Minutes from April 29, 1999
Agricultural Ground Water Coordination Committee

Chaired by Division of Agricultural Resources
Idaho State Department of Agriculture

2270 Old Penitentiary Road
Boise, Idaho 83712

Gary Bahr
Agricultural Bureau Chief
ISDA Water Quality Program
Chair of the Agricultural Ground Water
Coordination Committee

208-332-8500

June 25, 1999

Agenda
Agricultural Ground Water Coordination Committee Meeting
April 29, 1999, 9 am to 3:30 pm
Meeting to be Held at the:
Idaho State Department of Agriculture
2270 Old Penitentiary Road

Introductions

Gary Bahr, Idaho State Department of Agriculture (ISDA)

- Welcome
- Overview of Agricultural Ground Water Plan
- Response process
- Long range goals of the committee
- Mailing list, and reporting

Jon Gould, ISDA

- Review of Agrichemical Contaminant Source Matrix

Bob Mahler, UICES

- Ground Water Education

Lunch Provided

Project Reports and Response Plans

- Ashton Project; Ken Beckman, NRCS Yellowstone SCD
- Lewis County area monitoring and response; Gary Bahr, ISDA
- Weiser area monitoring and response; Gary Bahr, ISDA
- West Ada County; Rob Howarth, DEQ
- N. Owyhee Co. monitoring; Jon Gould, ISDA & Linda Boyle, DEQ

Mike Mitchell, Dairy MOU Review

- Program update
- Monitoring at dairies

Scott Short, Idaho Division of Environmental Quality (DEQ)

- Ground Water Monitoring Technical Committee
- CAM
- Source Water Assessment Plan
- Update on CAFO Work

Gary Bahr, ISDA

- EPA State Pesticide Management Plan (PMP) Rule

Plan next meeting and adjourn

Minutes from April 29, 1999
Agricultural Ground Water Coordination Committee

A. Introductions

B. Gary Bahr, Idaho State Department of Agriculture (ISDA)

- Welcome
- Overview of *Agricultural Ground Water Quality Protection Program for Idaho*

Gary provided an update of key items that are listed in the Preface and Introduction of the *Agricultural Ground Water Quality Protection Program for Idaho (1995)*. Of importance is the goal, purpose, and objectives of the *Agricultural Ground Water Protection Plan for Idaho* (Attachment A). These points were reviewed again to remind existing and new members of the committee of the focus of the plan and the group. **Committee members agreed that the key aspects of the plan are still the core responsibilities of the Coordination Committee and the key agencies, especially the Idaho State Department of Agriculture.**

Refer to the *Agricultural Ground Water Quality Protection Program for Idaho (1995)* for the detailed information on the approaches. Below is a listing of the goal, purpose, and objectives of the plan.

The **goal** of the *Agricultural Ground Water Quality Protection Program for Idaho (1995)* is to protect the state's ground water and interconnected surface water from contamination originating from agricultural activities. The **purpose** of the program is to describe the management approaches to prevent ground water contamination and to respond to the occurrence(s) of such ground water contamination.

The following are the **objectives** of the Agricultural Ground Water Quality Protection Program:

1. Identify agricultural sources of ground water contamination.

2. Identify and describe the management approaches.

3. Identify and describe implementation strategies.

4. Identify roles and responsibilities of agencies involved in the protection of ground water quality.

5. Provide a basis for the development of an interagency Memorandum of Understanding which will solidify agency roles and responsibilities.

6. Describe how the Ground Water Quality Plan, the Agricultural Pollution Abatement Plan and the State Management Plan (SMP) for pesticides will interact and support the implementation of this program.

7. Inventory existing local, state, federal and industry agricultural ground water programs and assess the ground water protection capabilities of existing agricultural management programs.

- **Response Process**

Gary provided an overview of the draft inorganic response process (see attachment). The **committee discussed the need to continue to organize and disseminate the data relative to the priority areas**, and to **continue writing response plans for the nitrate impacted areas**. The **committee discussed the need for DEQ to continue the Ground Water Monitoring Technical Committee which was a requirement of the *Agricultural Ground Water Protection Plan for Idaho*, and the *Coordinated Agreement Meeting (CAM)* document which DEQ, IDWR, and ISDA signed in 1996 (attached)**. It also was **recommended that DEQ continue the CAM process**. It was **recommended that a narrative nitrate response process be developed** to accompany the flow chart (Attachment B) that has been created and reviewed.

Nitrate can come from fertilizer, animal waste, human waste, waste water land applications, natural sources, and other sources. Responding to nitrate problems in ground water **should be a multi-agency approach** since the sources can be numerous. The **Agricultural Coordination Committee was established to facilitate and implement programs and projects related to agriculture**. The agencies need to **involve the private sector groups and implement response processes at the local level. It was agreed that the committee, private sector groups, and agencies have been in agreement on this type of approach**.

The **pesticide ground water issues are lead by ISDA. ISDA will be finishing a Draft of the State Pesticide Management Plan (PMP) and present it at the next meeting**. The **facilitation of editing and approving the PMP will occur through the Agricultural Ground Water Coordination Committee**. It was discussed that the PMP would be a significant topic at the next, and **that a draft would be sent to committee members prior to the next meeting**.

- **Long range goals of the committee**

  Gary provided an overview of short and long range goals of the committee. The goals are listed below. **Gary** asked for feedback.

  Draft Short and Long Range Goals of the Committee

  1. Organize data for response process, DEQ, ISDA, IDWR
  2. Ensure Ground Water Monitoring Technical Committee Continues
  3. Ensure Coordinated Agreement Meetings (CAM) continue between DEQ, ISDA, and IDWR
  4. Evaluate matrix and develop a plan to fill program gaps
  5. Supply data to groups and policy makers
  6. Gain commitment for response from agencies and agricultural groups
  7. Further develop prevention efforts
  8. Develop response processes in areas of concern
  9. Implement response processes
  10. Evaluate success of response processes
  11. Further develop education programs for response and prevention
  12. Utilize existing or develop cost share programs
  13. Enhance monitoring process
  14. Develop BMP effectiveness monitoring
  15. Determine research or demonstration project needs
  16. Communication, and information transfer
  17. Documentation of successes
  18. Determine need for future funding sources
  19. Formalize Nutrient Response Process
  20. Provide input and approval for State Pesticide Management Plans (PMPs)

  It was suggested to streamline the list and then send it back out to the committee to have the committee vote on the importance of each goal. The **use of a 10-4 voting process was suggested. The list will be revised and presented to the committee members for evaluation and voting**.

- **Mailing list, and reporting**

ISDA will be updating the mailing list to include state and federal agency administrative staff and decision makers, city and county officials in Idaho, other industry groups such as the Idaho Cattle Association, and state legislative committee leaders for the agriculture and environment committees.

ISDA will be sending announcements and minutes out via mail and email.

C. Jon Gould, ISDA, Review of Agrichemical Contaminant Source Matrix

Jon has been working with other agencies to review the Agrichemical Contaminant Source Matrix. The objectives of the effort are related to five out of the seven overall objectives of the *Agricultural Ground Water Quality Protection Program for Idaho*.

1. Identify agricultural sources of ground water contamination.
2. Identify and describe the management approaches.
3. Identify and describe implementation strategies.
4. Identify roles and responsibilities of agencies involved in the protection of ground water quality.
7. Inventory existing local, state, federal and industry agricultural ground water programs and assess the ground water protection capabilities of existing agricultural management programs.

Since the Matrix was finished in 1993, there is a **need to further evaluate the matrix** for determining the current status of the management approaches and to identify any program or regulatory gaps. There is also a **need to fulfill the objectives of the plan**. **Agencies need to put an emphasis on reviewing and implementing the items that are listed in the Matrix.**

Jon gave a presentation to update the committee members on the work that has been done. The ISDA programs related to certain agrichemical sources have mostly been the focus so far. A number of agency staff have contributed to the effort. **Jon requested that agency and industry staff send in their comments related to the matrix**. In the future the **Agricultural Coordination Committee will be creating a summary of the Agrichemical Matrix review findings**.

D. Bob Mahler, UICES, Ground Water Education

Bob has created a proposal for ISDA and SCC to consider for coordination and funding. Bob's proposal covers three basic topics which are:

- UI-CES would develop an electronic bulletin board for agricultural ground water education information that would be available on the internet and be sent to SCDs, Ag Chem Professionals, Agencies, and others,
- UI-CES would assist with ground water response plan development and implementation of education related to ground water response plans.
- UI-CES would develop a pilot project with ISDA to utilize the USGS Nitrate and Atrazine Probability Maps that were created by Mike Rupert of the USGS.

Bob has submitted a proposal to ISDA and SCC for funding a portion of this work. UI-CES would supply a large amount of staff time and funding to the effort. ISDA and SCC will need to make a decision to fund this effort.

E. Project Reports and Response Plans

The Agricultural Ground Water Coordination Committee is reviewing information related to areas of agricultural ground water quality concern. At each meeting a project leader working on a specific problem area supplies a project information and an update to the committee. The committee becomes educated about the agricultural impacts and provides some feedback and direction to the project leader and/or responsible agencies or private sector groups with regards to developing a response process for each area. Most of the projects are areas of concern that have been assessed by the Ground Water Monitoring Technical Committee.

- **Ashton Project; Ken Beckman, NRCS Yellowstone SCD**

Ken provided an overview of the Ashton Ground Water Response Plan and the Nutrient and Irrigation Water Management demonstration project that the Yellowstone SCD and the local Ag Chemical Professionals have designed and are going to implement. **The Ashton area Ag Chemical Professionals, Jeff Stark (UI-CES), and Dale Westerman (USDA-ARS) have assisted Ken with the design of the project**. Each party will have a significant role in implementing the project for three years with three producers. **The committee was pleased with the progress** on this project since public drinking water wells have been impacted. This project is a fine example of coordination and implementation at the local level. **Ken was also looking for funding from ISDA and SCC** to implement this project. The **SCD has already secured funding from the Ag Chemical Professionals and the producers**.

- **Lewis County area monitoring and response; Gary Bahr, ISDA**

Gary provide a brief overview of the 1998 Lewis County nitrate monitoring done by DEQ. There is a significant concern about nitrate in ground in Lewis County. Fertilization, animal waste, and human waste are three suspected sources. **In March, Gary and Brandon Bentz (DEQ-Lewiston) meet with the Lewis SCD Board on this matter**. **The board agreed to be involved and help lead the process**. Gary discussed with them the need to write an implementation plan. The Lewis Board agreed to this approach. They felt the wells with the highest nitrate concentrations should be evaluated further. They would like to know more about what the causes of the elevated nitrates might be. Gary discussed with the Lewis Board, the need for additional monitoring including isotope testing, and the

need for nutrient management field trials to be developed with the producers. ISDA must meet with the Lewis Board again.

- **Weiser area monitoring and response; Gary Bahr, ISDA**

Gary meet with the Weiser River SCD in April, and discussed with the board the Ag Ground Water Plan, the data from the ground water monitoring project that ISDA has conducted in the area since 1996, and the need to develop a response plan. Gary gave the SCD a summary of the data. **Gary discussed with the board the need to write an implementation plan** for responding to the nitrate and pesticide in ground water concerns in Washington Co. Gary reminded the Board that ISDA and IASCD have conducted three years of educational ground water training to licensed applicators.

The **Weiser River SCD Board discussed their interest in developing a response process**. The NRCS began a Preliminary Investigation (PI) process for Washington County in 1996. The Weiser River SCD was hoping to compete for a SAWQP grant related to ground water protection. That never happened due to the moratorium on SAWQP. **The board would like the ISDA monitoring to continue, to know more about the sources of nitrate, to have ISDA conduct some isotope testing, to write an implementation plan, and to have the educational process continue in the area. ISDA and SCC will have further meetings with the Board**.

- **West Ada County; Rob Howarth, DEQ**

Rob provided the committee with an update on the monitoring project and draft report related to the Northwest Ada County ground water nitrate and pesticide concern. The ground water has been impacted by nitrate, 1,2-dichloropropane, 1,2,3-Trichloropropane, dacthal, and atrazine. The area overlying the contaminated aquifer has a very sandy soil. There are multiple sources of the nitrate including fertilization, manure land application, a large cattle feedlot, septic, and the Eagle Sewer District rapid infiltration ponds. The pesticide sources are from crop and possibly noncrop applications, possible spills, and deep leaching of pesticide product due to irrigation and sandy soils. **Rob will be finalizing his report. ISDA and SCC need to meet with the Ada SCD, Ag Chem Professionals to create a response plan and provide producers with an update on nitrate and pesticide ground water problems in the area. DEQ should consider to work with the feedlot to review operations and potentially implement pollution abatement actions.** Rob mentioned that the Eagle Sewer District will be phasing out the rapid infiltration pond disposal method within the next couple of years. **DEQ should review operations with the Eagle Sewer District to ensure that the operations are not impacting ground water**. ISDA has conducted some educational outreach in the area in the past. **However ISDA, UI-CES, and IASCD will continue the educational process for nutrients and pesticides and notify agrichemical users. It was discussed that IDWR should**

look at establishing specific well drilling requirements for this area. It was also discussed that any home buyer or real-estate transaction in this area should be notified of the ground water situation and concern. DEQ, ISDA, and District Health had this discussion 2 or 3 years ago at a summer time meeting at the DEQ Boise Regional Office. Rob Howarth and Gary Bahr were in attendance at that meeting and this type of action was never taken by any group.

- **N. Owyhee County monitoring; Jon Gould, ISDA & Linda Boyle, DEQ**

Jon presented an overview of the local ground water monitoring project in Northwest Owyhee County. Nitrate and ammonia are elevated in certain locations within a shallow aquifer underlying an agricultural area. The first round of quarterly sampling took place in March, 99. **The results are back and Jon and Linda are reviewing the data, supplying the data results to homeowners, and creating maps of the data points.** Jon presented a map of the project and data. Some wells are low in both nitrate and ammonia. Some wells are elevated for nitrate or ammonia. If a well sample is elevated for nitrate it seems to be very low in ammonia. If a well sample is elevated for ammonia it seems to be very low in ammonia. The wells that were elevated in ammonia were off the upper bench and were located along an east-west floodplain along the Snake River. Prior to 1996, the predominant land use has been irrigated agriculture with a few small cattle operations. After 1996, there have been several large dairy operations that have moved into the area west of Marshing. There are some IDWR statewide data points from 1991-1995 that indicate elevated nitrate in one well within the project area, and elevated ammonia in another well near the Snake River west of the project area. **After further monitoring events the technical team will be assessing the data and providing some conclusions. Jon will provide further updates at future meetings.** Linda presented information related to the bacteria testing for the project. There were three wells that had bacteria hits, however there were sampling and piping concerns at the time of the sample that may have indicated a problem with the piping not the ground water. Those sites will be retested.

F. Mike Mitchell, ISDA, Dairy MOU Review

- Program update

Mike provided an overview of the ISDA dairy waste management program. The program received it's annual review by EPA, and DEQ in April, 99. The program received very good reviews. **Mike** discussed with the committee the revised NRCS nutrient management standard. The revised NRCS nutrient management standard has been approved by NRCS. ISDA is providing training to certify public and private sector people to become certified nutrient management planners. ISDA is trying to have all the dairy nutrient management plans written within the next two years.

- Monitoring at dairies

Mike discussed how the dairy program will add a nitrate test to the monitoring program requirements for dairy production wells. This effort will provide some data for wells underlying the dairy facility itself. ISDA will strategize further to determine monitoring needs associated with dairies.

G. Scott Short, Idaho Division of Environmental Quality (DEQ)

- **Scott** discussed:
  - The DEQ reorganization.
  - Ground Water Monitoring Technical Committee
  - CAM
    - **Scott stated that DEQ is still uncertain who will be assigned to represent DEQ** at the **Agricultural Ground Water Coordination Committee** meetings; who will **chair the Ground Water Monitoring Technical Committee**; and who will **lead the DEQ, ISDA, and ISDA Coordinated Agreement Meetings (CAM)**. He did state that DEQ would be committed to these processes. **Gary indicated that it is very important that DEQ continue to lead or participate in the processes that were created under the *Idaho Ground Water Plan*, and *Agricultural Ground Water Quality Protection Program for Idaho.***
  - Source Water Assessment Plan Process
    - **Scott** stated that DEQ has submitted to EPA the *Source Assessment Plan for Idaho (1999)*. DEQ is committed to implementing source water assessment. Modeling and GIS will be major components of the source water assessments.

  - Update on CAFO Work
    - **Scott state that DEQ is reviewing the rules and the program associated with regulating CAFOs. The swine and poultry rules are to be created soon.**

H. Gary Bahr, ISDA

Gary has worked to update the Generic State Pesticide Management Plan (PMP) for Idaho. Gary will be sending it to the committee members for review prior to the next quarterly committee meeting. The Generic PMP will set the standard for the chemical specific PMPs that will have to be written for atrazine, simazine, alachlor, and metolachlor. Gary has represented state FIFRA lead agencies for two years in EPA Region X on EPA's Office of Pesticide Programs (OPP) State Pesticide Management Plan (PMP) Rule Review Committee. This committee most recently met in April, 99 to discuss the draft final PMP rule that will go in

the federal register. The final rule is slated to go in the federal register in January, 2000. The Generic PMP for Idaho will be a focus of the next committee meeting.

I. Plan next meeting and adjourn

The next meeting will be on July 29, 1999 at the Idaho State Parks and Recreation Department located at 5657 Warm Springs Ave, Boise, Idaho (phone: 208-334-4199). Call Jennifer Ambrose, or Gary Bahr at ISDA at 208-332-8500 for directions if you need them. An agenda will be sent out shortly.

Attachment A

Preface, and Introduction of the Agriculture Ground Water Quality Protection Program for Idaho (1995)

PREFACE

Contained within the Idaho Ground Water Quality Plan are several items for implementing Policy II-B. This program has been developed to describe how agricultural activities and agricultural chemicals are to be managed for ground water protection. The following implementation features will be used in combination to accomplish the management objectives of the Agricultural Ground Water Quality Protection Program.

Coordination of the existing Agricultural Pollution Abatement Plan, Nonpoint Source Management Plan, and the Ground Water Quality Plan.

Coordination of the State Management Plan (SMP) for pesticides, as it is being developed to be consistent with the Ground Water Quality Plan.

Development of an Information & Education Strategy.

Development of the BMP Strategy.

Development of the Regulatory Strategy.

Establishment of an interdisciplinary team called the Agricultural Ground Water Quality Coordination Committee.

Act upon the preliminary recommendations of the Agricultural Chemical Subcommittee to address potential agricultural sources of contamination (Agricultural Chemical Source Matrix).

Act upon the recommendations of the Ground Water Program Interdisciplinary Team to make existing agricultural programs fully consistent with the Ground Water Quality Plan.

The progression from voluntary BMPs to a regulatory program is outlined in the first eight steps under Policy II-B. Step nine recognizes sources and activities already managed by an existing regulatory program. These steps are described in the Agricultural Ground Water Quality Protection Program as follows:

7. Voluntary BMPs will be the primary method of protecting ground water below the crop root zone.

7. The agricultural feedback loop is the method of choice to allow the development, implementation, evaluation and improvement of BMPs. The voluntary BMPs should be developed and implemented by the appropriate agencies on a site-specific basis with consideration for soil and crop characteristics and needs.

7. Based on the potential for a contamination [to occur] and [the] suspected cause, a specific time period will be set to determine effectiveness of BMPs in maintaining and improving ground water quality.

7. Appropriate federal, state and local agencies including, but not limited to IDA, IDWR, NRCS, SCC, SCD, CES, and IDHW-DEQ will make effectiveness determination.

Step four is the key trigger point in this program when water quality monitoring shows the ground water quality trend is not improving.

The result of the effectiveness evaluation determines the next course of action. The trigger points which determine which of the three options available are detailed on page 16 of this program. The three options include:

7. If the ground water quality trend is not improving, then mandatory participation in applying voluntary BMPs is required.

7. If the ground water quality trend is still not improving, BMPs with more stringent protection must be applied.

7. If there is still no improvement in the ground water quality trend, regulatory programs will be required.

Step eight, below, may be used irrespectively of water quality monitoring or ground water quality trends. The regulatory option may be chosen based on high ground water vulnerability, chemical characteristics such as leachability, areas of significant use or a combination of these factors.

7. [New] Regulatory actions may be needed instead of BMPs as determined by a committee of appropriate agencies including but not limited to IDA, IDWR, NRCS, SCC, SCD, CES and IDHW-DEQ.

7. [Existing] Regulatory programs will also be applied when required by law. Step nine recognizes that some agricultural sources and activities are already managed by regulatory programs.

Footnote: text added to original language in Ground Water Quality Plan designated as [ ]

INTRODUCTION

Agriculture accounted for 36 percent of Idaho's economy in 1991 (IASS, 1991). Considering the size and extent of this industry, it has the potential to place large demands on the state's resources. Mitigating agricultural impacts on ground water and preventing ground water contamination is a major challenge for the agricultural community and the agencies with agricultural program responsibilities.

In response, the **goal** of the Agricultural Ground Water Quality Protection Program is to protect the state's ground water and interconnected surface water from contamination originating from agricultural activities. The **purpose** of the program is to describe the management approaches to prevent ground water contamination and to respond to the occurrence(s) of such ground water contamination.

The following are the **objectives** of the Agricultural Ground Water Quality Protection Program:

7. Identify agricultural sources of ground water contamination.

7. Identify and describe the management approaches.

7. Identify and describe implementation strategies.

7. Identify roles and responsibilities of agencies involved in the protection of ground water quality.

7. Provide a basis for the development of an interagency Memorandum of Understanding which will solidify agency roles and responsibilities.

7. Describe how the Ground Water Quality Plan, the Agricultural Pollution Abatement Plan and the State Management Plan (SMP) for pesticides will interact and support the implementation of this program.

7. Inventory existing local, state, federal and industry agricultural ground water programs and assess the ground water protection capabilities of existing agricultural management programs.

SOURCES OF CONTAMINATION

The potential agricultural contaminant sources are:

Agricultural chemical storage and handling

Agricultural chemical mixing and loading

Agricultural chemical application practices

Agricultural practices

Confined animal feeding operations

Agricultural chemical waste disposal

Aquaculture waste management practices

Injection wells and other underground disposal methods

Agricultural chemical spills

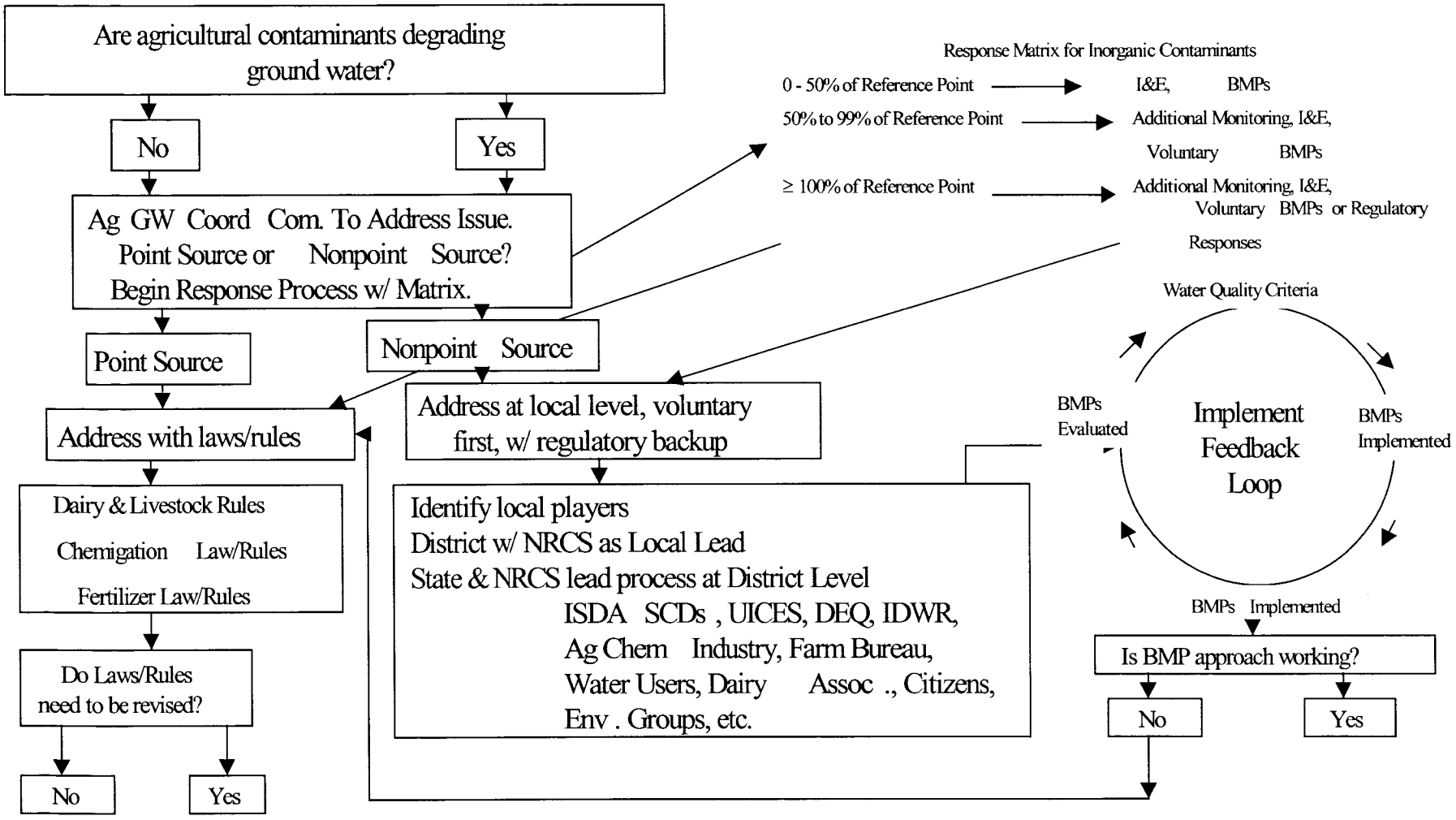
Urban/nonagricultural chemical uses

Land applied waste and wastewater

Agricultural waste disposal

Well construction and abandonment

These potential agricultural contaminant sources and their impacts on ground water are further identified in the Agricultural Chemical Source Matrix (Appendix A, Table 1). The corresponding existing management programs and recommendations addressing program deficiencies are identified for each source in the matrix. The matrix also shows the appropriate implementation strategy(ies) for each recommendation. Note: Recommendations commonly support using a combination of implementation strategies (I&E, BMPs, Regulations) for the most efficient program results.

Attachment B

Ground Water Stewardship Process For Inorganic Contaminants (DRAFT 12/4/98)