth shall file with the Board a plan under which the processor, either directly or under contract with a third party, shall:*

- 1. Provide technical assistance to the poultry growers with whom it contracts on the proper management and storage of poultry waste in accordance with best management practices;*
- 2. Provide education programs on poultry waste nutrient management for the poultry growers with whom it contracts as well as for poultry litter brokers and persons utilizing poultry waste;*
- 3. Provide a toll-free hotline and advertising program to assist poultry growers with excess amounts of poultry waste to make available such waste to persons in other areas who can use such waste as a fertilizer consistent with the provisions of subdivision C 2 or for other alternative purposes;*
- 4. Participate in the development of a poultry waste transportation and alternative use equal matching grant program between the Commonwealth and commercial poultry processors to (i) facilitate the transportation of excess poultry waste in the possession of poultry growers with whom it contracts to persons in other areas who can use such waste as a fertilizer consistent with the provisions of subdivision C 2 or for other alternative purposes and (ii) encourage alternative uses to land application of poultry waste;*

5. Conduct research on the reduction of phosphorus in poultry waste, innovative best management practices for poultry waste, water quality issues concerning poultry waste, or alternative uses of poultry waste; and

6. Conduct research on and consider implementation of nutrient reduction strategies in the formulation of feed. Such nutrient reduction strategies may include the addition of phytase or other feed additives or modifications to reduce nutrients in poultry waste.

H. Any amendments to the plan required by subsection G shall be filed with the Board before they are implemented. After January 1, 2000, each commercial poultry processor shall implement its plan and any amendments thereto. Each commercial poultry processor shall report annually to the Board on the activities it has undertaken pursuant to its plan and any amendments thereto. Failure to comply with the provisions of this section or to implement and follow a filed plan or any amendments thereto shall constitute a violation of this section.

2. That the State Water Control Board shall adopt the regulations required by § 62.1-44.17:1.1 no later than October 1, 2000. The Board shall impanel an advisory group to assist in the development of the program in accordance with its public participation guidelines. Membership of the group shall be balanced among organizations and persons expressing an interest in the program and shall include a minimum of three representatives of poultry growers, three representatives of commercial poultry processors, and three representatives of environmental organizations.

3. That the Director of the Department of Conservation and Recreation, with the consultation of the Director of the Department of Environmental Quality and the Commissioner of Agriculture and Consumer Services, shall, by December 20, 1999, recommend to the Governor, the Senate Committee on Agriculture, Conservation and Natural Resources, the House Committee on Conservation and Natural Resources, and the House Committee on the Chesapeake and Its Tributaries ways that the Commonwealth should assist poultry growers and processors to improve the economic feasibility of transporting and selling poultry waste, and pursue alternative uses for poultry waste, including the establishment of the equal matching grant program referred to in subdivision G 4 of § 62.1-44.17:1.1.

4. That on or before December 31, 2003, the Director of the Department of Environmental Quality, in consultation with the Director of the Department of Conservation and Recreation and the Commissioner of Agriculture and Consumer Services, shall report to the Governor and the General Assembly on the effectiveness of the plans implemented by commercial poultry processors pursuant to subsection G of § 62.1-44.17:1.1 in assisting poultry growers with whom they contract with the proper management, storage, disposal, and transportation of poultry waste, including excess poultry waste, for the protection of water quality.

