WEST VIRGINIA
SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION

Form #1

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OFFICE OF WEST VIRGINIA SECRETARY OF STATE

NOTICE OF PUBLIC HEARING ON A PROPOSED RULE

AGENCY: Agriculture TITLE NUMBER: 61

RULE TYPE: Procedural ; CITE AUTHORITY 19-16A-4; 20-5M-5

AMENDMENT TO AN EXISTING RULE: YES____ NO X

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 22

TITLE OF RULE BEING PROPOSED: Generic State Management Plan for Pesticides and Fertilizer in Groundwater

DATE OF PUBLIC HEARING: Tuesday, July 21, 1992 TIME: 1:00 PM

LOCATION OF PUBLIC HEARING: West Virginia Department of Agriculture
J. T. Johnson Conference Room, Building 2
Guthrie Agricultural Center
Charleston, WV 25312

COMMENTS LIMITED TO: ORAL____, WRITTEN____, BOTH X
Written comments will be accepted until Friday, July 31, 1992.
COMMENTS MAY ALSO BE MAILED TO THE FOLLOWING ADDRESS: Robert Frame
Director, Pesticide Division
West Virginia Dept. of Agriculture
1900 Kanawha Blvd., East
Charleston, WV 25305

The Department requests that persons wishing to make comments at the hearing make an effort to submit written comments in order to facilitate the review of these comments.

The issues to be heard shall be limited to the proposed rule.

4.10 ATTACH A **BRIEF** SUMMARY OF YOUR PROPOSAL

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: Generic State Management Plan for Pesticides and Fertilizer in Groundwater.

Type of Rule: _____Legislative _____Interpretive X Procedural

Agency Department of Agriculture Address Pesticide Division
1900 Kanawha Blvd. E., Charleston, WV 25305-0190

1. Effect of Proposed Rule	ANNUAL Increase	ANNUAL Decrease	FISCAL YEAR Current	FISCAL YEAR Next	FISCAL YEAR Thereafter
Estimated Total Cost	$ 75,000	$	$ 75,000	$ 75,000	$ 75,000
Personal Services	70,000		70,000	70,000	70,000
Current Expense	5,000		5,000	5,000	5,000
Repairs and Alterations					
Equipment					
Other					

2. Explanation of above estimates:

The estimates are based on the assumption of an increased inspection staff to monitor and educate the regulated community on groundwater protection activities. The personal services estimate is for 2 additional field inspectors and 1 additional clerical person. Current expense estimates are for travel expenses.

3. Objectives of these rules:

The objective of this rule is to provide a framework for the protection of groundwater. The plan provides for interagency cooperation in monitoring, education, and mitigation of groundwater issues. The rules provide recognized procedures or measures to address groundwater issues surrounding pesticides and/or fertilizers.

4. Explanation of Overall Economic Impact of Proposed Rule.

A. Economic Impact on State Government.

This rule will increase the responsibility of the Department of Agriculture and other agencies named in the rule. The increased responsibility and activity to educate the public, prevent contamination and mitigate instances of contamination. To be effective the costs to state goverment will be significant. As this is a new area of regulation no accurate estimate can be given.

B. Economic Impact on Political Subdivisions; Specific Industries; Specific groups of citizens.

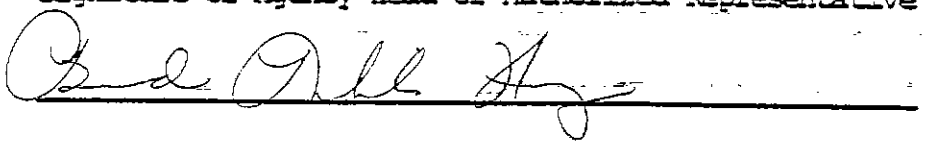
The economic impact to the agricultural pest control and golf course industries will be high. The price of many goods and services will increase. These groups, along with various state agencies and political subdivisions storing large quantities of pesticides and fertilizers will face increased fiscal costs. As this is a new rule no accurate estimate can begiven.

C. Economic Impact on Citizens/Public at Large.

The economic impact on the citizens and public will be that the cost of goods and services will increase.

Date: June 5, 1992

Signature of Agency Head or Authorized Representative



Title 61
West Virginia Procedural Rule
State Department of Agriculture

Series 22

Title: GENERIC STATE MANAGEMENT PLAN FOR PESTICIDES AND FERTILIZERS IN GROUNDWATER

§61-22-1 General

1.1 Scope - This rule establishes the guidance for the development of procedures, practices and regulations to protect groundwater.

1.2 Authority - West Virginia Code 19-16A-4, 20-5M-5

1.3 Filing date -

1.4 Effective date -

§61-22-2 Definitions

2.1 The definitions used in West Virginia Code 19-15-1 et seq., 19-16A-1 et seq. and Title 61 code of state regulations adopted thereunder shall apply to these regulations unless otherwise defined in this regulation.

§61-22-3 GOALS AND GENERAL PROGRAM POLICIES

3.1 The goal of the State Management Plan for Pesticides and Fertilizers in Groundwater is to prevent, minimize, or mitigate the movement of pesticides and fertilizer to groundwaters of the state. This goal does not mean zero-contaminant discharge, but that discharges of pesticides and fertilizers be conducted in a manner that will maintain or improve present groundwater quality and not impair potential use of groundwater or pose a public health hazard. Remediation of groundwater where contaminated with pesticides and fertilizers should utilize all existing relevant technologies to revert water to its previous condition. The term pesticides and fertilizers shall mean the same as their definition in West Virginia code 19-16A-1 et seq. and 19-15-1 et seq. respectively.

3.2 Groundwater classification can allow ground waters of the state to be identified and protected according to their water quality and present or potential use. The highest and best use of groundwater is for drinking purposes. Groundwater in some aquifers

may not be suitable for drinking due to natural conditions such as salinity.

3.3 Pesticides and fertilizers are beneficial and important to the economy of the state. Scientific procedures exist that permit the mathematical prediction of the potential of probability of their subsequent entry into groundwater. However, predictive modeling must be verified by actual monitoring. Procedures also exist to identify areas of the state more vulnerable to groundwater contamination due to soils, geology, hydrology and pesticide and fertilizer use patterns. Identification of sensitive areas for this program serves to focus the utilization of limited resources.

3.4 By identifying chemicals of concern and sensitive areas of the state and applying appropriate Best Management Practices on a voluntary basis, or on a mandatory basis if the voluntary efforts fail, useful chemical production tools can be maintained while protecting the state's groundwater resource. This approach recognizes that the elimination of useful pesticides and fertilizers may cause economic hardships and that replacement products or techniques may also cause environmental or health risks.

3.5 Valid scientific monitoring, prediction and other methodologies will be used in a scientific approach to determining the quality of groundwater resources. Modern analytical techniques can identify minute concentrations of chemicals, far below levels of health concern. As improvements are made in these techniques, lower and lower concentrations will be detected, which makes zero discharges theoretically an impossibility. For these reasons, the use of numerical health-based standards to trigger management changes is a sound ground-water resource management approach. As activities carried out near wellheads often affects well water quality, this groundwater protection plan includes a wellhead protection strategy.

3.6 Existing state and federal resources, funding programs, fee controls, grants and cooperative agreements will be used to the maximum extent possible. Where necessary, appropriate new legislation will be sought.

§61-22-4 STATE AGENCIES AND RESPONSIBILITIES

4.1 General. Whenever possible, existing authorities will be utilized and enhanced where necessary to provide for the establishment of water quality standards, monitoring protocols and procedures including quality assessment and development of management plans.

4.1.a West Virginia code 20-5M-1 et seq. designates the Division of Natural Resources as the state lead department for groundwater. The Department of Agriculture is specifically

authorized to be the groundwater regulatory department for the use or application of pesticides and fertilizers. Other agencies specifically designated to regulate groundwater are the division of energy and the division of health. If the authority to regulate facilities or activities which may adversely impact groundwater is not otherwise assigned, the division of natural resources is authorized as the regulatory department for unassigned facilities or activities. As appropriate, the Division of Natural Resources shall cooperate with the Department of Agriculture, Division of Energy, and Division of Health.

4.2 Water Quality and Health-based Standards

4.2.a The Water Resources Board shall set numerical health-based standards for pesticides and fertilizers in ground water, based on the best available scientific data. Federal Maximum Contaminant Levels (MCL) as promulgated under the Safe Drinking Water Act, or a National Primary Drinking Water Regulation will be used when possible.

4.2.b In the absence of a regulatory standard promulgated by the Water Resources Board, the Commissioner will utilize established EPA Health Advisory Levels or other non-promulgated federal numerical values based on health evaluations. The use of these non-regulatory health based standards will be used for guidance in determining program direction.

4.3 Monitoring Studies

4.3.a The Department of Agriculture in cooperation with the Division of Natural Resources, Water Resources Section will be responsible for designing and carrying out groundwater monitoring studies with respect to pesticides and fertilizers. The department will also determine sensitive areas in cooperation from the State Geological Survey, the U. S. Geological Survey and the Soil Conservation Service.

4.3.b The State Health Department is responsible for implementing pesticide monitoring under the National Primary Drinking Water Regulations.

4.4 Regulation of Pesticides and Fertilizers

4.4.a The Department of Agriculture registers all pesticides distributed in the state and may restrict the use of a pesticide if restrictions are required to prevent unreasonable risk to health or the environment. The department is responsible for regulating the use, distribution, transportation, storage, and disposal of pesticides to ensure compliance with statute and regulations and for documenting use violations under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The department

is also responsible for licensing pesticide dealers and for certifying commercial and private pesticide applicators who use restricted use pesticides. The department investigates complaints of suspected pesticide misuse and conducts routine inspections of pesticides used in the state.

4.4.b The department will compile a list of chemicals of concern, based on monitoring data and/or scientific evaluation of up-to-date computer modeling techniques. When monitoring data or proven models indicate that health-based standards are exceeded or may be exceeded in the future, based on a trend approach, the department will develop a chemical-specific management plan utilizing preventative Best Management Practices in areas of the state deemed sensitive to contamination by the chemical.

4.4.c The current fertilizer law specifies that all fertilizers (not including unmanipulated manures) be registered, labeled and a tonnage fee paid. The enforcement program revolves around sampling the product and comparing the results with the guarantee on the label. There are no provisions for use, application rates, or groundwater protection.

4.4.d The Groundwater Protection Act gives the West Virginia Department of Agriculture the authority to regulate the application and use of pesticides and fertilizers. In addition the Department has the authority to:

4.4.d.A engage the voluntary cooperation of all persons in the maintenance and protection of groundwater;

4.4.d.B advise, consult and cooperate with all persons, all agencies of this state, universities and colleges, the federal government and other states in the furtherance of protecting groundwater;

4.4.d.C receive and spend funds to further this end;

4.4.d.D encourage the formation and execution of plans to maintain and protect groundwater by cooperative groups or associations who are impacting on the maintenance and protection of groundwater;

4.4.d.E encourage, participate in or conduct or cause to be conducted studies of groundwater quality and the impact of fertilizers and pesticides;

4.4.d.F make reports and recommendations;

4.4.d.G conduct sampling, data collection, analyses and evaluation with sufficient frequency so as to ascertain the characteristics and quality of groundwater, and the

sufficiency of the groundwater protection programs established; and

4.4.d.H develop public education and promotion of groundwater protection programs.

4.5 The State Agricultural Experiment Station will to the extent feasible, conduct studies to determine the fate and transport of pesticides and fertilizers through soils to groundwater under varying conditions across the state. Best Management Practices specific to chemicals and sensitive areas will be developed to reduce groundwater contamination risk. State scientists will cooperate with scientists in other agencies when appropriate. The Experiment Station will also investigate ground water remediation techniques to address previously contaminated water.

4.6 The State Agricultural Extension Service will carry out educational activities to improve the efficiency of pesticide and fertilizer use and promote the adoption of Best Management Practices to reduce groundwater contamination. Information generated by research at the State Agricultural Experiment Station and elsewhere will be extended to agriculturalists and the general public. Staff will provide training in these areas and address inquiries. Cooperative educational programs will be carried out with other appropriate state and federal agencies including the State Agricultural Experiment Station, State Department of Natural Resources, U. S. Soil Conservation Service (SCS), Agricultural Stabilization and Conservation Service (ASCS), U. S. Environmental Protection Agency (EPA) and the U.S. Geological Survey (USGS).

§61-22-5 LEGAL AUTHORITY

5.1 State Statutes

5.1.a Existing state statutes are believed to provide adequate authority for the protection of the state's groundwater resources. The state Groundwater Protection Act of 1991 identifies the roles and responsibilities of the various State Agencies. Where authority is lacking under specific statutes, the Groundwater Protection Act of 1991 provides the authority for adopting groundwater protection practices or regulations.

5.1.b The specific existing statutes relevant to groundwater protection from pesticides and fertilizers are:

5.1.b.A Groundwater Protection Act of 1991 (WV code 20-5M-1 et seq.)

5.1.b.B Pesticide Control Act of 1990 (WV code 19-16A-1 et seq.)

5.1.b.C Wellhead Protection Act (WV code 16-1-1 et

seq.)

5.1.b.D Solid Waste Act (WV code 20-5F-1 et seq.)

5.2 Federal statutes administered in some degree by designated state agencies include:

5.2.a Resource Conservation and Recovery Act (RCRA). U.S. EPA authorizes state agencies to administer its hazardous waste program. The RCRA program regulates the generation, transportation, treatment, storage and disposal of hazardous waste. Facilities regulated under the RCRA program must obtain a permit for pesticide storage, processing or disposal which requires compliance with specific performance standards relating to protection of groundwater.

5.2.b Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). U. S. EPA cooperates with designated state agencies to initiate an appropriate response to releases or threatened releases of hazardous substances. The program partially finances cleanup of sites on the National Priorities List, holds polluters liable for the costs of cleanups and establishes a federal notification requirement for hazardous substances release and assists states in monitoring hazardous sites.

5.2.c Clean Water Act (CWA). Section 106 of the CWA provides funds to states to develop statewide groundwater protection strategies and management programs. Funds provided under Sections 205 (j) (5) and 319 of the CWA allow development and implementation of programs related to prevention and remediation of nonpoint sources of pollution of surface and groundwater, including pollution from pesticides and fertilizers.

5.2.d Safe Drinking Water Act (SDWA). U. S. EPA may designate sole or principal source aquifers, which have been determined to be sensitive to contamination and if contaminated, would pose a public health risk. No federal funds may be committed to a project if EPA determines that the project may contaminate the designated aquifer. Amendments in 1986 to the SDWA provide a mechanism to fund sole source aquifer demonstration projects for state and local governments for groundwater protection programs, which could include pesticide and fertilizer use related projects.

§61-22-6 ENFORCEMENT MECHANISMS

6.1 The prevention of exceedance of health-based water quality standards will be accomplished through use of a two tiered management system (voluntary, followed by mandatory management practices and safeguards) which seeks to identify, prevent and reverse trends toward increasing concentrations of pesticides and fertilizers in groundwater.

6.2 When valid monitoring data or generally accepted computer modeling techniques predict potential contamination by specific chemicals in specific areas or when monitoring shows an increasing trend, voluntary best management practices will be initiated accompanied by an educational effort. Monitoring of the groundwater in the area will increase.

6.3 If despite voluntary measures, monitoring indicates that chemical concentrations continue to increase or contamination exceeding health based standards is documented, mandatory management practices and other regulatory restrictions will be enacted. These practices would then be included as pesticide and fertilizer regulations in the state and would be enforceable under FIFRA and/or state laws. Penalties for violation of pesticide label requirements or state restrictions include revocation of pesticide dealer licenses or pesticide applicator certification and civil penalties or criminal penalties, depending on the severity of the violation. (If the state statutes do not provide for adequate civil or criminal penalties, violations can be referred to the U.S. EPA for prosecution under FIFRA where applicable).

6.4 If, after evaluation of it's effectiveness, the two tiered management system is unsuccessful in preventing standard-exceeding concentrations of pesticides and fertilizers, product registration may be suspended, canceled or restrictions imposed by areas of concern.

6.5 Other regulations which protect groundwater from pesticides and fertilizers will include secondary containment regulations for pesticide and fertilizer storage and mixing, pesticide and container disposal regulations and wellhead protection programs.

6.6 When water quality and health-based standards for pesticides and fertilizers are found to be exceeded by any agency, this information will be forwarded to the Department of Agriculture for a site investigation to determine if a product use pattern or best management practice is ineffective or if a misuse has occurred which may be subject to penalty. This information shall also be shared with other appropriate agencies for their evaluation or to see if other statutes may have been violated.

§61-22-7 RESOURCE/TECHNICAL EXPERTISE

7.1 All existing technical expertise and other resources available in the state will be inventoried and roles and responsibilities of each resource specified.

7.2 Existing and potential funding sources will be identified.

7.3 Where technical expertise or resources or authority are

inadequate to meet the objectives of the management plan, these deficiencies will be identified and addressed.

7.4 Technical expertise needed to carry out the management plan include: groundwater vulnerability studies based on soil type and hydrogeologic factors; present cropping and pesticide and fertilizer use patterns in the state; present aquifer use and projected future use; predictive modelling of pesticide and fertilizer groundwater contamination potential; chemical analysis; groundwater monitoring; engineering of structures related to groundwater protection such as secondary containment; training and certification of applicators; pesticide and fertilizer use investigations; development of specific best management practices based on research; and education of pesticide and fertilizer users.

7.5 State agencies which may have needed expertise and resources include the Department of Agriculture, Department of Natural Resources, Department of Public Health, Geological Survey, Agricultural Experiment station and Extension Service. Federal agencies include U.S. EPA (including Office of Pesticides and Toxic Substances, Office of Drinking Water, Office of Groundwater Protection, Office of Water Regulations and Standards,Office of Solid Wastes, Office of Emergency and Remedial Response), Soil Conservation Service, Agricultural Stabilization and Conservation Service, Animal and Plant Health Inspection Service, USDA Agricultural Research Service, U. S. Army Corps of Engineers, U.S. Forest Service, U. S. Bureau of Land Management and U. S. Geological Survey.

§61-22-8 BASIS FOR ASSESSMENT AND PLANNING

8.1 Vulnerability Assessment

8.1.a The assessment of the vulnerability of groundwaters to agricultural and non-agricultural point and nonpoint source contamination will require the cooperation of state agencies. Information concerning soil properties, hydrogeology, aquifer properties, usage of pesticides and fertilizers and known contamination will be used to identify areas sensitive to point and nonpoint source pollution. These areas will be targeted for closer examination by the Department of Agriculture or other appropriate agencies.

8.1.b Data required include: Soil properties: physical, chemical and/or biological properties; unsaturated zone organic carbon and clay content; and rates of water travel through the unsaturated zone. Aquifer properties: depth to groundwater; recharge areas; discharge areas; rates of travel in the saturated zone; and wellhead protection areas. Irrigation and rainfall data. Pesticide and fertilizer usage and leaching data.

8.1.c Evaluation of the relationships between the

above factors will be conducted by all participating agencies using general integrative techniques such as modeling, DRASTIC, and GIS systems to identify areas in the state that appear or are most likely to be vulnerable to contamination. However, more weight will be given to actual data than predictions due to modeling, as modeling is not a definitive predictor of water movement, but the technique is valuable as a reference point.

8.2 Pesticide and Fertilizer Assessment

8.2.a State management plans will be developed for specific pesticides and fertilizers when either predictive models which indicate likelihood of leaching in vulnerable areas or monitoring data demonstrates an existing or potential problem.

8.2.b Chemicals of concern will be identified by considering physicochemical properties including: water solubility, soil adsorption, soil degradation, hydrolysis and rate, timing or method or application. Predictive models such as GLEAMS, CREAMS, PRZM and the SCS pesticide-soil matrix will be utilized. Predicted ground-water concentrations will be compared to health-based water standards to determine chemicals which are predicted to exceed standards under certain conditions or are shown to have an increasing concentration in the groundwater.

8.2.c Use patterns of identified chemicals of concern will be examined along with existing monitoring data. If the chemical has been used extensively in vulnerable areas and monitoring data fails to demonstrate detections exceeding standards or trends which threaten to exceed standards in the future, a management plan is not required. However, if sufficient monitoring data is unavailable or if the chemical in question does not have a history of use in the area and could be used in the future, a management plan could be initiated.

§61-22-9 GROUNDWATER CONTAMINATION PREVENTION MEASURES

9.1 General. Contaminated groundwater can be very expensive and sometimes impossible to totally remediate. When contamination occurs from point sources, the origin of the pollutant can be identified and corrective action taken to prevent further contamination. When contamination comes from a nonpoint source, remediation may be more expensive than from point source contamination and may not be technologically or economically feasible. Prevention of unacceptable contamination from pesticides and fertilizers, rather than depending on remediation is the primary goal of this plan.

9.2 Point Source Management. Any pesticide and fertilizer can contaminate wells or groundwater from point sources and all areas of the state can be vulnerable, although areas determined to be more vulnerable to contamination from nonpoint sources will also

be more vulnerable to point source contamination. Because of the ubiquitous nature of the point source threat to groundwater, prevention measures will apply to all pesticides and fertilizers. Some measures may be voluntary while other measures are mandatory and described by statue.

9.2.a Regulations will be adopted to provide for secondary containment at pesticide and fertilizer storage and mixing sites. Likewise, regulations will be adopted to provide for mixing/loading pad requirements, containment at bulk pesticide and fertilizer storage sites and rainwater and surface discharge management at pesticide and fertilizer storage and mixing sites.

9.2.b Animal waste storage and management, best management practices and/or regulations will be promulgated.

9.3 Wellhead Protection. Activities which may threaten wells will be cataloged, regulated and monitored in wellhead protection zones and may be already covered by statute. State well codes will be assessed to determine if they provide adequate protection. Programs to assist well owners in evaluating construction and maintenance deficiencies and in reconditioning substandard wells will be initiated. Additional wellhead protection practices include:

9.3.a education on proper well construction and maintenance practices;

9.3.b conducting pesticide and fertilizer mixing activities a safe distance (100 feet or more) from wells or confining mixing activities to watertight loading pads;

9.3.c storing pesticides and fertilizer away from wells;

9.3.d use of anti-backsiphon devices or allowing an air space between the filling hose and liquid in the tank when sprayers are filled at the well or water distribution system and when practicing chemigation;

9.3.e reduction in sprayer rinsate through use of injection sprayers or on-board sprayer rinsers;

9.3.f recycling of sprayer rinsate through use as sprayer make-up water; or

9.3.g avoiding pesticide and fertilizer application within 50 feet of wellheads.

9.4 Other programs will be developed to include:

9.4.a programs on ground and surface water protection

for urban and home use audiences;

9.4.b programs to collect excess and unusable pesticides for proper disposal;

9.4.c educational programs to encourage proper triple rinsing or pressure rinsing of pesticide containers;

9.4.d pesticide container recycling programs; and

9.4.e public education in schools, civic clubs and other organizations on water resource protection.

9.5 Nonpoint Management Plans

9.5.a General. Chemical specific management plans addressing nonpoint contamination will be two-tiered, relying on voluntary measures first, with mandatory measures enacted if voluntary measures fail to alleviate contamination.

9.5.b First Tier Voluntary Management

9.5.b.A Vulnerability Assessments. Agencies including Cooperative Extension and SCS will assist landowners and managers with assessments which will determine specific areas vulnerable to groundwater contamination due to conditions such as highly permeable soils, shallow ground water, geological features such as sinkholes, presence of drainage wells and presence of major groundwater recharge areas. Based on conditions found, voluntary management plans will be developed. These plans may include:

9.5.b.A.1 use of alternative pesticides or methods in vulnerable areas;

9.5.b.A.2 sealing dry and abandoned wells;

9.5.b.A.3 changes in rate or timing of pesticide and fertilizer applications;

9.5.b.A.4 buffer strips to protect sinkholes, drainage well inlets and surface water;

9.5.b.A.5 alternate crop rotations;

9.5.b.A.6 conservation tillage to reduce pesticide and fertilizer runoff to sinkholes, drainage well inlets or surface water;

9.5.b.A.7 soil conservation practices such as terracing, contouring, strip cropping and grassed waterways; and

9.5.b.A.8 nutrient management practices such as

soil and tissue testing, changes in application timing and use of nitrification inhibitors.

9.5.b.B State-wide Education Efforts. In addition, state-wide educational efforts will stress the use of management techniques that improve efficiency in the use of pesticides and fertilizers including:

9.5.b.B.1 use of Integrated Crop Management techniques: scouting for pests, use of economic thresholds and considering all pest management options- chemical, cultural and biological;

9.5.b.B.2 use of alternative crop rotations to reduce pest problems or reduce nitrogen fertilizer needs;

9.5.b.B.3 alternative pesticide application techniques such a band and spot application;

9.5.b.B.4 proper calibration and operation of application equipment; and

9.5.b.B.5 intensive soil sampling of fields to allow adjustments in fertilizer and pesticide application rates.

9.5.c Second Tier Mandatory Management

9.5.c.A If monitoring detects levels of a pesticide or fertilizer that are already in excess of health-based standards or if voluntary management changes fail to reverse a trend which could cause standards to be exceeded in the future, within a vulnerable area, regulatory restrictions would be imposed by the Department of Agriculture. Limiting restrictions to specific vulnerable areas avoids penalizing non-contributory areas.

9.5.c.B Examples of restrictions include:

9.5.c.B.1 reductions in rates of application if reduced rates provide efficacious control of pests;

9.5.c.B.2 changes in application timing;

9.5.c.B.3 mandatory set-backs (buffer zones) from points where surface water directly enters groundwater;

9.5.c.B.4 use of specific formulations or additives to reduce leaching risk;

9.5.c.B.5 restricted use designation to limit application to certified applicators;

9.5.c.B.6 prohibition of certain application techniques such as chemigation, soil incorporation or injection;

9.5.c.B.7 required changes in irrigation techniques such as irrigation scheduling and soil moisture determination;

9.5.c.B.8 prohibiting use of certain chemicals in vulnerable areas; or

9.5.c.B.9 mandatory attendance to educational and training programs, ie. special certification for purchase and use.

§61-22-10 INFORMATION DISSEMINATION

10.1 General. Many of the participating agencies involved in the development and implementation of the state management plan have existing programs designed to distribute information associated with their respective responsibilities. Joint efforts involving state agencies, dealers, manufacturers, state agricultural associations, state commodity groups and national associations, such as the Alliance for a Clean Rural Environment (ACRE), can improve the effectiveness of educational efforts and reach a wider audience. Communications media including magazine, newspapers, radio and television will be utilized.

10.1.a Three major communication avenues will be utilized: licensing and certification, field agents and public education on the application of pesticides and fertilizers.

10.1.b Audiences targeted for educational efforts include private applicators (certified and noncertified), dealers, commercial pesticide applicators, chemical sales representatives, turfcare operators, landowners, managers and home owners.

10.1.c On-going state-wide educational programs will be utilized at each level of enforcement to alert pesticide and fertilizer users of voluntary and mandatory management practices and penalties for violations. Mechanisms for such a program include: news releases, agricultural bulletin articles, direct mail, recertification programs, satellite educational broadcasts and special certification for specific active ingredients or use patterns.

10.2 State Agencies serving major educational roles include:

10.2.a The State Agricultural Extension Service in cooperation with the Department of Agriculture provides training for persons preparing for state department examinations as a means for qualifying for certification as private and commercial pesticide applicators (enabling use of Restricted Use Pesticides). Training qualifying for continuing education required for maintaining certification is also provided. Training on proper pesticide and fertilizer use including groundwater protection

practices is also provided to non-certified pesticide applicators. All training programs are periodically updated to include information on current use and application practices, including adoption of state management plans.

10.2.b The West Virginia Department of Agriculture will include information concerning groundwater protection and state management plans in testing materials for the certification of pesticide business, dealers, commercial and private applicators. Field agents will also publicize changes in regulations during site visits. The Department will also utilize the mass media to publicize state management plans.

§61-22-11 MONITORING

11.1 General. A key element of the management strategy is the development of an anticipatory monitoring system to identify existing and emerging problems and to assess the success of the management plan.

11.1.a The West Virginia Department of Agriculture in cooperation with Division of Natural Resources or other appropriate state agencies will design a comprehensive groundwater monitoring program with an EPA reviewed Quality Assurance Quality Control (QA/QC) Plan. This plan specifies field sampling procedures including purging, collection and tagging of samples; collection of field/trip blanks; shipping methodology; and chain of custody procedures.

11.1.b Monitoring will include random monitoring of rural and public wells as well as repeated monitoring of a network of observation wells. Because of past, undocumented activities near domestic and public wells, it is often difficult to trace sources of pesticide and fertilizer contamination. For example, backsiphoning accidents can result in chemical detections many years after the incident. The use of observation wells installed for the sole purpose of groundwater monitoring eliminates some of the interpretation uncertainties inevitable with existing wells.

11.1.c Existing wells included in the network must meet the following criteria: wells should have sufficient construction information to evaluate the structural integrity of the well; surface protection such as a well house or concrete slab, must be adequate to prevent contaminants from entering the well via the land surface; preference should be given to shallow wells (<50 feet in total depth), with a few additional wells of the same depth but upgraded for comparison; such wells must not be hand dug and must be accessible for investigation and sample collection, including physical accessibility and a water collection point prior to any treatment system. In addition, wells considered favorable for sampling will not have had pesticides or fertilizers stored, mixed, spilled, or disposed of within 500 feet of the wellhead.

Questionable or unofficial data will be used to assist voluntary programs. Mandatory programs will only be initiated upon the obtainment of verifiable official data.

11.1.d The monitoring well network will be more heavily concentrated in areas that have been identified as vulnerable to potential contamination. Localities considered for observation well installation will be those areas with either confirmed or potential groundwater contamination problems; areas which have had pesticides or fertilizers known to be more subject to leaching applied in large quantities; areas known to contain excessive amounts of nitrate in the soil profile and/or groundwater; those areas which may be sensitive to groundwater pollution due to soil types and/or depth to the water table; or areas where past practices may have caused groundwater quality problems.

11.2 Laboratory Analysis

11.2.a A qualified laboratory will conduct pesticide and fertilizer analyses using standard EPA approved methods and good laboratory practices (GLP's) and operating under their QA/QC laboratory plan. Water samples determined to contain pesticides or fertilizers will be confirmed by split and repeat analysis. Wells with confirmed analysis will be resampled over time to determine if the sample was contaminated during collection, shipping or analysis and to determine concentration trends.

11.3 Site Investigations

11.3.a Accurate diagnosis of the causes of well contamination is essential to applying appropriate solutions. To aid in the evaluation of data and to identify problems practices and effective BMP's, a survey will be conducted at each sampling site. Wells with pesticide and fertilizer detections confirmed by repeated sampling over time, will receive a thorough follow-up investigation to determine potential causes of contamination, with particular emphasis on distinguishing point source causes of contamination from nonpoint source causes.

11.3.b Depth and type of well construction and any construction or maintenance deficiencies will be noted, including the potential for surface or shallow groundwater to enter the well. Potential point sources of contamination such as pesticide and fertilizer, storage mixing sites, spills and disposal will be noted. Crops grown within a quarter-mile radius in present and preceding years, pesticide and fertilizer use, application methods and rates will be determined. Specific practices will be noted such as terracing, contour tillage and planting, type of tillage practice and irrigation/chemigation practices.

11.3.c Geographic and topographic conditions around

the well and well use will be noted. The survey will include an inventory of potential contaminate sources within 500 feet of the well such a septic systems, livestock feedlots, landfills, underground storage tanks, golf courses, pesticide and fertilizer storage, tail water holding ponds, irrigation canals and ditches and location of spills. Within one-half mile of the well, locations of chemical plants and/or storage facilities, airports or landing strips, military bases, mines and lakes will be noted.

11.4 Monitoring Data Base

11.4.a All monitoring data collected by the West Virginia Department of Agriculture in addition to all monitoring data collected by other agencies will be entered into a central data base. Analysis of these data with respect to health-based water standards and concentration trends over time will be used to trigger voluntary or mandatory management changes. These data will also be used to evaluate predictive models. While predictive models may be used to trigger first tier, voluntary BMP's for chemicals of concern, models will not be used to initiate regulatory restrictions.

11.4.b Monitoring data from the observation wells in vulnerable areas will be used to assess the effectiveness of voluntary and mandatory BMP's and to determine if modifications in BMP's are necessary.

§61-22-12 ACTIONS IN RESPONSE TO CONTAMINATION

12.1 If contamination is predicted based on chemical properties, vulnerability assessment and site vulnerability modelling; the prevention philosophy of the State Management Plan will require the development of voluntary BMP's to be in place without evidence of contamination. Educational programs designed to prevent contamination will focus on those products or practices that have the highest probability of impacting ground water quality.

12.2 When contamination is detected and confirmed by monitoring activities, the well owner will be notified and a site investigation will be conducted to determine if the cause as due to a point source or a nonpoint source.

12.3 If the contamination is determined to be caused by a point source, the case will be referred to the appropriate department for investigation of possible label or code violations and corrective action. Data will be entered in the data base. Concentrations detected will be compared to health-based standards and possible remediation considered if standards are exceeded.

12.4 NONPOINT SOURCE

12.4.a If the cause of contamination is determined to be due to nonpoint sources, data will be entered into the central date base, and additional wells in the area will be monitored and investigated. Using the best professional judgement, several options are available to the department.

12.4.b If health-based standards are currently exceeded, or if previously obtained monitoring data demonstrate an increasing trend of concentrations such that health-based standards might be exceeded in the future in the absence of changes in management, mandatory practices could be enacted, including possible restriction of use in vulnerable areas.

12.4.c If current levels of contamination do not exceed health-based standards and there is no documented trend toward exceedance, voluntary BMP's would be implemented along with an educational and awareness program in affected areas.

12.4.d Intensified monitoring would be carried out in the affected area to determine the success of BMP's. If concentrations found increase over time such that health-based standards might be exceeded in the future, mandatory management practices would be imposed.

§61-22-13 PUBLIC AWARENESS AND PARTICIPATION

13.1 A Pesticide and Fertilizer Water Quality Management Advisory Committee consisting of scientists with expertise in agriculture, pesticides and fertilizers, hydrogeology, well construction and maintenance and toxicology and growers will be appointed to provide input into development of Management Plans. Public comment will be sought on Management Plan components including voluntary and mandatory BMP's. There will be opportunity for public input through rulemaking processes should mandatory practices be required.

13.2 A public awareness program will publicize the State Management Plan and any adoption of chemical specific plans. This program will advise the agricultural community of opportunities to protect water resources and inform the public of water quality protection actions taken and will include but is not limited to: public hearings, newsletters, public notices, news releases, personal appearances, speaking engagements and select mailings.

13.3 Monitoring results following the confirmation of the presence of pesticides and fertilizers will be publicly disclosed along with their relationship to health-based standards. Public participation and cooperation in the monitoring program will be encouraged. All data (with the exception of the name of the owner and the exact location of the well to maintain confidentiality) will be made available to individuals or organizations conducting research on groundwater contamination and groundwater protection

practices.

§61-22-14 RECORDS/REPORTING OF PROGRAMS PROGRESS

14.1 All monitoring records shall be compiled in a central data base so that short and long-term evaluations can be used to determine the effectiveness of groundwater protection activities. Records of results of all point source cases and possible remediation activities will be maintained.

14.2 Biennially the West Virginia Department of Agriculture will publish a progress report on all activities and make the report available to interested parties.

14.3 Quarterly reports on monitoring results and program activities will be made to EPA. An annual report of all confirmed pesticide and fertilizer detections along with comparative federal health-based standards and point/nonpoint source determination will be published and submitted annually to EPA and other interested parties. The West Virginia Department of Agriculture reserves the right to maintain confidentiality on location of tested wells and guarantee the right of privacy to well owners.

STATE OF WEST VIRGINIA
DEPARTMENT OF AGRICULTURE

State Capitol
Charleston, WV 25305

Cleve Benedict
Commissioner

June 15, 1992

The Honorable Ken Hechler
Secretary of State
Ground Floor, W-157, State Capitol
Charleston, West Virginia 25305

Dear Mr. Hechler:

The Commissioner of Agriculture announces that he has scheduled public hearings for the proposed rules affecting groundwater in addition to the hearings listed on the "Notice of Public Hearing on a Proposed Rule" filed with you on June 5, 1992.

The additional hearings will all be held in Room 315/316 Percival Hall, Forestry Building, Evansdale Campus, West Virginia University, Morgantown, WV according to the following schedule:

Non-Bulk Pesticide Rules for Permanent Operational Areas (61-12I)
Thursday July 23 3 PM

General Groundwater Protection Rules for Fertilizer and Manures (61-6A)
Thursday July 23 5PM

Primary and Secondary Containment of Fertilizers (61-6B)
Thursday July 23 7PM

General Groundwater Protection Rules for Pesticides (61-12G)
Friday July 24 8AM

Bulk Pesticide Operational Rules (61-12H)
Friday July 24 10AM

Generic State Management Plan for Pesticides and Fertilizer in Groundwater(61-22)
Friday July 24 1PM

Best Management Practices for Temporary Operational Areas of Non- Bulk Pesticides (61-22A) Friday July 24 2:30PM

Please publish this notice in the State Register.

Sincerely,

Barbara J. Smith

Barbara J. Smith
Director, Compliance Division
(304)-558-2226 FAX: - 3594

BJS:pfhear.hec