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Pesticides and Ground Water State/Tribal Management Plans



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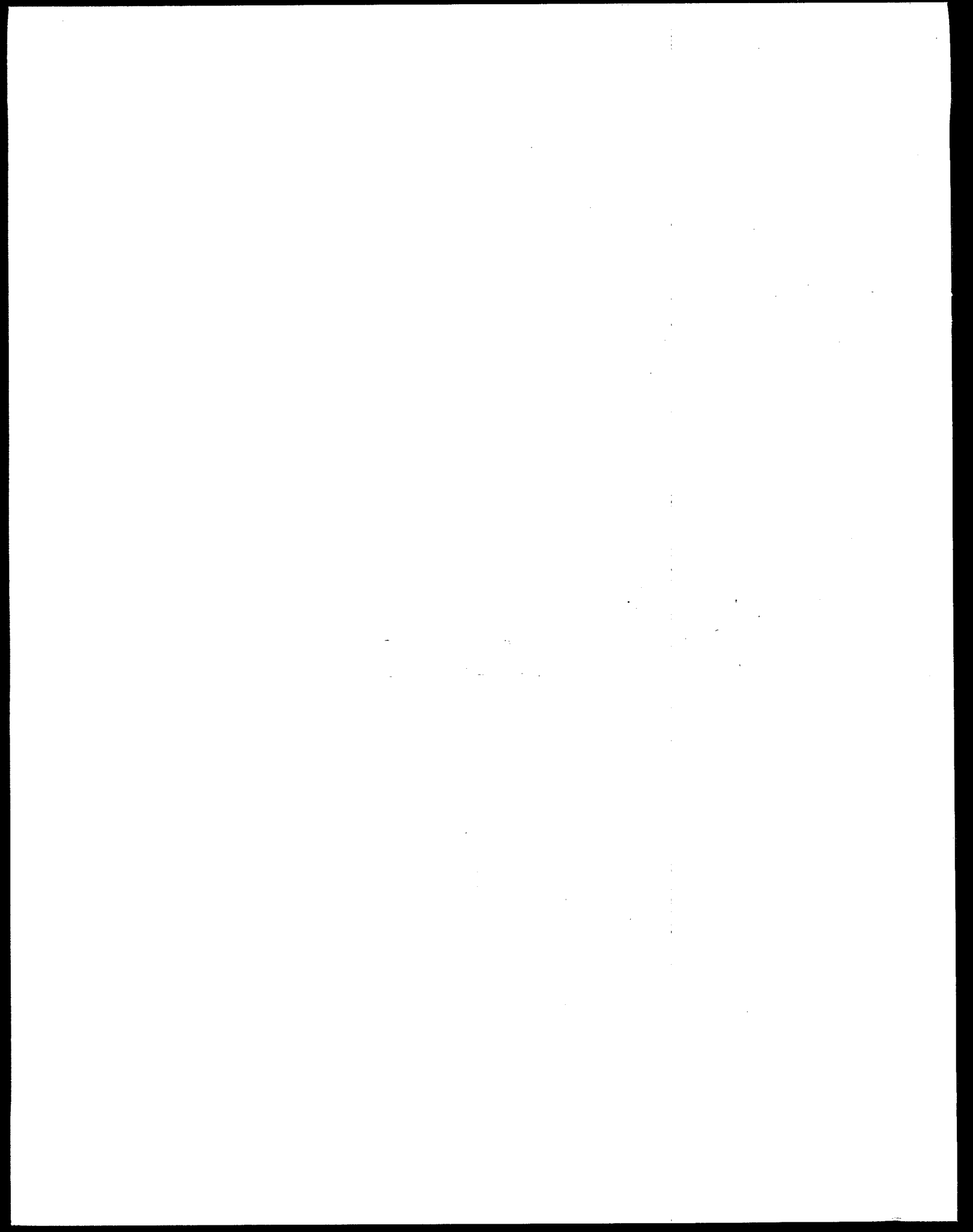


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BACKGROUND

On June 26, 1996, the Field Operations Division in the U.S. Environmental Protection Agency's Office of Pesticide Programs published a proposed regulation in the Federal Register (FR 33260). The proposed regulation, for which a 120-day comment period was provided, would require that use of five pesticides (Atrazine, Alachlor, Simazine, Cyanazine and Metolachlor) be contingent upon the existence of, and in accordance with, an approved State Management Plan (SMP). Each of these pesticides is either a "possible" or "probable" human carcinogen. Because of their potential to reach ground water, EPA has determined that they may cause unreasonable adverse effects on the environment in the absence of effective management measures provided by SMPs.

The proposed rule implements a key component of the Agency's 1991 *Pesticides and Ground Water Strategy*, and reflects many years of discussions and input from States and other partners. Through the development and use of SMPs, EPA is proposing to allow continued use of the five pesticides by providing States and Tribes the flexibility to protect the ground water in the most appropriate way for local conditions. This approach capitalizes on the most effective and efficient roles for State and Federal governments to collaborate in the protection of the nation's ground water resources.

In an effort to continue the partnerships that have been built to establish the SMP process, EPA hosted a public workshop on August 26 and 27, 1996. The purpose of the workshop was to continue dialogue regarding the SMP process and to provide participants a forum to discuss the proposed rule, EPA's rationale and regulatory approach, and issues that have arisen as States and Tribes have developed their programs.

It was not the objective of EPA to reach consensus on any issues at the workshop. Instead, ideas, issues, and questions were sought to assist others in making informed comments on the rule and assist EPA in learning about implementation issues.

KEYNOTE ADDRESS

*If this
partnership
approach works,
State
Management
Plans will serve
as a model of an
inclusive and
cooperative
approach to
environmental
regulation.*

SUSAN H. WAYLAND,
Deputy Assistant
Administrator,
EPA Office of
Prevention, Pesticides &
Toxic Substances

Ms. Susan Wayland:

Welcome. I'm gratified to see that so many of you made the commitment to attend a workshop in Washington, D.C., in August, when the rest of the world is trying to get away from the city. By definition, this is a dedicated and hardy crowd, and it's great to see many old friends and new faces.

I think it is testimony to the importance of this issue that, in spite of the vacation season, we have representatives from the public sector, over 40 States, all 10 EPA Regional Offices, at least three Tribal authorities, nearly a dozen pesticide registrants, and numerous others from our sister Federal agencies, particularly the U.S. Department of Agriculture (USDA), the U.S. Geological Survey (USGS), and the Extension Services.

Today in my time with you, I want to cover five areas. First, I will describe the purpose and objectives of this workshop. Then, I'll describe a bit how we got here, and our accomplishments along the way. Third, I'll talk about the Federal-State partnership and the goals of the program. Then I'll describe new legislative events that affect our work here today. And finally, I want to throw out some challenges for us all for the next two days.

The impetus for this workshop is the publication of the proposed SMP rule in the Federal Register this past June. This is a significant milestone in our effort to protect public health and the integrity of our nation's ground water resources. The proposed rule represents the actual application -- to five specific chemicals -- of a strategic approach that many of you have helped to develop and refine over the years. For those of you who are veterans of the long

*Workshop
Expectations*

campaigns to construct this program, thank you, thank you for your dedication to this public process. For those of you who are new to the issue, welcome. Many of you may be here to get a clearer understanding of our expectations for this new approach to pesticide regulation. Others of you may be potentially affected by this rule, as pesticide users, or registrants, or through an interest in water quality. Your purpose here may be to learn whether this program will protect your interests and secure for all of us the ground water quality goals expressed by these State programs. Whatever your interest in this rule may be, we intend this workshop to be of benefit to you.

Let me comment in more detail on some of our expectations for the workshop. As you know, we are currently in the midst of a 120-day public comment period on the proposed rule. The comment period closes on October 24th. Your official comments on the rule should be sent in writing to the address that we provided in the Federal Register notice of June 26th. Our purpose here in these two days is not to collect comments for the official record, but to provide an opportunity for as much informal exchange of views and information as possible. This will help all potential commentators to frame their issues. We believe that, through the discussions held in the next two days, participants will:

- ▶ have a clearer understanding of the provisions of the proposed Rule so that they can provide informed, comprehensive, formal comments;
- ▶ have a clearer understanding of EPA's rationale for taking this regulatory approach with respect to the chemicals involved;
- ▶ identify the predominant issues they face in meeting Rule requirements; and
- ▶ suggest process improvements to resolve issues, assure consistency, preserve flexibility, and achieve the greatest economy of operation.

History of the SMP Program

In addition to these objectives, I hope that States, Tribes, and Regions will also have the opportunity to:

- ▶ share information about how they plan to coordinate with other States and Tribes in their Region, or in neighboring Regions;
- ▶ examine ways to share information among themselves to keep informed of their progress during Management Plan development; and
- ▶ discuss inter-Regional and inter-State issues and views.

Let's turn now to the history of this program, because I think it is important for all of our participants to appreciate some facts about how we got here. Today it is official Administration policy that Federal regulators should seek out the participation of the States in developing regulations that affect them. It was not always so, and for that reason, I think we can take pride in the fact that the strategy for dealing with pesticides and ground water was developed from the beginning through an inclusive process, a process that brought together as many stakeholders from the public and private sectors as possible.

This included State agricultural agencies, but also State agencies responsible for health and water quality that had not traditionally been involved with pesticide issues. It included farmers. It included public interest groups. It included other Federal agencies, notably USDA and USGS, staff from Capitol Hill, and many pesticide producers. The process began with two national meetings in 1986 and 1987 at Coolfont, West Virginia.

As a result of the Coolfont meetings, stakeholders reached basic agreement on the core principles of the strategy, and especially on the idea of a Federal-State partnership in which the basic roles are that:

- ▶ the Federal government should provide the regulatory framework, define national goals, and provide technical assistance; and
- ▶ the States should have the opportunity to tailor risk management to local conditions, and carry out the pesticide program in conjunction with overall ground water protection programs.

In addition to a partnership approach, the strategy also promoted flexibility, recognizing that there are many options for designing an effective program. There was a general consensus that this division of roles and allowing flexibility for different approaches to ground water problems would provide effective, prevention-oriented risk management for ground water resources. And it would preclude the need for more stringent Federal measures that would be less sensitive to local needs. This remains the basic core philosophy of the SMP approach.

Our inclusive approach to developing ground water policy didn't end when the *Pesticides and Ground Water Strategy* was published in final form in 1991. It has carried through as we went on to develop guidance documents and then to the drafting of the current proposal itself. Throughout the history of this program, the States and the Federal government have worked hard, first to build and then to strengthen this partnership. We have sat together at workshops, public meetings, and Regional round tables across the country, debating issues, working out definitions, and refining our roles. It's been a very constructive and open process.

We have a long way to go to fully achieve what was begun at Coolfont, but we have covered a lot of ground since 1986. And we do have accomplishments to show for it. We have fashioned a common-sense partnership program and crafted its basic technical guidance. We also have taken the first steps toward development of SMPs through the development of voluntary generic plans. These have been vehicles for helping to build State capacity to assess and deal with ground water risks through coordinated multi-agency efforts. All States have developed or are in a stage of developing generic plans, as are the District of Columbia, Puerto Rico, and several Tribes.

Some States have used their generic management plans to incorporate protection strategies for all water, ground and surface. Some have used the pesticide management plan as the framework to deal with water quality issues on an intensive basis in certain geographical areas. Many, many States have reported unprecedented cooperation between agricultural, environment, and health agencies within the State government structure. My office has delivered, through the EPA Regions, over \$33 million in grants for ground water protection purposes, and that's not counting the Office of Water's contribution in grants for ground water protection, or the considerable financial and time contributions from the States and Tribes.

We have coordinated the design of SMP guidance with the Office of Water to ensure that the components of a pesticide plan will be compatible with Comprehensive State Ground Water Protection Program (CSGWPP) plans and vice versa. So we have many years, many dollars, and a tremendous amount of work and energy invested in this collaborative approach, and already we have many payoffs along the way.

*The SMP
Approach in
Perspective*

Now, for the next few minutes, let's focus on the goals of the SMP approach. The fundamental goal of the SMP is to prevent contamination of ground water resources resulting from the normal, registered use of pesticides. Since this approach empowers the individual States and Tribes with the responsibility for assessing the scope of their problem and the choice of measures to deal with it, it is a considerable innovation in the realm of pesticide regulation, which historically has been a highly centralized Federal process. If this partnership approach works, SMPs will serve as a model of an inclusive and cooperative approach to environmental regulation.

From the perspective of traditional pesticide regulation, one of the benefits of this approach for many stakeholders is that by developing and administering individual plans States can provide for pesticide use that would otherwise be regulated through assessments and management measures determined by EPA alone. I think we need to take a lesson here from medical history. In the old days, we used to deal with some ailments by amputation. Then broad-scale antibiotics became available. Now we have laser surgery and orthoscopic surgery.

In the same way, our principal tool for significant pesticide risks has been cancellation and suspension. Now we are tailoring our regulatory responses more precisely to the nature and location of the environmental hazards we seek to address, while minimizing side effects to agricultural production and efficiency.

If this approach to providing for plans tailored to local conditions should fail, however, the means for addressing concerns about pesticides that contaminate ground water will

surely revert to the blunt tools that EPA can bring to bear on a national level. I think there is a great deal at stake here in the success of the SMP approach.

In addition to its role as an innovation in the field of pesticide regulation, the Agency believes that the SMP approach should be viewed as a piece of a larger mosaic that includes regulatory, research, and legislative initiatives in which agricultural and environmental policy issues converge. While we have stated in our guidance documents that SMP development should not wait for completion of CSGWPP plans, we have consistently encouraged States, if feasible, to coordinate and integrate pesticide management plan activities with other programs having agricultural components. You are familiar with many of the programs that EPA's Office of Water coordinates. Since our next speaker will comment on these in more detail, I'll only mention them briefly. There are many complementary activities in the Water programs, including:

- ▶ Non-point Source programs
- ▶ Coastal Non-point Source programs
- ▶ State Water Quality grants
- ▶ Wellhead Protection (WHP) programs
- ▶ National Primary Drinking Water regulations
- ▶ Underground Injection Control programs.

And I'm not even mentioning the USDA programs under the Farm Bill and farm policies that dovetail with this issue.

So our challenge is not only to deal with pesticide and ground water issues, but also to take the opportunity to make them work comprehensively, and in harmony, with other important water and agricultural programs. Let me now turn to more recent legislation that affects our work here.

*Legislative
Changes*

Literally, within the past few weeks, the context of ground water protection as related to pesticides has been further changed by new legislation. The amendments to the Safe Drinking Water Act (SDWA), for example, give new impetus to the concept of source water protection, and the legislation specifically cites SMPs for pesticides as one appropriate tool toward that goal.

Another very important legislative change is included in the new Food Quality Protection Act (FQPA), signed into law just three weeks ago. Among a number of amendments to the Food, Drug and Cosmetic Act is a requirement that in setting the maximum residue limits (or tolerances) for pesticides on foods, EPA must consider all routes of exposure to that pesticide, including drinking water.

With the new legislation, it's clear that protecting water quality and, specifically, preventing pesticide contamination, now takes on increased importance to an even wider body of stakeholders than ever before. For example, the food processing industry, which has a stake in pesticide tolerances, now has a direct interest in whether a pesticide has a history of water contamination, because that will be weighed in the Agency's process of granting food tolerances. In addition, both the Safe Drinking Water Act and the Food Quality Protection Act include provisions for increased notification to the general public about pesticide or other contaminant exposure.

I think the basic message of these legislative changes is pretty clear: now, more than ever, protecting water resources from pesticide contamination demands to be addressed in a responsible and effective manner. I believe that SMPs for pesticides can be a valuable tool in addressing many of the important goals of the new legislation.

Challenges

I want to acknowledge the fact that we have seen some existing State programs already serve to fulfill virtually all of the requirements of SMPs as outlined in our guidance. We are well aware that some States have taken very significant steps in the area of protecting ground water resources from pesticide contamination. Let me assure you that such efforts will transition smoothly into SMPs. It is not our intention to ask States with excellent programs to reinvent the wheel. Neither is it our intention to impose regulation for its own sake. The SMP concept is to tailor risk management measures in proportion to the need for them. Thus, based upon a State's existing program, and depending on the level of pesticide use and the vulnerability of its ground water resources, a State may propose few changes to its current program, or a vast array of new management approaches.

I have talked a good deal about our relationship with States. We have worked most closely with the States over the years because of their central role in designing and carrying out the actual Plans. However, we have always tried to be inclusive of all points of view on ground water issues, because we recognize that the success of this new approach depends on broad acceptance of its principles, and a genuine desire to make it work in practice. Now that we are entering the public comment phase, it is particularly important for all stakeholders to provide EPA with information and constructive suggestions on how best to achieve the ground water protection goals which are the heart of this proposal.

I want now to talk about some of the challenges before us. I think there are certain questions we need to be asking in the next two days:

- ▶ Will States and Tribes be ready to carry out the State Management Plan rule by its effective date?

- ▶ Are EPA Headquarters and Regional efforts meeting State and Tribal needs at this stage of the rule development?
- ▶ What assistance is needed from other Federal partners in addition to EPA?
- ▶ Do all of our program activities -- at the Federal, State, and Tribal level -- continue to promote the success of this concept?

I believe that we've structured a workshop that will assist in answering these questions. We also hope that discussions of ideas among all of you will provide us with key information to help build a workable final program, and will give you the information YOU need to comment effectively.

As we proceed with our discussions, let's ask ourselves several pivotal questions:

- ▶ Are we keeping faith with our ground water protection priorities in the development and review of State Management Plans?
- ▶ Can we ensure ground water protection on a consistent basis nationwide while preserving critical State flexibility to meet local needs ?
- ▶ Are we contributing constructively to this process in order to make the strategy work?

Closing Remarks

In conclusion, I hope that each of you will bring to this workshop a healthy confidence in this partnership, and an enthusiasm for finding innovative ways to take it one step further.

This strategy makes sense. Over time, particularly with this Administration's commitment to partnerships, pollution prevention, increased flexibility, and ecosystem protection, it makes even more sense today than when we began. It brings to bear the best abilities of the Federal and State levels of government. It promotes flexibility, and gets away from "one-size-fits-all" national dictates. It involves active participation from industry, the farm community, and the public. It protects farmers, farm families, and consumers alike. And, at the heart of the issue, it protects the underground resource that provides drinking water for millions of people, recharges our rivers and streams, and is a critical component to healthy ecosystems across the country. Let's continue to work together to make this innovative approach a reality.

Again, I congratulate you — and thank you — for your commitment to this process and look forward to continuing our work together in the future.

**EPA's OFFICE
OF WATER
ADDRESS**

I used to call my program the un-funded, un-mandate. But with passage of the act, it became a mandate and funded all at once.

DR. BARBARA ELKUS,
Deputy Director, EPA
Office of Ground Water
and Drinking Water

*Contaminant
Occurrence Data
Base*

Dr. Barbara Elkus:

Dr. Elkus' remarks focused on opportunity for linkages between the water and pesticide programs in relation to SMPs. She said that there has been a long history of cooperation between EPA's Office of Water and Office of Pesticide Programs. This cooperation began with the development of EPA's ground water protection strategy, progressed with the pesticides and ground water strategy, and continued with development of the SMP guidance and the CSGWPP guidance.

The major focus of the CSGWPP is to bring together all players in the State that focus on ground water. That almost always includes the State agriculture departments, as well as the environmental agencies. In many cases, it includes public health agencies, and land-management agencies. This in essence is what SMPs are about -- everyone coming together to determine how to protect the resource and still allow production of crops.

One of the top priorities for SMPs, CSGWPP, the Well Head Protection Program, and the new Source Water Protection Program is protecting ground water used for drinking water.

Dr. Elkus said that she used to think of her program as the "un-funded, un-mandate" but with passage of the SDWA it became a mandate and funded all at once. The Office of Water now has authority and money.

The new SDWA provisions contain a number of things that will help State Lead Agencies for pesticides develop SMPs. One provision requires that EPA develop a *contaminant occurrence data base* over the next three years. The SDWA of 10 years ago required EPA to regulate 25 chemicals every three years. Many argued that EPA should be looking at

Notification Requirements

chemicals of concern and potential health effects, rather than just selecting chemicals. The occurrence data base will help us do that. This data base may find pesticides in ground water and assist pesticide State Lead Agencies responsible for SMPs target areas of concern.

Another provision that may be of assistance is *stronger notification requirements where there is a violation of a Maximum Contaminant Level (MCL.)* This provision will make information more understandable and will require that an annual "consumer confidence" report be provided to water users by the water provider. This report will say what's in the water, whether it's at a level that exceeds an MCL, and what it means if these contaminants are in the water in trace amounts. These reports could potentially provide information to pesticide State and Tribal Lead Agencies on where contamination might be found.

Source Water Protection Provisions

The final major provision Dr. Elkus described is the new *source water protection provisions and related monitoring relief.* The source water protection program is an expansion of the well-head protection program and focuses on three activities: 1) delineating the area around the well that is the source of water, 2) assessing and developing an inventory of potential sources of contamination in that area, and 3) developing management plans for the area.

Dr. Elkus said that there is no provision that forces action in the statute, just requirements for delineation and assessment. The statute provides for financial assistance ("many millions of dollars") to water agencies through the state revolving fund to conduct these activities. The delineated areas and assessments are the same underpinnings needed to accomplish SMPs.

Also, there are provisions that if a State does undertake a source water protection program, there is some relief from monitoring. If you can show that a particular chemical or pesticide is not used in the source water protection area or that it is adequately managed, there is relief from certain monitoring requirements. This may be an opportunity for pesticide State and Tribal Lead Agencies to work with water offices to mutual benefit.

Dr. Elkus also said that her Office is developing a latitude/longitude data base of drinking water supplies and that this data base may benefit SMP development as well. Her office has the location or address for the treatment facilities, but does not have good information regarding the precise locations of wells or surface water sources. Once developed, this data base would be available for use by pesticide State and Tribal Lead Agencies.

In closing, Dr. Elkus said that EPA's Office of Water intends to continue to work closely with the Office of Pesticide Programs in the continuing development of both CSGWPP guidance and the SMP program. One indicator of the strength of this continuing relationship is that the new SDWA provisions recognize the SMP process as linked to source water protection plans.

Closing Remarks

Questions From The Floor

Q - (State Ground Water Agency) - What is the status of CSGWPP at this point?

A - The CSGWPP is stronger in some States than in others. The most attention is paid to it in States that have an interest in the Superfund relief that can be afforded if a CSGWPP is in place. It now has reference in the statute and authorization for funding (note -- authorization does not mean it will receive funding, only that it may receive funding). This gives it the force of reality and boosts its heart beat and blood pressure somewhat, just like SMPs are much more real now because Congress said they exist. EPA has always believed CSGWPPs to be important because it's the right thing to do. In many states it has happened even without Congressional recognition. The power of CSGWPPs is that they bring all the players together to allow them to identify duplication of effort, gaps in effort and knowledge and to share information and combine data bases.

The biggest complaint EPA's Office of Water has received regarding the CSGWPP is that the package required to be submitted is not useful to the State. EPA is now working with a group of State representatives to streamline the CSGWPP process and the physical package so that it is of value to the State in showing them how they focus their combined resources.

Q - (Regulated Industry) - The SDWA and source water protection provisions, where localities can petition the State, seem to introduce a "wild card" for pesticide State Lead Agencies. Most drinking water programs are in the State environmental or health agencies. If petitions go to them, who will ultimately be leading the pesticide management effort as it relates to water?

A - How the agricultural agency plays in this will vary from State to State. This is another reason why the CSGWPP is important in bringing agencies together. Under the petition program, if you find contamination at a level high enough to petition, you have already failed. This is why we prefer to focus on the delineation and assessment aspects, the prevention aspects. Given what we know about the costs of cleaning up a water source, focusing on delineation and assessment is like the ounce of prevention that, in this case, is probably worth a ton of cure.

Q - (Regulated Industry) - Do you then envision the pesticide State Lead Agency working through some agreement with sister agencies to deal with surface water, perhaps outside the SMP process?

A - I would hope it's in conjunction with the SMP process. We have done about all we can do in our own little boxes, and we did a lot, but if we are going to move water quality forward into the next century we need to be looking much more holistically. We need to build links between programs. This has taken a lot of effort within EPA, and at least we are all in the same agency. In the States, the programs are in different agencies -- the agriculture agency, environmental agency, health department, etc; however, we all need to expend the energy to build these links.

Q - (Regulated Industry) - In your remarks you continue to discuss contamination. Is there a basic definition in the SDWA of "contamination" or "contaminant"?

A - I'm not sure they use the word "contaminant." "Drinkable water" is that which meets the federal MCL and the Agency-wide actionable level is the MCL. There is no definition specifically of "contaminant."

Q - (Pesticide State Lead Agency) - If EPA decides an SMP is required for a particular pesticide, will that pesticide automatically go on the list of compounds for which monitoring is required in drinking water?

A - No, but it's a good bet that it might. If the Office of Pesticide Programs identifies a pesticide that requires an SMP, that should trigger the Drinking Water Program to seriously consider the chemical. However, there are limitations in the statute on the list of chemicals, so we would need to look at it in relation to other things across the country for which we need monitoring.

**PANEL ON
PROPOSED
REGULATION**

Jim Roelofs:

Mr. Roelofs began his presentation by emphasizing the core provision of the proposed rule: *33 months after publication of the final rule, Atrazine, Cyanazine, Simazine, Metolachlor and Alachlor can only be used in States or on Tribal Lands where a management plan has been approved.* The rest of the provisions in the proposal either refer to SMP components or, for the most part, to the SMP guidance document. This is why the rule itself is short and tends to be fairly general.

In the preamble, EPA lays out its rationale for how it chose these specific chemicals and explains its risk/benefit determinations and how this fits into its legal authorities. The preamble also is an opportunity for EPA to pose questions and possible alternative ways to frame the core rule.

Mr. Roelofs noted that his remarks would focus on three areas: 1) tools available to EPA, 2) several issues raised by AAPCO and NASDA late in the drafting process of the proposal, and 3) three major items on which the proposal requests comments.

As background, Mr. Roelofs explained how the SMP approach fits into the array of tools available to EPA. The least restrictive tool that EPA has to deal with ground water concerns is label advisories. These are simply warnings that some evidence exists that the chemical may leach to ground water. Users are put on notice that use may pose this risk, and that they should use the product with extra care. These statements are not enforceable and have been used on only about a dozen chemicals.

Tools

SMPs are premised on the finding that without them, these pesticides may cause unreasonable adverse effects, not a finding that they currently cause unreasonable adverse effects across the nation.

JIM ROELOFS,
Ground Water Section
Chief, EPA Office of
Pesticide Programs

The next most restrictive tool is risk mitigation measures on the pesticide label. This includes any change in use directions, precautions, or limitations intended to address ground water concerns. When we use this tool, the specific mitigation measures are generally negotiated with the registrant during the registration process for new chemicals or during the reregistration process for existing pesticide registrations. The mitigation measures on the pesticide's label are enforceable and we have used a variety of these measures in the past to address ground water concerns specifically. Measures in an SMP could be similar to these: In some cases measures could be voluntary Best Management Practices (BMPs) rather than regulatory measures. These BMPs could then be delivered through interaction between the State and the user community, rather than through interaction between EPA and the pesticide registrant.

Another approach is to classify use of a product as restricted. This is a formal regulatory step that classifies the pesticide as a "Restricted Use Pesticide" in the conventional sense. That is, the product can only be used by or under the direct supervision of a Certified Applicator. This classification also provides for competency determinations, generally includes formal training of the applicators, and provides for record-keeping of pesticide use.

The SMP concept was developed to fill a gap that existed between Restricted Use classification and cancellation. Technically, it is an elaboration of the Restricted Use classification, but instead of limiting use to Certified Applicators, it specifies that the pesticide can be used only in accordance with an approved SMP. We recognize that this tool is stringent and that it involves a tremendous undertaking on the part of the State Lead Agencies and others who cooperate with them. Therefore, we are not likely to use

*Issues in the
Drafting Process*

it very often and when we do, it is to address a problem we believe is widespread and is not likely to be adequately addressed by certification and training alone.

SMPs are premised on the finding that without them, these pesticides may cause unreasonable adverse effects, not a finding that they currently cause unreasonable adverse effects across the nation.

Finally, cancellation is the most stringent possibility. EPA has never canceled a chemical solely on the risks from ground water contamination. If a chemical has significant toxicity and is causing concern on such a widespread scale, it would likely have other routes of exposure as well, such as worker or dietary exposure. EPA has canceled chemicals in the past for which ground water contamination concerns were one of several concerns.

Late in the process of drafting the proposed rule, representatives of AAPCO (the Association of American Pesticide Control Officials) and NASDA (the National Association of State Departments of Agriculture) requested clarification on several issues prior to proposal of the SMP rule. As a result of that request, EPA met with them in the summer of 1995 to discuss seven issues:

1. **Vulnerability Assessment and Monitoring** - Given the complexity and cost of these two SMP components, the States requested clarification of EPA's expectations of completeness and adequacy on the day the rule becomes effective. While a State may design an ambitious program, it may not be able to have that program up and running on the first day. Specifically, the States requested that EPA articulate its position on this issue.

At the 1995 meeting, and formalized in minutes from the meeting, EPA agreed that under certain circumstances it would be acceptable to "phase in" assessment and monitoring programs. A rationale would need to be provided and a credible commitment to move these two components forward would have to be in evidence.

2. **Evaluation of SMPs** - The States requested clarification of EPA's expectations on initial evaluations demonstrating that SMP measures were effective. They noted that it may take a significant amount of time for actions on the surface to result in a positive effect on the ground water. There was concern expressed that EPA intended to withdraw approval of an SMP if, at submission of the first evaluation two years from implementation, there was no appreciable difference in the quality of the ground water.

EPA agreed that there are a variety of measures and indicators that could be used to demonstrate that the SMP is effective and recognized that direct measured results may take longer to demonstrate.

3. **Variation Among States or Level of Effort** - The States noted that the level of effort needed in chemical-specific SMPs might vary from State to State, or even within a State, for different chemicals. Every chemical may not need to be addressed to the same degree in every location. The States requested that EPA clarify its position on whether this variation was acceptable.

EPA agreed that plans will vary. In cases where relatively little risk or use occurs, for example, the SMP associated with the chemical can be minimal. Variation such as this among plans is acceptable to EPA.

4. **Good Laboratory Practices** - The EPA has Good Laboratory Practices (GLP) regulations that apply to studies performed in support of registration. The States indicated that they did not believe these regulations were appropriate for the kind of field monitoring/surveying associated with SMPs. They also noted that GLPs can make the SMPs extremely expensive and, in some cases, impossible to carry out.

EPA concurred with the States' position. The proposed rule now indicates that GLPs do not generally apply to the monitoring and surveying foreseen to support SMPs.

5. **Time to Develop SMPs** - At the time of the meeting with AAPCO and NASDA, the time frames in the draft proposed rule were 12 months for development and submission of an SMP and nine months for the EPA Regional Office to review and approve the SMP. States put forth arguments that supported a longer time frame for development and submission.

As a result of the rationale that the States provided, the proposed rule now provides 24 months for development and submission and maintains the nine-month time frame for EPA Regional Office review and approval.

6. **Restricted Use Classification** - In the summer of 1995, the draft proposed rule did not include "traditional" Restricted Use classification for the five chemicals proposed for SMPs. The States believed that without "traditional" Restricted Use classification, there would be confusion on the part of the users. They also stated that they would lose several critical tools, such as the ability to identify users of these chemicals, training opportunities for users, and record keeping.

EPA agreed that "traditional" Restricted Use was appropriate and that it was our intention to so classify the five subject chemicals. However, our original plan for a Restricted Use rule has changed somewhat, which has resulted in some confusion.

We still intend to issue a final Restricted Use rule this year. This rule will define criteria that relate to the potential for ground water contamination. The criteria will identify candidates for Restricted Use due to ground water concerns. The rule would not automatically classify specific pesticides. The five SMP chemicals meet the criteria -- so do about 17 other chemicals. Because of questions within EPA regarding how the criteria will be applied, we have been delayed in issuing the final rule. Our questions relate to the 17 chemicals, not the five in the proposed SMP Rule.

Over the next few months, we will attempt to resolve our questions. It is highly unlikely we would take all the chemicals that met the criteria and classify them for Restricted Use at the same time. EPA will need to develop a much more systematic, deliberate system to apply and use the criteria to make decisions. For example, there may be situations where a chemical meets the criteria but we still believe that the ground water concerns can be resolved through mitigation measures on the label.

In spite of the delay in issuing the Restricted Use Criteria Rule, EPA has determined that we do not have to do a separate rule-making to classify the five SMP chemicals, but instead, can classify them through the now-proposed SMP rule. However, to do that, we need to receive comment and build a record that supports us doing so.

7. **Pesticide Metabolites** - For some of the proposed SMP chemicals, a significant portion of the substances being detected in ground water is metabolites rather than the parent compound. It was unclear whether EPA expected SMPs to address metabolites. The States requested that EPA identify specific metabolites of concern. The States pointed out that identifying these and requiring that they be considered in the SMP programs later would be disruptive.

EPA agreed with the States' position. The proposed rule does not require SMPs to monitor for metabolites or to otherwise include them in the SMP. EPA agreed that the potential for disruption could be serious and indicated the Agency would make every effort to determine, through its reregistration processes, whether it believes specific metabolites should be addressed through SMPs. If a decision is made that metabolites do need to be addressed, EPA still hopes to be able to do this in a time frame that would not result in significant disruption to the SMP process.

Mr. Roelofs stated that the preamble to the proposed SMP rule asks for comment on dozens of issues. In some cases, the questions being asked are an attempt to obtain information. In other cases, they address alternative ways of framing the rule itself, and thus will influence policy choices. The point of asking these questions is that if you want to adopt substantive changes to a proposed rule, you have to ensure that the public has had an adequate opportunity to comment on the change. If there has not been adequate opportunity to comment on a substantive change, EPA must re-propose the rule before it can adopt the change. Asking questions and posing alternatives in the preamble to a rule provides the flexibility to adopt changes if supported by the public comments.

Three Key Issues for Comment

Mr. Roelofs encouraged comment on all the areas on which we requested input and those on which we did not specifically request input. He focused his remarks on three areas of the preamble that he considers to be key:

Whether the five chemicals subject to the proposed rule should be classified as "traditional" Restricted Use - He pointed out that EPA is inclined to so classify these five chemicals, but in order to do so EPA needs to build a record of support. Therefore, the proposal requests comments on several specific questions:

- ▶ Why should these chemicals be classified (or not) as "traditional" Restricted Use?
- ▶ What are the down sides, if any?
- ▶ If the pesticides are classified as Restricted Use, should this apply to all products? Should homeowner-use products or other categories be excluded from Restricted Use classification?
- ▶ What would be the effects on SMPs of classifying (or not), these pesticides as "traditional" Restricted Use.

Whether EPA should define triggers for action -

Mr. Roelofs said the proposed rule does not currently define triggers at which action must be taken by a State, nor does it define what actions should be taken. However, the preamble requests comment on whether EPA should establish triggers or levels of the five pesticides in ground water that would trigger action on the part of all States and Tribes who develop management plans. For example, should the rule include requirements that SMPs include a commitment to act at 10% of the MCL, commit to do more at 50%, and to do the maximum at 100%?

There are both pros and cons to such an approach. Perhaps the most significant con is the loss of some flexibility built into the SMP process. However, there also are benefits to be gained in terms of national consistency and clear expectations. Such an approach might result in simplification of the decision-making process for States, Tribes when developing SMPs and Regional Offices when reviewing pesticide-specific SMPs.

Whether there should be a default label process - This process is a significant policy alternative in the preamble with a specific request for comment. This option was included in the Federal Register for consideration based upon input from the regulated industry. This constituent suggested that the proposed program sets up a process whereby a registrant will lose the chemical in a specific State if that State chooses not to pursue an SMP. Industry also asked whether they should have the opportunity to continue use of the pesticide in such States if industry can do so in a way that satisfies EPA's concerns about potential ground water contamination.

The proposal outlines many specific questions for comment about this concept to provide EPA with input on two basic questions: Should such an alternative be made available, and if so, what kinds of provisions would be adequate?

Mr. Roelofs also pointed out that a potential model to review in formulating comment in this area is the agreement that EPA negotiated with the registrants of Acetochlor. This chemical was conditionally registered under an agreement that amounts to a detailed contract between EPA and the registrant. This agreement addressed label provisions for the chemical, contained registrant commitments to monitor, and provides that certain detection events lead to consequences up to and including cancellation.

*We must be
careful not to
give up on the
'good enough'
in the search for
perfection.*

DENISE KEEHNER,
Acting Director, EPA
Environmental Fate and
Effects Division**

** Ms. Keehner began her remarks by announcing that Dr. Joseph Merenda would begin as the Director of EFED within the next several weeks.

During development of the SMP process, the EPA had no experience with conditional registration agreements such as that entered into with Acetochlor. Now that EPA and the States have experience with such an agreement, we can jointly assess its utility within the context of the SMP program.

Denise Keehner:

Ms. Keehner said the monitoring component of SMPs and indicated that this is a critical component of any kind of ground water protection strategy. Without monitoring data of known quality, you cannot:

- ▶ tell whether there is a problem,
- ▶ define the nature, magnitude or scope of the problem,
- ▶ determine what **might** work to solve the problem, or
- ▶ evaluate whether your measures **did** work to solve the problem.

EPA realizes that monitoring is an inexact science. In fact, the more you understand the science and the state of the science of ground water monitoring and analysis, the more you understand there is a lot more to learn. EPA also recognizes that ground water monitoring is expensive. As an example, the registrants of Acetochlor estimated at between \$10 million and \$30 million, the costs of implementing the monitoring agreed to as part of the conditional registration of Acetochlor.

Ms. Keehner said it is difficult to define up front, precisely what constitutes an adequate monitoring program. In part, this is due to the fact that the questions needing answers vary based on a number of factors.

*Four Types of
Monitoring*

A mutual challenge was proposed to put in place carefully designed monitoring programs to answer specific state or local questions at a known level of confidence. Ms. Keehner noted that we need to consider and balance the costs of increasing our certainty with the ramifications of making the wrong decision based on the monitoring results. She urged common sense during development of monitoring plans and cautioned that together, we must be careful not to give up on the "good enough" in the search for perfection.

In its evaluation of the adequacy of a monitoring program, EPA must realize that these programs can serve a variety of purposes and will be designed differently, depending on the questions you are trying to answer. As an example, four types of monitoring were highlighted: baseline, problem identification, response, and evaluation.

In baseline monitoring, one might use existing data and wells with a small number of new monitoring wells. When you move up the chart to problem identification, you may use information from baseline monitoring, plus knowledge of pesticide use and hydrogeological characteristics to do more focused monitoring of particular areas to determine whether you have a problem. Response monitoring, which would be more focused yet, needs to be designed to characterize and determine the source of contamination. Finally, evaluation monitoring would tend to be a long-term, consistent program since it may take several years, or even a decade, to determine the effect a specific set of actions had on ground water quality.

Referring to the proposed rule, Ms. Keehner said EPA does not intend to dictate the details of monitoring programs to support SMPs, and EPA continues to encourage the use of other monitoring data such as that collected by the USGS, particularly for baseline monitoring.

Closing Remarks

EPA believes it is providing adequate opportunity for notice and comment and is providing ample procedural protection which satisfies the legal requirements and is fair.

STEVEN SILVERMAN,
EPA Office of General
Counsel

Also referring to the proposed rule, it was pointed out that comment has been requested on the extent to which EPA should undertake a data call-in (FIFRA [Federal Insecticide, Fungicide and Rodenticide Act] section 3(c)(2)(B)) for ground water monitoring data to support SMP program needs.

In closing, Ms. Keehner said that given resource constraints, States will need to set priorities when undertaking monitoring. For example, a State may need to focus monitoring first on areas of greatest ground water value or on areas where unchecked contamination may produce the most significant potential exposures.

Mr. Silverman:

Mr. Silverman directed his comments to the basis for the proposed SMP rule and adequacy of opportunity for notice and comment. On the first point, he stated that there is clear authority for the proposal in FIFRA section 3(d)(1)(C). This section allows EPA to classify a pesticide for Restricted Use upon finding that without additional regulatory restrictions, use of the pesticide may cause unreasonable adverse effects on the environment. The act further provides that the Agency can adopt additional regulatory restrictions by rule.

Mr. Silverman said EPA has set out its record for comment, which lays out the basis for the finding of unreasonable adverse effects for the five chemicals subject to the rule. Also, the costs and benefits are included in the proposal and in background documents on which we are soliciting comment.

On the second point, EPA believes it is providing adequate opportunity for notice and comment and is providing ample procedural protection which satisfies the legal requirements and is fair. There are two "bites at the apple;" that is, two opportunities to comment on EPA findings of potential unreasonable adverse effects:

- ▶ comment on the SMP proposed rule, and
- ▶ comment on pesticide specific SMPs.

First, Mr. Silverman said EPA has put forward, in general terms, the record by which it believes Other Regulatory Restrictions are needed to prevent unreasonable adverse effects stemming from pesticides in ground water. Comment may be made on the adequacy of this record to justify the imposition of Other Regulatory Restrictions.

Second, there is opportunity to comment on whether a specific SMP adequately addresses the possibility of unreasonable adverse effects. In this regard, comment could address adequacy or could address whether the specific SMP is too restrictive. Mr. Silverman pointed out that the opportunity to address this comes when the State or Tribe puts forward a specific plan. He further noted that the preamble to the proposed regulation says SMPs must provide the opportunity for adequate comment on the specifics of the plan, whether the plan is adequate to deal with potential unreasonable adverse effects, and whether the costs and benefits are adequately addressed. EPA's final determination on a pesticide-specific SMP will consider the State's or Tribe's record, comments received, and how the state addressed those comments, along with our own record related to this proposal.

Questions from the Floor

Q - (Regulated Industry) - You spoke of the tools that EPA has and the Ground Water Strategy says that you start at the bottom of the tier and implement that, evaluate whether it works and then move to the next tier if necessary, implement that, and evaluate whether that works. You don't seem to be doing this evaluation. These tiers haven't been applied to the five chemicals and EPA has concluded that tier four, SMPs, is the way to go.

A - First, I don't believe EPA has said that it will walk through each tier and try them, evaluate them and then move on. Instead, we have said that we will look at whether any of the tiers are likely to be adequate to address the concern. We have gone through that process and determined that the provisions of "traditional" Restricted Use -- record keeping and training -- would not be adequate to manage the potential risks, which is why we've moved to the next tier -- SMPs.

Q - (State Lead Agency) - If the label says to follow the SMP and that is what is enforceable, then if we put voluntary actions into the SMP, they would appear to become mandatory and would have to be enforced. Is this the case?

A - No. If a plan says a particular measure is voluntary, the terms of the plan control. You can't enforce these measures as requirements. The issue for EPA in approving or disapproving the plan is whether voluntary measures that are not enforceable will adequately protect against potential unreasonable adverse effects. If the plan denominates something as voluntary, it doesn't become enforceable.

Q - (State Lead Agency) - Has EPA made a determination of what the label will look like, specifically focusing on the use directions, rates of application, setbacks, etc.? Various States will have voluntary approaches, while others may have regulatory rate reductions, etc.

A - The basic approach is that the label will say the user has to comply with the provisions in the SMP. We don't see any other way to do this and still preserve flexibility. We have proposed that use has to be in accordance with the SMP. The proposed rule mentions that the registrant will have to make this elementary change in the label within an appropriate time (reference page 33266 of the proposed regulation).

Q - (State Lead Agency) - If a State has done significant baseline monitoring of high-use areas for a compound and hasn't found detections, and the State decides not to invest the resources in doing a plan, would EPA be comfortable canceling use in that State?

A - If you have a minimal situation, why would you want to do that rather than put in a few paragraphs to account for that situation?

Q - (follow up) - A few paragraphs would do it? Reality is that it will take far more than a few paragraphs or a few pages and you will have to spend minimally, tens of thousands of dollars for something that the State has been monitoring for years and has not found a problem.

A - One issue is that you may have all these data that show there is no problem, but the Agency would need to see that and make a determination. Then you get into the "minimal plan" concept. You need to remember that there are opportunities to submit plans that are not "full-blown" plans if you can show there is no use, no problem, the water is not particularly vulnerable, etc. But a plan of some sort needs to be submitted.

Another issue is that EPA would likely still want to see some commitment to continued monitoring if use patterns changed, etc., and at least a basic plan for what actions would be taken if subsequent monitoring finds the pesticide in the ground water.

Q - (State Lead Agency) - Is EPA prepared to approve a plan that simply says follow the label directions?

A - There are still basic things that need to be in the plan because of the nature of the pesticide and the frequency of detections on a national basis. But if there is a minimal problem, the plan could be minimal and in the area of mitigation measures, that theoretically could consist of following the label directions.

Q - (State Lead Agency) - I'm pleased to see the default label being mentioned. There may be a time when a State chooses not to invest the resources in an SMP because there are so few users in the State. This would provide a way for users in the State to continue using it. I'd be interested in hearing from registrants their views. Also I'd like to know what's going on with Cyanazine and why are we writing a plan for it?

A - Regarding Cyanazine, we're leaving it in the proposal because we're not 100% sure what's going on with Cyanazine.

Q - (Regulated Industry) - Registrants are supposed to submit labels within 12 months of the final rule and these labels are supposed to be on the product in 33 months. Does that mean we label new product or do we have to go out and locate all old product and re-label it? There were issues involving the Endangered Species Protection Program (ESPP) where labeling in the field referenced Bulletins which were not available. As a result, the labels had no meaning.

A - We need to make sure that when the 33-month date arrives, users aren't faced with labels that don't tell them what to do. I hope we learned from the ESPP situation. One approach is to require a label statement that says "after date certain, this product must be used only in accordance with an approved SMP." This way, users won't be out searching for a plan that is not yet in existence.

Q - (Regulated Industry) - One way to measure success or failure of this workshop is to answer the question, Can a mandatory plan be voluntary? I think the answer is yes. The State has to develop a plan and it is subject to approval, but the specific provisions in the plan that the user is subject to can be voluntary, I believe. Second, minor crops, minor crops, minor crops. In response to the previous statement regarding the default option, the State needs to realize that the mentality that the State would use in determining whether to devote resources to an SMP, is likely to be similar to the industry's rationale for determining whether to support the use of a chemical in a particular State.

Also, there appears to be inconsistency between the way Dr. Elkus indicated triggers are used in the SDWA and the way EPA is using triggers in the SMP process. Under the SDWA, utilities can petition out of monitoring if detections were reliably and consistently below the MCL. SMPs go the other way in that monitoring puts you into a more stringent plan. Could you clarify this?

A - There are not specific triggers in this rule, although we are requesting comment on this issue. What we have proposed is a standard-less approach. Should a State come forward saying they need a certain level of response based on historic data, the plan could have minimal controls. It would depend on the record developed.

Q - (State Lead Agency) - The implementation in the proposal is 33 months (24 months for submission and nine months for review and approval), but nowhere is there time for education or to put information together for the users based on the approved plan. Will the States be allowed to phase in the plan by using education as the only component for the first 24 or 12 months?

A - In developing a plan over the course of two years, educating the users should be a component of that. I'm not clear on why this is an issue.

Q (follow-up) - You are assuming that the plan remains the same from early draft until final. You can't put educational materials together until you know that the plan is approved, or else you'd be providing information that upon final plan approval, may be incorrect. It's important that the information we provide is the right information.

A - I certainly can't argue that information and education has to be accurate, but a very long phase-in would probably be a real problem for EPA to accept.

Q - (Regulated Industry) - Is it EPA's intention that registrants would amend their labels for newly manufactured materials or is it your intention that we would need to find existing inventory at the 33-month point, and re-label that as well?

A - It is our intent that at the 33-month point, the labels in the field have the correct information on them and that users are not finding old labels out there.

Q - (State Lead Agency) - The proposal, as well as the guidance document, indicates that States should make a commitment to obtain the resources necessary to fully implement the SMP. If I put in my plan that the State is committed to generating the resources, I'd be a liar. Not only are increased taxes and fees, etc. politically incorrect in my State, they are politically impossible. What does EPA really expect for a resource commitment? What I'm hoping will be acceptable is a plan with a minimal resource commitment that can be evaluated at the end of two years to determine whether additional resources are needed to carry it out.

A - The key principle in reviewing these plans will be to determine that the plan is a coherent whole. Your plan may be a modest one that requires modest resources. However, if you propose a very elaborate, expensive plan and then do not have the resources to carry it out, that would likely not be acceptable unless it included a phase-in plan for the future. Some of the regions on the panels tomorrow may be better able to address this since they will be reviewing the plan.

Q - (State Water Agency) - You said in your remarks that the State has to submit evidence that comments have been taken and that the State has conducted a risk/benefit analysis. A lot of the information that EPA has that may be necessary for a State to perform a risk/benefit analysis is not available to the States. This information would be helpful in showing that our plans are not overly restrictive. How can we address this?

A - The record for this proceeding (the proposed SMP rule) should be available. There is only limited Confidential Business Information that would not be available through our docket. States have to respond to public comment. Those comments could indicate that the cost of the restrictions in the plan outweigh the benefits. If you receive comments that speak to that, you need to address them. Our record justifies that the SMP program is necessary, but does not address the specific limitations that each State might impose through their SMP. That's what you have to address if you receive comments on what you're doing through your SMP.

Q - (State Water Agency) - What is the background for including the requirement in the proposal that plans need to have the State Attorney General sign-off?

A - This was probably transported from other programs and included as a routine part of the submittal. The basic idea is to get some assurance that the legal mechanisms exist to carry out what you are proposing to do.

Q - (State Lead Agency) - What role is EPA Headquarters going to play in assisting the Regional Offices to be uniform in their review and approval processes? And do you anticipate there will ultimately be an appeal process to Headquarters if the State is unhappy with the result of the Regional Office review?

A - What we have been doing is trying to provide a forum for ensuring some degree of consistency among the Regions. We sponsor a process whereby the Regions and several States meet monthly via teleconference to address issues raised by the Regions or by the States through their Regional Office. Some issues are raised in an effort on the part of the Region to reach consensus and some are raised only so the Region can hear other viewpoints prior to making a decision. Our intention, unless we find we need some other process, is to continue to support this. In terms of our involvement in the review of plans, it is not our intent to review plans unless the Region requests, for some specific reason, that we do so. We are reviewing one SMP right now. The Regional Office has completed a review and has asked that we provide them with our assessment so they can determine whether we are all on the same "wavelength" in terms of what is or is not acceptable. We had not anticipated any involvement beyond this.

We have not discussed an appeal process such as you mention. The authority for approval will be delegated to the Regional Administrator and the formal appeal process would then be to the Administrator of EPA. This afternoon we can discuss whether there is a need or desire for something beyond this and we'd also welcome formal comment on this issue.

**PANEL OF
STATE LEAD
AGENCIES**

Dr. Henry Wade:

Dr. Wade began his presentation by stating that North Carolina's generic SMP received concurrence in early 1996. As it is laid out, it provides the State significant flexibility in the areas of assessment, monitoring, outreach and other components. There are no minimum numbers of wells required and no specific time frames for adoption of

If EPA doesn't decide whether we should look for metabolites, the States can make the decision themselves that yes, we are going to look for them.

DR. HENRY WADE,
Pesticide Environmental
Program Manager, North
Carolina Dept. of
Agriculture

regulations to limit use in areas where there are detections. Instead, the State has the flexibility to determine these two factors itself.

The North Carolina plan has three detection levels at which actions will be taken. These levels are based on a percent of a ground water quality standard which has been adopted by the State's Environmental Management Commission. There are currently standards for 80 chemicals, 20 of which are pesticides.

The first detection level at which action is taken is detections less than or equal to 50% of the ground water quality standard. At this level of detection, voluntary BMPs are encouraged.

Detections of between 50% and 100% of the ground water quality standard will result in regulatory approaches. This can include limitations on frequency of use, reductions of use rates, irrigation restrictions, etc.

At levels of greater than 100% of the ground water quality standard, use prohibitions would be implemented.

The North Carolina Department of Agriculture and the Environmental Health and Natural Resources Departments have been involved in a statewide ground water monitoring program since 1991. Funding for not only assessment and monitoring, but for positions in the Department and supplies, comes from the support provided by the State General Assembly. The Department receives approximately \$700,000 per year and the Department of Environmental Health and Natural Resources receives over \$300,000 per year to address pesticides and ground water issues.

Registrant input and assistance is a major component in North Carolina's SMP. The plan indicates a variety of activities

*Identifying
Susceptible Areas*

that the State may require of the registrant. For example, registrants may be required to submit proposed risk reduction measures that could be included in the pesticide-specific SMP for their pesticides. They also may be requested to provide geographic usage data for their compound, assist in developing educational information, provide assessments of the likelihood of their pesticide impacting ground water, provide methods for analyzing their compounds and metabolites, and provide analytical reference standards.

Dr. Wade mentioned two ways to identify susceptible areas and assess ground water quality. The first method is through the use of DRASTIC. While the EPA Pesticide Survey used this model with uncertain success, they used it on a county level. North Carolina has used DRASTIC on a sub-county level to produce useful maps to target areas within the county for locating monitoring wells.

Another useful tool is Soil Leaching Potential Indices. Developed by Rich McLaughlin and Jerry Weber from NC State University, this approach relies on calculations of pesticide leaching potential and soil characteristics to derive an index number.

In these calculations, the leaching potential is based on the materials used, the fraction hitting the soil, the soil adsorption coefficient and persistence of the compound. The soil characteristics used are texture, pH, and organic matter content.

In evaluating soil potential, each of the three factors is weighted. Organic matter content is the most important factor influencing potential movement through the soil. The second is texture and the third acidity. Organic matter is measured to 1/2 foot and the other two are measured down to 3 feet.

Metabolites

Once you perform all the calculations, you add the factors and get a soil leaching potential value. From this number you calculate the index. The index will be a number between zero -- if you have a soil that is about like steel -- and 100 -- if you have a very coarse, sandy soil that the pesticide would go through like a bullet.

Dr. Wade said the Soil Leaching Potential model is a very beneficial tool, particularly if resources are limited and you need to quickly find out where susceptible areas are.

"Evaluating Pesticide Movement in North Carolina," by Ward and Weber, in *Soil Science of North Carolina* proceedings; vol. 37, pages 23 - 35, 1994, contains complete equations for calculating soil leaching potentials and pesticide leaching potentials. In all cases, Dr. Wade cautioned, what you've got is only as good as the data that's put into it.

North Carolina's statewide ground water study employs 97 monitoring wells. In this study, now completed, they found a few pesticides in about 17 locations. Most detections were in soils with high to very high leaching potential. One chlorinated hydrocarbon pesticide was found in areas where soils had moderate leaching potential. Dinoseb and Simazine were found in areas with low soil leaching potential. However, in the field where simazine was found, other soil samples showed high leaching potential, demonstrating the mosaic of soil leaching potentials.

One very important issue discussed by Dr. Wade involves metabolites. He said if they are of toxicological concern, they need to be addressed. In North Carolina, some metabolites have been analyzed by State toxicologists and then added to the parent compound to derive a health-based guidance

Closing Remarks

number for the combined compounds. Individually, they may not exceed the State standards, but when combined, they may.

EPA needs to decide now if we are going to address metabolites. It would be a significant waste of time and money to take samples now, analyze them only for the parent and then find out later that we need to analyze for metabolites. If EPA doesn't decide whether we should look for metabolites, the States can make the decision themselves that yes, we are going to look for metabolites.

Dr. Wade closed his presentation by stressing the importance of classifying the five SMP chemicals for "traditional" Restricted Use. He also urged that any statements regarding the need to use a product in accordance with an SMP be on the front panel of the label where the user is most inclined to see it.

Paul Goslin:

Mr. Goslin focused his remarks on California's experiences in SMP development. He noted that none of the State programs are growing, so it is more important now than ever to focus dollars in a way that results in action at the field level, rather than resulting in development of plans and documents that will wind up sitting on a shelf. Plans don't protect the ground water, actions do.

Since 1986 or 1987, many States had put the five SMP compounds on a State Restricted Use list. Mr. Goslin said one major reason for this is that Certification programs do work and provide a means of targeted education. This process needs to be solidly supported and we need to maintain our foundation programs such as Certification and Training.

*We need to
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PAUL H. GOSLIN,
Asst. Director for
Enforcement,
Environmental
Monitoring and Data
Management Division,
CA Dept. of Pesticide
Regulation

In California, targeted ground water protection goes back 10 years. At about that time, a comprehensive statute was enacted that prescribes how California operates. Among other things, it mandates monitoring and identifies compounds for which to monitor. The five SMP compounds are on that list.

The statute also requires an annual report on ground water monitoring results. The State collects over 6,000 samples per year and invests over \$2 million in its ground water program. The State also invests over \$1 million in its surface water program, which is a growing area of focus in California.

California is a strange State in that it is broken into subdivisions -- and it has to be, given its size and diversity. Each State environmental program is broken into local control areas. There is a County Agricultural Commissioner in each County who is responsible for, among other things, field based use reporting programs, Restricted Materials permitting and use reporting. The State Water Board also has Regional Water Boards that are fairly autonomous, but also carry out the State programs at the local level.

This structure results in a unique dynamic in ground water protection efforts. There is not only interagency interaction, but also subdivisional interaction to consider.

Ten years ago, when the ground water protection program was begun, it brought agencies together to coordinate and set up joint processes on what would occur, the State's response, etc. In 1991, the State established a foundation for interaction with the State Water Board and in 1996, California broadened that foundation by developing a comprehensive agency management agreement which includes Counties and Regional Water Boards. All have signed off on this agreement. While it doesn't necessarily fit exactly into the SMP structure, it works for California and builds on the strengths of each department.

*Actions Taken
When Detections
are Found*

In addition to directing monitoring and identifying compounds for which to monitor, California's statute also requires that action be taken when detections are found. The first level of response is training, and then restriction, and then prohibition in the use area. California is changing its regulations to broaden this out to County-wide control of the pesticide. These are changes being made outside the scope of the SMP process, based on the State's own history with its own program.

In the history of California's program, they have performed what would probably be considered "baseline" monitoring according to the SMP process. Mr. Goslin noted that many thousands of samples have been taken and the results show limited problems.

Mr. Goslin stated that Alachlor and Metolachlor have been found maybe one time. They detected triazines, but not from the over 250 crops grown in California. Instead, the use patterns resulting in issues with the triazines were rights-of-way and industrial uses, with some minor detections in citrus. As a result of the monitoring effort, triazine use on rights-of-way was prohibited almost eight years ago. One advantage in California, Mr. Goslin noted, is that because of their system of Restricted Materials permitting and use reporting, California has been able to target monitoring to areas of high use and vulnerability.

SMPs do not reflect what the real State priorities are. The five SMP chemicals are national priorities and no one would dispute that, but upon California's own monitoring and evaluation, they find other compounds of more concern. For example, Bentazon was being found in ground water and the State determined that the major contributor was use on rice.

*California's
Concerns with its
Generic SMP*

That use was prohibited under the State's own ground water program. Simazine and Atrazine have been prohibited on rights-of-way. California is currently focusing on some issues in grapes and citrus and is working with the growers to identify BMPs that can keep the pesticides from reaching ground water.

Mr. Goslin said California is going to use field dissipation studies as part of their ground water protection efforts. The State does not want to use "Superfund-style" monitoring wells, which are expensive and result in data with limitations. Through field dissipation studies, California believes it will be able to make sure the chemical is not moving through the soil profile. If it's not, you don't need to look at the ground water to see whether it has made it that far.

California began drafting its generic SMP in 1991 and has just received comments on its third draft. Of the 12 SMP components described in the guidance, none has been determined to be complete or adequate. The EPA Regional Office reviewing the generic SMP has taken a lot of heat, Mr. Goslin said, but the issue is really how the program is designed. He said the 12 components are designed to tie up resources of the State and Region in asking questions to which everyone should already know the answers. These resources would be better spent working in partnership with each other. If we can't simply explain what our enforcement authorities are, what our resource base is, who we are and how we operate after almost 20 years of work with each other through Cooperative Agreements, something is wrong. He also said that requiring the "planning" aspects of these programs to be detailed in writing is leading Regions and States to a point of conflict.

Other State/EPA programs have similar issues. For example, Attorney General sign-off is one issue that the RCRA (Resource Conservation and Recovery Act) programs are dealing with now.

Closing Remarks

The California program spends nearly \$1 million a year to have an Attorney General sign a letter saying the State is doing what it is supposed to do. Mr. Goslin said it is frightening that the SMP program might go down some of the same paths that other programs are now trying to fix.

Mr. Goslin questioned the value added by all the documentation and sign-offs and said that California would prefer to see the dialogue focused on major policy issues such as adequacy of monitoring, what's being found and what actions are being taken to address the situation.

In closing, Mr. Goslin said the EPA Regional Office has taken a narrow, strict view of the SMP guidance and that they have taken criticism for that. But the rule is such that if anyone were in their position and trying to push the envelope, they would have the flexibility to say "that's not good enough," or "you can do this better," because the rule sets up that dynamic.

Mr. Goslin said that instead of spending time trying to iron out the wrinkles in the program, we should step back and design a program that will last into the future. We shouldn't be wasting dollars better spent protecting ground water. We should be spending staff time doing monitoring or putting restrictions in place where needed or doing education programs, rather than using the resources we have to argue over language in a document that's going to sit in a file cabinet.

Tammy Gould:

Ms. Gould began by saying "I must say, I get along great with my Regional Office. I think they're wonderful."

Maine submitted its generic SMP in July of 1994. In October of 1994 they received a letter from the EPA Regional Office

By going through this process, public awareness was increased and maybe someone thought to use the chemical a little more carefully.

TAMMY GOULD,
Pesticide Planner, Maine
Board of Pesticide
Control

stating that it had passed its completeness review. In June of 1995, concurrence was received. Ms. Gould noted that while awaiting word from EPA that pesticide-specific SMPs were required and for what chemicals, a State concern was identified for the pesticide Hexazinone. Hexazinone is an herbicide used to control weeds in blueberries in Maine. It is a relative of the triazines and is persistent.

Blueberries in Maine are grown on sandy soil, if there's soil at all. For the most part they grow on the Maine coast. Since the introduction of Hexazinone, Maine blueberry growers have tripled their output in the last 10 years. It is a significant product to the blueberry industry and there are no chemical alternatives. According to Ms. Gould, the issue with Hexazinone was characterized through monitoring conducted in 1994 when they sampled 20 drinking water wells and found Hexazinone in 15. In follow-up monitoring, 48 wells were sampled and Hexazinone was detected in 37. Because the sampling was statistically valid, you could conclude from it that if you lived within 1/4-mile down gradient of a blueberry field, you had a three out of four chance of finding Hexazinone in your water. The Cooperative Extension Service also had been doing research on Hexazinone and had been finding the chemical in ground water since 1989.

Hexazinone detections were all under 30 ppb, well below the Health Advisory Level of 200 ppb. There is no MCL established for Hexazinone, so Maine used the HAL as its reference point.

Based on the monitoring information, the Maine Pesticide Board was presented with a citizen-initiated petition to ban the use of hexazinone in Maine. After a lengthy regulatory process, the petition failed. However, the Board decided to apply the provisions of its generic SMP to the issue.

*Developing a
Pesticide-Specific
SMP*

Maine's generic SMP requires the formation of a Pesticide SMP Advisory Committee and describes a process by which pesticide-specific SMPs will be written. The Advisory Committee's duty is to respond to a mandate from either EPA or the Maine Pesticide Board to develop pesticide-specific recommendations, including prevention, response and monitoring, and present these recommendations to the Board in the form of a proposed pesticide-specific SMP.

The Board directed that the Committee be formed and it began meeting in January 1995. The Committee consists of "core members" and "pesticide-specific members". The core members have specific technical backgrounds in agronomy, soil science and hydrogeology. The pesticide-specific members would include the chemical industry, citizens affected by the issue, etc. The core members provide consistency, while the pesticide-specific members provide specific knowledge of the chemical and its use.

*A Plan for
Hexazinone*

Ms. Gould noted that for the Hexazinone Advisory Committee, the agronomist (who was also a water quality specialist) was chosen from the Cooperative Extension in Maine. Both the soil scientist and the hydrogeologist were from the private sector and donated their time to this issue. Also on the committee were a Maine Department of Agriculture representative, a blueberry crop specialist from Maine's university system, the town Selectman from Franklin,* a school superintendent, a member of the public (the person who filed the petition to ban Hexazinone), two blueberry growers, and DuPont.

* The town of Franklin found Hexazinone in their water supply well. They determined that rather than filtering the water, they would drill another well. Upon doing so, they also found Hexazinone in that well. In exploring surface water alternatives, they determined that, too, contained Hexazinone.

Lessons Learned

Ms. Gould said the charge to the group was simple: develop a plan to prevent further contamination. All options were to be considered, both regulatory and voluntary. With this charge in hand, the group met six times and presented final recommendations to the Board in August 1995.

The plan relies heavily on voluntary use of BMPs developed and published by the Maine Cooperative Extension Service and the Maine Department of Agriculture. This was acceptable because the State was not finding Hexazinone at levels approaching the HAL. Additionally, DuPont changed its label to limit rates and to require a 50-foot well-head setback. The State also initiated two regulatory requirements: prohibiting application with air blast equipment and requiring licensing of applicators. Ms. Gould said they did not classify Hexazinone as a State Restricted Use chemical because they do not currently have Restricted Use criteria in place for ground water. However, the special regulation that was promulgated accomplishes basically the same end.

The final rule for licensing requirements and a summary of comments the State received through its Administrative Procedures Act comment period are included with, and are part of, the pesticide-specific SMP.

Ms. Gould said they learned several lessons from the experience of moving from a generic to a pesticide-specific SMP. First, when you have members of the public and industry at the same table, there will be friction. Ms. Gould said that they worked very diligently to bring everyone to middle ground, but that it is not always possible. Second, if a group is weighted on the side of any one interest, the other interests will feel they are not being heard with equal seriousness.

In spite of the difficulties, Ms. Gould said she could not have asked for a more knowledgeable group of people to sit down and answer the question, "What do we do?" Each member of the committee was provided with EPA's Appendix B (the technical document on monitoring) and none of them needed to use it. The best knowledge comes from the people who use the chemical, manufacture it, etc.

In reviewing the time necessary to move from a generic to a pesticide-specific SMP, the Maine experience required six to nine months for the Advisory Committee to develop recommendations and another six to nine months for the Board's review and adoption; overall, it took between 12 and 18 months. Based on this experience, Ms. Gould believes the 24-months time frame in EPA's proposed SMP Rule will be adequate for Maine.

Ms. Gould said this first test of their generic plan has pointed out that it does not adequately address widespread, low-level contamination and noted that Hexazinone would not have been handled had the issue not been raised through the citizen petition process. Also, Maine is going to review its generic SMP to determine whether changes need to be made to better balance participation on the pesticide SMP Advisory Committee.

In closing, Ms. Gould said Maine instituted no new taxes or fees to support this effort. However, even with limited resources, they found a method to move forward. A real side benefit noted by Ms. Gould was that by going through the process, public awareness was increased. Because of this, maybe someone thought to be a little more careful in using Hexazinone.

Closing Remarks

If you get 10 people in a room discussing it, you'll come up with 15 different opinions on how to do it and by the time you're done, nobody will like any of the 15.

JOHN HINES,
Supervisor of the
Monitoring and
Assessment Unit,
Minnesota Dept. of
Agriculture

John Hines:

Mr. Hines began by disagreeing with the previous speaker. He said he believes all the programs the States are required to implement are growing. The issue is that there is a concomitant decrease in resources to operate them.

Minnesota began looking at the issue of pesticides in ground water in 1986. Through monitoring programs, they found 14 pesticides in different types of wells throughout the State. Subsequent to that, the legislature developed the Minnesota Pesticide Control Law. Among other things, this law provides authority and a mandate to the Minnesota Department of Agriculture to develop "Pesticide Management Plans". This mandate was given to the Department about the same time that the Coolfont meetings were taking place and EPA was beginning to develop the SMP approach. Therefore, the Department developed its State-mandated plan to parallel EPA's developing program. The plan and monitoring within the State focus on urban and rural areas and uses.

In 1989, Minnesota began developing the State-mandated plan. Around the same time, the legislature put into place the Ground Water Protection Act. This act gives additional, detailed direction to the Department of Agriculture relative to their plan.

The process of developing the plan took seven years and the final document was completed this past April. It took this long, noted Mr. Hines, because the Department hadn't done anything like this before. One of the most difficult aspects of developing the plan was public participation, which the law requires. Rather than developing information up front and then involving the public, the State opened the process from

the start. Gaining consensus among 30 to 40 people is a huge challenge. Mr. Hines noted that this process was a lot like how he views monitoring -- if you get 10 people in a room discussing it, you'll come up with 15 different opinions on how to do it and by the time you're done, nobody will like any of the 15.

The Department has access to monitoring information from as far back as 1987. The State is using this information to determine chemicals that have been found in either surface or ground water. Surface water is included in the State's legislation on its own merits. Minnesota has a quarter-million miles of rivers, 15,000 lakes and five distinct continental drainage basins. Water is considered one of the primary reasons for the high quality of life in Minnesota, and as a result, the state law also implements a non-degradation standard.

Because of the non-degradation standard, Minnesota has no standards against which to set triggers. If a pesticide is found in the water at the limits of detection, the Department has to decide what to do about it. Mr. Hines said, however, that they are not allowing the data to make the decisions for them. A committee representing industry, universities, farmers, the State government and environmental groups has been established to set priorities for the State. The members of the committee review the data, review the protocol for collecting the data, perform quality assurance/quality control (QA/QC) and determine which chemicals to take action on due to a concern for water quality.

Once the chemicals are identified, the State-mandated plan calls for voluntary BMPs or alternative use practices. More specific, targeted monitoring is then performed in association with these changed practices. To do this, the State sets up "Pesticide Management Areas." Within those areas, BMP

Questions from the Floor

Promotion Areas are established. These are smaller areas and serve very much like a demonstration project. It is in these BMP Promotion Areas where the State then can measure the impact of the plan. If the voluntary measures are not successful (i.e., levels are not decreasing or are increasing, frequency of detections is increasing or not decreasing), the plan moves into mandatory measures.

The State's priority setting committee has made tentative decisions on which chemicals are of concern in ground water and they are beginning discussions about surface water concerns. While not at liberty to disclose which chemicals will be the focus of the State's plans, Mr. Hines noted five chemicals most frequently found in ground water: Alachlor, Atrazine, Cyanazine, Metolachlor and Metribuzin. He also noted an equal number of chemicals found most often in surface water: Alachlor, Atrazine, Cyanazine, Metolachlor and Acetochlor.

In conclusion, Mr. Hines said they will submit their plan to the EPA Regional Office this September. He noted that the State and the EPA Regional Office have been engaged in open dialogue throughout the plan's development. One area that Mr. Hines believes will need to be discussed further with the Regional Office is how their plan, without trigger levels, will fit into the guidance EPA has issued that calls for the State to set such levels.

Q - (State Lead Agency) - (The participant asked all State Lead Agencies and then all State Lead Agencies with approved SMPs to raise their hand.) It's impressive that 50% of the panel has approved plans. The panel doesn't seem to represent the percentage of States that have approved plans. I think this is an indicator that the proposed 33-month time frame in the proposed rule may not be enough.

A - (EPA moderator) - We didn't try to weight the panel, but tried to get differing views in order to promote discussion. Apparently that worked.

Q - (State Lead Agency to North Carolina) - The leaching index system has a scale of zero to 100. Do you use those fine intervals? That is, is an index of 7 significantly more important than one of 2?

A - The State is concerned when the leaching index is 60 or greater.

Q - (State Lead Agency to Maine) - Given the extent of the problem with Hexazinone in Maine, do you believe the two regulatory measures (certified applicators and prohibition on air blast equipment) are adequate to address the problem?

A - Our seven-member board sets public policy. We present them with the best information we can and they make the decisions. We hope it works. If it doesn't, the committee will be back together to review the situation and recommend alternative actions.

We won't know for four years whether the plan is having a positive effect. Hexazinone is used every other year (non-bearing years) and we'd like to go through two use seasons.

Q - (State Lead Agency) - Can all the panel members talk about what wells they use in their monitoring programs?

A - (from North Carolina) - We use monitoring wells and have a network across the State of about 100 wells. They are stainless steel and are drilled to shallow ground water. We look at shallow ground water because that's where the pesticides will show up first.

A - (from California) - We use a variety of irrigation and private drinking water wells. We will get public drinking water supply wells data because we are the repository for all ground water monitoring data in the State. We obtain well logs when available. We do not have dedicated monitoring wells.

A - (from Minnesota) - We use monitoring wells. There are about 1200 wells throughout the State that we can access. They were installed by a variety of different organizations. We are currently monitoring over 450 of these in the sand plains area. In the bedrock areas, we use domestic drinking water wells. At \$10,000 per well to install a single well, this is a little more money than we have available. We've tried using irrigations wells but they are difficult and don't represent the water we're trying to sample. These are too deep to provide an early warning system.

Q - (Regulated Industry) - Some of the primary uses causing problems and chemicals of concern to the panelists are not the five chemicals identified in the proposed SMP rule. What is number 6 on EPA's list and what is the criteria for selecting them, when what we saw in the presentation was that these may not be the right five?

A - (EPA moderator) - We are looking at concern on a national scale. Hexazinone was a big concern in Maine, but it would not have come up on our radar screen. In terms of the next ones, I don't know, We started with the As maybe we'll move to the Bs. Seriously, if you want to get a sense, there are about 20 chemicals that meet the draft Restricted Use criteria and I'd look at those. However, we have no plans at the present time to identify additional chemicals, except the possibility of Aldicarb, which is currently in Special Review.

Q - (State Lead Agency to North Carolina) - Do you have any special sources of general revenue money?

A - The State Legislature provides the funding. The State does have annual assessment fees in the amount of \$25 or \$50 per product per year. These funds are earmarked as an environmental trust fund. The trust fund monies are then used for a variety of activities including recycling programs, drift reduction, epidemiological studies, etc.

Q - (State Lead Agency to Maine) - What was the impetus behind the initiative to ban Hexazinone, and would you be in the position you are now in if the citizen petition had not occurred?

A - The individual who brought the petition was an organic blueberry grower. That person got our monitoring data, which is public information, and filed the petition. In the State of Maine anyone can bring forward 150 signatures and force a board or commission with rule-making powers to address the petition. Had the person not brought the petition forward, we likely would not have done a plan to address Hexazinone. Our generic SMP calls for action at 10% of the MCL. The levels of hexazinone that were found were well below 10% of the HAL.

Q - (University) - How are BMPs selected? How do you know they work? Do they present even a quasi-enforcement burden?

A - (from North Carolina) - North Carolina would look to the registrants to identify BMPs to reduce ground water contamination. We also would want data to demonstrate that these would be likely to work.

A - (from California) - It's really not voluntary, because the notion is you come to us with ways to fix it or we're going to regulate you. We try to get industry to understand the technical aspects it will take to mitigate the problem. Trying to determine whether people are using it probably does take some compliance oversight.

A - (from Maine) - The BMPs are designed and researched by the Maine Cooperative Extension. They are voluntary in nature in that when we do use inspections, we don't inspect to see whether BMPs are being followed. We'd like to do some kind of survey to see how BMPs are being worked into the agricultural community. We can't just ask, "Are you using BMPs?" because the answer will be yes.

A - (from Minnesota) - The university and Extension make recommendations for specific crop/chemical combinations. At some point these could become mandatory if the situation becomes worse. Right now, they are voluntary in the sense that the user can select which practices best fit their operations. We also will track implementation of BMPs with surveys in our BMP promotion areas.

Q - (State Environment Department) - What liability do the panel members see associated with detections in private drinking water wells?

A - (from Maine) - We ask permission to sample and if the well owner says no, we go away. When information is requested about our monitoring, we provide the information based on county and town. If someone wants more specific information about location of the well, they will need to file under the Freedom of Information Act. We have not had any requests under FOIA, so it hasn't been tested whether we will

be forced to release information. The first time I release information will be the last time someone will let me sample.

A - (from Minnesota) - We operate in a similar manner for the few domestic wells we sample. That's one of the reasons, though, that we use monitoring wells.

A - (from California) - It's about the same in California.

Q - (from CA panelist to last questioner) - Does your State have liability for the grower if you get a detection?

A - (from State Environment Department) - There are responsibilities in terms of cleanup if the detection is above the standard. There are also property laws that come into play when any real estate transaction is made. We are looking at the feasibility of installing wells on non-private lands because this is a big issue for us. People are not inclined to cooperate with private drinking water wells.

A - (from State Lead Agency from the floor) We've conducted limited monitoring and we would go to the well owner and ask permission. As with the other States, if the owner said no, we'd leave. In one case, we had detections over the MCL and felt a moral responsibility to notify the well owner. We contacted the registrants of the chemical as well and they worked together to install a new well for the person. I don't know how deep the pockets of the registrants are if we get a national program going, but that one individual is now a convert to our program.

A - (from North Carolina) - North Carolina also had a situation where the registrants, after taking and analyzing their own sample, agreed to assist in installing new wells for owners of wells contaminated with their product. We also tried a pilot survey to look at immunoassay tests. A list of 80

**PANEL OF
REGULATED
INDUSTRY**

farmers was identified for us in areas where there were certain soil types and we sent letters to each asking them to participate at no cost to them. Fourteen agreed. We don't agree to any level of confidentiality in North Carolina. Because the program is funded with State money, it is all public information. As more detections occur, it will be more difficult to get volunteers.

Margaret Cherney:

Ms. Cherney expressed appreciation on the part of industry for having them present their views to the group.

Since 1991, ACPA (American Crop Protection Association) has continually supported the concept of SMPs as a means of regulating risks in ground water. This is still the case. ACPA believes that the use of sound science and risk characterization in determining which products may generally cause unreasonable adverse effects in ground water, with the use of local knowledge and experience provided through the pesticide State Lead Agencies, promotes the most efficient use of resources in protecting ground water.

Given that several factors influence whether a pesticide will reach ground water, and given varying toxicity of pesticides, it is prudent to implement a tiered program. Ms. Cherney said ACPA has defined a four-tier approach over the past several years. The tiers from less to more stringent are:

- ▶ ground water advisory labels or labels negotiated with the registrant,
- ▶ voluntary measures in cooperation with pesticide State Lead Agencies,
- ▶ Federal Restricted Use classification, and
- ▶ mandatory SMPs.

ACPA would like to see specific science-based criteria defined for requiring the level of the current proposed regulation -- that is, mandatory State Management Plans.

MARGARET A. CHERNEY, Director of Environmental and Regulatory Affairs, Rhone-Poulenc AG Company

Ms. Cherney said several actions have already taken place that are consistent with this approach. Several States are managing the presence of pesticide in ground water, along with the registrants, through voluntary SMPs or BMPs. Those registrants involved in these efforts believe it has been an effective approach and recommend that it continue on a voluntary basis.

Second, EPA proposed rules in 1991 that lay out criteria for classifying pesticides for Federal Restricted Use. ACPA supports the process of setting science-based criteria for products that would be regulated in this way and urges EPA to finalize that proposed rule prior to establishing mandatory SMPs. Ms. Cherney said it is necessary to have these criteria defined so further criteria can be developed to decide when mandatory SMPs are necessary.

In reference to tier four of this approach, ACPA agreed with a comment made by Dr. Lynn Goldman in a letter to the late Representative Bill Emerson: "SMPs are a remedy that should only be invoked for the most serious and widespread threats to ground water." As with the Restricted Use criteria, ACPA would like to see specific science-based criteria defined for requiring the level of the currently proposed, mandatory SMPs.

In closing, Ms. Cherney said ACPA is interested in seeing each of the four tiers in their approach formally recognized, defined and implemented as part of managing pesticide risks in ground water. This would result in a more systematic approach to regulation of pesticides in ground water, using all available resources in achieving the overall objective of ensuring effective and efficient protection. The industry, Ms. Cherney said, stands ready to work with EPA and the pesticide State Lead Agencies toward this objective.

A voluntary approach would avoid the legal issues ACPA believes are serious flaws with the current proposal.

VINCENT
ALBENTOSA, Division
Counsel for the
Agriculture Group, CIBA
Crop Protection

Vincent Albentosa:

Mr. Albentosa began by stating he was going to comment on some legal considerations underlying the proposed SMP rule and whether they are consistent with FIFRA. In the view of the industry, they are not.

One issue is whether EPA can use a rule to establish Restricted Use status when it involves a change in classification from General Use. Mr. Albentosa said the answer is no. Section 3(d)(2) of FIFRA says EPA has to follow specific procedures which involve holding hearings and allowing registrants their procedural rights under FIFRA section 6(b). Most of the specific chemicals in the proposed rule have not been classified as Restricted Use and therefore, the proceeding is inappropriate for these chemicals.

Another issue was that even if this were an appropriate proceeding, industry still does not have "two bites at the apple" in terms of judicial review. First, EPA said industry has an opportunity to comment on this proceeding, but the restrictions contained in the proceeding have no content -- that is, it just says SMPs are required, but does not say what the specific restrictions will be. Mr. Albentosa said he doesn't see how anyone can do a risk/benefit or cost/benefit analysis under these conditions or determine that these restrictions need to appear on a Federal label. The prospect of a pesticide being canceled in a State shows there can be severe consequences without having demonstrated that there is any kind of unreasonable adverse effect. Mr. Albentosa said "this is not consistent with FIFRA," and the first step should be to set out criteria without applying them to any specific pesticides.

Second, FIFRA provides that a determination of necessary restrictions to protect the public interest, and not unduly restrict the ability of growers to use the product, must be a Federal proceeding and there has to be a Federal hearing. Under those conditions, EPA could use the statutory authority it claims it has. However, Mr. Albentosa said, this is not a Federal proceeding and there is no evidence that there would be a right to judicial review as provided under FIFRA.

In closing, Mr. Albentosa said that while ACPA believes these are several of the reasons why the current proposal is inconsistent with FIFRA, that doesn't mean that they don't support SMPs and in particular, voluntary SMPs. A voluntary approach would avoid the legal issues ACPA believes are a serious flaw with the current proposal.

Charles Rock:

Mr. Rock said that he was going to provide ideas that he had come to learn over the years working on ground water issues since 1983. He said that unlike common rumor, Wisconsin was not the first State to pass ground water legislation and that he believed Florida beat them by maybe about two weeks. Mr. Rock noted that the Florida legislation was based on the education and management theme that industry supported and that this was occurring at a time when EPA had not yet begun its pesticide and ground water program. California and Arizona were next to enact legislation in the mid-1980s. They took a different tack and based their programs on the theory that you could predict the likelihood that a pesticide would appear in ground water based on its physio-chemical properties. Mr. Rock said the physio-chemical approach

Once a problem is identified and opportunities are created to solve the problem, agriculture has the knowledge, skills and abilities, and the will, to respond to resolve the issue.

CHARLES G. ROCK,
Director of State
Government Affairs and
Environmental Policies,
CIBA Crop Protection

State Innovations

can be used for resource targeting and planning, but is probably not really something on which to build a management plan.

There are now over 20 States that have adopted legislation related to water quality and in those, Mr. Rock said, he sees a common theme. This theme is a two-tiered approach where first, voluntary measures are applied, and then if they are not acceptable, a mandatory approach begins. Another commonality is "management areas." The underlying theme to this approach is that a State will fit a solution to a given problem. If the problem is in a small area, the solution is applied there; individuals in other areas of the State are not impacted.

Mr. Rock cited Montana's ground water bill as a national model, noting that the Council of State Governments adopted this as a model bill for all the States. You can see parts of it in many other States' legislation. He also said that within about four months of the model bill being identified, Minnesota passed legislation that has basically the same intent.

The point of this history, Mr. Rock said, is to show that a number of States have adopted water quality legislation with some combination of voluntary and mandatory approaches. The common theme throughout all of them is reliance on outreach and education. A study conducted by the University of Wisconsin shows that education leads to behavioral changes that can go beyond what any wholly regulatory approach might accomplish.

Next, Mr. Rock described what he considered to be an innovation in ground water and pesticides management. He cautioned that he doesn't necessarily support these, nor are they necessarily ACPA positions -- simply observations that may help States develop more efficient programs and perhaps less bureaucratic ones.

The five chemicals proposed for SMPs have one major thing in common -- they are all used on corn. Additionally, they are soil applied, generally at the same application rates, and usually at the same time of year. Mr. Rock said he believes the State of New York took a very innovative step in recognizing these similarities. New York is developing a Corn Herbicide SMP, or a Crop Specific SMP. The program includes the five proposed chemicals and is voluntary in nature. What this approach did for the growers, dealers and sales representatives was to ensure that everyone had the same information and they were all on the "same page." Growers could attend training sponsored by CIBA or Monsanto or a variety of others, and learn the same information. They did not have to attend multiple training sessions. This, Mr. Rock noted, is a move toward efficiency.

Although not related to ground water concerns, Mr. Rock highlighted a similar approach to an issue in Mississippi. The cotton-growing community in Mississippi was not pleased with the numbers of training sessions they were required to attend to learn about using a variety of cotton insecticides. As a result of grower outcry, the State developed a cotton insecticide management plan approach. Mr. Rock said this program resulted in measurable, positive environmental results.

Mr. Rock said that one area where flexibility might be considered is in identifying active ingredients subject to the proposed rule. He noted that what is a problem in one State may not be in another, and believes significant flexibility to address issues of concern could be added by not identifying specific chemicals in the proposed rule.

Industry's Role

The message from Mr. Rock is that States have been in the pesticide business for a long time -- since well before EPA was created -- but the proposed rule itself makes them appear as infants in this issue and that is not the case. He said EPA's strategy and guidance have stimulated tremendous interest in the States and that the 20 States who have legislation probably have it, in part, due to EPA's efforts. However, there now needs to be recognition by EPA that States have moved out in front.

Mr. Rock also believes it is important for industry to have opportunities to be players. He said that most growers do not go to the Cooperative Extension Service to obtain information about pesticides and ground water, but instead, consult their dealers and sales representatives. He urged States to include a role for the registrants and said that "if nobody steps up to the plate to help with the plan, maybe that's a product you want to consider dropping from your repertoire." If registrants get the opportunity to participate, the chances of them being able to bring in commodity groups or crop groups in question is generally enhanced. Mr. Rock asked whether this was not what the program is all about -- getting growers and applicators to add a water quality component to their overall farm management plan.

Next, Mr. Rock discussed industry support for water quality programs. He said that industry has been receptive and responsive to the "favor" EPA has done by creating a water quality role for FIFRA that leads back to the State Lead Agencies. The SMP program has been built on the States' record even if EPA doesn't fully recognize that record. But, he said, if you want to get something done with respect to agriculture and you work with the Agriculture

Departments, grower groups and education providers, things are going to happen -- positive things. Mr. Rock said that he would put agriculture's record up against any other industry in the United States. Once a problem is identified and opportunities are created to solve the problem, agriculture has the knowledge, skills and ability, and the will, to respond to resolve the issue.

Mr. Rock pointed out that industry has cooperated in sharing data and noted that his company (CIBA Crop Protection) has monitoring programs in over 20 states. These biased projects were done to determine how the chemicals might move under worst-case situations. Industry's goal has been a consistent one: to protect the beneficial uses of surface and ground water.

Mr. Rock urged monitoring in lieu of modeling. If modeling is used that is not valid and there are attempts to regulate based on that modeling, the regulators need to prepare to defend themselves. However, industry is constantly looking for valid models to help offset the considerable costs (around \$1 million to \$2 million) for leaching studies, and that if there are valid models, you should use them as far as you can take them.

Industry has tried to help build capacity in the States through these and other programs. Mr. Rock said all of the field and lab projects done by CIBA Crop Protection have been conducted using GLPs. The GLP issue may not be as big as some believe, but there are training costs and paperwork burden to consider.

Closing Remarks

In closing, Mr. Rock questioned whether water quality has improved. His answer was yes. He urged that if anyone wanted to see positive results, they should look to, among other things, Iowa's sink holes and agricultural drainage wells rules, Kansas' Delaware and Blue River Basin programs, Wisconsin's ground water protection program, and Maryland's Chesapeake Bay program. These are measurable water quality improvements, built on a foundation of education, outreach and involvement of all the interested parties.

Mr. Rock urged EPA and the States to recognize that we are all in this together, that we share the same goals, and that we must continue to provide opportunities for registrants to step forward to steward their own products.

Questions from the Floor

Q - (Extension Service comment) - A recent survey shows that farmers actually use Extension more than dealers. Water quality issues in my State go through the Extension Service because that's where it gets done. Also, regarding modeling, we wouldn't propose to use modeling to regulate. However, if you just use monitoring in your programs you wind up with a lot of holes throughout the state; you don't know what's going on. Some sort of model, which may be as simple as a soils map, needs to be used to extend the data from monitoring to apply it across the state.

Q - (EPA Office of General Counsel comment) - Thanks to Vince Albentosa for his candid remarks. We didn't discuss the issue much, but you mentioned judicial review. Judicial review of the Regions' determination to approve, disapprove or withdraw a plan is available. Also, there is review of our determination in this proceeding that an SMP is required.

**PANEL OF
OTHER
FEDERAL
AGENCIES**

Maybe there's a misunderstanding, but we see two chances at judicial review. The Regional decision review would be based on a record comprised of the record for this proceeding, plus any of the record developed by the State that the Region uses in making its determination.

Dr. John Impson:

Mr. Impson began his remarks with several points about implementation of the SMP program:

- ▶ there needs to be uniformity in education and implementation,
- ▶ how and when education is presented is important, and
- ▶ there are three keys to successful implementation of any program: education, education, and education.

Dr. Impson acknowledged that the days of Extension being the only education providers ended almost 20 years ago. While he identified no problems with the expanded base of educators, he did stress that the key is to make sure that those affected get the same information.

Dr. Impson said Extension still is the only body with official connections to a variety of individuals and institutions. They are connected to the land grant colleges which have data bases, research and the educational component. At the Federal level, the Health and Environmental Pesticide Safety Education Program (or HELPS) has ties to the Field Operations Division in EPA's Office of Pesticide Programs through the Certification and Training Program. Two programs in HELPS are connected: the Pesticide Applicator Training Program and the general education program. Further, Dr. Impson pointed

It is important that implementation efforts for the State Management Plan program take advantage of the resources of the Land Grant Institutions.

DR. JOHN W. IMPSON,
National Program Leader
for Health, Environmental
and Pesticide Safety
Education, Cooperative
State Research, Education
and Extension Service,
USDA

out that Extension is connected to the land grant institutions at the State level. Those institutions in turn are, through the Certification and Training Program, connected to the State Lead Agencies.

Dr. Impson announced that as of this past year, there are Pesticide Coordinators at 57 land grant universities responsible for Pesticide Applicator Training (PAT). There is one in each of the 50 states, Puerto Rico and the District of Columbia. It is important, according to Dr. Impson, that implementation efforts for the SMP program take advantage of the resources of the land grant institutions. Not only are there Pesticide Coordinators, but also Water Quality Coordinators and Integrated Pest Management (IPM) Coordinators. Not only does this cadre of educators reach Private and Commercial Applicators through the PAT program, they also reach urban pesticide users, the general public, pesticide dealers and consultants.

Dr. Impson demonstrated the impact that PAT and education programs can have on implementation of a field program. Through initial certification and recertification programs across the country, PAT reaches approximately 500,000 individuals. The education program reaches over 4 million per year through face-to-face interaction, brochures, the media, etc.

Voluntary programs and BMPs can be effective. Years ago, the way to reach growers was through their pocketbooks. Now, growers are just as interested in environmental issues, and in particular water quality issues; therefore, there is another avenue through which to reach them.

In closing, Dr. Impson cited three areas for attention in implementing the SMP program: First, existing pesticide labels are complicated and cluttered. He urged that consideration be given to this fact when requiring any label changes necessary for program implementation. Second, Dr. Impson noted the importance of educating not only pesticide users, but also the general public to gain acceptance of programs. Last, education can have the greatest impact if it is delivered well before implementation of the program.

Dr. Jerry L. Hatfield:

Dr. Hatfield said the Agricultural Research Service (ARS) is one of the smaller branches of the USDA and attempts to answer questions such as:

- ▶ How do pesticides behave in the environment?
- ▶ How well are models being predictive?
- ▶ How do pesticides interact with soil, and other media?

Dr. Hatfield noted one area where ARS efforts might be of great benefit to State Lead Agencies in implementing SMPs: ARS' examination of the effectiveness of BMPs. He noted that there are four factors that influence effectiveness: soil, climate, landscape, and the operator.

Dr. Hatfield said many things we talk about are operator-dependent, such as no-till and conservation tillage practices. He urged everyone to keep in mind that the operators' behavior and attitudes are integral factors when looking at how pesticides behave in the environment.

You should keep in mind that the operator's behavior and attitudes are integral factors when looking at how pesticides behave in the environment.

DR. JERRY L.
HATFIELD, Director,
Agricultural Research
Service, National Soil
Tilth Laboratory, USDA

Another program within ARS that may be of value in SMP implementation is the Management System Evaluation Areas program (MSEA). The program is in 10 locations in five States in the Corn Belt. It was designed for that area because of the use of pesticides and fertilizer on corn. The program, in part, is looking at what happens to certain pesticides in varying combinations of soil, geology and climate. The pesticides that have been monitored under this program for the past six years include Atrazine, Alachlor, Metribuzin, Metolachlor and Cyanazine.

MSEA is a cooperative effort between the USDA, USGS, EPA and State agencies. More than 150 researchers are associated with it. The results of the project have answered such questions as, "What is the impact of banding, ridge till, and no till and post-emergence applications?" This research is helping to refine existing BMPs and, beyond that, is resulting in the development of such things as bio-economic weed models -- what is the effect of filter strips and how do they really work? The program also is exploring how BMPs relate to new methods of precision application and farming.

In closing, Dr. Hatfield pointed out that there is a large resource base available, not only from education such as Dr. Impson noted, but from the research side of USDA, as well.

The Federal/State Cooperative Program places a USGS office in each State. This office is a ready source of information.

DR. WILLIAM G. WILBER, National Synthesis Coordinator, National Water-Quality Assessment Program, USGS

Dr. William G. Wilber:

USGS has no regulatory responsibility, Dr. Wilber said. Instead, they try to provide information to resource managers and the public so they can make better-informed decisions.

Dr. Wilber cited two specific areas where USGS can assist states in the SMP program. First, the Federal/State Cooperative Program may be of value to State Lead Agencies in that it places a USGS office in each State. This office is a ready source of information from USGS, and State Lead Agencies are invited to go there not only to obtain specific information, but to talk with the geologists and hydrologists.

The second area where USGS may assist States is through the National Water Quality Assessment Program (NAWQA). This program was begun in 1986 at the direction of Congress after it attempted to obtain information from USGS about the status of the Nation's water quality. At the time, USGS didn't have adequate information to respond and Congress directed them to develop a program to learn the answers.

The program began with a five-year pilot and is now ongoing. The four broad goals of the program are to:

- ▶ provide information on water quality conditions,
- ▶ provide information on changes in water quality conditions over time,
- ▶ determine why water quality is changing, and
- ▶ explain the impacts of these changes or lack of changes.

There are two phases to NAWQA projects: The first phase is study and investigation organized around major hydrological systems. The second phase is synthesis. It is in this second phase that USGS attempts to draw national conclusions about water quality, based on information from the first phase.

NAWQA began with the intention of looking at 60 study units that would comprise 60% to 70% of water use and population and 50% of land area. Part of a study area in every state in the country. Because resources didn't permit beginning all 60 study areas at one time, they were initially divided into three groups of 20 study areas each. In actuality, Dr. Wilber noted, there are not sufficient resources to accomplish the 60 studies in three groups. The study area work schedule is:

1991 - began 20 study areas
1994 - began 15 study areas
1997 - will begin 17 study areas.

Dr. Wilber is hopeful that work on the remaining eight study areas can begin after the turn of the century.

Each study is on a 10-year cycle and begins with the formation of a liaison committee. This committee, is comprised of representatives from USGS, State and local governments, and the public. Their charge is to avoid duplication of effort by determining what we already know and what questions should be addressed for each of the study areas. Among other things, this group tries to answer questions such as "What do we know about pesticides in the atmosphere and in ground water? What do we know about monitoring results, the use of predictive models, temporal distribution?" This effort takes between one and two years.

After the liaison committee's work, the study enters the "high-intensity phase," which lasts for about three years. In this phase, investigations are carried out through field studies in both surface and ground water. Physical hydrology, chemistry and biology are studied.

Next, the study moves into a low-intensity phase. This phase also lasts about three years and is intended to track water quality and changes in water quality over time.

Dr. Wilber said the national synthesis phase could be conducted either area-by-area or topic-by-topic. A Federal Advisory Committee, established to help develop the program, was asked to set priorities for the most important study topics if the topic-by-topic approach were chosen. The top three priorities were pesticides, nutrients and sediments. As a result of that priority-setting effort, pesticides and nutrients are being studied first.

In closing, Dr. Wilber said there are many ways to access information on the studies and their results. He urged State Lead Agencies to visit the USGS offices within each State.

He also said the program has an address on the World Wide Web and E-mail, and each study investigation has a home page that can be visited. Dr. Wilber said he and his colleagues are available to provide information and they would like feedback on the utility of the information.

Questions from the Floor

Q - (State Lead Agency comment) - If you haven't worked with the NAWQA program, I would urge you to do so and capitalize on their expertise and information. Also, after they are done with their studies, they are willing to turn over their wells to you and you wind up with free monitoring wells of a quality that we could never afford.

Q - (Regulated Industry to USGS) - USGS seems to be the most aggressive in trying to get methods to go from ppb to ppt in detecting chemicals in water. The public has difficulty just understanding whether they can drink their water. Given that, can you explain your reason for trying to go lower and lower with detection limits?

A - It certainly is not to scare anyone. It really is to address the third objective I mentioned; that is, what are the major factors controlling the occurrence and distribution of these compounds. If you constantly are dealing with non-detects, you can't get at that understanding.

**PANEL OF
TRIBAL LEAD
AGENCIES**

In an attempt to address elevated nitrate levels in ground water, the Tribe established and implemented Best Management Practices for all agricultural activity on the Reservation.

KAREN SMALL,
Agricultural Resource
Management Assistant,
Shoshone Bannock Tribes

Karen Small:

Ms. Small began by providing some background information about the Shoshone Bannock Tribes. An 1868 treaty provided the Tribal government with total jurisdiction throughout the 124-square-mile (more than 543,000 acres) Reservation in southeast Idaho. About 3,700 Tribal members and another 3,700 non-members live on Reservation lands. A significant amount of farming, both irrigated and dry-land, takes place on the Reservation.

The Shoshone Bannock Tribes were the first to adopt and implement their own pesticides and farm chemicals code. This code, and pesticide applicator certification plan, were adopted in 1989 to ensure that the Tribes had the capacity to regulate and monitor all agricultural use of pesticides and fertilizers within the Reservation boundaries. In addition to a certification plan, the Tribes also adopted a separate plan to address chemigation.

Ms. Small said monitoring the water resources within the Reservation pointed to a problem with elevated nitrate levels in ground water. This included detections in both shallow and deep domestic wells. In an attempt to address this problem, the Tribe put a program in place in 1995 to establish and implement BMPs for all agricultural activity on the Reservation.

The programs carried out by the Shoshone Bannock Tribes are no longer funded by EPA. The resources provided through cooperative agreements with EPA were not sufficient for the Tribe to carry out its goals. Therefore, the Tribe implemented

a self-revenue program to enhance its resource base: an Agricultural Environmental Compliance Fee applies to all farming activities within the boundaries of the Reservation. This program has allowed the Tribe's pesticide program to become self-supporting and has allowed the Tribes to continue toward its primary goal: to protect the health, welfare and safety of all persons residing within the Reservation.

In closing, Ms. Small said environmental quality is a major Tribal concern. Continued regulation and monitoring of farming activities within the Reservation boundaries are high priorities due to the extensive agricultural activities that take place on the Reservation.

Irving Provost:

Mr. Provost provided background information about the Oglala Sioux. He said they live in the southwest corner of South Dakota on the second-largest Reservation in the United States. About 16,000 members are counted on the Tribal rolls, but the actual number is probably higher. The count comes from the formal U.S. census and may undercount because some Tribal members hesitate to interact with Federal officials who enter the Reservation.

The Oglala Sioux entered into a cooperative agreement with EPA in 1980 to enforce FIFRA. They also established an EPA-approved certification plan. In addition to these core programs, the Tribe is developing a plan to address ground water concerns.

The Oglala Sioux have worked with four entities to address the components of their plan: the Tribal government, the Bureau of Indian Affairs, the State agencies in the area, and Federal agencies such as EPA and USDA.

IRVING PROVOST,
Director, Pesticide
Enforcement, Oglala
Sioux Tribe

The effort to develop their ground water plan began in late 1991 to early 1992. The Tribe initially ran into difficulty because much information was not available and data were incomplete. However, working with other agencies, the Tribe has managed to obtain much of the needed information to proceed. Mr. Provost said the Tribe kept in close contact with EPA Region 8 and have been submitting components to the Regional Office for preliminary review. They anticipate submitting their complete draft for review by the end of September.

Mr. Provost said the Reservation is located on recharge waters, the soil is loamy and agricultural activity exists. In sampling on the Reservation, with the assistance of the Extension Service, two areas were identified where detections of pesticides in ground water occurred. In an area called "Cooney's Table," detections were above the MCL. As a result of these analyses, the Tribal Council directed that work begin in the Cooney's Table area to address the issue. Mr. Provost said that before he left the workshop, he hoped to be able to speak with industry representatives to get input from them on how he might proceed in that area.

There are two components of the ground water plan that are very work-intensive, according to Mr. Provost: vulnerability assessment and monitoring. The Oglala Sioux have worked with and are continuing to work with four other entities to address these and other components of their plan: The Tribal government, the Bureau of Indian Affairs, the State agencies in the area, and the Federal government.

In closing, Mr. Provost expressed the Tribe's goals of protecting health, safety, and the environment and welcomed any ideas, suggestions or help that could assist them in carrying out their ground water protection program.

There are over 550 Tribes. The Tribes have jurisdiction on over 4% of the land mass in the country and receive about ½ of 1% of all EPA funding available for field program use.

GREG PHILLIPS, Vice
Chairman, Tribal
Council, Omaha Tribe

Greg Phillips:

Mr. Phillips provided an overview of the Omaha Tribe and some basic information about Tribes across the nation.

In 1856, the Omaha Tribe signed a treaty that ceded Reservation land, but kept jurisdiction within the exterior boundaries of the Reservation. The Tribe's overall goal is to protect the health, welfare and safety of all people who live within the boundaries of the 187,000-acre Reservation, which covers parts of both Nebraska and Iowa. Its population of about 6,000 is split almost evenly between Tribal members and non-members. About 3,000 more Tribal members live off the Reservation.

In 1993, the Omaha Tribe entered into a cooperative agreement with EPA, under FIFRA section 23(a), to manage pesticide use and carry out certification programs on the Reservation. The objective of the certification plan is to protect the water and land and to ensure the health and safety of all people on the Reservation.

The process of developing the certification plan has been an open one. The Tribe began by gathering State pesticide laws from neighboring States and Tribal codes from across the nation to determine whether there were aspects that would apply to the Omaha Tribe's Reservation. To ensure that whatever plan was developed would not impose requirements on the community without their knowledge and involvement, committees of approximately 10 people were established. The committees consisted of both members and non-members and represented pesticide applicators, farmers, and dealers

working within the reservation. These committees reviewed the existing plans and codes and recommended provisions for adoption on the Reservation that would meet the needs of the community while continuing to protect the Reservation environment. After that, public meetings were conducted to help those living on the reservation understand the new provisions. The certification plan is now in the last stages of receiving EPA approval.

On a national scale, Mr. Phillips said there are over 550 Tribes, including Native Alaskan Villages. The Tribes have jurisdiction on over 4% of the land mass in the country and receive about 0.5% of all EPA funding available for field program use. Mr. Phillips also said that in 1994, President Clinton signed a document describing the relationship that Tribes and the Federal government would pursue in treating Tribes as States. This document established a government-to-government relationship.

In closing, Mr. Phillips said there are currently about 130 Tribes with some environmental programs whether that be in the area of pesticides, air, water, etc. Twenty-six Tribes have cooperative agreements with EPA to implement FIFRA programs on the Reservations and about eight Tribes have EPA-approved certification plans.

**Questions from
the Floor**

Q - (State Lead Agency) - Could Ms. Small explain further the environmental compliance fees imposed on the Shoshone Bannock reservation?

A - The fees were begun to put the Tribe in control of monitoring and regulating all environmental issues on the reservation including, but not limited to, enforcement,

certification, water and soil testing. Fees are assessed to anyone carrying out agricultural activity on the Reservation and are assessed differently based on the type of farming. Irrigated land is assessed at \$2.50/acre and dry land is assessed at \$0.75/acre. In addition, all people have to be certified by the State and then by the Tribe to perform any kind of farming activity on the Reservation.

Q - (State Lead Agency) - As a representative from a State writing a ground water plan, how would EPA recommend I get in touch with the Tribal governments in the area, or has EPA already done that?

A - (EPA) - We have not done a good job in consistently communicating with Tribal governments. A priority for the Office of Pesticide Programs over the next year is to determine how to better do that. Perhaps Greg Phillips has some thoughts on how the States can reach Tribal governments.

A - (Greg Phillips) - One method would be to work through the Regional Tribal liaison. There is a liaison in each EPA Regional Office. You can find out from them whether the Tribe has some sort of agreement with EPA or find out who to contact at the Tribe's environmental office.

A - (EPA) - Irv Provost also just mentioned that there is an office at EPA now that focuses on Tribal issues -- the American Indian Environmental Office -- led by Tom Wall as the acting Director. You can reach them through me. Also, EPA will send out to the States the listing of Regional Office Tribal liaison officers so you will know who you can contact in the Region.

Q - (unidentified speaker) - Do you involve USDA and the Natural Resource Conservation Service (NRCS) in development and implementation of your programs?

A - (Irv Provost) - A Department of Agriculture person works within our Natural Resources Office. They have been very helpful in providing information on soils and other things for our ground water program development. Also, the Extension Service has cooperated with us in water sampling efforts on the Reservation. We are constantly working with other Federal agencies and also with State agencies on our programs.

A - (Karen Small) - The Shoshone Bannock Tribe also has worked closely with NRCS and the Extension Service. They are located on the reservation. We also work with the Intertribal Agriculture Council. They recently hired a Tribal member to carry out workshops focusing on USDA and the Council's activities so that people better understand the work of these organizations.

FUNDING AND FLEXIBILITY

Most of us don't have all the answers to most things that have been around for a long period of time. SMPs are something new. You don't have to have all the answers to all the questions in order to get from one spot to another spot.

DANIEL M. BAROLO,
Director, EPA Office of
Pesticide Programs

Daniel M. Barolo:

Mr. Barolo welcomed the group to Washington, D.C. and said he appreciated the opportunity to speak to the workshop participants. The objective of the workshop, he said, was to stimulate discussion, either now or later.

Mr. Barolo said he realizes the efforts that have gone into the gestation process of the SMP approach, stating that as he understands it, many have been working on this for 25 to 30 years. It's like birthing a lot of things in the pesticide program in that it may have been fun at first, but after a while it begins to get to a point where you don't think you'll ever see anything. Plus, like most things in life, when you get to those late stages, you begin to have second thoughts, and you begin to engender the kind of push-back and feedback that makes you ask yourself why were you about this in the first instance. Mr. Barolo said he would like to suggest a few things about why we may have started on this course and why, for many of us, we still believe it's the appropriate way to go.

There are myriad challenges ahead, not the least of which is giving this proposal an honest opportunity for formal, public comment. Mr. Barolo focused his remarks on several areas:

- ▶ how are we all going to fund this, in time;
- ▶ the issue of State flexibility, what we think about it, and what the States' opportunities and obligations are in that area;
- ▶ principles and pressures; and
- ▶ mutual commitment to meaningful agricultural management in the U.S., for which EPA believes we all have an important responsibility.

Funding Options

In the area of funding, Mr. Barolo said there is not enough to make this program happen as meaningfully and efficiently as we would like. There hasn't been enough in the past, even though OPP has provided, at this stage, over \$30 million as seed money to the States and to the Regions to get this program off the ground. The future funding is even more uncertain and there is likely to be even less. In combination with the effort to balance the budget and other national efforts, it is very unlikely that there are going to be significant resources.

Mr. Barolo said this is all compounded by a new statute that affects the Office of Pesticide Programs. It came EPA's way with 32 seconds of debate in the Senate and with significant additional work and responsibilities for all of us, with not an additional dollar to implement those new responsibilities. So to say that funding is a major issue is a minor statement (or the other way around).

Because of these resource considerations, we need to collectively seek other sources of funding. Mr. Barolo suggested that there are other sources around, both public and private, and encouraged the Regional Offices and those in the States and Tribal governments to try to take advantage of resources in other offices within EPA. For example, the Office of Water, the Office of Research and Development, the Office of Solid and Hazardous Waste, and so on may wish to contribute to this effort. Mr. Barolo also encouraged participants at the workshop to work with their counterparts in the water program, solid and hazardous waste arena, etc., and seek ways to cooperate in funding this program at the State level that will benefit all parties in the long term. Finally, on the public-sector side, participants were encouraged to take maximum advantage of funding that may be available from other Federal agencies.

On the private-sector side, Mr. Barolo said U.S. sales of pesticides last year were on the order of \$8 billion. While not

Flexibility

all profit, there may be some money available through private financing. This could assist in a more complete and more accurate assessment of what kinds of issues there may or may not be related to ground water.

Mr. Barolo urged creativity in the ways and means of exploring resources to implement mutual responsibilities in ground water protection for now and for the future.

In discussing flexibility, Mr. Barolo focused on principles:

- ▶ The number-one principle is that the attempt to create SMPs across the country is an effort to try to establish some general, national standards and give the States and Tribes flexibility and an opportunity to approach reaching those standards with what makes sense at a State and Tribal level. As a fundamental principle, this is at the foundation of what the SMP initiative is all about.
- ▶ Most of us don't have all the answers to most things that have been around for a long period of time. SMPs are something new. They are evolving. You don't have to have all the answers to all the questions in order to get from one spot in the free world to another spot.
- ▶ The third principle is partnership. Mr. Barolo said he worked at the State level for a long time. They talked forever about partnerships with local government and the Federal government, and they flowered them with all kinds of new terms and terminologies, and they're still talking about partnerships. But this is an opportunity to affect some meaningful relations, for want of a better word, between State governments and the Federal government involved in passing judgment on pesticide regulation in the U.S. Mr. Barolo suggested

*Evolving
Pressures*

that there aren't very many other areas of the pesticide program where we can have these opportunities and we ought to build on this principle of partnership or else we'll be further behind in the long term.

- ▶ The principle of a commitment to the SMP as a direction of first choice. A long time ago, as the direction of first choice, we collectively bought into the concept of allowing State and Tribal managers to approach ground water protection and pesticide regulatory management at the State and Tribal level through management plans. And we need to be really comfortable before we fall back to a third or fourth choice in this process.

There are evolving pressures when you get down to this end of every game. This is a process wherein we're getting down to the final points about whether or not we should proceed with a proposed regulation, and the best circumstances in which to proceed. Evolving pressures include the new law. And there are competing pressures there.

On one hand, there are no new resources, and there are huge new responsibilities. This includes looking at aggregate and cumulative effects on the dietary or tolerance side. In order to do this, EPA needs to better understand and clarify both surface and ground water concentrations and contamination across the U.S. EPA has an obligation to make a public attestation of public health safety on all future tolerances starting on Aug. 3 of this year. Having an understanding of what the ground water contamination, or lack thereof, is in each State is a critical ingredient for EPA to be making regulatory management decisions that best advantage local and State communities. Absent that, EPA falls back to default criteria which will necessarily be very conservative.

Some Choices

Another pressure is that there are some individuals around town -- lobbyists, registrants, State representatives, and others -- who believe that any effort to move regulatory management out of the hands of a central bureaucracy, wherein there's an opportunity to focus lobbying efforts and pressure, is the beginning of the end of the free world. Therefore, some are engaged in pressures to suggest that moving anything out into the State and local government arena, with this kind of flexibility, can bring with it practical problems. Mr. Barolo said he could argue both sides of this, but wanted to make sure everyone in the audience was aware that much of the pressure may be an effort to limit the arenas in which people have to focus lobbying efforts. It is easier to focus nationally than on 50 States plus Tribes and communities.

Lastly, Mr. Barolo noted that the devil of most things is in the details. We are finally getting to the point of proposing a regulation with words associated with it, and interpretations associated with the words, wherein everybody now has a chance to look very, very carefully and ask, "What is the meaning of these three particular words in this particular sentence?" And that always causes a certain amount of consternation and back pressure.

Mr. Barolo suggested that the situation is relatively simple. We have a choice between national standards via national regulatory action, potentially influenced by national pressures; or we have the opportunity to advance some of the principles mentioned earlier, including State flexibility in the process.

There are two ways to look at flexibility relative to this program. First, there are some States who believe that they invented ground water and ground water management. Mr. Barolo said he was in New York for a time and they believed that they knew exactly what ground water

management was all about long before EPA was created. They believed they were at the front end of evolving science and public health protection in that area. It doesn't matter whether they were or not. They thought they were. And so, whatever the national standards were, the State took great pride in trying to do a little bit better than that. There are some States who believe they are in this position. SMPs give you the flexibility to continue to manage your resource in that way.

On the other hand, there are some States who have a greater interest in ensuring that the legitimate, meaningful, agricultural production in a State takes the kind of precedence that it should. And, in some areas, ground water may not have the same appeal, or same kind of ranking, or priority. These states may want an opportunity to influence regulatory management of pesticides to ensure that kind of agriculture priority is preserved in a State. The SMP process provides, in our view, an opportunity to head in that direction as well.

Mr. Barolo said when you come right down to it, there is one question to ask: Do we want national standards or State flexibility? We can discuss the time it's taken to get to here, ask questions, see whether all the "Ts" are crossed and "Is" dotted. Everyone of us can challenge someone else's writing and the details or lack thereof. Mr. Barolo said the choices of approaching this program one way or another should be influenced by your belief in the principles discussed earlier: State, Federal, local partnerships; national goals and State flexibilities; and not needing all the answers to move forward, but trusting each other to try to get from here to there.

Closing Remarks

In closing, Mr. Barolo said EPA will go either way with this program. If somehow in the process of program development, the SMP program falls off the track it is on, EPA will have to fall back to national standards. Then everyone will have to deal with the opportunities and consequences and complications of that. If we don't fall off track, then we make a commitment to try to work with everybody affected to make it the most meaningful program possible.

**Questions from
the Floor**

Q - (State Lead Agency) - You mentioned a very operative word in your presentation and I guess I'll be the devil's advocate: Why should we trust you?

A - That's a fair question. I think you need to look at the changes we've promoted over the last several years and ask yourself if we're headed in a better direction. We have changed programs to make more decisions, more quickly with less resources. We have changed managers within the Office to provide them an opportunity to bring new ideas on ways of doing business to new areas. We have established user liaisons in our Environmental Stewardship Program. We have established an advisory committee to get all the players at the same table at the same time to provide us advice on evolving public policy and science issues. We have made efforts to communicate and cooperate with our Regional Offices and the State Lead Agencies.

Others can judge better than I whether these have resulted in changes in actions and commitment and decisions. If you think the answer is "no" you can vote with your feet, so to speak. If you think the answer is "yes," that the direction we are moving in makes sense, you can vote by trying to establish better trust and communication in the future.

I don't believe there are many choices. We are either comfortable with the national labels, growing ever more complex, and established on necessarily conservative principles in order to provide adequate protection to the most vulnerable areas of the country or, some form of re-invention and flexibility is the way to approach the future. I guess the latter is the choice I want to believe in.

Q - (State Environmental Agency) - Labels are increasingly complex and I'm not sure whether this program is solving that problem. Whatever we wind up doing, the plan needs to be simple so that users can understand it.

A - I can agree wholeheartedly with that.

Q - (State Lead Agency comment) - I agree that they have to be simple. We just finished a water quality plan that is useless to the grower. Now we have to develop another document that they can use. In situations like this, you could wind up with a label that refers to a plan that, in turn, refers to another document. Growers are not likely to put this kind of effort into finding out what they have to do. Simplicity is the key.

GROUP A REPORT OUT

DOUGLAS E.
HUDSON, Environmental
Program Specialist, West
Virginia Department of
Agriculture

Doug Hudson, Rapporteur:

Mr. Hudson said use of the target compounds in West Virginia, when compared to their use in most States, would be considered minor use; when compared to their use in some States, West Virginia's use would be considered no use. Mr. Hudson said this comparison results in a few concerns about the proposed regulation from his perspective.

Group A discussed 16 issues. For purposes of the report-out, the Group voted them into four major areas: monitoring, flexibility, funding and registration.

Monitoring

Mr. Hudson said monitoring includes metabolites, QA/QC and scientific support. He also said there are two types of monitoring: discovery and definition. Discovery finds out what substances are present and definition determines the extent of the residues.

To be comprehensive, monitoring must include not only ground water sampling, but also behavioral changes. These programs must look at changes in use practices, application rates, etc.

One major issue under this topic was whether EPA would defer to the State's assessment of vulnerability. When a State is justifying minimal program limitations based on the vulnerability assessment, how extensive will the justification have to be? Mr. Hudson said that in vulnerability assessment, you may need to weigh two aspects differently from one another, depending on your particular situation: first, the use or actual threat that may be posed by the particular chemical and second, the physical attributes of the use area, or the geology.

The Group also discussed that monitoring must be balanced with prevention actions.

The Group expressed concerns regarding QA/QC requirements in the proposed regulation:

- ▶ Will EPA accept the QA/QC plans that State laboratories have in place and that go through routine review by EPA?
- ▶ Will the requirement for specific QA/QC in the proposed rule preclude States from using information gathered through sampling efforts, by the Extension Service, USGS and others?

Funding

The Group urged EPA to set minimum detection levels and to decide whether analytes will be included.

Questions about funding included whether SDWA funds might be available for these programs. Also, clarification of the financial burden that will be borne by registrants, particularly under the default option, was requested.

The Group discussed a variety of approaches to funding, including obtaining funding through Memoranda of Understanding or Agreement with other agencies, sub-grants, and cost-sharing. It was noted that during the panel discussion on this topic, States were urged to talk to other agencies within the State. Mr. Hudson noted his belief that probably over 99% of the States were doing this and urged EPA to do the same at the Federal level. He said once funding gets to the State level, many agencies believe they are constrained in how they can use those funds. The Group believes that EPA can help in this area by undertaking a concurrent effort at the Federal level to provide clear guidance and mechanisms for States to share funding among State agencies.

Finally, the Group said they can't be expected to perform past the resources they are given and urged EPA to make a funding commitment concurrent with issuance of the rule or prior to the need to implement the requirements of the rule.

Flexibility

Mr. Hudson noted that many have been complaining about flexibility, although it is what the States want. The Group suggested that requests for examples and clarification of the definition of flexibility oppose the whole concept of flexibility.

As an example of the clarifications being requested, the Group asks how EPA will resolve potential conflicts between the SMP approach and State regulations that might occur in the following situation: A state has a standard which says there is not a compliance issue if residues do not exceed the MCL. However, under SMPs with fractionalized triggers up to the MCL, regulatory action might be taken even in the absence of non-compliance. While the result may not be loss of the chemical, there would be changes in the way the product could be used.

Some of the States in the Group would request flexibility to address State priority compounds in lieu of the five compounds subject to the proposed regulation. How much will a State be required to do with the five compounds if there are higher priorities and the problems resulting from the five are limited? Further, does the program provide flexibility to address surface water concerns that are higher priority than ground water concerns? Some States do not delineate between surface and ground water, and the Group asked whether EPA intended in the future, to include surface water under the SMP approach.

Finally, the Group said that simply because there is not a problem in a State, does not mean that the State doesn't have a use for the product. Concern was expressed that there be a mechanism to retain the product in these situations, without having to devote scarce resources to developing a detailed plan.

*Registration
Issues*

Noting that EPA has said flexibility will be on a case-by-case basis, Mr. Hudson said this was either a very carefully non-committal statement or the epitome of flexibility. The Group, being familiar with the complexities of Federal Government and the pressures that politics can bear, believe States have doubts about whether they can trust EPA's use of this approach.

Citing one State that has no problem with one of the target chemicals, the Group again raised the issue of why the States need to prepare SMPs for compounds with which they have no ground water concerns. States requested that EPA include a process for variances and asked how this could be reconciled with the new proposal to have a national default process -- that is, a national process that would be more rigorous than previous labels but would stop short of cancellation. They also said they did not yet have enough information about the default process mentioned in the proposed regulation, nor about where responsibilities would be under such a process -- with the registrants or the States.

Another general area of concern that Mr. Hudson expressed on behalf of the Group, was the content of the label itself, possible ambiguities, and the strength of the label in terms of enforcement. For example, if SMPs are referenced on the label and the SMP uses BMPs, will BMPs, in effect, become regulatory?

GROUP B REPORT OUT

MITCH YERGERT,
Agriculture Specialist,
Division of Plant
Industry, Colorado
Department of
Agriculture

Flexibility and Survival of the Rule

Mr. Hudson said the Group discussed Restricted Use classification and was not convinced that the traditional certification and recertification training would not accomplish the desired result in ground water quality. He cited an example in West Virginia, where surface water across the State had unacceptable residue levels of Tordon 10K resulting from misuse. Mr. Hudson said water quality was successfully improved after two years of targeted recertification training focusing on use of this compound.

Mitch Yergert, Rapporteur:

Mr. Yergert said Group B had an excellent cross-section of State, EPA, other Federal agencies, and registrants in the room and noted that this cross-section enhanced the discussions.

Group B discussed six issues in some depth: flexibility, survival of the rule, the default option, national trigger levels, non-rule pesticides, and how to measure success.

The Group also briefly discussed potential ways to improve the process of resolving issues and communicating.

Mr. Yergert combined the first two issues for purposes of the Group B report, saying that the group believes survival of the rule is predicated on flexibility. He said the Group B participants were generally in favor of the SMP concept and how it was envisioned, but that adjustments in flexibility, recognition of the existing efforts at the State level, and other minor modifications to the rule would be necessary for the

program to be acceptable. The Group discussed whether a rule was even necessary at all. Most believed that yes, something more than a "handshake" would be needed to implement the program. Mr. Yergert said the Group had concerns regarding communication and trust that were similar to those of Group A.

For the most part, Group B believed that lack of large numbers of concurred-upon generic SMPs was not an indictment of the rule or the process. Instead, many States have been working toward putting pieces in place, rather than on committing the process to paper for Regional review. Some States are not able to give the process high priority until a rule is issued by EPA.

One thing that could alleviate many issues related to flexibility, consistency and trust would be some sort of "appeal process" for the States outside of the individual Region. This would provide an opportunity and assurance that a State's case could be heard again if a situation arose in which the State and Region could not agree on any particular aspect of the SMP. While other processes may exist, two potential processes were identified: appeal to EPA Headquarters or to a council of Regions.

Supplemental to this was a discussion of "minimal plans." States expressed a desire for a more firm commitment from EPA that these types of plans would be acceptable. Mr. Yergert reported the Group's desire for EPA to determine how much "proof" that a problem did not exist would be necessary before EPA would accept a "minimal plan."

Group B discussed both surface water and non-rule chemicals. Questions arose regarding the flexibility permitted States to target these rather than the five SMP compounds in ground water. While EPA said the five would likely need to be addressed, if the situation in the State was non-problematic, acceptance of a "minimal plan" would free up resources to focus on the high-priority chemicals or on surface water issues.

Default Process

The Group also discussed whether the program could be better served if specific chemicals were omitted from the rule. The sense of some in the Group was that this approach would wind up being rather "hollow."

The Group viewed the "default" issue as so new, there may not be enough information available to comment on this topic. There was speculation that even if very strict, this option might be acceptable to some States in lieu of using limited resources to develop an SMP. The Group noted that if a State chose to forgo development of an SMP because they wanted the chemical canceled in the State, the default option would be a hindrance. However, if a State did not develop an SMP because they lacked sufficient resources, the default option would provide an opportunity to retain use in the State.

National Triggers

The Groups were not asked to reach consensus on issues, Group B basically did reach consensus on this issue, but Group B did reach consensus on national-level triggers. No one in Group B believed that national-level triggers should be set below the reference point. Instead, this should be left to the States.

*Non-Rule
Pesticides*

To be able to address non-rule pesticides that are a priority for a State, the States need assurances and guidance about "minimal plans."

Measuring Success

Mr. Yergert reported that the Group believes showing success through actual water-quality parameters will take a long time -- probably longer than the first two-year evaluation. The Group suggested that ground water quality should be used to measure long-term success, but for the short term, other parameters need to be considered. These could include applicator behavior changes and adoption rate of BMPs.

*Issues Resolution
Process
Improvement*

Group B believed that improvements in communication between EPA and the States will help to resolve issues and will be needed to address the volume and complexity of SMP business in the future as we move toward implementation. The Group noted existing mechanisms such as monthly Regional conference calls, work with the SFIREG (State-FIFRA Issues Research and Evaluation Group) Water Quality Committee and courses such as the Pesticide Regulatory Education Programs. In addition to these, Mr. Yergert noted several other suggestions:

- ▶ occasional workshops such as this one;
 - ▶ video conferencing to enable more people to "attend" meetings;
 - ▶ issuance of interpretive guidance (similar to what occurred with the Worker Protection Standards); and
 - ▶ making interpretations, issue papers, etc. more widely available through posting to EPA's Home Page.
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**GROUP C
REPORT OUT**

MARK SWARTZ,
Ground Water Program
Manager, Pesticide and
Plant Pest Management
Division, Michigan
Department of
Agriculture

Mark Swartz, Rapporteur:

Group C discussed more than 50 issues. Seven were discussed in the most detail: default option, minimal plans, review and approval process, metabolites, label issues, Tribal considerations, and time frames for implementation of the rule.

Default Process

Group C believed that, to some degree, the default option goes in the opposite direction from where the program was intended to go. The Group also did not believe they had sufficient information regarding this option and raised areas for clarification such as: what components are included, whether Acetochlor is really a good model, where the burdens are placed in such an option, and how trigger levels will work in the context of the default option. Trigger levels may result in circumstances within a State where the SMP requires actions on the part of pesticide users at 20% of the MCL, but the national trigger is 50% of the MCL. Users will surely ask why the State is making them do more.

Minimal Plans

The Group requested clarification on what it would take to have a minimal plan accepted in two regards. First, what level of performance would be necessary if you showed there was not a problem with a specific chemical in your state? That is, would a State be permitted to simply make the "no problem" argument and move on, or would they still be required to develop each of the 12 SMP components? Second, what would it take to show you didn't have a problem? How high are the hoops you have to go through to retain uses even if that use is small?

Review and Approval Process

The Group felt there were discrepancies among the EPA Regions in their application of the guidance to review of SMPs. The Group believes some are interpreting the guidance documents in a very literal sense, while others are comparing the intent of the guidance with the expected outcome of the SMP. On behalf of the Group, Mr. Swartz asked that a mechanism or process be developed to ensure consistency in interpretation.

Metabolites

Whether SMPs are to include metabolites of concern needs to be addressed fairly quickly. The Group was concerned that they have this information soon, to be able to factor it into both resource and monitoring considerations.

Labels

The Group felt strongly that we need to avoid some of the issues of complexity, timing, etc. that arose during implementation of the Worker Protection Standards. An overriding theme during the discussion of labels was the need to keep them simple and usable.

*Tribal
Considerations*

Tribal members in Group C cited territorial and jurisdictional issues as those that might inhibit their ability to fulfill the SMP requirements. Also, Tribal authorities may not have access to certain funding because they do not yet have adequate enforcement programs in place; even so, they would be held to the same standards for ground water management plans. Given the strong interest of the Tribal authorities present, Mr. Swartz noted the need to resolve many of the Tribal considerations in developing an agricultural management base. He also noted the vast differences among Tribes in terms of having cooperative agreements, an environmental presence, etc., and said that as a group, the Tribes are probably even more diverse than the States.

Timetable Issues

The first timetable issue addresses the proposed default option. States would want time to consider the default option prior to committing to develop an SMP. In doing this, they may be able to concur in the default for some chemicals and direct limited resources to higher-priority ground water or surface water issues.

Second, States in Group C said Attorney General review time is likely to be six months or more. This would add considerably to the time needed intrastate to gain approval of a plan to forward to EPA. Given this, the 24-month development time frame in the proposed rule might not be adequate.

*Issues Resolution
Process
Improvements*

Third, Group C concluded that in a number of States, legislation or regulations might be needed to implement their plans. In many States, this process may take between six and 24 months. In the latter case, the State would need to have their rule ready to move forward on the day the SMP rule is final.

Phase-in of SMPs was viewed as essential. There may be situations where the only piece lacking is approval of a rule. In cases such as this, either an extension or an interim approval should be permitted. It would be a shame to have the program 98% completed and have use of a needed chemical stop because the State was awaiting final signature of a State rule. However, the Group believes that in spite of these potential situations, a firm "drop dead" date is necessary to motivate those rule-making groups.

Group C made general recommendations that the monthly conference calls with the Regional offices continue, and that these and other efforts to resolve issues should focus on one issue at a time through resolution prior to moving on. The Group also indicated a desire to hold more workshops such as this to focus on particular issues that need attention.

**PLENARY
WRAP-UP
SESSION**

During the final, general discussion, Ms. Arty Williams acknowledged the effort that was put forth in the breakout groups and asked the participants to now consider the following questions:

- ▶ Which issues are not so tied to the rule-making process that we might begin to address them now, rather than through formal comment?
- ▶ What processes might work best for addressing those issues?

After some discussion, there were several issues participants believed might be addressed now, but noted that most of the issues seemed to be directly related to the proposed rule. The issues they believed might be addressed outside the rule-making process were:

- ▶ What constitutes an acceptable SMP in situations where the five SMP chemicals are not a concern for the State?
- ▶ What level of "proof" would a State need to submit to EPA to receive acknowledgment that there was no problem with the SMP chemicals in the State?
- ▶ What is an acceptable vulnerability assessment? Will EPA defer to the States?
- ▶ What is a State's ability or authority to address activities on Federally owned land?

A variety of approaches for beginning to address these issues were considered, but none was a clear choice among the group. Among those suggested were:

- ▶ conduct a pilot in one or more states with their SMPs to determine whether a plan with minimal requirements is feasible;

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- ▶ hold a one- to two-day workshop to address, particularly, issues surrounding vulnerability assessments;
 - ▶ establish Regional round-table meetings to improve communication and discuss issues at the Regional level with the States; and
 - ▶ discuss the issues one at a time via conference calls, although some participants believed this would result in a process that takes too long to resolve issues.

Ms. Williams suggested that participants give further thought to the issue of process outside the workshop. In turn, the Regional Operations Branch staff would review the issues raised and identify national-level issues that can be addressed outside the rule-making process. Ms. Williams committed to provide this information to all workshop participants, along with a copy of the proceedings of the workshop. At that time, participants would be asked to identify issues they wished to help resolve and to identify any further approaches to resolving them.

Ms. Williams closed the workshop by expressing her appreciation for all those who attended. She indicated her continuing belief that by working together, they can take the next step in the program in a way that will ensure protection of the ground water resource and will provide the States and Tribes with the flexibility necessary to do that in a manner best suited to local needs and conditions.

