# SJR 22
# INTERIM STUDY ON GROUND WATER QUALITY PROTECTION AND MANAGEMENT

**Final Report to the 52nd**
**Montana State Legislature**

Prepared by the Environmental Quality Council
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## SUMMARY OF FINAL EQC RECOMMENDATIONS AND PROPOSED LEGISLATION

### GROUND WATER ASSESSMENT PROGRAMS

The legislation that EQC has requested to implement the following recommendations related to the ground water assessment programs is presented in Appendix #2.

**Recommendation #1**

The EQC recommends that a ground water monitoring program be established to record water chemistry and water levels on a long-term basis through a statewide network of observation wells.

**Recommendation #2**

The EQC recommends that a ground water characterization program be established to systematically assess Montana's ground water on a statewide basis.

**Recommendation #3**

The EQC reccommends that an interagency steering committee be established to guide the proposed ground water characterization and monitoring programs and to ensure that the work performed under the programs is fully coordinated with ground water-related projects that individual agencies may be conducting. Specific duties of the steering committee should include prioritizing aquifers for future ground water assessments and overseeing the selection of monitoring well sites. The steering committee should include representatives of the Department of Natural Resources and Conservation, the Department of Health and Environmental Sciences, the Department of Agriculture, the Department of State Lands, and the Natural Resource Information System. Ex-officio members may include representatives of the the EQC, the Montana Bureau of Mines and Geology (MBMG), the university system, federal agencies such as the USGS, the Bureau of Land Management, the Forest Service, the Soil Conservation Service, the Environmental Protection Agency and the Bureau of Reclamation, and local government, water users, industry and ecological protection organizations.

**Recommendation #4**

The EQC recommends that the MBMG be assigned primary administrative responsibility for the ground water characterization and monitoring programs, subject to the guidance provided by the interagency steering committee.

**Recommendation #5**

The EQC recommends that if the 1991 Legislature approves the proposed ground water monitoring and characterization programs, the resulting information should be entered into a Geographic Information System. A data collection and management system that ensures a reliable data base and that is satisfactory to the interagency steering committee should be implemented.

**Recommendation #6**

The EQC recommends that the interagency steering committee be responsible for identifying ways to heighten public awareness of ground water issues and improve government's efforts to educate the public about ground water. The task force also recommends that the MBMG provide technical support and information to existing ground water education programs.

**Recommendation #7**

The EQC recommends that the MBMG establish communication with the public in each area selected for ground water assessment under the characterization program. Mechanisms should be established to provide for a mutual exchange of information between state agencies and local people to identify citizen concerns and to explain the goals and process of the ground water assessment work.

**Recommendation #8**

The EQC recommends that a portion of the proceeds of the resource indemnity trust tax be allocated in an amount sufficient to support the proposed ground water monitoring and characterization programs.

**Recommendation #9**

If the proposed ground water characterization program is approved by the 1991 Legislature, the EQC recommends that the MBMG and the interagency steering committee encourage local government involvement to the fullest extent possible.

**Recommendation #10**

If the proposed ground water characterization and monitoring programs are approved by the 1991 Legislature, the EQC recommends that the MBMG devote immediate attention toward opening a dialogue with the USGS, the Bureau of Land Management, the Forest Service, Soil Conservation Service, the Environmental Protection Agency and the Bureau of Reclamation to specifically identify how their ground water programs and the federal funds targeted for Montana could be coordinated with the state's efforts.

## GROUND WATER MANAGEMENT

### Recommendation #11

The EQC endorses legislation to authorize county commissions to create local water quality districts, assess fees, and adopt local laws related to water quality protection, provided that the Board of Health and Environmental Sciences approves the local water quality program that would be administered in a local district. The legislation the EQC has requested to implement this recommendation is presented in Appendix #3.

### Recommendation #12

The EQC endorses an amendment to Section 85-2-506(2), MCA, to allow units of local government, including counties, incorporated cities and towns, and local water quality districts, to petition the Board of Natural Resources and Conservation to designate a controlled ground water area.

### Recommendation #13

The EQC endorses legislation to authorize the Department of Natural Resources and Conservation to prevent adverse effects on water quality and to ensure that ground water withdrawals do not exceed long term aquifer recharge rates when the department approves new water rights permits. This recommendation is contingent upon development of legislation that does not require applicants for water rights permits to provide the information necessary for the department to make these judgements.

## SEWAGE DISPOSAL AND SEPTIC SYSTEMS

### Recommendation #14

The EQC endorses legislation to clarify that the Department of Health and Environmental Sciences may issue a cleanup order to a local board of health or a county commission in instances where the board or commission has approved a waste discharge activity that the department has reason to believe is likely to cause pollution of state waters. The legislation EQC has requested to implement this recommendation is presented in Appendix #4.

### Recommendation #15

The EQC endorses legislation to require the Board of Health and Environmental Sciences to adopt rules establishing minimum standards for all new septic and sewage disposal systems connected to individual public and private buildings, and to

require local boards of health to adopt regulations for the control and disposal of sewage that are no less stringent than the state standards. Local governments should not be required to regulate sewage disposal systems that are reviewed and regulated by the Department of Health and Environmental Sciences under the public water supply system and sanitation in subdivision statutes. The legislation EQC has requested to implement this recommendation is presented in Appendix #4.

## UNDERGROUND STORAGE TANKS

### Recommendation #16

The EQC supports proposed congressional legislation to make federal Leaking Underground Storage Tank Trust money available to help small businesses providing petroleum products in geographically isolated communities to comply with underground storage tank regulations. Accordingly, the EQC will send a letter to the Montana Congressional delegation expressing support for this legislation.

## HARD ROCK MINING

### Recommendation #17

The EQC endorses legislation recommended by the Governor's Mine Permitting Improvement Advisory Council to amend the confidentiality provision of the Metal Mine Reclamation Act (Section 82-4-306, MCA) to allow the Department of State Lands to release information about mine exploration projects on public lands, except for patented claims. The type of information that will no longer be held confidential includes the locations of exploration projects and a description of surface disturbance, excluding proprietary geological information.

### Recommendation #18

The EQC recommends that the Department of Health and Environmental Sciences and the Department of State Lands jointly review their respective rules, procedures and statutory responsibilities to ensure that water quality is protected from adverse effects associated with hard rock mining activities. The EQC further recommends that the departments revise their rules, procedures and interagency agreement as necessary to more effectively coordinate mine permitting, regulatory activities, and cleanup operations relating to water quality protection.

**Recommendation #19**

The EQC recommends that the Department of Health and Environmental Sciences specifically review its rules pertaining to the content of applications for water pollution discharge permits and make revisions as necessary to ensure that the information is sufficient to enable the department to evaluate and mitigate ground water quality impacts associated with mining operations.

**Recommendation #20**

The EQC endorses legislation recommended by the Governor's Mine Permitting Improvement Advisory Council to prohibit persons from obtaining mining permits if they have unresolved legal issues stemming from past violations of state and federal mining laws that are not being addressed in good faith. If past legal issues are resolved to the satisfaction of the involved state and federal agencies, a person would subsequently be able to obtain new mining permits.

**Recommendation #21**

The EQC endorses legislation recommended by the Governor's Mine Permitting Improvement Advisory Council to authorize the Department of State Lands to establish an annual reporting requirement for all individual officers and directors of mining companies, partnerships, and other business entities to track and assess individual liability for environmental damages stemming from permitted mining.

## AGRICULTURAL CHEMICALS

**Recommendation #22**

The EQC endorses the portions of the Department of Agriculture's proposed budget for the 1992-1993 biennium that provide additional funding to implement the 1989 Montana Agricultural Chemical Ground Water Protection Act and to expand ground water monitoring for pesticides.

**Recommendation #23**

The EQC endorses legislation to specifically include research and demonstration of low chemical input farming practices among the types of projects proposed by public entities that are eligible to compete for funds from the water development and renewable resource development grant programs. A copy of this legislation is presented in Appendix #5.

**Recommendation #24**

The EQC endorses a resolution directing the DNRC to give greater emphasis to projects that focus on alternative agricultural practices and reduced agricultural chemical use in promoting the water development and renewable resource development grant programs, and directing Montana State University to aggressively pursue funding from all available state and federal sources for these types of projects. The EQC also will send a letter to MSU expressing the Council's support for alternative agricultural research and demonstration projects, and encouraging MSU to seek grant funds in order to give greater emphasis to these projects.

**Recommendation #25**

The EQC endorses legislation requiring weed district supervisors to receive training related to pesticide management, ground water protection, and public and worker safety, within the limits of available funding. The EQC also endorses the use of noxious weed management funds for purposes of improving the quality of training available to weed supervisors and for providing stipends where necessary to enable weed supervisors to attend the training programs.

**Recommendation #26**

The EQC recommends that the Department of Agriculture review its existing publications that classify pesticides according to their potential to contaminate ground water and make improvements wherever possible to increase the usefulness of these materials to Montana agricultural producers and other persons who use and apply pesticides. The EQC further recommends that the department reference this material on its computerized bulletin board to encourage greater public awareness and use of the information.

**Recommendation #27**

The EQC recommends that the Department of Agriculture prepare and publish a map showing usage patterns of pesticides commonly applied to agricultural crops and rangelands that have a high potential to leach to ground water. To develop the map the department should rely upon 1990 records currently collected from pesticide dealers and commercial and government applicators, and records that will be collected by the U.S. Department of Agriculture from farm applicators showing applications of restricted use pesticides.

**Recommendation #28**

The EQC endorses legislation to require pesticide registrants to submit to the Department of Agriculture results of tests completed on or after October 1, 1991 relating to the

leachibility of pesticides that have significant potential to impair ground water. The EQC also endorses legislation to require the department to provide copies of pesticide test results to interested persons, provided that the department may charge a reasonable fee for this service. A copy of this legislation is included in Appendix #5.

**Recommendation #29**

The EQC recommends that the Department of Agriculture review its pesticide applicator training and certification programs, and make revisions and improvements to increase the level of information and emphasis placed on long-term integrated pest management techniques.

**Recommendation #30**

The EQC endorses legislation to establish a voluntary reporting system to encourage persons to contact the Department of Agriculture and report on the types and volumes of waste pesticides in their possession, and directing the department to compile and analyze the information for purposes of making recommendations to the 1993 Legislature concerning the design and scope of a proposed waste pesticide collection program.

**Recommendation #31**

The EQC recommends that the Department of Agriculture develop proposals for the 1993 Legislature's consideration to ensure proper disposal of pesticide containers.

## WATER QUALITY BUREAU STAFFING

**Recommendation #32**

The EQC recommends that the 1991 Legislature provide 3.5 additional FTEs to the Water Quality Bureau and 1.0 additional FTE to the DHES legal unit to work on ground water quality protection tasks.

**SJR 22**
**INTERIM STUDY ON GROUND WATER QUALITY PROTECTION AND MANAGEMENT**

## INTRODUCTION

Public perception of the importance and fragility of the state's ground water resource has increased dramatically in the last few years, due in part to the increased number of contamination incidents that have occurred in Montana and elsewhere. As surface water supplies are becoming fully appropriated in a number of basins, ground water use has been increasing for a variety of beneficial purposes, including drinking water, irrigation, stock water, industrial processes, and commercial uses. Over half of Montana's people rely on ground water for their drinking water, including virtually all rural residents. In many areas ground water is so closely interconnected with surface water that the ground water supplies are essential to maintain both the quality and quantity of water in rivers and streams and to support aquatic ecosystems and riparian areas.

In recognition of the public's concern about ground water, the 51st Legislature approved Senate Joint Resolution 22 directing the Environmental Quality Council to evaluate state policies and programs for the protection and management of ground water quality (see Appendix #1). This report presents the EQC's findings and recommendations to the 52nd Legislature.

A major conclusion that the EQC reached through the SJR 22 study is that Montana's ground water has not been systematically evaluated and that the lack of basic hydrogeologic and ground water quality information is seriously hampering the efforts of citizens and government agencies to protect, manage, and develop the ground water resource. Accordingly, the EQC endorsed two proposed ground water assessment programs to fill in the gaps in current knowledge of ground water hydrogeology and quality. These programs are described in Section I and Appendix #2.

Virtually all organizations and regulated industries involved with water quality issues have expressed concern that the level of staff allocated to the ground water program in the Department of Health and Environmental Sciences is inadequate. The EQC addressed this issue in two ways. Local governments may be able to effectively administer portions of the Water Quality Act and regulate some types of contaminant sources on a local basis. To provide that opportunity to interested local governments the EQC endorsed legislation to allow counties to establish local water quality districts, subject to the Board of Health and Environmental Sciences' approval of the local water quality

programs that would be implemented in the districts (see Section II and Appendix #3). Section VII assesses the current ground water-related work load in the Water Quality Bureau and the DHES' legal unit. Based on this information the EQC concluded that additional staff should be allocated to DHES to administer and enforce the Water Quality Act and to develop more effective approaches to preventing ground water contamination.

The EQC received a substantial amount of testimony about ground water quality problems caused by improper sewage disposal in many areas of the state and the resulting costs that communities are facing in attempting to protect and maintain drinking water supplies. The EQC concluded that additional sewage disposal controls are warranted, including standards for the proper design, installation and maintenance of septic systems (see Section III and Appendix #4).

The 51st Legislature passed several major ground water quality protection initiatives, including the Montana Agricultural Chemical Ground Water Protection Act, statutes to regulate underground petroleum storage tanks and to provide funds for clean up of tank leaks, regulation of cyanide use by small miners, and ground water monitoring at large landfills. A major objective of the SJR 22 ground water study was to review agency implementation of these new programs and requirements. The results of the EQC's review of ground water issues related to hard rock mining, underground storage tanks, and agricultural chemicals are presented in Sections IV, V, and VI. Solid waste management and landfill-related issues are the subject of a separate EQC report based on another interim study conducted under SJR 19.

## SECTION I. PROPOSED MONTANA GROUND WATER MONITORING AND CHARACTERIZATION PROGRAMS

### Background

The Environmental Quality Council began its SJR 22 interim study on ground water quality and management with the presumption that the information necessary to make basic management and regulatory decisions was either lacking or inaccessible. The EQC appointed a fourteen member Ground Water Data Task Force in the fall of 1989 to assist with the study. The task force's assigment was to evaluate existing ground water data, identify the most important data deficiencies and develop a plan for obtaining the missing information and making existing information more accessible to users.

The Ground Water Data Task Force was comprised of representatives from each of the following units of government: 1) State agencies, including the Department of State Lands, the Department of Natural Resources and Conservation, the Department of Health and Environmental Sciences, the Department of Agriculture and the Montana State Library, Natural Resource Information System; 2) the University System, including the Montana Bureau of Mines and Geology (MBMG) and Montana State University; 3) Federal agencies, including the U.S. Geological Survey (USGS), the Bureau of Land Management, the Forest Service and the Soil Conservation Service; and 4) local government, including the Fort Peck Tribes and the Missoula County Department of Health. The task force met five times between October 1989 and May 1990 and presented its findings to the EQC in June 1990.

### Ground Water Task Force Findings and Conclusions

**1. Information on ground water hydrology and quality serves the following public and private purposes: water quality protection, water supply management, regulatory programs, public education, identification of vulnerable aquifers, protection of private water wells, operation of public water supplies, business development, water well drilling and irrigation.** For most of these purposes, ground and surface water are closely interconnected and cannot be effectively evaluated or managed separately. Ground water quality and supply are also closely interrelated in many locations.

**2. Where ground water data are lacking, important questions cannot be answered with any degree of certainty.** Examples of such questions include: Why are water levels declining? Is an adequate supply of water available? How will recent or proposed withdrawals affect existing wells or water rights? Is the water

safe to drink? Who polluted the water and when? What is the most effective clean-up strategy. What is the rate and direction of water flow? Where is the recharge area? What is the natural water quality?

3. The EQC received testimony during the 1990-1991 biennium on numerous ground water quality related issues, including; declining water quality in the Missoula and Helena Valley aquifers, leaking landfills and new ground water management requirements, leaking underground storage tanks, cyanide use in gold mining operations, detection of pesticides in ground water, ground water clean-up plans at Burlington Northern's Livingston site, and ground water contamination caused by improper sewage disposal and failed septic systems. **A common theme underlying most of these issues is the need for basic information about aquifer characteristics and water quality in order to improve the ability of citizens and government agencies to prevent ground water contamination.**

4. **Ground water data deficiencies consistently hamper water appropriations and water rights permitting decisions** because effects of new water withdrawals on other water users and ground and surface water interactions cannot be adequately assessed. Water use activities also have an effect on water quality, but water rights permitting decisions are made without this information.

5. **Ground water has not been systematically evaluated in Montana.** The locations of previous ground water studies containing one or more data elements included in the proposed ground water characterization program are shown on Figure 1. As Figure 1 illustrates, the characteristics of aquifers in substantial portions of the state were not previously studied nor were past studies conducted with the idea of producing a comprehensive statewide ground water data base. Some portion of the studies shown on Figure 1 may be suitable for inclusion in a new data base, but much of the information may be outdated or only useful for comparison with more recent information.

6. **Most of the information produced by ground water investigations <u>other</u> than those shown on Figure 1 is not applicable to most ground water management and protection decisions for some combination of the following reasons:**

.. the studies concentrated on problem situations such as saline seep and the behavior of contaminants in the subsurface rather than evaluation of the ground water resource;

.. the studies were done on a short-term, one-time basis and were not of sufficient duration to reflect year-to-year changes in aquifer flow and direction, or in some instances, seasonal changes;

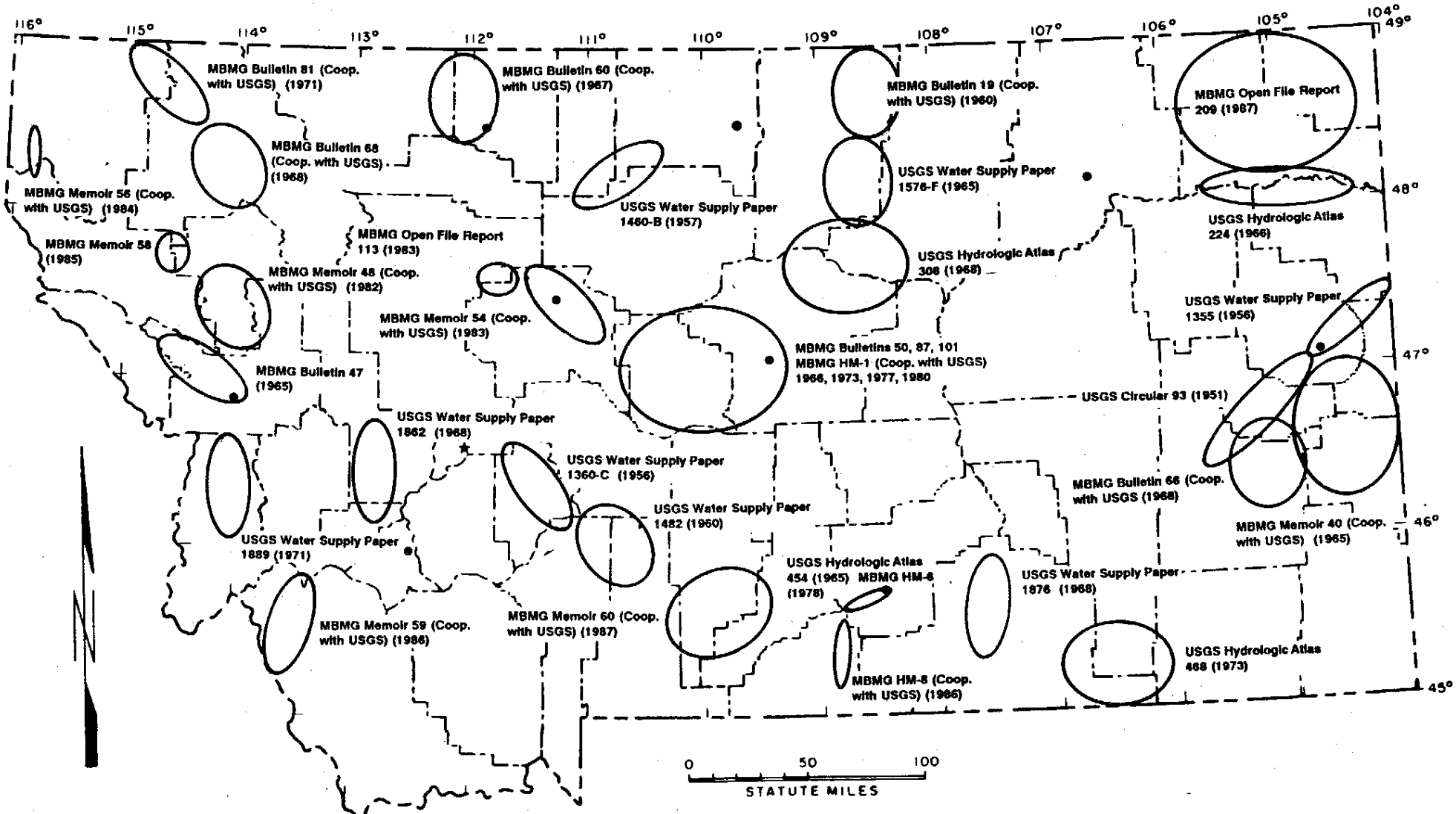



Figure 1: Schematic locations of ground-water studies published between 1950 and 1990 that contain one or more aspects of an aquifer characterization.

.. only one aquifer was studied rather than all of the potentially usable aquifers in a particular study area;

.. study results are incompatible or difficult to compare due to differences in emphasis or because different parameters were assessed;

.. aquifers were not evaluated for regional variability;

.. the study results were either too site-specific or too regional in scale; and

.. shallow alluvial aquifers that are generally the most vulnerable to contamination were not considered.

**7. Efforts to monitor ground water levels and natural water quality over the long-term have been generally weak and fragmented.** There is very little statewide information available, although there is more water level data than ground water quality information. The total average annual state funds spent for long-term ground water monitoring on a relatively stable basis is $31,150. **There is a significant need for a more comprehensive long-term monitoring record to measure on-going changes in ground water quality and supply.**

**8.** Systematic collection of ground water data will not provide immediate answers or the means to resolve all of the state's ground water issues. The information also will not be a substitute for the detailed, site-specific work required to site a new mine or a landfill, nor will it necessarily answer specific questions individual citizens may have about ground water hydrology or quality underlying their property. Instead, **the goal of the ground water monitoring and characterization programs is to generate data that will improve ground water protection and management decisions over the long term.**

**9. The expense of ground water cleanup operations and the difficulty of achieving acceptable results presents the strongest possible argument for a shift in emphasis to programs that prevent contamination. Prevention goals cannot be met without better statewide data concerning aquifer characteristics and ground water quality.**

Based on the Task Force's findings and conclusions, the EQC endorsed two proposed programs: a ground water monitoring program and a ground water characterization program. Issues addressed by the programs that are discussed further in this section include: interagency coordination, data management, public involvement and education, and program funding.

## Proposed Ground Water Monitoring Program

**Recommendation #1:**

**The EQC recommends that a ground water monitoring program be established to record water chemistry and water levels on a long-term basis through a statewide network of observation wells.**

### Program Description

Ground water data are used to define hydrogeologic conditions and background quality of water in an aquifer. This information is useful in resolving questions about the overall magnitude and frequency of changes in water levels in the aquifer and changes in water quality.

The proposed ground water monitoring program would concentrate on shallow aquifer systems, but would also include some deeper aquifers that are widely used in Eastern Montana. The Ground Water Data Task Force suggested an allocation of 730 monitoring wells among the major aquifer groups in the state. Observation wells could either be privately or publicly owned water wells or special monitoring wells drilled specifically for the program. Construction of new monitoring wells would be done only as a last resort if there are no suitable existing wells in an area considered critical for obtaining information about a paricular aquifer. For the most part, the observation wells would be selected from existing monitoring programs and inventories of wells and well logs on file in agency data bases.

The program would consist of quarterly water level measurements on each well, with continuous recorders installed on 10 percent of the wells. Water quality samples would be collected from ten percent of the wells (about 70 wells) annually. Water quality monitoring would include analyses of inorganic parameters and selected organic parameters for aquifers considered vulnerable to contamination.

**The projected cost of the proposed ground water monitoring program is $438,512 per biennium,** as shown by the budget presented in Table 1.

## GROUND WATER MONITORING PROGRAM

### Annual Budget

| **Personnel** | **Year 1** | **Year 2** |
|---|---|---|
| Hydrogeologist (1 FTE) | $ 30,000 | $ 30,000 |
| Data entry Personnel (1 FTE) | 15,800 | 15,800 |
| Field program trainer (.33) | 6,160 | 6,160 |
| Water sampling technician (1 FTE) | 18,480 | 18,480 |
| Benefits (22%) | 15,497 | 15,497 |
| Subtotal Personnel | $ 85,937 | $ 85,937 |
| **Operations** | | |
| Mileage; 60,000 miles at $.30/mile | $ 18,000 | $ 18,000 |
| Per diem; 401 days at $38.50/day | 15,439 | 15,439 |
| Computer application | 15,000 | 15,000 |
| Equipment: | | |
| Electric water level sounders; 12 at $380/each | 4,560 | 400 |
| Water-quality sampling equipment; Cond. meter, pH meter, filtering apparatus, filters, etc. | 1,500 | 1,500 |
| Water-level recorders; 30 at $900 | 27,000 | 9,000 |
| Equipment Rental: | | |
| Pumping, testing and other miscellaneous equipment | 10,000 | 10,000 |
| Analytical Costs: | | |
| Inorganic; 70 analyses at $100/each | 7,000 | 7,000 |
| Volatile organic; 70 analyses at $180/each | 12,600 | 12,600 |
| Other organic; 70 analyses at $190/each | 13,300 | 13,300 |
| Well construction and testing | 20,000 | 20,000 |
| Subtotal Operations | $144,399 | $122,239 |
| **Annual Total** | **$230,336** | **$208,176** |
| **Total for Biennium** | **$438,512** | |

## Proposed Ground Water Characterization Program

**Recommendation #2:**

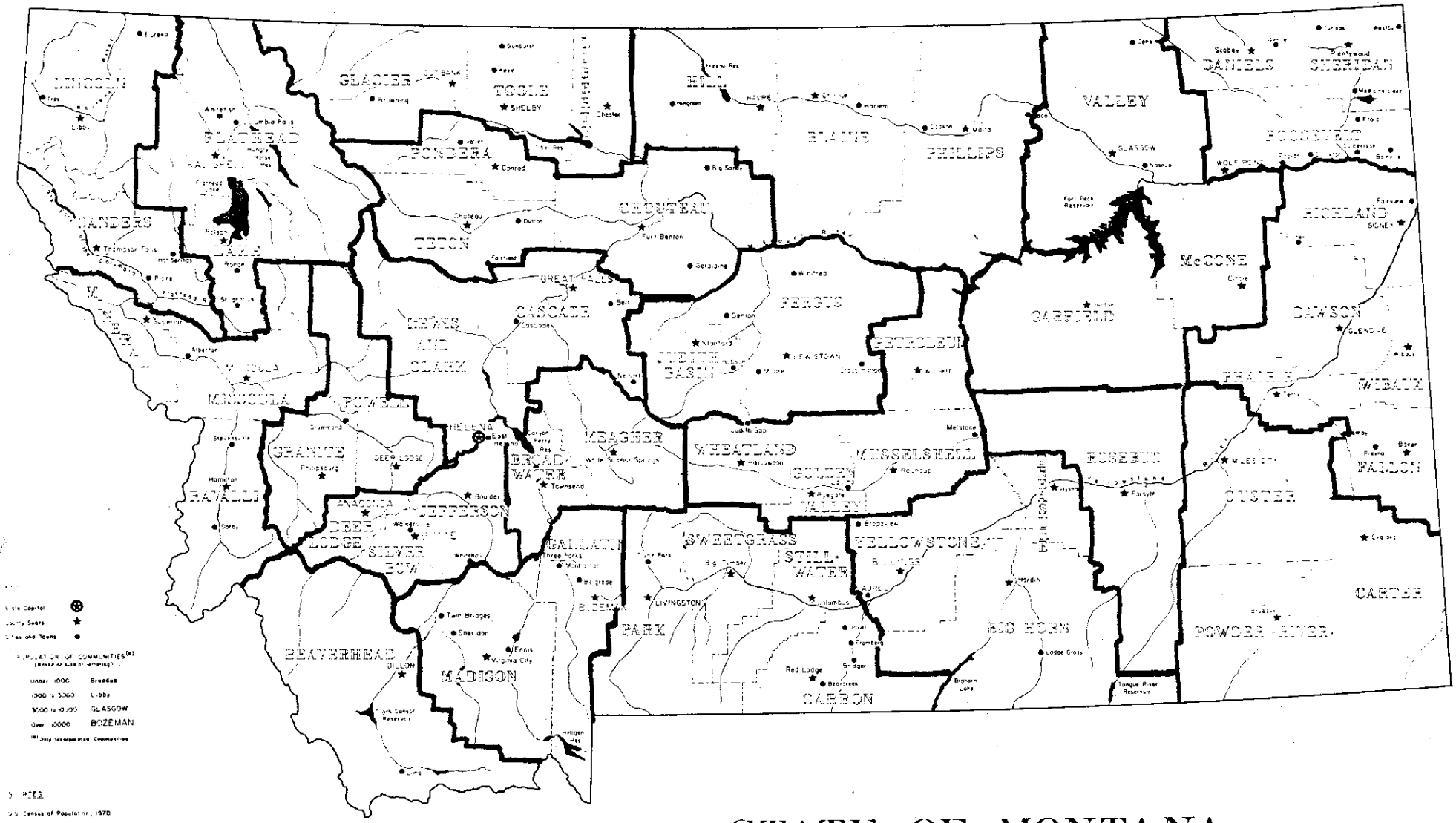
**The EQC recommends that a ground water characterization program be established to systematically assess Montana's ground water on a statewide basis.**

There is no mandate in Montana statutes for a program to systematically assess the state's ground water. While existing law does not prohibit or discourage agencies from initiating aquifer studies, the lack of a specific directive to any one agency to implement an organized program and lack of specific funds for this purpose has hampered progress in achieving a better understanding of the ground water resource. **The goal of the proposed ground water characterization program is to study all of Montana's major aquifers over the next twenty-one years and to provide data that are useful to all agencies with ground water management and protection responsibilities and to all citizens interested in protecting and developing ground water.**

### Prioritization of Aquifers

Figure 2 depicts 21 potential study areas that would be evaluated under the proposed ground water characterization program. The Ground Water Data Task Force identified these areas by matching drainage basin boundaries to county boundaries as much as possible and by grouping geologically similar areas together. The task force recommended that areas should be prioritized for assessment according to two primary criteria:
1) vulnerability to contamination and/or declining water supply; and 2) functional importance of the aquifer in terms of current and potential use. **The areas of Montana that are likely to receive highest priority for the first ground water assessments conducted under the program are the Western Montana basins and the Eastern Montana river valleys, primarily because these areas are where the most people live, where activities involving use of contaminant substances are greatest, and where aquifers tend to be generally shallow and most vulnerable to pollution.**

**Other criteria that should be considered in the selection of priority ground water assessment areas are: the seriousness of the health threat posed by certain types of contaminants and the extent of these contaminants; aquifers that are of highest current ambient quality; areas where ground water problems are occurring or are considered likely to occur; the functional**




# STATE OF MONTANA

Figure 2: Ground Water Characterization Study Areas

**importance of an aquifer to surface hydrology and quality; aquifers that are both vulnerable to contamination and important for a variety of uses but that have not been previously studied; the level of local interest in and support for ground water assessment work; and aquifers that are sole sources of drinking water.**

Program Description

**Once an area is selected for a ground water assessment, all of the aquifers currently used or potentially usable in the study area would be included, although more emphasis would be given to those aquifers considered most vulnerable to contamination (i.e., the shallower aquifer systems).** Since surface water and shallow ground water are closely connected, the ground water assessments would allow analysis of surface/ground water interactions. Each completed study would include the following series of map topics and a narrative report: published literature base map, surface and bedrock geologic maps, geologic cross-sections, aquifer characteristics map, water quality map, land use inventory map, water well inventory map, water table map and aquifer assessment map.

The proposed ground water characterization program would focus on the collection of basic hydrogeological, water quality, water use and land use data and interpretation of the information in order to determine aquifer characteristics such as flow direction, recharge-discharge patterns, and cause-effect patterns related to water withdrawal and surface-ground water interactions. The land use inventory would primarily consist of verifying the locations of point and potential nonpoint sources of ground water contaminants. Water quality analyses would include sampling for common ions, inorganic chemicals, metal ions and nutrients. In areas where there is particular concern about the possible presence of contaminants, the work would also include sampling for those substances as funds permit.

Each of the twenty-one ground water assessments would require approximately three years to complete and would require the services of a team of hydrogeologists, including a water quality specialist and a data manager. Approximately one ground water assessment would be completed each year after initial program start-up, resulting in complete state-wide coverage in twenty-one years. **The estimated cost of this program is $893,220 per biennium,** as shown by the budget in Table 2.

## GROUND WATER ASSESSMENT, CHARACTERIZATION AND EVALUATION

### Annual Budget

| | |
|---|---|
| **Personnel** | |
| Hydrogeoligist/Manager/Outreach ( 1 FTE) | $ 35,000 |
| Hydrogeologist/Physical Hydrologist ( 1 FTE) | 35,000 |
| Hydrogeologist/Water Quality (1 FTE) | 35,000 |
| Hydrotechnician (1 FTE) | 25,000 |
| GIS Specialist (.5 FTE) | 16,000 |
| GIS/Data Base Technician (1 FTE) | 25,000 |
| Secretarial (.25 FTE) | 3,600 |
| Benefits (22%) | 38,410 |
| Subtotal Personnel | $213,010 |
| **Operations** | |
| GIS basemaps, data entry and acquisition | $ 9,600 |
| Computer application, programming and software | 10,000 |
| Equipment; sampling, monitoring and testing | 8,000 |
| Equipment rental; pumps, recorders and loggers | 8,000 |
| Travel and per diem (team); | |
| 40,000 miles at $.30 per mile | 12,000 |
| 182 days at $38.50/day | 7,000 |
| Office and field supplies | 6,000 |
| Communications | 2,000 |
| Publication costs; reports, maps, etc. | 8,000 |
| Subtotal Operations | $ 70,600 |
| **Contracted Services** | |
| USGS-MBMG Coop Program | 35,000 |
| Analytical cost: selected organic and inorganic analyses; an estimated 300 at $160 each | 48,000 |
| Drilling Program; exploration and monitoring well installation | 80,000 |
| Subtotal Contracted Services | $163,000 |
| **Annual Total** | **$446,610** |
| **Total for Biennium** | **$893,220** |

## Interagency Coordination

**Recommendation #3:**

**The EQC recommends that an interagency steering committee be established to guide the proposed ground water characterization and monitoring programs and to ensure that the work performed under the programs is fully coordinated with ground water-related projects that individual agencies may be conducting. Specific duties of the steering committee should include prioritizing aquifers for future ground water assessments and overseeing the selection of monitoring well sites. The steering committee should include representatives of the Department of Natural Resources and Conservation, the Department of Health and Environmental Sciences, the Department of Agriculture, the Department of State Lands, and the Natural Resource Information System. Ex-officio members may include representatives of the EQC, the Montana Bureau of Mines and Geology (MBMG), the university system, federal agencies such as the USGS, the Bureau of Land Management, the Forest Service, the Soil Conservation Service, the Environmental Protection Agency and the Bureau of Reclamation, and local government, water users, industry, and ecological protection organizations.**

Interagency coordination is a critically important component of the proposed ground water programs. Some of the inadequacies of existing ground water data and problems hampering data access can be traced to the historic lack of interagency coordination of ground water programs. Agencies have mainly tended to cooperate on a project-specific or site-specific basis where issues involving separate agency jurisdictions have arisen. Systematic study of the ground water resource has not been fostered by this arrangement. If the proposed ground water characterization and monitoring programs are initiated, many agencies have a legitimate interest in participating on a continuing basis to ensure that the programs meet their needs.

## Program Administration

**Recommendation #4:**

**The EQC recommends that the MBMG be assigned primary administrative responsibility for the ground water characterization and monitoring programs, subject to the guidance provided by the interagency steering committee.**

The MBMG has statuatory responsibility for conducting studies, compiling statistics and publishing reports concerning Montana geology, including hydrology. The Ground Water Information Center is housed at the MBMG and is the repository for a substantial portion of existing Montana ground water data. MBMG staff have been responsible for many ground water field investigations and have performed work under contract or in cooperation with virtually all other state and federal agencies that are responsible for ground water programs in Montana.

## Data Management

**Recommendation #5:**

**The EQC recommends that if the 1991 Legislature approves the proposed ground water monitoring and characterization programs, the resulting information should be entered into a Geographic Information System. A data collection and management system that ensures a reliable data base and that is satisfactory to the steering committee should be implemented.**

Numerous problems have historically hampered user access to ground water data in Montana. Mechanisms needed to make existing data easily computer-accessible to users are not yet in place. Other data management issues that need to be resolved include differences in map scales among various sets of data, loss of data accuracy through conversion to a GIS, inconsistency in quality of ground water data, and the need for uniform standards for ground water data collection, analysis and recording. Data resulting from the proposed programs should be made available in

written form and on a GIS, and on-line access to information should be readily available to any interested user who possesses the necessary computer hardware and software.

Public Education and Involvement

**Recommendation #6:**

**The EQC recommends that the interagency ground water steering committee be responsible for identifying ways to heighten public awareness of ground water issues and improve government's efforts to educate the public about ground water. The task force also recommends that the MBMG provide technical support and information to existing ground water education programs.**

**Recommendation #7:**

**The EQC further recommends that the MBMG establish communication with the public in each area selected for ground water assessment under the characterization program. Mechanisms should be established to provide for a mutual exchange of information between state agencies and local people to identify citizen concerns and to explain the goals and process of the ground water assessment work.**

All existing and planned efforts to increase public awareness of the importance of ground water, the causes of ground water contamination, and options for reducing contamination risk should be encouraged. However, better interagency coordination of these programs is needed. Because the proposed ground water monitoring and characterization programs would be focused on the study of the state's ground water resource as a whole, these programs would place the MBMG in a unique position to contribute to the efforts of other agencies that are responsible for developing ground water information for the public.

Development of strong working relationships with local governments, water user associations, conservation districts, rural water districts, public water supply operators and other organizations with a special interest in ground water will be important to the success of individual ground water assessments and acceptance of the proposed ground water programs. Local

support and recognition of threats to ground water quality and supply may also be significant factors influencing the selection of areas for future study.

Potential Funding Options for Ground Water Information Programs

**Approximately $1.33 million will be required to fund the proposed ground water monitoring and characterization programs each bienium. The proposed programs will require a stable, long-term source of funding.** Potential revenue sources being considered by the EQC include reallocation of funds currently directed to other purposes, increases in the rates or levels of existing funding mechanisms, and creation of new funding mechanisms.

There is general agreement that state general fund revenues are not a realistic option for funding the proposed programs. Revenue could be collected from the general public based on the premise that everyone has a responsibiltiy for ensuring that ground water is properly managed and protected and that everyone contributes to some degree to the demands and stress placed on ground water systems. Potential revenue mechanisms currently assessed on the general public include the gasoline tax, vehicle registration fees and the cigarette tax. Another option is reallocation of a percentage of the resource indemnity trust tax, based on the premise that improved ground water information would substantially enhance all types of projects and activities aimed at reclaiming sites and areas damaged by past resource extraction. Revenue also could be collected from specific sources of ground water contamination such as landfills, mining operations, oil and gas wells, pesticides, fertilizers, and hazardous wastes. Fees could also be assessed on ground water users.

A partial listing of issues affecting the choice of a funding source includes the following: 1) the administrative expense of collecting revenue from any new funding mechanisms; 2) current uses of the funds raised by existing fees and taxes; 3) the likelihood of other proposals in the 1991 Legislature to raise the rates of existing funding mechanisms or creating new ones; 4) the political acceptability of raising the rates of any existing funding mechanisms or creating new ones; 5) the distribution and comparative rates of fees and taxes among the various sources of ground water contaminants; and 6) the volume of revenue some types of industry and businesses are already providing to support environmental and natural resource programs.

**Recommendation #8:**

**After substantial debate and evaluation of the various funding alternatives, the EQC recommends that a portion of the proceeds of the resource indemnity trust tax be allocated in an amount sufficient to support the proposed ground water monitoring and characterization programs.**

Local Government

**Recommendation #9:**

**If the proposed ground water characterization program is approved, the EQC recommends that local government involvement should be encouraged by the MBMG and the interagency ground water information steering committee to the fullest extent possible.**

Federal Agencies

**Recommendation #10:**

**If the proposed ground water characterization and monitoring programs are approved, the EQC recommends that the MBMG devote immediate attention toward opening a dialogue with the USGS, the Bureau of Land Management, the Forest Service, the Soil Conservation Service, the Environmental Protection Agency, and the Bureau of Reclamation to specifically identify how their ground water programs and the federal funds targeted for Montana could be coordinated with the state's efforts.**

Cost share arrangements can be made with the USGS to conduct part of the ground water assessment work and potentially absorb up to 50 percent of some expenses. There is also a possibility of negotiating cost-share agreements with other federal agencies such as the Bureau of land Management and the Forest Service,

depending upon federal revenue availability for ground water programs.

Based upon the level of attention that ground water is receiving nationally, the next two or three years may be an unprecedented opportunity for increasing ground water data collection and analysis in the state in partnership with federal agencies, particularly if Montana is willing to define its priorities and provide more support than in the past.

**The legislation EQC has requested to establish and fund the proposed ground water monitoring and characterization programs is presented in Appendix #2.**

## SECTION II. GROUND WATER MANAGEMENT AREAS

A number of areas in Montana are threatened by ground water contamination and depletion. These threats particularly occur where population centers are located over shallow aquifers and in areas with low recharge rates where large volume ground water withdrawals are occurring or proposed. No statewide study of aquifer vulnerability has been done, but ground water contamination and potential aquifer depletion are issues of concern. Programs that regulate contaminant sources and that issue permits to water appropriators are inherently reactive because they are designed to respond to proposed development on a case by case basis. Montana generally lacks programs designed to anticipate ground water protection needs and to prevent problems from occurring. Designation of special ground water management areas is one aspect of a more preventive approach to ground water protection.

The primary purpose of a ground water management area program is to identify locations where there are potential threats to ground water quality or situations that could cause water supply to decline and to implement preventive strategies before the problems occur or become critical. Responsibilities for ground water protection within a designated management area are generally shared by state and local governments, and may also include federal agencies, water users, businesses, industry, and citizens. The success of this type of program depends on local leadership. Ground water management areas that have been established in neighboring states may offer a model for Montana policymakers.

### EQC Review of Ground Water Management Issues

In order to evaluate the applicability of ground water management areas to Montana situations, the EQC sponsored a panel discussion at its April 27, 1990 meeting that included the following participants: Jim Carlson, Missoula City-County Health Department; Will Selser, Lewis and Clark County Health Department; Rich Moy, Water Management Bureau, Department of Natural Resources and Conservation (DNRC); John Arrigo, Water Quality Bureau, Department of Health and Environmental Sciences (DHES); and Doug Rushton, Washington Department of Ecology. Mr. Carlson and Mr. Selser discussed numerous ground water problems that have occurred in their respective counties. Mr. Moy described Montana's controlled ground water area statute and other water supply management issues. Wellhead protection was the subject of Mr. Arrigo's presentation. Mr. Rushton discussed the state of Washington's ground water management areas program and designation process. The following material summarizes and updates these speakers' presentations.

Examples of Aquifer Contamination Problems and Responses

The ground water that underlies many of the populated valleys in the western third of Montana and major river valleys throughout the state is threatened by existing and potential degradation. Residents of these areas depend on ground water as their source of drinking water. Portions of both the Missoula and Helena Valley aquifers are known to be contaminated by a variety of substances, including pesticides, bacteria, nutrients, petroleum products, organic compounds, and a variety of toxic contaminants that are leaking from landfills. The contamination is an economic problem as well as a health issue. Local governments in both the Missoula and Helena areas have concluded that an overall management strategy is needed to protect these aquifers.

Local governments have inadequate authority and resources to implement comprehensive ground water protection programs. The DHES has authority to enforce water quality standards and various state agencies are responsible for regulating most major contaminant sources. However, the DHES does not have sufficient funding to properly perform many of its water quality protection duties. Although the DHES has given a number of counties permission to inspect possible sources of ground water contamination, some local governments want more responsibility. Local sanitarians and health officers are often more familiar with site-specific ground water problems in their areas and some local officials feel that they would be able to resolve local ground water protection issues more effectively than the DHES. Local governments would need additional funding if they are given more responsibility for water quality.

In June 1990 the Lewis and Clark City-County Health Board announced a proposal to create a "Water Quality Assurance District". If the proposal is implemented, property owners in the county would be assessed a special fee to raise approximately $145,000 annually for a long-term local program to protect drinking water supplies. The funds would pay for a septic system inventory, current county health department costs for water quality protection, toxic waste clean-up and use reduction, the county's share of a special Helena Valley aquifer study, water quality monitoring, stormwater drainage planning, pesticide use reduction by the local weed district, water-quality related zoning, and the salary of a program coordinator. The method of allocating costs for this proposed program among urban and rural residents has been controversial. Nevertheless, the program appears to include many of the components necessary to reduce threats of ground water contamination.

The following two subsections discuss some of the limitations in existing Montana law for addressing the relationships between water supply, land use and water quality.

## Ground Water Supply Management

In some areas of Montana, ground water is the only source of water. Interest in ground water for irrigation and other purposes is increasing in a number of locations, especially where surface water is becoming fully appropriated. Large volume withdrawals will cause a significant water supply decline in some aquifers, particularly aquifers where recharge rates are low. A number of large water rights holders are beginning to object to new proposals to withdraw alluvial ground water because they are concerned that their water rights will be adversely affected. Water quality and quantity also are closely interconnected and increased water withdrawal may cause water quality to decline in some areas. Adequate data to evaluate these potential problems are generally lacking.

Ground water management issues could be addressed through the state water plan, but this topic was not selected to receive priority attention during the 1990-1991 biennium. The DNRC has indicated that ground water will be addressed in the state water plan in the future.

## Controlled Ground Water Areas

The Board of Natural Resources and Conservation (BNRC) has the authority to designate a controlled ground water area by petition of the DNRC or 20 local water users or one-quarter of the water users in an area proposed for designation. In order for the BNRC to designate a controlled ground water area, the facts supporting a petition must demonstrate that at least one of the following situations exist: ground water withdrawals are exceeding water recharge; excessive ground water withdrawals are likely to occur in the near future; significant disputes are in progress regarding priority of rights, amount of ground water used by appropriators, or priority of type of use; ground water levels or pressures are declining; or excessive ground water withdrawals are occurring and will cause contaminant migration and ground water quality degradation.

The BNRC must hold a public hearing before it can designate a controlled ground water area. Once an area is designated, the BNRC may impose a number of corrective control provisions. The BNRC can close the area to further appropriations, limit total ground water withdrawals among existing appropriators, impose a system of rotation of water use and other restrictions, give preference to water use for domestic purposes and livestock, and impose other provisions deemed necessary to protect public health, safety, and welfare.

Although the controlled ground water area statute has been part of Montana law for nearly thirty years, only two areas have been

designated. Water users may be hesitant to invite BNRC intervention into local water issues and thereby trigger state-level management decisions that could affect existing water rights. Designation of a controlled ground water area is essentially a reactive response to problems rather than a tool to prevent problems from occurring. Also, the BNRC's authority is limited to water supply management and does not include management of land use practices that may be causing or contributing to adverse effects on both ground water supply and quality.

## Other Ground Water Management Concerns

Current law limits the DNRC's ability to prevent ground water supplies and quality from declining. For example, water management agencies in some other states have the authority to restrict long-term aquifer depletion, but the DNRC does not. The DNRC may consider water quality impacts when issuing permits for ground water appropriations greater than 4,000 acre-feet and 5.5 cubic feet per second, but the department may not evaluate these impacts when issuing permits for appropriations less than 4,000 acre-feet but greater than 100 gallons per minute. New water wells that produce less than 100 gallons per minute are exempted from permit requirements. The department conducts no evaluation of either water supply or water quality impacts for these wells.

The Board of Water Well Contractors has adopted rules that include water well construction standards and provisions concerning proper abandonment of wells. Although the Board is sponsoring education efforts to help prospective well owners ensure that their wells are properly installed, there is a need for better enforcement of the water well installation standards. There is also a substantial number of older wells that do not meet the standards. These wells may exacerbate water quality problems because they can serve as conduits for movement of contaminants and mixing of poorer quality water with higher quality water. The DHES gives priority attention to larger public water supply systems in enforcing water quality standards but lacks sufficient staff to enforce the standards for private water wells. In the Missoula area an estimated 20 percent of private water wells are contaminated, but the local health department lacks the funds, personnel, and regulations to address the problem.

## Wellhead Protection

Based upon 1986 amendments to the Federal Safe Drinking Water Act, Congress directed the EPA to create a wellhead protection program that would be implemented by the states. The purpose of the program is to prevent ground water pollution through special

management of contaminant sources and land uses in areas surrounding water wells, especially public water supply wells. The EPA has only recently begun to make funds available to the states for wellhead protection, but approximately 30 states have already submitted program applications to the EPA and four have been approved. The DHES has not yet submitted its wellhead program application due to lack of funding and staff; however, DHES expects to receive an EPA grant of about $36,000 for this purpose.

There are over 2,100 public water supply systems in Montana. Of this total, about 700 are municipal systems. The other 1,400 systems serve schools, trailer courts, subdivisions, and businesses. Although most of Montana's largest communities rely on surface sources for their drinking water, all but 98 of the public water supply systems use ground water. The need for wellhead protection is most apparent in populated areas where drinking water is supplied by relatively shallow aquifers. However, depending on local hydrogeologic conditions, ground water can also become contaminated in smaller communities and rural subdivided areas. Wellhead protection may also be warranted in these areas in order to maintain the quality of drinking water.

The development and implementation of wellhead protection programs depends on local government and community leadership. As a first step, communities must determine the level of water quality protection they want and are willing to work toward. After a community makes a decision to develop a wellhead program, it must collect sufficient hydrogeologic data to delineate the boundaries of the area that should be protected. The next step is an inventory of land uses and contaminant sources in the proposed wellhead area to evaluate potential threats to ground water. Another critical step is definition of the separate roles and duties of state and local agencies and the appropriate mixture of regulatory and land use management tools needed to protect ground water.

Missoula is likely to be the first community in Montana to complete the hydrogeologic studies necessary to develop a local wellhead protection program. Similar efforts are underway to evaluate the Helena Valley aquifer. However, funding is generally inadequate to pay for data collection, program development, and administration. Both communities have relied on federal and state grants to do much of the initial technical work and both communities are pursuing additional funding from a variety of sources to continue their efforts. In order for local wellhead protection programs to be properly developed and operated over the long term, stable funding at the local level will be necessary. The following subsection summarizes how one of Montana's neighbors, the state of Washington, has provided for

local government financing and management of ground water protection areas.

## Ground Water Management Areas in Washington State

The state of Washington's ground water management areas legislation was passed in 1986 in response to widespread public concern about threats to drinking water. Wellhead protection is one way that contamination may be prevented in a ground water management area, but Washington's program is more comprehensive because it addresses both water supply and water quality issues and advocates a regional approach to the protection of entire aquifers and aquifer systems. The State Department of Ecology administers the program. However, local recognition of the need for special ground water management and local leadership in developing specific management strategies has been the key to the program's success. There are currently 16 ground water management areas in Washington that cover approximately 10 percent of the state. Local committees are still in the process of collecting technical information and developing management plans for most of these areas.

Washington established a state grants program with revenues from a special cigarette tax to provides funds to local governments and ground water advisory committees to develop and implement ground water management area plans. Counties are typically the lead agency in the planning effort. The advisory committees include representatives of county and city governments, state and federal agencies, Indian tribes, water users, businesses, and public interest groups. The state provides technical assistance to the advisory groups and also pays up to 50 percent of program implementation costs after the Department of Ecology has certified a proposed ground water management area plan. Ground water management area grants have averaged approximately $650,000 each.

A variety of regulatory and land management mechanisms may be applied in a ground water management area. Examples of local ordinances include restrictions on siting of contaminant sources in sensitive areas (i.e., areas overlying vulnerable aquifers), restrictions on building density, and traffic management in sensitive areas to minimize the chance of contaminant spills. State agencies may impose special conditions on contaminant discharge sources that are regulated under state programs. Also, water withdrawals may be restricted where there is concern about aquifer depletion. The Department of Ecology is exploring the possibility of turning some responsibility for water supply management and water rights permitting over to units of local government that have certified ground water management plans.

Local administration of ground water management areas in Washington will be financed primarily through special fees that county commissions may impose on individual sewage disposal systems and private water wells. A commission cannot impose the fees unless voters approve a special ballot proposition to authorize creation of an aquifer protection area. The ballot proposition must describe the proposed area boundaries, specify the maximum level of fees that may be charged, and describe the uses of the fees. An aquifer protection area may not include territory within a city or town without the approval of the city commission or town governing body.

Washington's ground water management areas program may offer a model for Montana to address problems of declining ground water quality and supply. If this approach were selected for implementation in Montana, major issues that would require detailed investigation include the following: 1) local government authority to establish ground water management areas; 2) coordination and allocation of state and local government duties; 3) procedures to designate a ground water management area; and 4) funding options, including local government authority to collect revenues.

## Response Options

The EQC evaluated the following list of potential legislative responses to ground water management issues:

### DHES Authority and Funding

1) Provide additional funds to the Water Quality Bureau to improve ground water quality protection efforts and enforcement of existing statutes and regulations;

2) Amend the Water Quality Act to allow local governments to establish water pollution control districts similar to the authorization for air pollution control districts currently contained in the Clean Air Act of Montana. Under this option local governments could develop regulatory programs to enforce the Water Quality Act for certain contaminant substances and collect fees locally to pay for the program;

### Ground Water Management Areas

1) Further examine the need for ground water management areas legislation in Montana and the level of support for this concept among local governments, water users, and the general public;

2) Request an initial draft of ground water management areas legislation for EQC review;

3) Determine that ground water management areas legislation is not necessary at this time;

Other Ground Water Management Issues

1) Authorize the DNRC to consider potential aquifer depletion and water quality impacts when issuing water rights permits;

2) Evaluate the adequacy of water well installation and abandonment regulations and enforcement practices;

3) Further examine options for improving coordination of water quality and water supply management functions within state government.

## EQC Deliberations

The EQC decided that localized ground water problems could be addressed by allowing counties to create local water quality districts and by allowing units of local government to petition the BNRC to designate controlled ground water areas. The EQC also endorsed the option of incorporating new criteria into the water rights permitting process that would allow the DNRC to consider water quality impacts and impacts on long-term aquifer recharge capabilities. Accordingly, the EQC approved the following final recommendations:

**Recommendation #11:**

**The Environmental Quality Council endorses legislation to authorize county commissions to create local water quality districts, assess fees, and adopt local laws related to water quality protection, provided that the Board of Health and Environmental Sciences approves the local water quality program that would be administered in a local district. The legislation the EQC has requested to implement this recommendation is presented in Appendix #3.**

**Recommendation #12:**

**The Environmental Quality Council endorses an amendment to Section 85-2-506(2), MCA, to allow units of local government, including counties, incorporated cities and towns, or a local water quality district, to petition the Board of Natural Resources and Conservation to designate a controlled ground water area.**

**Recommendation #13**

**The Environmental Quality Council endorses legislation to authorize the Department of Natural Resources and Conservation to prevent adverse effects on water quality and to ensure that ground water withdrawals do not exceed long term aquifer recharge rates when the department approves new water rights permits. This recommendation is contingent upon the development of legislation that does not require applicants for water rights permits to provide the information necessary for the department to make these judgements.**

## SECTION III - ON SITE SEWAGE DISPOSAL AND SEPTIC SYSTEMS

Montana law contains a variety of statutes and regulatory programs that are designed to protect ground water and other natural resources from the adverse environmental effects of large industrial developments. Agencies, project developers, and the public scrutinize these programs on a continuing basis and frequently enter into heated debate about whether the programs are operating fairly and effectively. Nonpoint sources of pollution such as septic systems historically have received much less comprehensive or stringent regulatory attention.

Montanans express concern about maintaining public health and the quality of their drinking water, but many citizens distrust government interference with private property rights, especially individual decisions about where and how to build homes. The state's current sewage disposal laws and regulations and the level of funding allocated for enforcement and water quality monitoring reflect the tension between these public concerns.

### Overview of the Problem

Approximately 300,000 people in Montana are served by an estimated 120,000 individual, on-site septic systems. Except where site conditions are inherently unfavorable, properly designed and installed septic systems can provide low cost, effective sewage treatment without contaminating ground water. Ground water quality monitoring efforts in Montana have not been extensive enough to define the magnitude of septic system failures, but most professionals working on public health and water quality-related issues believe that improper sewage disposal is causing substantial, widespread water quality contamination.

The contaminants most often associated with sewage are coliform bacteria, other pathogens, nutrients, and heavy metals. Areas of the state where septic system failures have been documented include but are not limited to Evergreen, the Missoula Valley, Whitefish Lake, Seeley Lake, Sidney, Melrose, Baker, Troy, St. Regis, Stockett, and the Flathead Valley. Problems are often initially discovered through routine well water sampling, but data are almost always insufficient to document the extent of contamination and to establish a direct causal link with specific failed septic systems.

Site characteristics linked with septic system failure include high water tables, porous soils that allow effluent to move too quickly into ground water, and tight soils that inhibit downward movement to such an extent that effluent moves to the surface. Where residential development has occurred along stream banks and lake shores, surface water quality may be adversely affected by

sewage effluent due to the interaction between surface water and contaminated ground water systems.

## EQC Review of Sewage Disposal Issues

The EQC has devoted considerable attention to sanitary waste disposal issues over the past few years, particularly in the context of its extensive study of subdivision laws during the 1986-87 and 1988-1989 bienniums. More recently, as part of its 1990-1991 interim study of ground water quality protection and management, the EQC reviewed sewage disposal and on-site septic system issues at its November 3, 1989 meeting. The participants included: Scott Anderson, Construction Grants Program Manager, Department of Health and Environmental Sciences (DHES); Bill Leonard, Midwest Assistance Program, Inc.; Jerry Sorenson, Chairman, Flathead Basin Commission; Lana Chevalier, Chairman, Melrose Sewer District Board; and Jeff Macon, Seeley Lake Community Council.

Mr. Anderson reported on the history of septic system regulations, the scope of water quality problems associated with improper sewage disposal, and local government efforts to obtain funding for wastewater treatment facilities. Problems small communities are encountering in planning and financing wastewater treatment projects were the subject of Mr. Leonard's remarks. Mr. Sorenson discussed sewage disposal issues in the Flathead Basin and Ms. Chevalier and Mr. Macon shared their experiences as members of local governing boards responsible for resolving community sewage disposal problems.

During the spring of 1990 the EQC agreed to undertake a study of rural development issues and the adequacy of state laws and regulations to address a variety of projects constructed in rural settings. Much of the public comment received during that study focused on sewage disposal problems and the inadequacy of subdivision laws.

## Limited Applicability and Enforcement of Septic System Regulations

Until 1961 there were no state restrictions on subdivision development and septic system design or placement. The state's first subdivision regulations specified minimum lot sizes, minimum distances between water wells and septic systems, and requirements relating to soil percolation characteristics. Septic system design requirements, including drainfield regulations, were established in 1970. The standards apply to systems classified as "public" (i.e., a system designed to serve ten or more families or 25 or more persons daily for a period of at least 60 days out of the calendar year) and to systems reviewed under the subdivision statutes. One acre is generally

the minimum lot size required for multiple individual water and sewer systems unless the developer can provide information from a qualified professional showing that sanitary problems will not occur if greater residential densities are allowed. The minimum size for a single lot is 20,000 square feet and the minimum distance between the bottom of an individual septic drainfield and ground water is four feet.

There appears to be general consensus among public health officials and water quality specialists that most ground water problems caused by septic systems are associated with older systems that were installed prior to current regulations. Some of these systems essentially function as cesspools and provide virtually no treatment of wastes or removal of solids. However, it is important to point out that the state's minimum design standards do not apply to new septic systems serving individual residences except when the residences are located in subdivisions. Local boards of health may adopt regulations for the control and disposal of sewage from individual private and public buildings, but an estimated 20 counties have not done so. In summary, septic system design standards may adequately protect water quality in most situations, but they are not applied to many individual residential systems.

A related problem is lack of staff within the DHES to properly enforce septic system regulations. The department primarily becomes involved in septic system investigations and enforcement actions in response to complaints or when water samples indicate elevated levels of contaminants. Enforcement efforts are generally hampered by a lack of ground water quality and hydrology data, especially for purposes of evaluating long-term, cumulative impacts of residential development. The state also evaluates new subdivisions primarily on a case by case basis. Thus the effects of residential development outside of subdivisions may not be considered. Follow-up investigations to evaluate drain field performance and to determine whether effluent is reaching ground water are rare or nonexistent.

## Funding for New Sewer Projects

The most obvious solution to septic system failure is to extend municipal sewers to unsewered areas or to construct new wastewater treatment facilities, but the cost is high and funding sources are becoming more limited. Federal funds available in the past through the Environmental Protection Agency's "Construction Grants Program" covered up to 85 percent of the costs of sewer projects. However, Congress replaced the grants program with a loan program based on an explicit policy shift toward requiring local communities to take more financial responsibility for resolving their water quality and waste disposal problems.

The 1989 Montana Legislature approved the "Wastewater Treatment Revolving Fund Act" which authorizes the sale of up to $10 million in state general obligation bonds to finance the state's share of funds that are required to match federal money for loans. However, the per capita costs for new sewer facilities are substantially higher in small communities than in larger cities and grants are generally considered necessary to bring the costs down to a level that citizens can afford.

There are a few other funding sources for sewer projects such as the Community Development Block Grant Program and Farmers Home Administration loans, but these funds are more limited than in the past. Also, constraints on how the funds must be applied or combined with other money limit their usefulness, especially for small communities. Some wastewater treatment projects have been funded by state water development and renewable resource development grants, but a number of years may elapse between application for and receipt of these funds, thus making project planning and coordination with other funding sources very difficult.

The demand for funds to provide adequate sewer and wastewater treatment facilities in Montana communities, including presently unsewered areas, could easily run into the hundreds of millions of dollars. During the past few years as the DHES has been phasing out the Construction Grants Program, over 60 percent of the projects awaiting funding were new sewer facilities. The most recent version of the DHESs priority projects list contained nearly $40 million in new sewer collection and interceptor projects. This figure does not include funds for sewage system replacement and rehabilitation. About $5.8 million in construction grant funds are available for the final year of the program.

The revolving loan program will begin operating within the next few months and by early 1991 about $20 million should be available for loans. It is difficult to predict how many of the communities with sewer projects on the construction grants priority list will decide to seek loans. The facilities are unquestionably needed and regulatory pressures to address wastewater treatment problems are increasing, but it may take some time for communities to adjust to the fact that the grants program has ended and that the costs paid by local citizens for sewer projects are going to be significantly higher in the future. Preliminary calculations indicate that sewer bills on the order of $40-$50 per household are likely to become relatively common in the future where new sewer facilities are built. This amount is roughly three times the size of average sewer bills in the past in most areas of Montana.

In May 1990 Governor Stephens announced his support for a proposal to redirect revenues from the coal severance tax into a

new state program to finance local government infrastructure improvements, including construction of new sewage treatment facilities. The proposed program, known as the "Big Sky Dividend Program" calls for investing coal tax revenues over the next 10 years to create a fund of about $200 million for local government infrastructure projects.

Congress has considered various aspects of the problem of providing adequate federal funding support for wastewater treatment projects. Senator Baucus introduced legislation to authorize $1.4 billion over a four-year period to provide loans to communities of less than 2500 people and grants to financially stricken localities for drinking water systems, sewage treatment plants, solid waste facilities, and other local projects. A major reason for the proposal is the increased costs small communities are facing in order to comply with various new federal requirements for clean drinking water and environmentally sound waste disposal since the demise of the Construction Grants Program. Congress may be reluctant to repeat the approach followed under the Construction Grants Program of allocating large volumes of federal funds to local projects, but there is growing nationwide concern that the revolving loan program will not meet the needs of small communities.

## Annexation

In some cases the most cost-effective option for an unsewered community or area is to connect with an existing municipal sewage system. Most municipal sewer and wastewater treatment systems were financed with federal and state funds and were designed to handle additional effluent from outlying areas. However, sewered communities usually raise the issue of annexation as a condition to agreeing to provide sewer service to new areas. Residents of unsewered areas often object to annexation because they are concerned about the associated costs and for a variety of other reasons.

## Lack of Community Support for Sewer Projects

Lack of community support for new sewage disposal facilities is a significant problem. Many people do not believe that their septic systems are causing ground water problems and data are usually unavailable to conclusively prove otherwise. In many communities a majority of citizens are unwilling to support even modest increases in fees to pay for new sewer facilities. For example, a number of Montana communities rejected bond levies during the era when 70-80 percent of sewer project costs would have been paid by federal and state funds. During periods when local boards of sewer districts are planning new facilities the public may express little interest, but opposition tends to

surface at public hearings after a specific sewer project is proposed.

In cases where there is sufficient documentation to show that sewage effluent is adversely affecting water quality, county commissions can determine that a health hazard exists and override local opposition in order to proceed with a new sewer project. In this situation a county commission could create a special improvement district and impose new sewer fees or increase existing fees. However, commissioners are reluctant to use this authority in situations where there is broad-based opposition to a sewer project.

The Montana Water Quality Act authorizes the DHES to prevent pollution of state waters. The DHES has taken the position that proper documentation of the role of specific septic systems in causing contamination is needed before clean-up orders can be issued. Because enforcement actions are expensive and time-consuming, the Water Quality Bureau has tended to encourage local control of septic system problems. It is not clear whether the DHES can direct clean-up orders to county commissions for action at a county-wide level rather than to individual septic system owners.

## Response Options

The EQC considered the following list of potential responses to on-site sewage disposal and septic system issues:

### DHES Authority and Funding

1) Clarify that the DHES may issue a clean-up order to the county commission(s) with jurisdiction over an area where general sampling indicates that ground water is contaminated by coliform bacteria, other pathogens and nutrients;

2) Direct DHES to review the portions of its rules that contain septic system and drainfield design standards, provide for public comment, and make revisions as necessary to protect ground water quality, particularly in vulnerable areas;

3) Increase funding for ground water monitoring to document the effects of septic system failure, especially in areas likely to be the most vulnerable to contamination such as lake shore developments, areas up-gradient from public water supply wells, and unsewered areas where there are numerous private water wells using shallow ground water;

* 4) Direct the DHES to initiate rulemaking to establish a state permit system for new individual septic systems, with

provisions for transfering responsibility for the permit program to qualified units of local government;

* 5) Amend the statutory definition of a subdivision to remove the 20-acre exemption, thereby bringing more individual septic systems under state or local government review;

Local Government Authority

1) Prohibit local governments from requiring annexation as a condition for extending sewer service to new areas, but clarify that local governments are not obligated to provide other services to the new area;

2) Authorize local boards of health to license existing on-site sewage disposal systems in order to ensure that these systems are providing proper wastewater treatment and that ineffective systems are replaced [Note: A bill was introduced in the 1987 Legislature for this purpose but it was not approved.];

3) Authorize local governments to designate special ground water protection areas where new septic systems could be restricted and/or special design requirements imposed;

* 4) Require local governments to adopt regulations as least as stringent as the state standards for individual septic systems;

Funding for Sewer and Wastewater Treatment Projects

1) Increase state funds to finance wastewater treatment and sewer projects [The proposed "Big Sky Infrastructure Program is one option; another potential source of funds identified at the EQC's November 1989 meeting is coal severance tax water development bonds.]

*This option was also identified as a response to issues examined by the EQC under the Rural Development Study.

## EQC Deliberations

The EQC determined that it would be more desirable to authorize the DHES to issue cleanup orders to local boards of health and county commissions to address sewage contamination problems than to continue the past practice of the department only issuing cleanup orders to individual home owners after obtaining sufficient water quality monitoring data to show that a specific septic system had failed. However, the EQC decided that cleanup orders should only be issued in instances where the local board

or commission specifically authorized a waste discharge activity that the DHES has reason to believe is likely to cause pollution.

The EQC also decided that it is important to ensure that all new septic systems are properly designed and installed and that local governments are the most appropriate entity to implement regulations to accomplish this objective. The local water quality districts legislation that the EQC endorsed under a separate section of the SJR 22 ground water study may also prove to be an effective mechanism for resolving improper sewage disposal problems (see Appendix #3). The recommendations implementing these EQC decisions are presented below.

**Recommendation #14:**

**The Environmental Quality Council endorses legislation to clarify that the Department of Health and Environmental Sciences may issue a cleanup order to a local board of health or a county commission in instances where the board or commission has approved a waste discharge activity that the department has reason to believe is likely to cause pollution of state waters. The legislation the EQC has requested to implement this recommendation is presented in Appendix #4.**

**Recommendation #15:**

**The Environmental Quality Council endorses legislation to require the Board of Health and Environmental Sciences to adopt rules establishing minimum standards for all new septic and sewage disposal systems connected to individual public and private buildings, and to require local boards of health to adopt regulations for the control and disposal of sewage that are no less stringent than the state standards. Local governments should not be required to regulate sewage disposal systems that are reviewed and regulated by the Department of Health and Environmental Sciences under the public water supply system and sanitation in subdivision statutes. The legislation EQC has requested to implement this recommendation is presented in Appendix #4.**

## SECTION IV. UNDERGROUND STORAGE TANKS

Leaking underground storage tanks (UST) are a major source of ground water contamination in Montana. As of August 1990 there were 21,384 UST systems registered with the DHES. Some officials estimate that there could be as many as 30,000 USTs in the state. About one-half of the systems are located at service stations with the remainder owned by government agencies, farmers, ranchers, school bus garages, airports, private businesses, railroads, and homeowners. The DHES has identified approximately 350 leaking systems and is adding an average of 20 to 30 new leaking systems to its case load monthly. DHES staff expect this rate of new leak detections to continue for at least the next two or three years as more USTs are removed from service or fitted with leak detection systems in compliance with state and federal regulations. National studies sponsored by the Environmental Protection Agency have estimated that up to 25 percent of existing UST systems may be leaking. If the current rate of discovery of new leaks continues, this estimate could be accurate for Montana.

UST leaks can create major ground water problems, especially when community water systems are threatened. Montana communities that have experienced these problems include Cascade, Fort Benton, Sheridan, Livingston, Superior, Missoula and Great Falls. One of the better known leaking UST cases is the Church Universal and Triumphant's development north of Yellowstone Park. DHES officials have noted that leaking USTs seem to occur with above average frequency in the northern half of the state where clay soils have a particularly corrosive effect on USTs.

The 1989 Legislature approved three major underground storage tank bills. SB 321 amended the Montana Hazardous Waste Act to specifically include underground storage tanks and authorized the DHES to establish annual tank registration fees to defray state and local government costs of implementing an UST leak prevention program that is discussed later in this report.

HB 552, the "Montana Underground Storage Tank Installer Licensing and Permitting Act", requires tank owners to obtain permits for UST installations, repairs, and closures and requires UST installers and removers to be licensed by the DHES. The bill also authorizes the DHES to adopt rules establishing fees for licenses, a permitting process, and inspections of tank installations and closures.

HB 603 established the state petroleum storage tank release compensation fund to provide UST owners and operators with a financial assurance program for cleanup of tank releases. The compensation fund is supported by a one cent fee on each gallon

of gasoline distributed in the state between July 1, 1989 and June 30, 1991 and a 0.75 cent fee thereafter. The fund is administered by the Petroleum Tank Release Compensation Board which is composed of seven gubenatorial appointees.

SJR 22 identifies implementation of the 1989 UST legislation as one of the subjects of the EQC's interim study of ground water protection and management. During 1989-1990 the EQC received testimony from the DHES and the public on UST-related issues at three meetings.

Status of the Underground Storage Tank Program and Regulations

Montana law is more extensive than federal UST regulations in several important areas. Montana's UST requirements apply to: 1) farm and residential tanks that are 1100 gallons or less in capacity and used to store motor fuel for noncommercial purposes; 2) tanks used to store heating oil on the premises where the heating oil is consumed; and 3) underground piping connected to above-ground storage tanks. Owners and operators of farm and residential tanks with a capacity of 1100 gallons or less are not required to obtain the services of a licensed installer for tank installations or closures, but they must obtain a permit from the DHES and must have an inspector present for installation or closure operations.

In November 1989 the DHES adopted rules setting forth corrective action requirements for releases from USTs and overall standards for tank management, leak detection, and closures. The leak detection requirements are being phased in between 1989 and 1993 according to the age of the tanks. Leak detection requirements for the small capacity tanks (1100 gallons or less) are less stringent than for larger tanks and consist of annual, owner-administered measurement of fuel levels. New UST systems must meet all of the performance and design standards specified in the rules while existing USTs must be upgraded to meet the standards by December 1998 or removed from service.

National studies have shown that improper design and installation of tanks is a major cause of tank failure. The UST program relies on site inspections as a primary means of ensuring that facility owners properly install and close USTs. The DHES is using a substantial portion of the permit and inspection fees authorized by HB 552 to reimburse local inspectors. An attorney general's opinion issued in late July 1990 said that the DHES may delegate both inspection and UST enforcement duties to local governments and that DHES should adopt rules specifying the duties and responsibilities of local governments.

The fees authorized by SB 321 fund an additional 6.5 FTEs within DHES to administer the leak prevention and UST permitting

program. HB 552 added 0.25 FTE to the DHES staff to administer the permit program. Under HB 603 the 1989 Legislature approved an additional 8 FTEs for DHES to work on leaking UST cases and to coordinate with the Petroleum Tank Release Compensation Board. Five of those positions were filled as of September 1990 and DHES anticipates that a sixth staff person will be added by the end of the year. The Board received authorization for 4 FTEs of which 2.5 have been hired. The remaining 1.5 positions will be filled as the Board's work load increases (see the following discussion of Board activities). All of the FTEs authorized under HB 603 are approved by the Petroleum Release Compensation Board before the positions are advertised and filled.

The UST program demands and workload have been intense, but DHES has not been able to fully staff the program due to resignations and difficulties attracting qualified applicants at the salaries offered. The DHES has requested the Department of Administration to approve pay plan exceptions for some UST program positions in order to be able to offer higher salaries.

The EQC received some testimony that criticized the DHES rules for not requiring new tanks to have double-walled construction and for not specifying proper methods for disposal of old tanks and contaminated soil and sludge. These aspects of DHES' rules parallel federal regulations adopted by the EPA. In a cleanup situation after a leak has occurred, the DHES requires tank owners and operators to obtain the department's approval of disposal methods on a case by case basis. Tank sludge containing small quantities of hazardous waste can be legally disposed of at a landfill facility. DHES is also working on identifying locations where contaminated soils can be safely landfarmed.

## Tank Closure and Uniform Fire Code Issues

The Statement of Intent accompanying SB 321 instructed the DHES to implement the UST program consistent with tank-related portions of the Uniform Fire Code and to work cooperatively with local health and fire officials to implement a leak prevention program.

Many tank owners have opted to close their tanks rather than incur the costs associated with new leak detection and performance standards. Also, the regulations require closure of any tank that is out of use or abandoned for a period of one year. Tanks that are permanently closed must either be removed entirely or closed in place. Requirements for the latter include properly emptying the tank, removing contaminants, and filling the tank with an inert, solid substance. Typically it is less expensive to remove a tank than to properly close it in place. An environmental site assessment is required to verify closure

conditions and to assess the UST location for evidence of leaks or contaminant releases.

The portions of DHES and federal regulations that require all USTs installed before 1988 to be upgraded, replaced with new systems, or properly closed by 1998 are presenting serious problems for some tank owners. The least expensive option -- properly closing the tanks -- is too costly for many small businesses. Such businesses may have also have problems meeting financial assurance requirements if any of their tanks leak (see following discussion on the petroleum tank release compensation fund). Over the past few years some tank owners, including small service stations, moved their tanks above ground in an attempt to minimize the costs. However, the Uniform Fire Code prohibits above-ground tanks at stations that serve the public. Local fire officials did not consistently enforce this provision of the code in small towns in the past and many service station owners who moved their tanks above ground were unaware that they were in violation. The Uniform Fire Code permits above-ground tanks if they are enclosed in concrete and if the enclosure contains no more than three tanks, with no individual tank in excess of 6,000 gallons capacity. These size limitations make above-ground tanks an impractical option for most service stations. Many rural Montanans are concerned that small, local service stations will go out of business as a result of the various tank-related requirements and that it will become impossible to purchase gasoline in certain rural areas of the state.

Senator Baucus introduced a bill in Congress during the spring of 1990 that would allow small service station owners to obtain grants and loans from the Federal Leaking Underground Storage Tank (LUST) trust to comply with UST regulations. The DHES received $720,000 of LUST trust funds for the current fiscal year which are matched 10 percent with state funds. However, the DHES presently can use this money only to respond to emergencies or to initiate cleanups when no responsible party can be found or when the responsible party does not pay for the cleanup in a timely manner.

## Status of Petroleum Tank Release Compensation Fund

Federal and DHES regulations require UST owners and operators to demonstrate financial responsibility for taking corrective action and compensating third parties harmed by accidential tank releases. Owners and operators of tanks located at petroleum marketing facilities or tanks that handle an average of over 10,000 gallons of petroleum per month must have $1 million in liability insurance coverage. All other tank owners must obtain $500,000 in coverage. Owners or operators must also demonstrate financial assurance in the following aggregate amounts: $1 million for owners or operators of 1 to 100 USTs or $2 million

for owners or operators with 101 or more USTs. All owners or operators must show financial responsibility by October 26, 1990.

The EPA has approved Montana's Petroleum Tank Release Compensation Fund for providing the required financial assurance; however, tank owners are responsible for paying half of the first $35,000 in cleanup and damage costs if a leak occurs. Farm or residential tanks with a capacity of 1100 gallons or less that contain fuel used for noncommercial purposes or heating oil that is consumed on the premises are not eligible for reimbursement from the fund. Eligible tank owners may list their assets to demonstrate their ability to comply with the $17,500 financial assurance requirement. Leaks occurring after April 13, 1989 are eligible for reimbursement. The DHES and staff for the Petroleum Tank Release Compensation Board estimate that about 80 percent of the leaks typically discovered in Montana are likely to be technically eligible for reimbursement.

As of June 30, 1990 there was $4.4 million in the fund, with approximately $3.5 million unobligated. As of August 1990 the Board had received 52 claims totalling just over $1 million. Thirty-two of the claims have been processed and the Board has approved payment of $346,000. All of the claims were for remedial investigation and cleanup costs except one that included third party damages. While the potential exists for claims to eventually exceed available funds, the Board's staff have indicated that concern about this problem is probably premature at this time. Tank owners are tending to submit their claims in incremental amounts so that the Board has not received many large claims at any one time.

## Response Options

The 1989 Montana Legislature made major decisions to regulate USTs and to provide financial assurance support for some tank owners. Many aspects of the current UST requirements were approved in response to federal requirements, but the Legislature also recognized that leaking USTs are a significant threat to ground water quality and that major efforts to prevent future tank leaks are warranted.

The EQC considered the following list of options as possible responses to UST issues that were raised by testimony received during the 1990-1991 biennium:

### Tank Requirements and Regulations

1) Direct the DHES to revise its rules to require new USTs to have double-walled construction and to specify appropriate UST

waste disposal methods and techniques, including disposal of old tanks;

2) Provide a waiver of current UST regulations for small service station owners operating in rural areas where aquifers are deep and ground water is not vulnerable to contamination;

3) Direct the State Fire Marshall to explore options for waiving Uniform Fire Code requirements for service stations with above-ground tanks located sufficiently distant from residential or public use areas to avoid creating a fire hazard;

4) Amend Montana UST laws and regulations to exempt farm and residential tanks that are 1100 gallons or less in capacity;

Financial Assistance for Tank Owners/Small Businesses

1) Endorse Senator Baucus' proposed legislation to make federal LUST Trust monies available to assist service station owners in complying with UST regulations;

2) Create a state fund to assist service station owners in complying with UST regulations;

3) Amend Petroleum Storage Tank Cleanup legislation to allow owners of farm and residential tanks that are 1100 gallons or less in capacity and heating oil tanks regardless of size to be eligible for reimbursement from the state fund.

## EQC Deliberations

The EQC evaluated the potential need for modifications of existing UST requirements and increased financial assistance to help tank owners and small businesses to comply and to cover portions of cleanup costs if leaks occur. The EQC recognized that compliance with the regulations raises serious economic issues for many tank owners, particularly small businesses and farm and residential tank owners. However, the Council ultimately deferred to the decisions made by the 1989 Legislature regarding the types of tanks that should be regulated and the rules adopted by the DHES related to tank construction requirements.

The Petroleum Tank Release Compensation Board submitted a memorandum to the EQC stating its concerns about the prospect of extending the Petroleum Tank Release Cleanup Fund to provide cleanup reimbursement to owners of small farm and residential tanks with 1,100 gallons or less capacity and heating oil tanks regardless of size. According to the Board, inclusion of these tanks would increase the number of tanks covered by the fund by

about 59 percent. The fund is presently supported only by revenues from the sale of gasoline. The Board took the position that fees should be assessed on heating oil and diesel fuel if the smaller tanks are covered. The Board also said that the present $8 million cap on the fund would need to be raised or a separate fund would need to be created for the smaller tanks in order to ensure that enough money is available to cover potential cleanup costs. The EQC ultimately elected not to recommend changes in the existing fund or the types of tanks that receive coverage.

The State Fire Marshall said that service stations are presently required to place existing above-ground tanks underground only when they are in need of replacement or when they pose an immediate threat to the public or adjoining property. New unenclosed above-ground tank systems are not allowed under the Uniform Fire Code (UFC). The Fire Marshall Bureau is currently reviewing various technical issues (e.g., distance from residential or adjoining property, tank design requirements, size limitations, safety features, separation from onsite buildings) to determine whether the UFC could be modified to allow rural service stations to construct new above-ground tanks under certain conditions. However, a key issue that is likely to have a significant effect on the cost and viability of above-ground storage tanks is the new regulations the Environmental Protection Agency is developing.

The EQC approved the following final recommendation relating to underground storage tanks:

**Recommendation #16:**

**The Environmental Quality Council supports proposed Congressional legislation to make federal Leaking Underground Storage Tank Trust money available to help small businesses providing petroleum products in geographically isolated communities to comply with underground storage tank regulations. Accordingly, the EQC will send a letter to the Montana Congressional delegation expressing support for this legislation.**

## SECTION V. HARD ROCK MINING

Ground water quality protection is an important issue associated with hard rock mining, especially mines that use cyanide. Potential sources of ground water contamination by hard rock mining operations include cyanide heap leach facilities, disposed tailings, spills and leaks, and water accumulating in abandoned pits. Fluids from these sources may contain cyanide, trace elements, heavy metals, and inorganic chemical constituents in concentrations that substantially exceed natural water quality levels.

Hard rock mining is one of the more heavily regulated sources of potential ground water contamination in Montana. Modern mining technology is capable of preventing most ground water problems, but concern persists that the best technology may not necessarily be employed in practice. Also, accidents and mine design failures have occurred sufficiently often to foster continuing debate about the effectiveness of current regulatory requirements and enforcement procedures. Two significant aspects of the debate concern the different levels of regulatory oversight and review of mining projects that occurs 1) under the Metal Mine Reclamation Act based on the size of the mining operation, and 2) under the separate responsibilities of the Department of State Lands (DSL) and the Department of Health and Environmental Sciences (DHES).

The 1989 Legislature added new provisions to the Metal Mine Reclamation Act to require small miners using cyanide to obtain an operating permit for the cyanide-related portion of their operations. SJR 22 specifically directed the EQC to review implementation of this legislation. In response to this directive, the EQC sponsored a special case study and panel discussion of hard rock mining and ground water quality protection issues at its March 9, 1990 meeting. The panelists were Sandra Olsen, Chief, Hard Rock Mining Bureau, DSL; Steve Pilcher, Chief, Water Quality Bureau, DHES; John Fitzpatrick, Pegasus Gold Corporation; Peter Antonoli, Thomas Keating Mining Project; Kim Wilson, a Helena attorney who has represented citizens concerned about water quality impacts from mining operations; and Stan Bradshaw, Trout Unlimited. Most of the issues discussed in this report were identified by the panelists.

In 1989 the Governor established the Montana Mine Permitting Improvement Advisory Council for the purpose of evaluating the DSL's hard rock mine permitting and environmental review process. The advisory council did not specifically evaluate ground water quality issues, but devoted considerable attention to the level of environmental review that state agencies give to proposed mines and to several of the issues discussed in this report. The EQC considered and ultimately endorsed a number of the advisory

council's recommendations (see the final two pages of this section).

Overview of Hard Rock Mining and Ground Water Issues

Although cyanide is not the only potential ground water contaminant associated with mining operations, it has probably generated the most public concern. A cyanide heap leach operation is conducted by pouring a cyanide solution over ore that has been piled on a special leach pad. The cyanide dissolves the gold, silver and other metals contained in the ore. The leach pad is lined with impermeable materials and has a special drainage system that collects the cyanide solution and dissolved metals. The cyanide solution is an economic commodity to the mine operator and is reused after the gold and silver are extracted. Monitoring and leak detection systems are a standard component of modern cyanide heap leach operations.

Cyanide is highly toxic, but it degrades into harmless chemicals and dissipates relatively quickly in the presence of sunlight and oxygen. It is also neutralized by common soil organisms, but it can persist for long periods in ground water. If cyanide and the various minerals contained in the leach solution escape into ground water, drinking water supplies, fisheries and aquatic systems could become contaminated, especially in areas where surface and ground water systems are closely interconnected. Many mining operations occur in headwaters areas or in locations where the water is very high quality. The sensitivity of these locations has heightened public concern about potential ground water contamination in many instances.

The DSL and the DHES have reported that between two-thirds and three-fourths of the mines that have used cyanide in Montana have had documented fluid losses. These problems have occurred at both large and small mines. The larger operations pose a greater threat to water quality because of the high volumes of cyanide solution used, but the large operators also have the funds and technical expertise to respond to problem situations. Small mining operations may lack both funds and expertise to adequately resolve water quality problems.

According to DSL files, in August 1990 there were 87 permitted mines, 196 active exploration licenses (involving an estimated 700-750 individual mining projects), and 994 small miner (i.e., operations that remove 36,500 tons of material per year or less and disturb five acres or less of surface) exclusions in Montana. An estimated 25 million pounds of cyanide per year is being used by ten large mines and by four or five small miners in the state. The large mines include Beal Mountain, Zortman, Landusky, Basin Creek, Montana Tunnels, Mineral Hill, Golden Sunlight, Kendall Venture, and Chelsea's Spotted Horse Mine. Approximately 15

small miners who used cyanide in the past were grandfathered from the new permitting requirements approved by the 1989 Legislature but about two-thirds of these operations are not currently active. Since the new requirements became effective, one small miner has applied for an operating permit to use cyanide.

DSL and DHES Responsibilities for Ground Water Protection

All hard rock mining in Montana is regulated by the DSL under the Metal Mine Reclamation Act. Small miners are exempted from many of the provisions of the Act but are required to file an annual statement with the DSL agreeing not to pollute any stream, to install doors on tunnel portals and other safety features, to provide a map of the mining operations, and to reclaim land disturbed by placer or dredge operations. Larger mines are required to obtain an operating permit from the DSL and to submit a detailed permit application that must include a reclamation plan, hydrologic data, descriptions of the mine design, tailings impoundment, and monitoring methods, and remedial action plans. The Act also requires any person proposing to engage in mineral exploration to obtain an exploration license.

The Water Quality Act declares that it is unlawful to pollute state waters and provides broad authority to the DHES to regulate pollution discharge sources. By rule, the DHES defers to the DSL's mine permitting process. A separate ground water pollution discharge permit is not required for mines that must obtain an operating permit from the DSL if water quality degradation is unlikely to occur, based on the proposed mining plan (see the following discussion on nondegradation issues). Water quality protection provisions identified by DHES are included as conditions of the mine operating permit. Small miners that are exempted from permit requirements under the Metal Mine Reclamation Act are required to obtain a ground water pollution discharge permit from the DHES if their operations would discharge waste into ground water. Examples include mining operations that use chemical ore processing reagents and activators other than cyanide. The goal of ground water discharge permit requirements is to prevent any pollutant from reaching ground water.

Representatives of the mining industry and representatives of public interest groups have different perspectives on the question of whether ground water contamination from mining is primarily a historic phenomenon or a significant current problem. The total number of acres disturbed by mining in the state is relatively small, but ground water vulnerability to contamination varies by location. The need for special mine design features and pollution control measures also varies by location. While mining companies are not uniformly committed to using the most modern environmental control technology, awareness of

environmental issues has increased substantially within the industry in recent years.

Citizens and public interest groups are concerned that the full extent of ground water contamination from current mining operations is not being discovered. They question the adequacy of baseline hydrologic data, information submitted in water pollution discharge permit applications, monitoring requirements, and field inspections and enforcement, especially for small miners. Mining operations generally receive more detailed review and ongoing evaluation when a permit is required under the Metal Mine Reclamation Act. Some of the public's concerns may be addressed by new provisions requiring small miners using cyanide to obtain an operating permit from the DSL for the cyanide-related portion of their operations. However, these provisions have only been in place since July 1, 1989.

Lack of staff and high turn-over of experienced staff in both the DSL and DHES is a major problem that has been discussed in detail by the Governor's mine permitting advisory council. Concerns about this problem have also been raised repeatedly by both business and public interest groups in testimony before the EQC.

Both the DSL and DHES have the authority to enforce their respective statutes and to issue notices of violation. Also, both departments may require a mining company to undertake corrective actions and may seek civil penalties for violations. Some interested parties believe it would be preferable for one state agency to be responsible for all aspects of water quality clean-up operations.

## Confidentiality of Information

The Metal Mine Reclamation Act requires the DSL to keep confidential all information obtained from small miners and information contained in applications for exploration licenses, except for the name of the applicant and the county where the proposed exploration will occur. Testimony submitted to the EQC has raised questions about the constitutionality of this provision. These questions are based on the contention that the provision does not appropriately acknowledge the public's right to obtain information about potential environmental impacts and proposed resource development.

## Small Miners Exemption

There is also public concern about the potential for small miners to inflict environmental damage beyond the boundaries of their five-acre operations. Some persons have testified to the EQC that there should be no legal distinction between small miners

and large mining operations and that all mines should have to meet the same requirements for protecting ground and surface water quality, considering site specific conditions and the type of mining process involved. The present regulatory system has allowed some small operators to mine without the technology and resources required to properly protect the environment, especially when accidents occur.

Bond Forfeiture -- Adequacy of Bonds for Water Quality Clean-up

The Metal Mine Reclamation Act was amended in 1989 to prohibit any person from conducting mining or exploration activities in the state if that person, or any firm or business association of which that person was a principal or controlling member, forfeited a bond under the Act. Such persons can re-engage in mining activities if they first pay to the DSL the full amount of the expenses incurred by the Board of Land Commissioners to reclaim the area for which the bond was forfeited, the full amount of any penalties assessed under the Act, and interest on these amounts at the rate of 6 percent per year. However, these amendments do not prevent operators from reorganizing under a different structure and obtaining new operating permits.

The Metal Mine Reclamation Act was also amended in 1989 to require small miners to post a performance bond equal to the state's actual cost of reclaiming land disturbed by placer or dredge operations. The bond may not exceed $5,000 per operation. Larger mines have always been required to post a performance bond. The amount of the bond is based on the estimated cost to the state to reclaim the disturbed land. The Act also authorizes persons whose water supply has been damaged by mining or exploration to recover damages for loss in water quality or quantity. The mining company may also be required to provide a substitute water supply.

The Water Quality Act does not contain either bonding requirements or a bond forfeiture provision. However, the DHES is authorized to initiate civil actions to assess a violator for the cost of investigating contamination incidents and for any expense incurred by the state in removing, correcting, or terminating any adverse effects upon water quality resulting from an unauthorized discharge of pollutants.

Both the Metal Mine Reclamation Act and the Water Quality Act could be amended to authorize the DSL and DHES to investigate a permit applicant's past mining operations in other states, as well as Montana, to determine whether any bonds were forfeited or whether any violations of permit requirements or state laws remain unabated. Provisions similar to the bond forfeiture section of the Metal Mine Reclamation Act could be included in the Water Quality Act. Also, DSL and DHES could be authorized to

investigate situations where a person changes corporate names to evade discovery of past forfeitures or permit violations. If past unabated violations are discovered, the applicant for either a mine operating permit or a water pollution discharge permit could be prohibited from receiving a new permit or the agencies could be authorized to require a larger bond than would otherwise be allowed. More stringent environmental protection requirements could also be included in any new permits that are issued.

## Nondegradation Policy

The Water Quality Act contains a nondegradation policy which declares that any state water whose existing quality is higher than the established water quality standards must be maintained at that high quality unless the Board of Health and Environmental Sciences detemines that a change is justifiable as a result of necessary economic or social development. The Board must also determine that the change will not preclude present and anticipated use of the water. Any industrial development that would constitute a new or increased source of pollution to high quality waters must provide the degree of waste treatment necessary to maintain the existing high water quality.

The DHES and BHES did not systematically apply this provision to mining operations in the past. However, during the past year the DHES began notifying mining companies that they must obtain a waiver of the nondegradation policy from the BHES if their proposed mining operations could potentially cause water quality degradation. Mining representatives assert that it will be problemmatic for the industry to comply with a strict interpretation of this requirement. They question DHES's rationale for the recent shift in application of the nondegradation policy. An option that industry representatives identified that would partially address their concern is designation of industrial zones where mining operations would have flexibility to operate under lower water quality standards or waste disposal requirements than is allowed in other areas. The DSL and DHES have suggested that mining companies submit a waiver application to the BHES and a mine permit application to the DSL concurrently in order to expedite the state's permitting and environmental review processes.

## Response Options

The EQC evaluated the following list of potential responses to hard rock mining and ground water protection issues:

DSL/DHES Jurisdictional Issues Related to Ground Water Quality

1) Provide additional funds to the Water Quality Bureau to increase staff and thereby improve the level of water pollution discharge permit review, field inspections, monitoring, and enforcement of permit requirements;

2) Direct the WQB to review, and if necessary, revise its rules to ensure that the information submitted in water pollution discharge permit applications is sufficient to enable the DHES to evaluate and mitigate ground water quality impacts;

2) Provide one state agency with lead authority and sufficient staff to oversee ground water clean-up operations at hard rock mines;

3) Direct the DHES and DSL to review ground water contamination response procedures to determine where improvements can be made to ensure a prompt, coordinated response by agency personnel;

Confidentiality

* 1) Amend the confidentiality provision of the Metal Mine Reclamation Act to provide greater discretion to the DSL to release information about exploration projects as long as the company's economic interests are not adversely affected;

* 2) Amend the confidentiality provision of the Metal Mine Reclamation Act to provide greater discretion to the DSL to release information about small miners' operations as long as the small miners' economic interests are not adversely affected;

Small Miners Exemption

1) Amend the Metal Mine Reclamation Act to ensure that uniform standards of environmental review and environmental protection are applied to all mining operations, commensurate with site specific conditions and the type of mining process proposed;

Bond Forfeiture -- Bonding Requirements

1) Amend the Water Quality Act to require mining operations applying for a water pollution discharge permit to file a performance bond with the DHES that would equal the state's costs of cleaning up ground water contamination;

2) Amend the Water Quality Act to include a provision similar to Section 82-4-360 of the Metal Mine Reclamation Act prohibiting a person from obtaining a water pollution discharge permit for a proposed mine if that person has forfeited a bond under either the Water Quality Act or the Metal Mine Reclamation Act;

*3) Amend the Metal Mine Reclamation Act (bond forfeiture provision) to prohibit persons from conducting mining or exploration activities in Montana if they have previously forfeited a bond or have unabated violations of laws or permit requirements of Montana or any other state, including mining or exploration that the person conducted under a different corporate name;

*4) Authorize the DSL and DHES to investigate whether permit applicants have changed corporate names in order to evade discovery of past bond forfeitures or unabated permit violations;

Nondegradation

1) Amend the Water Quality Act to authorize creation of special industrial zones where the nondegradation policy will not be applied to water pollution discharge sources (Note: This option assumes that discharge sources will be required to operate in compliance with water quality standards.);

* Variations on this option were also considered by the Mine Permitting Improvement Advisory Council.

**EQC Deliberations**

The EQC decided to endorse recommendations of the Governor's Mine Permitting Improvement Advisory Council to change the confidentiality provision in existing law, prohibit persons with past unabated mining violations from obtaining new permits until the past violations are resolved, and authorize the DSL to establish a system for tracking the past environmental compliance records of mining company officers. The EQC also concluded that the frequency of ground water contamination incidents and problems the DSL and DHES have experienced in enforcing and overseeing cleanup operations warrants a general review of the agencies' respective roles and duties. The purpose of the review is to identify and implement procedures and, if necessary, adopt

rules to improve coordination of the agencies' respective ground water protection responsibilities.

The EQC's final SJR 22 recommendations related to hard rock mining are as follows:

**Recommendation #17:**

**The Environmental Quality Council endorses legislation recommended by the Governor's Mine Permitting Improvement Advisory Council to amend the confidentiality provision of the Metal Mine Reclamation Act (Section 82-4-306, MCA) to allow the Department of State Lands to release information about mine exploration projects on public lands, except for patented claims. The type of information that will no longer be held confidential includes the locations of exploration projects and a description of surface disturbance, excluding proprietary geological information.**

**Recommendation #18:**

**The Environmental Quality Council recommends that the Department of Health and Environmental Sciences and the Department of State Lands jointly review their respective rules, procedures and statutory responsibilities to ensure that water quality is protected from adverse effects associated with hard rock mining activities. The EQC further recommends that the departments revise their rules, procedures and interagency agreement as necessary to more effectively coordinate mine permitting, regulatory activities, and cleanup operations relating to water quality protection.**

**Recommendation #19:**

**The Environmental Quality Council recommends that the Department of Health and Environmental Sciences specifically review its rules pertaining to the content of applications for water pollution discharge permits and make revisions as necessary to ensure that the information is sufficient to enable the department to evaluate and mitigate ground water quality impacts associated with mining operations.**

**Recommendation #20:**

**The Environmental Quality Council endorses legislation recommended by the Governor's Mine Permitting Improvement Advisory Council to prohibit persons from obtaining mining permits if they have unresolved legal issues stemming from past violations of state and federal mining laws that are not being addressed in good faith. If past legal issues are resolved to the satisfaction of the involved state and federal agencies, a person subsequently would be able to obtain new mining permits.**

**Recommendation #21:**

**The Environmental Quality Council endorses legislation recommended by the Governor's Mine Permitting Improvement Advisory Council to authorize the Department of State Lands to establish an annual reporting requirement for all individual officers and directors of mining companies, partnerships, and other business entities to track and assess individual liability for environmental damages stemming from permitted mining.**

## SECTION VI. AGRICULTURAL CHEMICALS

There are differing opinions about the potential scope and significance of ground water contamination by pesticides in Montana. Although relatively little monitoring has been done, there is general agreement that Montana's problems are not as critical as those of many other states and that Montana is still in a position to operate in a preventive mode to protect ground water from agricultural chemicals.

Major debates have occurred nationally and in many states about the proper focus of agricultural policies and programs for purposes of protecting ground water. The major differences in proposed strategies generally can be described as better management of agricultural chemicals (and development of more environmentally benign chemicals) versus reduction of chemical use. To the degree that both approaches are deemed necessary, the debate shifts to the question of how relatively scarce funding and staff resources should be allocated to accomplish these goals. Development of pesticide and ground water protection policies requires decisionmakers to balance concerns about ground water quality and public health with concerns about the ability of farm producers to maintain profits and compete in the national and international marketplace.

Federal farm policies and agricultural commodity price support programs have limited producers's options in managing set-aside acres and crop rotations. Many farmers, researchers, and public interest groups consider these limitations counterproductive to environmental concerns such as ground water protection because the federal programs encourage monocropping and relatively high levels of agricultural chemical use. Many states have allocated substantial funds to alternative agricultural research and some states are providing incentives to farmers to adopt low chemical input farming practices. All of the these policy issues were the subject of debate during development of the 1990 federal farm bill and a number of provisions were included in the final bill that expand the U.S. Department of Agriculture's role in encouraging ground water protection.

The 1989 Legislature approved the Montana Agricultural Chemical Ground Water Protection Act as a first major step toward managing pesticides to prevent ground water contamination. SJR 22 specifically identified this legislation as one of the subjects of the Environmental Quality Council's interim study of ground water protection and management. Accordingly, the EQC scheduled a case study and panel discussion of agricultural chemical and ground water quality issues at its January 15, 1990 meeting. The participants were Gary Gingery, Administrator, Environmental Management Division, Montana Department of Agriculture (MDA); Reeves Petroff, Gallatin County Weed District; Tom Peterson,

Shields Valley Grain; Nancy Matheson, Alternative Energy Resources Organization; Larry Johnson, Montana Graingrowers Association; and Bob Quinn, a farm producer who is implementing alternative agricultural management practices. Most of the policy issues presented in this report were identified by the panelists.

## Montana Agricultural Chemical Ground Water Protection Act of 1989

The 1989 Montana Agricultural Chemical Ground Water Protection Act declares that it is the policy of the state to protect ground water and the environment from degradation due to agricultural chemical use, to allow for proper and correct use of agri-chemicals, to manage agri-chemicals in a manner that prevents and minimizes their presence in ground water, and to provide for education and training on ground water protection, agri-chemical use, and alternative agricultural methods.

The Act directs the MDA to prepare agricultural chemical ground water management plans for specific areas of the state where an agricultural chemical is detected in ground water at 50 percent of the ground water quality standard for that chemical. Other criteria that also trigger the need for a specific management plan, include: 1) when monitoring indicates a trend of increased presence of an agri-chemical in ground water; 2) when an agri-chemical migrates from the initial point of detection; 3) when leachable agri-chemicals are used in areas underlaid by ground water that is vulnerable to impairment; and 4) when the EPA proposes to suspend or cancel registration of an agri-chemical or otherwise restrict its use due to concerns about ground water quality. The DHES is responsible for establishing ground water quality standards for agricultural chemicals and for formal review of the management plans prepared by the MDA.

After the MDA adopts a specific agricultural chemical management plan, farm producers, pesticide applicators, government agencies and other persons using that pesticide in areas covered by the plan would be required to comply. Plan requirements could include modifications in agri-chemical use, restrictions on use in sensitive areas around water wells, required implementation of best management practices, and education, training, and licensing for agri-chemical users. The Act also directs the MDA to prepare a general statewide agricultural chemical management plan. A major purpose of this plan is to educate farm producers and other pesticide users about farming practices and agricultural chemical management methods that will prevent or minimize ground water contamination. The Act gives the Montana State University Extension Service and the MDA cooperative responsibility for the education programs and development of agricultural best management practices.

The MDA currently is developing rules to implement the Act.

Funding Issues

The Montana Agricultural Chemical Ground Water Protection Act is funded by pesticide and fertilizer registration fees. Special fee increases included in the Act were expected to raise approximately $87,000 per year. However, $12,000 of this amount that is raised from fertilizer registration fees cannot be spent unless the Environmental Protection Agency implements a national program to protect ground water from fertilizers or unless sufficient technical information becomes available to show that commercial fertilizer residues are present in ground water. Of the remaining $75,000, the Legislature allocated about $15,000 to the DHES to develop new agricultural chemical ground water quality standards, $15,000 to the MSU Extension Service for educational program development, and $15,000 to the Montana Bureau of Mines and Geology to collect ground water data on selected aquifers in order to facilitate ground water classification efforts by DHES. The Legislature allocated the remainder of the funds to the MDA to carry out its responsibilities under the Act.

There is general agreement that the current funding level is inadequate to fully implement the Act. Further agricultural chemical registration fee increases will be proposed in the 1991 Legislature to pay for continued agency implementation efforts. Some farmers and ranchers favor a special fee or tax on household pesticides to cover some ground water protection costs. Other states have generally favored funding agricultural chemical ground water programs from pesticide and fertilizer registration fees or surcharges on retail sales. Some states have also used oil overcharge funds to provide partial funding for research and educational programs.

Results of Monitoring for Pesticides in Montana Ground Water

The MDA has conducted limited monitoring for agricultural chemicals over the past six years and has detected pesticides in 25 percent of the wells sampled in 14 Montana counties. The department believes that 31 wells were contaminated by point sources (e.g., pesticide mixing and loading sites) and that 19 wells were probably contaminated by nonpoint source activities (e.g., routine field application of pesticides). The levels of pesticides detected in wells contaminated by point sources are much higher [e.g., 140 parts per billion (ppb) toxophene, 99 ppb picloram] than concentrations potentially associated with nonpoint sources (e.g., 0.1 to approximately 4 ppb). Some of the pesticides that have been detected in Montana ground water include aldicarb, picloram, atrazine, dicamba, MCPA, 2,4-D, and

simazine. All of the concentrations detected by the MDA were below EPA health standards.

Although elevated levels of nitrates have been detected in some Montana ground water, the specific role of commercial fertilizers in causing this contamination is unclear. Nitrates occur naturally in some Montana soils and also come from septic tanks, animal manures, and nitrogen-fixing crops such as legumes and alfalfa. Montana State University extension scientists have said that field application of fertilizers is probably a minor source of nitrates in ground water. Environmental organizations and some farmers and researchers assert that agricultural practices such as summer fallowing play a major role in increasing nitrate levels in ground water and that these practices must be addressed in agricultural-ground water protection strategies. In areas where a number of nitrate sources exist, more research is needed to obtain a better understanding of the specific role each source plays in contributing to elevated nitrate levels in ground water. The EPA has not yet developed a national strategy for nitrate management, but proper management of all of the possible sources of nitrate will be important in order for such a strategy to be effective.

Only a small percentage of potential problem sites in Montana have been sampled for agricultural chemicals. Some of the wells where pesticides have been detected are not in locations where the risk of pesticide leaching is thought to be greatest. Since only limited monitoring has been done, the relative contribution of point sources and nonpoint sources to ground water contamination in Montana is not well understood. The MDA is planning to target future sampling efforts to areas of the state where pesticide contamination could have the greatest impacts on human health and the environment. However, better ground water hydrology data is needed to support this effort. Additional monitoring is also needed to determine the extent of potential contamination (beyond initial detection of agri-chemicals) and to detect on-going changes in ground water quality over the long-term.

## County Weed District Issues

Noxious weeds pose a significant threat to agricultural production and natural ecosystems on a statewide basis. There are weed management districts in every county in the state that are responsible for implementing noxious weed management programs on lands and rights-of-way controlled or owned by the counties and municipalities. Some districts are placing greater emphasis on education of their employees to protect ground water quality, including proper pesticide storage and cleanup procedures, proper application of chemicals, special precautions in sensitive areas with shallow ground water, and use of long term integrated pest

management techniques and biological controls. However, the districts are not uniformly committed to these educational efforts. Budget constraints hamper many districts' efforts to improve management and to acquire and maintain proper pesticide spraying equipment. Also, there are no professional training and certification standards for weed district supervisors.

## Agricultural Chemical Management Issues

There are several aspects of pesticide use where progress can be made to prevent ground water contamination, including waste pesticide and pesticide container disposal practices and education of pesticide dealers and applicators. Proper disposal of unused pesticides and pesticide containers is an important issue. Pesticide containers that are triple rinsed can be treated as solid waste rather than a hazardous waste. The agri-chemical industry strongly supports efforts to educate pesticide users on the importance of properly rinsing pesticide containers. The future trend is toward bulk pesticide delivery and use of refillable containers in order to reduce the number of pesticide containers in the environment. The industry supports efforts by the EPA and MDA to develop new rules addressing bulk pesticide handling, improved containment of pesticides at mixing and loading sites and proper rinsing of pesticide containers. The MDA intends to adopt rules on these subjects over the next eighteen months.

Agricultural commodity organizations and many farm producers take the position that public policies and regulatory decisions to protect ground water from agricultural chemicals must be based on scientific risk/benefit analysis, with full consideration of the impacts on production of abundant food supplies. Environmental organizations and other farm producers are more concerned about the risks of pesticide use. These groups and individuals assert that information about the health effects of pesticides is inadequate to evaluate the risks to public health and the environment.

Most farm producers are concerned about proper disposal of old, unused pesticides that the EPA has not reregistered. The options for properly disposing of these old pesticides are presently limited. Household and garden use of pesticides and disposal of the containers is another issue that concerns agricultural producers. Household use of pesticides contributes to ground water contamination risk, but this activity is essentially unregulated.

## Alternative Agriculture Issues

Many farmers, citizens and environmental and public interest organizations believe that reduction in pesticide use is the key

to reducing ground water contamination risk. These organizations and individuals strongly support increased funding for research, education and demonstration projects to provide farmers with more management options to maintain production but reduce the need for pesticides and commercial fertilizer inputs. Development of markets for grains and other crops that are produced without chemicals is an important related issue.

There are a number of on-farm research projects underway in Montana and other northern Great Plains states that are testing alternative and sustainable agricultural management practices. Much of this work is financed by non-profit foundations or is being conducted informally by individual farmers. The MSU Extension Service and Agricultural Experiment Station are involved in some alternative agricultural research, but state funding for these types of projects has been limited. The 1989 Legislature directed the MSU Agricultural Experiment Station and Extension Service to conduct research and develop education projects on methods of farming without chemicals. However, the Legislature failed to appropriate specific funds and MSU has not redirected other funds within its budget to support this work.

Some of the panelists who testified at the EQC's January 1990 meeting said that the effectiveness of agricultural chemical ground water management plans will necessarily depend on the availability of a workable, proven set of alternatives to reduce agricultural chemical use. Persons supportive of this view believe that answers to certain research questions would be substantially more effective than a regulatory approach in encouraging Montana farm producers to voluntarily reduce pesticide and fertilizer use. Some examples of alternative agricultural research questions presented to the EQC are as follows: What biological control techniques are effective against the Russian wheat aphid? What is the best timing for mechanical weed control operations in major Montana crops? Could a high protein field pea now being grown in Saskatchewan serve as a soybean substitute in Montana and make possible the introduction of another legume into a small grain rotation? What legumes use the least amount of water and hence have the greatest potential for success in Montana?

## Response Options

The EQC considered the following list of potential responses to agricultural chemical and ground water protection issues. Most of the response options were raised by persons who testified before the EQC during the 1990-1991 biennium. A few of the options are policies that have been adopted or are being considered in other states in the context of developing preventive programs to protect ground water quality from pesticides.

Funding for State Agency Programs

1) Provide additional funding to the MDA to implement the 1989 Montana Agricultural Chemical Ground Water Protection Act;

2) Provide specific funding to the MDA for pesticide monitoring in ground water;

3) Provide funding to MSU for research, education and demonstration projects on alternative agricultural practices and for special training of extension agents;

4) Expand the water development and/or renewable resource development grant programs to specifically encourage farmers and farm groups to conduct projects that focus on reduced agricultural chemical use and research and demonstration of low chemical input farming practices;

5) Create a new grant program to fund projects that promote alternative agriculture, including projects proposed by individual farmers and farm organizations;

Economic Incentives for Farm Producers

1) Exempt certain agricultural land from taxation (or reduce its taxes) if the land is located within a wellhead protection zone or other special ground water protection area and if productivity would be reduced due to restrictions on the use of agricultural chemicals;

2) Establish tax credits for farm equipment retrofit and purchase and for specific farm management practices that would enhance water quality protection;

3) Provide interest free, low interest, or interest sharing loans to farm producers who adopt farming practices that protect ground water;

Weed District Issues

1) Require professional training for weed district supervisors in order to improve the ability of weed districts to protect ground water quality, including providing information about long-term integrated pest management techniques;

2) Direct the MDA to prepare rules establishing standards for proper management, application and storage of pesticides by county weed districts;

Additional Agricultural Chemical-Ground Water Protection Mechanisms

1) Direct the MDA to develop criteria and publish a list that classifies pesticide ingredients that are used in Montana according to their potential to contaminate ground water;

2) Direct the MDA to prepare a statewide agricultural chemical use map that shows the areas, types and volumes of pesticides used in Montana;

3) Specifically authorize the MDA to cancel registration of any pesticide that has contaminated ground water unless the director of the MDA, in cooperation with the DHES, finds that the health effects are not carcinogenic, mutagenic, teratogenic, or neurotoxic;

4) Require pesticide registrants to submit information to the MDA about the pesticide's effect on ground water as a prerequisite to registration or reregistration of the pesticide in Montana;

5) Direct the MDA to emphasize long-term integrated pest management techniques in pesticide applicator training and certification classes;

6) Amend the Montana Agricultural Chemical Ground Water Protection Act and other sections of the Montana Code Annotated as necessary to allow local entities such as conservation districts to develop and adopt specific agricultural chemical ground water management plans in advance of the triggering mechanisms in the Act and direct the MDA and Extension Service to provide technical assistance to the conservation districts to develop the plans;

7) Direct the MDA and the DHES to cooperatively develop a waste pesticide disposal program for farmers and households which may include state-sponsored collection days (NOTE: This option could also include opportunities for government agencies, weed districts, and commerical pesticide applicators to dispose of waste pesticides.);

8) Direct the MDA to develop proposals for the 1993 Legislature to ensure proper disposal of pesticide containers;

9) Support revisions to federal farm policies and programs that would encourage producers to implement farm management practices that will enhance ground water protection.

## EQC Deliberations

The EQC rejected options for establishing economic incentives to encourage farmers to implement agricultural practices to protect ground water. The Council also eliminated from consideration the option of authorizing conservation districts to prepare specific agricultural chemical ground water management plans in advance of the triggering mechanisms presently set forth in the Agricultural Chemical Ground Water Protection Act. Another option that the EQC dropped from consideration was a provision to authorize the Department of Agriculture to cancel the registration of any pesticide found in Montana ground water unless the department director finds that the health effects are not carcinogenic, mutagenic, teratogenic, or neurotoxic. Because Congress had approved the 1990 federal farm bill before the EQC completed its final SJR 22 recommendations, the EQC elected not to prepare a resolution or letters expressing formal support for federal farm policies to enhance ground water protection.

The EQC addressed the remaining options through the following final recommendations:

**Recommendation #22:**

**The Environmental Quality Council endorses the portions of the Department of Agriculture's proposed budget for the 1992-1993 biennium that provide additional funding to implement the 1989 Montana Agricultural Chemical Ground Water Protection Act and to expand ground water monitoring for pesticides.**

**Recommendation #23:**

**The Environmental Quality Council endorses legislation to specifically include research and demonstration of low chemical input farming practices among the types of projects proposed by public entities that are eligible to compete for funds from the water development and renewable resource development grant programs. A copy of this legislation is presented in Appendix #5.**

**Recommendation #24:**

**The Environmental Quality Council endorses a resolution directing the DNRC to give greater emphasis to projects that focus on alternative agricultural practices and reduced agricultural chemical use in promoting the water development and renewable resource development grant programs, and directing Montana State University to agressively pursue funding from all available state and federal sources for these types of projects. The EQC will also send a letter to MSU expressing the Council's support for alternative agricultural research and demonstration projects, and encouraging MSU to seek grant funds in order to give greater emphasis to these projects.**

**Recommendation #25:**

**The Environmental Quality Council endorses legislation requiring weed district supervisors to receive training related to pesticide management, ground water protection, and public and worker safety, within the limits of available funding. The EQC also endorses the use of noxious weed management funds for purposes of improving the quality of training available to weed supervisors and for providing stipends where necessary to enable weed supervisors to attend the training programs.**

**Recommendation #26:**

**The Environmental Quality Council recommends that the Department of Agriculture review its existing publications that classify pesticides according to their potential to contaminate ground water and make improvements whever possible to increase the usefulness of these materials to Montana agricultural producers and other persons who use and apply pesticides. The EQC further recommends that the department reference this material on its computerized bulletin board to encourage greater public awareness of the information.**

**Recommendation #27:**

The Environmental Quality Council recommends that the Department of Agriculture prepare and publish a map showing usage patterns of pesticides commonly applied to agricultural crops and rangelands that have a high probability of leaching into ground water. To develop the map, the department should rely upon records currently collected from pesticide dealers and commercial and government applicators, and records that will be collected from the U.S. Department of Agriculture from farm applicators showing applications of restricted use pesticides.

**Recommendation #28**

The Environmental Quality Council endorses legislation to require pesticide registrants to submit to the Department of Agriculture results of tests completed on or after October 1, 1991 relating to the leachability of pesticides that have significant potential to impair ground water. The EQC also endorses legislation to require the department to provide copies of pesticide test results to interested persons, provided that the department may charge a reasonable fee for this service. A copy of this legislation is included in Appendix #5.

**Recommendation #29:**

The Environmental Quality Council recommends that the Department of Agriculture review its pesticide applicator training and certification programs, and make revisions and improvements to increase the level of information and emphasis placed on long-term integrated pest management techniques.

**Recommendation #30:**

**The Environmental Quality Council endorses legislation to establish a voluntary reporting system to encourage persons to contact the Department of Agriculture and report the types and volumes of waste pesticides in their possession, and directing the department to compile and analyze the information for purposes of making recommendations to the 1993 Legislature concerning the design and scope of a proposed waste pesticide collection program.**

**Recommendation #31:**

**The Environmental Quality Council recommends that the Department of Agriculture develop proposals for the 1993 Legislature's consideration to ensure proper disposal of pesticide containers.**

## SECTION VII. WATER QUALITY BUREAU STAFFING ISSUES

### Ground Water Quality Protection

Virtually every section of the SJR 22 interim study contains options for recommendations to provide additional funds to the DHES, Water Quality Bureau (WQB) to increase and improve the current level of effort devoted to water pollution discharge permit review, enforcement of the Water Quality Act, and overall water quality protection. At the EQC's October meeting, WQB staff presented a detailed description of the bureau's current ground water protection program, including information describing the program's current workload and staff assignments. The WQB identied specific areas within the program where new staff would be assigned if the 1991 Legislature were to decide that the WQB needs additional people to work on ground water protection.

At this time the ground water program is totally funded by the EPA but not at a level sufficient to handle the work load, especially considering the increasing number of ground water contamination incidents statewide. For the past few years the EPA has provided approximately $100,000 annually, with about 60 percent of the funds used for salaries for 2.0 full-time equivalent staff (FTEs), 20 percent for contracted services, and the remainder for supplies, travel and overhead. The WQB is receiving new funds this fiscal year from the EPA to support 2.0 additional FTEs who will work on wellhead protection and pesticide management. One DHES attorney is assigned to water quality-related cases and is funded by 75 percent federal and 25 percent state money. Subdivision review is a separate program within the WQB that receives state general funds for 1.0 FTE who is responsible for review and approval of all subdivisions. Subdivision review is discussed in this section because one of the more effective ways to prevent ground water contamination is to ensure that sewage disposal systems in subdivisions are properly designed.

The following points summarize the ground water program's workload issues:

-- DHES' ground water rules have not been reviewed or updated in 8 years -- water quality standards have not been adopted for many pollutants and where standards are lacking, the DHES lacks authority to require ground water cleanup in locations where no reasonably foreseeable beneficial use of the water would be affected -- numerous other policy issues and technical questions that have arisen over the years may warrant a general review of the rules

-- ground water pollution discharge permits currently require 4 to 8 months to process; compliance inspections of permitted facilities are minimal; some facilities have not been inspected in over 3 years

-- landfarming of contaminated soils, sewage lagoons, and Class V disposal wells (dry sumps) are three sources of ground water pollutants that the DHES has not been able to properly regulate

-- the WQB receives reports/complaints of about an average of 30 spills and accidents per month involving pollutants and possible ground water contamination; the reports and complaints are coming in at an increasing rate due to greater public awareness of ground water; many of these matters require substantial investigation and oversight, with some taking years to resolve

-- over the past 3 years about 12 new water pollution enforcement cases per year have been referred to DHES legal staff but only 4 or 5 cases per year have been closed; the back-log is seriously hampering the legal staff's effectiveness

-- the number of mine permit applications that the WQB reviews in conjunction with the Department of State Lands has increased dramatically -- the ground water staff is not able to review monitoring data collected by mine permit applicants and can conduct only minimal permit compliance monitoring

-- the number of major ground water problem sites has also increased substantially (e.g., Church Universal and Triumphant, Nelson Trailer Court, Mountain Water Co.) -- work on such sites generally extends over several years

-- in FY 90, 27 major subdivisions, 820 minor subdivisions, 14 trailer courts, and 3 condominium developments were approved by the WQB -- environmental assessments were prepared on only 2 subdivisions under MEPA -- 1.0 new FTE may be approved by the 1991 Legislature through proposed staff increases for the safe drinking water program, but this person would only provide assistance on reviews of subdivisions with public water systems

-- the WQB currently does not have an organized ground water pollution prevention component for projects such as ground water vulnerability assessment and prioritization and public education and outreach

Based on the information WQB staff presented to the EQC, the following list shows where 4.5 additional FTEs would be assigned if the 1991 Legislature concludes that additional staff are necessary:

0.5 FTE -- water pollution discharge permitting and compliance inspections; writing guidelines for permit applicants; and determining regulatory requirements for sewage lagoons and land farming of contaminated soils

0.3 FTE -- ground water rules update and ground water protection strategy development

0.5 FTE -- complaint, spills and accident response

0.4 FTE -- technical review of mine permit applications and compliance monitoring; technical assistance to other state government programs

0.3 FTE -- major ground water contamination site evaluation and oversight

0.5 -- development of preventive ground water protection program components

1.0 FTE -- subdivision review

1.0 FTE -- legal expertise and water quality enforcement

## EQC Deliberations

Based upon the WQB workload issues summarized in this section and other information concerning the scope of ground water quality protection problems in the state that was presented under the hard rock mining, septic system and sewage disposal, agricultural chemical, and ground water management sections of the SJR 22 ground water study, the EQC endorsed the following recommendation:

**Recommendation #32:**

**The Environmental Quality Council recommends that the 1991 Legislature provide 3.5 additional FTE's to the Water Quality Bureau and 1.0 additional FTE to the DHES legal unit to work on ground water quality protection tasks.**

SENATE JOINT RESOLUTION NO. 22

INTRODUCED BY HARP, YELLOWTAIL, WEEDING, BECK, GILBERT, DRISCOLL, HARPER, IVERSON

A JOINT RESOLUTION OF THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA DIRECTING THE ENVIRONMENTAL QUALITY COUNCIL TO STUDY THE PROTECTION AND MANAGEMENT OF GROUND WATER QUALITY; AND DIRECTING THE ENVIRONMENTAL QUALITY COUNCIL TO REPORT ITS FINDINGS OF THE STUDY TO THE 52ND LEGISLATURE.

WHEREAS, Montanans are increasingly dependent on ground water for domestic, agricultural, and industrial uses; and

WHEREAS, Montanans have expressed a strong interest in protecting the quality of their ground water; and

WHEREAS, the 51st Montana Legislature is considering major new ground water quality initiatives to:

(1) establish an agricultural chemical ground water protection program;

(2) require ground water monitoring at landfills;

(3) establish licensing, permitting, and fee requirements for underground storage tanks and to create a multimillion dollar fund to clean up tank leaks;

(4) more closely regulate the use of cyanide by small miners; and





(5) otherwise respond to continuing challenges to the effective management of ground water resources; and

WHEREAS, these initiatives are anticipated to result in improvements to Montana's environment and in new responsibilities for citizens and state agencies; and

WHEREAS, there are a number of other state and federal programs affecting ground water quality in Montana; and

WHEREAS, it is desirable for the Montana Legislature to review these various programs to determine the best means to meet the needs of the State of Montana and its citizens.

NOW, THEREFORE, BE IT RESOLVED BY THE SENATE AND THE HOUSE OF REPRESENTATIVES OF THE STATE OF MONTANA:

That the Environmental Quality Council be assigned to study:

(1) existing programs in Montana and other states for protecting ground water quality;

(2) the implementation of new legislative initiatives on ground water management enacted by the 51st Montana Legislature;

(3) federal requirements that affect ground water quality programs in Montana; and

(4) other necessary responses to ground water protection and management challenges identified by the Environmental Quality Council.





REFERENCE BILL

APPENDIX #1

1 BE IT FURTHER RESOLVED, that the Environmental Quality
2 Council report the findings of the study to the 52nd
3 Legislature, develop recommendations on ground water quality
4 programs, and, if appropriate, present options for
5 legislative consideration to implement these
6 recommendations.

-End-

A P P E N D I X # 2

LC785

**** Bill No. ***

Introduced By **********

By Request of ENVIRONMENTAL QUALITY COUNCIL

A Bill for an Act entitled: "AN ACT TO CREATE A GROUND WATER MONITORING PROGRAM AND A GROUND WATER CHARACTERIZATION PROGRAM; ESTABLISHING A GROUND WATER ASSESSMENT ACCOUNT; ESTABLISHING A GROUND WATER ASSESSMENT STEERING COMMITTEE; DIRECTING THE MONTANA BUREAU OF MINES AND GEOLOGY TO ADMINISTER THE PROGRAMS; and providing an effective date."

Be it enacted by the Legislature of the State of Montana:

NEW SECTION. **Section 1. Short title.** [Sections 2 through 6] may be cited as the Montana Ground Water Assessment Act."

NEW SECTION. **Section 2. Findings and purpose.** (1) The legislature finds that:

(a) Montana's people depend upon ground water for a variety of uses, including domestic, agricultural, industrial, irrigation, mining, municipal, power, and recreation, and maintenance of ecosystems and surface water supplies;

(b) ground water supplies and quality are threatened by a variety of contaminant sources;

(c) there is insufficient information characterizing the volume, quality, and flow patterns of the state's ground water;

(d) ground water information deficiencies are hampering the efforts of citizens and units of government to properly manage, protect, and develop ground water;

(e) government policies and programs should focus on preventing ground contamination and supply depletion, but in order for preventive policies and programs to be effective, better ground water information is required; and

(e) there is a need for better coordination among the numerous units of the state, federal, and local governments with responsibility for ground water management, protection and development.

(2) The purposes of [sections 2 through 6] are:

(a) to improve the quality of ground water management, protection, and development decisions within the public and private sectors by establishing a program to systematically assess and monitor the state's ground water and to disseminate the information to interested persons; and

(b) to improve coordination of ground water management, protection, development and research functions among units of the state, federal, and local governments by establishing a ground water assessment steering committee.

NEW SECTION. **Section 3. Definitions.** As used in [this act], the following definitions apply:

(1) "Aquifer" means a water-bearing, subsurface formation capable of yielding sufficient quantities of water to a well for a beneficial use.

(2) "Ground water characterization program" means a program to systematically assess and document the hydrogeology and quality of the state's major aquifers.

(3) "Ground water characterization study" means the assessment of individual aquifers in specific areas within the state.

(4) "Ground water assessment steering committee" means the committee established by [section 7].

(5) Ground water monitoring program" means a program to produce and maintain a long term record of ground water chemistry and water level changes, based on information collected from a statewide network of observation wells.

NEW SECTION. **Section 4. Ground water assessment account.** (1) There is a ground water assessment account within the state special revenue fund established in 17-2-102. The Montana bureau of mines and geology is authorized to expend amounts from the account necessary to carry out the purposes of [sections 2 through 6].

(2) The account may be used by the Montana bureau of mines and geology only to carry out the provisions of [sections 2 through 6].

(3) Subject to the direction of the ground water assessment steering committee, the Montana bureau of mines and geology shall investigate opportunities for the participation and financial contribution of agencies of federal and local governments to accomplish the purposes of this part.

(4) There must be deposited in the account:

(a) on July 1, 1991, and at the beginning of each succeeding fiscal year, 14.1% of the proceeds from the resource indemnity and ground water assessment tax as authorized by [LC 787], except if at the beginning of the fiscal year the unobligated cash balance in the ground water assessment account:

(i) equals or exceeds $666,000, no allocation will be made, in which case the funds must be deposited in the resource indemnity trust fund established by 15-38-201; or

(ii) is less than $666,000, then an amount equal to the difference between the unobligated cash balance and $666,000, must be allocated to the ground water assessment account, and any remaining amount to the resource indemnity trust fund established by 15-38-201;

(b) funds provided by agencies of the federal or state governments and by local governments to carry out the purposes of [sections 2 through 6]; and

(c) funds provided by any other public or private sector organization or person in the form of gifts, grants or contracts specifically designated to carry out the purposes of [sections 2 through 6].

NEW SECTION. **Section 5. Ground water characterization program -- ground water monitoring program.** (1) There is a ground water characterization program and a ground water monitoring program.

(2) Subject to the direction of the ground water assessment steering committee, the Montana bureau of mines and geology shall

establish and administer the ground water characterization program and the ground water monitoring program.

(3) The Montana bureau of mines and geology shall work with units of local government, ground water users, and other affected organizations and individuals in areas of the state that are included in a ground water characterization study and, if warranted by the level of local interest in a ground water characterization study, shall establish a local ground water assessment advisory committee.

(4) The ground water assessment steering committee created by [section 7] shall:

(a) oversee expenditures from the ground water assessment account, and organization plans and work plans proposed by the Montana bureau of mines and geology to implement the ground water characterization and ground water monitoring programs, including plans for local involvement and participation in ground water characterization studies;

(b) approve ground water monitoring sites;

(c) prioritize and select ground water characterization study areas;

(d) develop plans for ground water information management and dissemination;

(e) develop plans for integrating existing ground water information with information collected under the programs created by subsection (1);

(f) coordinate ground water information collection projects sponsored by individual units of the state, federal or local governments with the programs created by subsection (1); and

(g) evaluate reports and other products produced by the Montana bureau of mines and geology from ground water characterization studies.

(5) The ground water assessment steering committee shall invite representatives of local governments and Indian tribes with jurisdiction over areas of the state that are included in an active ground water characterization study or in a study scheduled to begin in the ensuing biennium, and affected citizens in these areas, to participate in steering committee meetings.

NEW SECTION. **Section 6. Ground water information collection by local governments.** Units of local government may conduct ground water information collection projects in advance of ground water characterization studies conducted under the program created by [section 5 (1)]. Local governments shall consult with the Montana bureau of mines and geology in designing local ground water information collection projects and studies, and, subject to local funding availability, shall conduct the local projects and studies to produce information that is compatible with information produced by the ground water characterization program.

NEW SECTION. **Section 7. Ground water assessment steering committee.** (1) There is a ground water assessment steering committee consisting of an employee of each of the following state agencies having responsibility for ground water protection,

management, or information, appointed by the head of the respective state agency:

(a) department of natural resources and conservation;

(b) department of health and environmental sciences;

(c) department of agriculture;

(d) department of state lands; and

(e) Montana state library, natural resource information system.

(2) The ground water assessment steering committee may include representatives of the following agencies and units of government with expertise or management responsibility related to ground water, and representatives of the organizations and groups specified in subsection (g), who shall serve as ex officio members:

(a) environmental quality council;

(b) Montana bureau of mines and geology;

(c) a representative from a unit of the university system other than the Montana bureau of mines and geology, appointed by the board of regents of higher education for the Montana university system;

(d) a county government, appointed by an organization of Montana counties;

(e) a city, town, or city-county government, appointed by an organization of Montana cities and towns;

(f) each principal federal agency having responsibility for ground water protection, management, or research, appointed by the Montana head of the respective federal agency; and

(g) one representative of each of the following, appointed by the governor:

(i) agricultural water users;

(ii) industrial water users; and

(iii) a conservation or ecological protection organization.

(3) The ground water assessment steering committee shall elect a chairman from its voting members.

(4) The Montana bureau of mines and geology shall provide staff support to the committee.

NEW SECTION. **Section 8. Codification instruction.** [Sections 1 through 6] are intended to be codified as an integral part of Title 85, chapter 2, and the provisions of Title 85, chapter 2, apply to [sections 1 through 6]. [Section 7] is intended to be codified as an integral part of Title 2, chapter 15, part 15, and the provisions of Title 2, chapter 15, part 15, apply to [section 7].

NEW SECTION. **Section 9. Coordination instruction.** If [LC 787] is not passed and approved, then [subsection (4)(a) of section 4] is void.

NEW SECTION. **Section 7. {standard} Effective date.** [This act] is effective July 1, 1991.

-END-

LC786

**** Bill No. ***

Introduced By **********

By Request of ENVIRONMENTAL QUALITY COUNCIL

A Bill for an Act entitled: "AN ACT APPROPRIATING MONEY TO THE MONTANA BUREAU OF MINES AND GEOLOGY FOR THE GROUND WATER MONITORING AND GROUND WATER CHARACTERIZATION PROGRAMS."

Be it enacted by the Legislature of the State of Montana:

NEW SECTION. **Section 1. Appropriation.** There is appropriated to the Montana bureau of mines and geology for the biennium ending June 30, 1993, $1,331,732 from tax proceeds allocated by [LC 787] for purposes of establishing a ground water monitoring program and a ground water characterization program as authorized by [LC 785].

NEW SECTION. **Section 2. Coordination instruction.** If [LC 787] and [LC 785] are not passed and approved, then [this act] is void.

-END-

LC787

**** Bill No. ***

Introduced By **********

By Request of ENVIRONMENTAL QUALITY COUNCIL

A Bill for an Act entitled: "AN ACT TO CHANGE THE NAME OF THE RESOURCE INDEMNITY TRUST ACT; REALLOCATING A PORTION OF THE TAX PROCEEDS TO THE GROUND WATER ASSESSMENT ACCOUNT; AMENDING SECTIONS 15-38-101, 15-38-102, and 15-38-106, MCA ; and providing an effective date."

Be it enacted by the Legislature of the State of Montana:

**Section 1.** Section 15-38-101, MCA, is amended to read:

"**15-38-101. Short title.** This chapter shall be known and may be cited as "The Montana Resource Indemnity Trust <u>and Ground Water Assessment</u> Act"."

**Section 2.** Section 15-38-102, MCA, is amended to read:

"**15-38-102. Legislative policy.** It is the policy of the state of Montana to indemnify its citizens for the loss of long-term value resulting from the depletion of its mineral resource base and for environmental damage caused by mineral development. This policy of indemnification is achieved by establishing a permanent resource indemnity trust <u>as required by Article IX, section 2, of the Montana Constitution</u>~~,~~ <u>and by supporting ground water assessment programs</u> from the proceeds of a tax levied on mineral extraction and by allocating spendable ~~trust~~ revenues:

(1) to protect and restore the environment from damages resulting from mineral development; ~~and~~

(2) to support a variety of development programs that benefit the economy of the state and the lives of Montana citizens; and

(3) to assess the state's ground water resource."

**Section 3.** Section 15-38-106, MCA, is amended to read:

**"15-38-106. Payment of tax -- records -- collection of taxes -- refunds.** (1) The tax imposed by this chapter shall be paid by each person to which the tax applies, on or before March 31, on the value of product in the year preceding January 1 of the year in which the tax is paid. The tax shall be paid to the department at the time the statement of yield for the preceding calendar year is filed with the department.

(2) The department shall deposit the proceeds of the tax in the resource indemnity trust fund of the nonexpendable trust fund type, except that 14.1% of the proceeds shall be deposited in the ground water assessment account established by [section 4 of LC 785]. Every person to whom the tax applies shall keep records in accordance with 15-38-105, and the records are subject to inspection by the department upon reasonable notice during normal business hours. The department shall examine the statement and compute the taxes thereon, and the amount computed by the department shall be the taxes imposed, assessed against, and payable by the taxpayer. If the tax found to be due is greater than the amount paid, the excess shall be paid by the taxpayer to the department within 30 days after written notice of the amount

of deficiency is mailed by the department to the taxpayer. If the tax imposed is less than the amount paid, the difference must be applied as a tax credit against tax liability for subsequent years or refunded if requested by the taxpayer."

NEW SECTION. **Section 4. Name change.** In the provisions of the Montana Code Annotated listed in this section, the term "resource indemnity trust tax", meaning the tax created by Title 15, chapter 38, is changed to "resource indemnity and ground water assessment tax".

NEW SECTION. **Section 5. Coordination instruction.** If [LC 785] is not passed and approved, then this bill is void.

NEW SECTION. **Section 6. {standard} Effective date.** [This act] is effective July 1, 1991.

-END-

# A P P E N D I X # 3

LC790

**** Bill No. ***

Introduced By **********

By Request of ENVIRONMENTAL QUALITY COUNCIL

A Bill for an Act entitled: "AN ACT TO AUTHORIZE COUNTY COMMISSIONS TO CREATE LOCAL WATER QUALITY DISTRICTS; AUTHORIZING ESTABLISHMENT OF FEES; AUTHORIZING COUNTY COMMISSIONS AND GOVERNING BODIES OF MUNICIPALITIES PARTICIPATING IN A LOCAL WATER QUALITY DISTRICT TO ADOPT LOCAL LAWS RELATED TO WATER QUALITY PROTECTION; AUTHORIZING THE BOARD OF HEALTH AND ENVIRONMENTAL SCIENCES TO APPROVE LOCAL WATER QUALITY PROGRAMS; AND AUTHORIZING THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES TO MONITOR IMPLEMENTATION OF LOCAL WATER QUALITY PROGRAMS."

## STATEMENT OF INTENT

A statement of intent is required for this bill in order to provide guidance to the board of health and environmental sciences concerning rulemaking and approval of local water quality programs. The board shall adopt rules concerning the format of local water quality programs, including the level of information necessary for a local water quality district to show that its proposed program will be consistent with Title 75, chapter 5, and that its program will be effective in protecting, preserving, and improving the quality of surface and ground

water. The board of health and environmental sciences shall ensure that local water quality programs do not duplicate department of health and environmental sciences' requirements and procedures relating to the regulation and permitting of waste discharge sources, enforcement of water quality standards, implementation of the nondegradation policy, or other water quality protection authorities. It is the intent of the Legislature that administrative responsibilities for water quality protection be clearly allocated and, where necessary, clearly divided between the department of health and environmental sciences and a local water district, insofar as possible, to ensure that permit holders, permit applicants, and citizens are not subject to conflicting or duplicative requirements. Through its approval of local water quality programs, the board of health and environmental sciences shall ensure that the department of health and environmental sciences' ability to continue to administer federally delegated water quality protection programs is not impaired.

Be it enacted by the Legislature of the State of Montana:

NEW SECTION. **Section 1. Findings and purpose.** (1) Pollution and degradation of surface and ground water pose both immediate and long-term threats to the health, safety and welfare of citizens of this state.

(2) In consideration of the expense and difficulty of ground water rehabilitation and cleanup, policies and programs to prevent ground water contamination must be implemented.

(3) The purpose of [sections 2 through 23] is to provide for the creation of local water quality districts to protect, preserve, and improve surface and ground water quality.

NEW SECTION. **Section 2. Definitions.** As used in this part, unless the context indicates otherwise, the following definitions apply:

(1) "Board of health and environmental sciences" as used in [sections 2 through 23] means the board of health and environmental sciences as provided in 2-15-2104.

(2) "Board of directors" means the board of directors as provided in [section 12] and [section 21].

(3) "Commissioners" means the board of county commissioners.

(4) "Family residential unit" means a single family dwelling.

(5) "Fee assessed units" means all real property with improvements, including taxable and tax-exempt property as shown on the property assessment records maintained by the county.

(7) "Local water quality district" means an area established with definite boundaries for the purpose of protecting, preserving, and improving the quality of surface and ground water in the district.

NEW SECTION. **Section 3. Authorization to initiate creation of a local water quality district.** (1) The commissioners may initiate the creation of a local water quality district for the purpose of protecting, preserving, and improving surface and ground water quality by holding a public meeting, passing a

resolution of intention, providing an opportunity for owners of fee assessed units to protest, and conducting a public hearing to receive protests as provided by [sections 5 through 8].

(2) Cities and towns may be included in the district if approved by the city and town councils.

NEW SECTION. **Section 4. Public meeting -- resolution of intention to create local water quality district.** (1) The commissioners shall hold at least one public meeting concerning the creation of a local water quality district prior to the passage of a resolution of intent to create the district.

(2) The resolution of intention shall designate:

(a) the proposed name of the district;

(b) the necessity for the proposed district;

(c) a general description of the territory or lands included in the district, including identification of the district boundaries;

(d) a general description of the proposed water quality program;

(e) the initial estimated cost of the water quality program; and

(f) the initial proposed fees to be charged.

NEW SECTION. **Section 5. Participation of municipalities.** (1) Upon passage of a resolution of intention, the commissioners must transmit a copy of the resolution to the executive head of any incorporated city or town within the proposed district for consideration by the city or town council.

(2) If the city or town council by resolution concurs in the resolution of the commissioners, a copy of the resolution of concurrence must be transmitted to the commissioners.

(3) If the incorporated city or town council does not concur in the resolution of the commissioners, the commissioners have no authority to include the city or town in the district, but may continue to develop the district, excluding the city or town.

NEW SECTION. **Section 6. Notice of resolutions of intention and concurrence.** (1) The commissioners shall give notice of the passage of the resolution of intention and resolution of concurrence, if applicable, and publish a notice describing the local water quality program that would be implemented in the local water quality district and the initial proposed fees to be charged, designating the time and place where the commissioners will hear and pass upon protests made against the operation of the proposed district and stating that a description of the boundaries for the proposed district is included in the resolution on file in the county clerk's office.

(2) The notice must be published as provided in 7-1-2121 and must also be posted in three public places within the boundaries of the proposed district.

(3) The commissioners shall mail a postcard to the owners of proposed fee assessed units as listed in the county assessor's office, identifying the location where the resolution of intention, resolution of concurrence, and protest forms may be obtained.

NEW SECTION. **Section 7. Right to protest.** (1) At any time within 30 days after the date of the first publication of the notice provided for in [section 6], any person owning a fee assessed unit located within the proposed local water quality district may make written protest on forms provided by the county clerk against the proposed district and the fees proposed to be charged.

(2) Such protest must be in writing on the forms provided by the county clerk and must be delivered to the county clerk, who shall endorse on it the date the completed form is received.

(3) Owners may file one protest per fee assessed unit.

NEW SECTION. **Section 8. Hearing on protest.** (1) At the next regular meeting of the commissioners after the expiration of the time within which the protest provided for in [section 7] may be made, the commissioners shall proceed to hear and pass upon all protests, and their decision shall be final and conclusive.

(2) The commissioners may adjourn the hearing from time to time.

NEW SECTION. **Section 9. Sufficient protest to bar proceedings.** If the owners of more than 20% of the fee assessed units in the proposed district protest against the creation of the proposed district and the fees proposed to be charged, the commissioners are barred from further proceedings unless the registered voters residing within the proposed district create the district and establish the fees by approving a ballot proposition by a simple majority vote.

NEW SECTION. **Section 10. Ballot proposition.** (1) The commissioners may adopt a resolution causing a ballot proposition to be submitted to the registered voters residing within a proposed local water quality district to authorize the creation of the district and establish fees.

(2) A ballot proposition must state the type and maximum rate of the initial proposed fees that would be imposed consistent with the requirements of [section 18], the maximum dollar amount for a family residential unit, and the type of activities proposed to be financed.

NEW SECTION. **Section 11. Insufficient protest to bar proceedings -- resolution creating district -- power to implement local water quality program.** (1) The commissioners are determined to have acquired jurisdiction to create a local water quality district, establish fees, and appoint a board of directors if the commissioners find that insufficient protests have been made in accordance with [section 9] or if the registered voters residing in the proposed district have approved a ballot proposition as provided in [section 10].

(2) To create a local water quality district, the commissioners shall pass a resolution in accordance with the resolution of intention introduced and passed by the commissioners or with the terms of the ballot proposition.

(3) The commissioners and board of directors have jurisdiction to implement a local water quality program after the program is approved by the board of health and environmental sciences pursuant to [section 24].

NEW SECTION. **Section 12. Board of directors.** (1) Upon creation of a local water quality district, the commissioners shall appoint a board of directors for the district, except as provided in subsection (3)(b).

(2) The board of directors must consist of not less than five members, including one county commissioner, one commissioner or council member from the governing body of each incorporated city or town that is included in the district, and one member of the county or city-county board of health.

(3) The rest of the board of directors must consist of interested citizens that are selected as follows:

(a) persons distributed equally throughout the district if a county is the only unit of local government participating in the district; or

(b) through mutual agreement by all governing bodies if a county and one or more incorporated cities and towns are participating in the district.

(4) Terms of members of the board of directors shall be staggered and shall be for 3 years each.

(5) In those counties where a full-time city-county health department exists, the city-county board of health created as authorized by 50-2-106, may be designated as the board of directors for the local water quality district.

NEW SECTION. **Section 13. Powers and duties of board of directors.** The board of directors of a local water quality district established and organized under [section 12] has the

following powers and duties, with the approval of the commissioners:

(1) to develop a local water quality program for submission to the board of health and environmental sciences for the protection, preservation, and improvement of surface and ground water quality in the district;

(2) to implement a local water quality program;

(3) to administer the budget of the local water quality district;

(4) to employ personnel;

(5) to purchase, rent, or execute leasing agreements for equipment and material necessary for developing and implementing an effective program;

(6) to cooperate or contract with any corporation, association, individual, or group of individuals, including any agency of the federal, state, or local governments, in order to develop and implement an effective program;

(7) to receive gifts, grants, or donations for the purpose of advancing the program and to acquire by gift, deed, or purchase, land necessary to implement the local water quality program;

(8) to administer local laws adopted by the commissioners of the participating county or counties and governing bodies of the participating municipalities pertaining to the protection, preservation, and improvement of surface and ground water quality;

(9) to apply for and receive from the federal government or the state government, on behalf of the local water quality district, money appropriated by federal or state legislative bodies for aiding the local water quality program;

(10) to borrow from any loaning agency funds available for assistance in planning or refinancing a local water quality district and repay these with the money received from the established fees; and

(11) to construct facilities costing not more than $5,000 and to maintain facilities necessary to accomplish the purposes of the district, including, but not limited to, facilities for removal of water-borne contaminants, water quality improvement, sanitary sewage collection, disposal, and treatment, and storm water or surface water drainage collection, disposal, and treatment.

NEW SECTION. **Section 14. Powers and duties of commissioners.** In addition to the other powers and duties of the commissioners authorized by [sections 2 through 23], the commissioners have the following powers and duties:

(1) to adopt local laws in accordance with the requirements of [section 24];

(2) to establish fees;

(3) to review and approve the annual budget of the local water quality district; and

(4) to approve construction of facilities costing more than $5,000 but not more than $100,000 per year, that are necessary to accomplish the purposes of [sections 2 through 23], including,

but not limited to, facilities for removal of water-borne contaminants, water quality improvement, sanitary sewage collection, disposal, and treatment, and storm water or surface water drainage collection, disposal, and treatment.

NEW SECTION. **Section 15. Implementation of program.** The board of directors may implement a local water quality program in parts of a local water quality district before the program is implemented in the district as a whole. If a program is initially implemented in only a portion of a district, the fees may be levied only against that part of the district where the program is being implemented. As the program is expanded throughout the district, each additional part of the district that is covered by the program must start to pay the fee.

NEW SECTION. **Section 16. Changes in district boundaries.** The board of directors may by resolution make changes in the boundaries of a local water quality district that the board determines are reasonable and proper, following the same procedures of notice and hearing outlined under [sections 6 through 8], except that the notice provisions of [section 6(3)] apply only to the owners of proposed fee assessed units in new areas that are proposed to be included in the district. If 20% of the owners of fee assessed units in the new areas protest against inclusion in the district and the fees proposed to be charged, the commissioners are barred from further proceedings unless the registered voters residing in those areas agree to be included in the district and accept the proposed fees by

approving a ballot proposition in accordance with the provisions of [section 10].

NEW SECTION. **Section 17. Role of county attorney -- contracts for legal services.** The board of directors may, by agreement with the commissioners, contract with the county attorney or any attorney licensed to practice law in the state of Montana to perform legal services for the local water quality district at a reasonable rate.

NEW SECTION. **Section 18. Determination of fee rates -- fee increases -- fee exemption for agricultural water use.** (1) The commissioners shall determine fee rates according to a classification system that is based upon the volume of water withdrawn and the volume and type of waste produced at each fee assessed unit in the local water quality district.

(2) Fees for commercial and industrial units must be based on a comparison with a typical family residential unit as to volume of water withdrawn and volume and type of waste produced. Commercial and industrial units may be assessed fees that are no greater than 50 times the fees assessed on a family residential unit.

(3) The commissioners may increase fees up to 10% per year by passing a resolution to establish the new fee rate. The commissioners may not approve a proposed fee increase of more than 10% per year unless notice of the proposed increase is given as provided in [section 6(1) and (2)] and opportunity for protest is provided as set forth in [sections 7 and 8]. If more than 20% of the owners of fee assessed units in the district protest, the

fee increase may not be approved except through the ballot proposition procedure provided in [section 10].

(4) Water withdrawals for irrigation and livestock use and related water discharges may not be assessed fees.

NEW SECTION. **Section 19. Procedure to collect fees.** The month the local water quality district is created pursuant to [section 11], the department of revenue or its agents shall insure that the amount of the fee is placed on the county tax assessments for each fee assessed unit. Unpaid fees shall become a lien on the fee assessed unit and may be enforced as is nonpayment of property taxes.

NEW SECTION. **Section 20. Disposition and administration of proceeds.** (1) All fees and other money received by a local water quality district must be placed in a separate fund maintained by the county treasurer and must be used solely for the purpose for which the local water quality district was created.

(2) The commissioners shall draw warrants upon these funds upon presentation of claims approved by the board of directors.

NEW SECTION. **Section 21. Creation of joint local water quality districts.** (1) Joint local water quality districts are districts which encompass two or more counties or parts of counties.

(2) A joint local water quality district may be created in the following manner:

(a) The commissioners of each affected county must create the district following the procedures prescribed under [sections 3 through 11].

(b) The commissioners must appoint a joint board of directors composed of at least five members, consistent with the requirement of [section 22(2)(ii)] if applicable.

NEW SECTION. **Section 22. Composition of board of directors of joint district.** (1) The board of directors for a joint district must consist of one commissioner from each county involved, one member from each of the incorporated cities or towns that are included in the district, and one member from each of the county or city-county boards of health.

(2) The rest of the joint board of directors must consist of interested citizens that are selected as follows:

(i) distributed equally throughout the district if counties are the only units of government participating in the joint district; or

(ii) through mutual agreement of all groups of commissioners and governing boards of incorporated cities and towns participating in the district.

(3) Terms of appointed members shall be staggered and shall be for 3 years each.

NEW SECTION. **Section 23. Administration of funds in joint districts.** Fees and other money collected by joint local water quality districts may be administered by one county treasurer's office upon mutual agreement by the commissioners of the counties participating in a joint local water quality district.

NEW SECTION. **Section 24. Local water quality districts -- local water quality programs.** (1) A county that establishes a local water quality district according to the procedures

specified in [sections 2 through 23], shall undertake planning and information gathering activities necessary to develop a proposed local water quality program in consultation with the department.

(2) A county may implement a local water quality program in a local water quality district if the program is approved by the board after a public hearing conducted under 75-5-202.

(3) To approve a local water quality program, the board shall determine that the program is consistent with the purposes and requirements of Title 75, chapter 5, and that the program will be effective in protecting, preserving, and improving the quality of surface and ground water, considering the administrative organization, staff, and financial and other resources available to implement the program.

(4) Subject to the board's approval, county commissioners and governing bodies of municipalities that participate in a local water quality district may adopt local laws:

(a) that are compatible with, more stringent, or more extensive than the requirements imposed by 75-5-303 through 75-5-306, and 75-5-401 through 75-5-404, and rules issued under these sections, to protect water quality, implement the nondegradation policy, enforce water quality standards, regulate sources that discharge wastes into state waters, establish pollutant discharge permitting requirements, and ensure proper management of substances that have the potential to contaminate water quality;

(b) that provide for administrative procedures, administrative orders and actions, and civil enforcement actions

that are consistent with sections 75-5-601 through 75-5-604, 75-5-611 through 75-5-616, 75-5-621, and 75-5-622, and rules issued under these sections;

(c) that provide for penalties not to exceed the penalties provided in 75-5-631 through 75-5-633; and

(d) that ensure that the requirements of 75-5-605 are met.

(4) If a county changes the boundaries of a district after the board has approved the local water quality program for the district, the county shall submit a program amendment to the board and must obtain the board's approval of the program amendment before implementing the local water quality program in new areas that have been added to the district.

(5) The department shall monitor the implementation of local water quality programs to ensure that the programs are adequate to protect, preserve, and improve surface and ground water quality and are being administered consistent with the purposes and requirements of Title 75, chapter 5. If the department finds that a local water quality program is not adequate to protect, preserve, and improve surface and ground water quality or is not being administered consistent with the purposes and requirements of Title 75, chapter 5, the department shall make a report to the board.

(6) If the board determines that a local water quality program in force under this section is inadequate to protect, preserve, and improve surface and ground water quality in the local water quality district to which the program relates or that the program is being administered in a manner inconsistent with

Title 75, chapter 5, the board shall, on notice, conduct a hearing on the matter.

(7) If, after the hearing, the board determines that the program is inadequate to protect, preserve, and improve surface and ground water quality in the local water quality district to which it relates or that it is not consistent with the purposes of Title 75, chapter 5, the board shall require that necessary corrective measures be taken within a reasonable time, not to exceed 60 days.

(8) If the local water quality district fails to take these measures within the time required, the department shall administer within that district all of the provisions of Title 75, chapter 5. The department's water quality program supersedes all local water quality laws, rules, ordinances, and requirements in the affected local water quality district. The cost of administering the program shall be a charge on the local water quality district.

(9) If the board finds that the control of a particular water pollution source because of its complexity or magnitude is beyond the reasonable capability of a local water quality district or may be more efficiently and economically performed at the state level, it may direct the department to assume and retain control over that water pollution source. No charge may be assessed against the local water quality district for that source. Findings made under this subsection may be either on the basis of the nature of the sources involved or on the basis of

their relationship to the size of the communities in which they are located.

(10) A local water quality district in which the department administers its local water quality program under subsection (8) of this section may, with the board's approval, establish or resume a local water quality program that meets the requirements of subsections (1) through (4) of this section.

NEW SECTION. **Section 25. Codification instruction.** [Sections 1 through 23] are intended to be codified as an integral part of Title 7, and the provisions of Title 7, apply to [sections 1 through 23]. [Section 24] is intended to be codified as an integal part of Title 75, chapter 5, and the provisions of Title 75, chapter 5, apply to [section 24].

# Draft Copy

Printed 11:32 am on January 4, 1991

A P P E N D I X # 4

LC788

**** Bill No. ***

Introduced By **********

By Request of ENVIRONMENTAL QUALITY COUNCIL

A Bill for an Act entitled: "AN ACT TO AUTHORIZE THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES TO ISSUE CLEAN UP ORDERS TO APPROPRIATE UNITS OF LOCAL GOVERNMENT IN INSTANCES WHERE THE LOCAL GOVERNMENT HAS APPROVED A WASTE DISCHARGE ACTIVITY THAT THE DEPARTMENT HAS REASON TO BELIEVE IS LIKELY TO CAUSE POLLUTION OF STATE WATERS; AMENDING SECTION 75-5-601, MCA."

Be it enacted by the Legislature of the State of Montana:

**Section 1.** Section 75-5-601, MCA, is amended to read:

**"75-5-601. Clean-up orders.** (1) The department shall issue orders to any person to clean up any material which he or his employee, agent, or subcontractor has accidentally or purposely dumped, spilled, or otherwise deposited in or near state waters and which may pollute them.

(2) If a unit of local government, including but not limited to a local board of health, county commission, or governing body of a municipality, has granted a permit or license to a person to discharge waste or otherwise authorized an activity for the purpose of discharging waste, and the department has reason to believe that the waste discharge is causing or is likely to cause pollution of state waters, the department may issue an order to

the unit of local government to take measures to ensure that the wastes causing or likely to cause the pollution are cleaned up."

-END-

LC789

**** Bill No. ***

Introduced By **********

By Request of ENVIRONMENTAL QUALITY COUNCIL

A Bill for an Act entitled: "AN ACT TO REQUIRE THE BOARD OF HEALTH AND ENVIRONMENTAL SCIENCES TO ADOPT MINIMUM STANDARDS FOR THE CONTROL AND DISPOSAL OF SEWAGE FROM PRIVATE AND PUBLIC BUILDINGS; REQUIRING LOCAL BOARDS OF HEALTH TO ADOPT REGULATIONS FOR THE CONTROL AND DISPOSAL OF SEWAGE FROM PRIVATE AND PUBLIC BUILDINGS THAT ARE NO LESS STRINGENT THAN STATE STANDARDS; AMENDING SECTIONS 50-2-116 AND 75-5-305, MCA; AND PROVIDING AN APPLICABILITY DATE."

STATEMENT OF INTENT

A statement of intent is required for this bill in order to provide guidance to the board of health and environmental and sciences concerning rulemaking to establish minimum standards for the design, installation, and maintenance of new septic and sewage disposal systems that are connected to individual public and private buildings. Following the adoption of minimum state standards, local boards of health shall adopt regulations for new septic and sewage disposal systems that are no less stringent than the state standards. Local governments are not required to regulate septic and sewage disposal systems that the department of health and environmental sciences reviews and regulates under the requirements of Title 75, chapter 6, pertaining to public

water supply systems, or the requirements of Title 76, chapter 4, pertaining to subdivisions.

Be it enacted by the Legislature of the State of Montana:

**Section 1.** Section 75-5-305, MCA, is amended to read:

"**75-5-305. Adoption of requirements for treatment of wastes.** The board may establish minimum requirements for the treatment of wastes, except that the board shall establish minimum requirements for the control and disposal of sewage from private and public buildings."

**Section 2.** Section 50-2-116, MCA, is amended to read:

"**50-2-116. Powers and duties of local boards.** (1) Local boards shall:

(a) appoint a local health officer who is a physician or a person with a master's degree in public health or equivalent and appropriate experience as determined by the department and fix his salary;

(b) elect a chairman and other necessary officers;

(c) employ necessary qualified staff;

(d) adopt bylaws to govern meetings;

(e) hold regular meetings quarterly and hold special meetings as necessary;

(f) supervise destruction and removal of all sources of filth which cause disease;

(g) guard against the introduction of communicable disease;

(h) supervise inspections of public establishments for sanitary conditions;

(i) adopt necessary regulations that are no less stringent than state standards for the control and disposal of sewage from private and public buildings ~~not currently connected to any municipal system~~ that is not regulated by the provisions of Title 75, chapter 6, or Title 76, chapter 4.

(2) Local boards may:

(a) quarantine persons who have communicable diseases;

(b) require isolation of persons or things which are infected with communicable diseases;

(c) furnish treatment for persons who have communicable diseases;

(d) prohibit the use of places which are infected with communicable diseases;

(e) require and provide means for disinfecting places which are infected with communicable diseases;

(f) accept and spend funds received from a federal agency, the state, a school district, or other persons;

(g) contract with another local board for all or a part of local health services;

(h) reimburse local health officers for necessary expenses incurred in official duties;

(i) abate nuisances affecting public health and safety or bring action necessary to restrain the violation of public health laws or rules;

(j) adopt necessary ~~regulations and~~ fees to administer regulations for the control and disposal of sewage from private and public buildings ~~not currently connected to any municipal~~

~~system~~ (fees ~~shall~~ must be deposited with the county treasurer);

(k) adopt rules which do not conflict with rules adopted by the department:

(i) for the control of communicable diseases;

(ii) for the removal of filth which might cause disease or adversely affect public health;

(iii) on sanitation in public buildings which affects public health;

(iv) for heating, ventilation, water supply, and waste disposal in public accommodations which might endanger human lives; and

(v) ~~for the control and disposal of sewage from private and public buildings and~~ for the maintenance of sewage treatment systems which do not discharge an effluent directly into state waters and which are not required to have an operating permit as required by rules adopted under 75-5-401."

NEW SECTION. **Section 3. Applicability.** [This act] applies to proceedings begun after October 1, 1991.

-END-

# Draft Copy

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A P P E N D I X # 5

LC783

**** Bill No. ***

Introduced By **********

By Request of ENVIRONMENTAL QUALITY COUNCIL

A Bill for an Act entitled: "AN ACT TO CLARIFY THAT PROJECTS PROPOSED BY PUBLIC ENTITIES TO RESEARCH AND DEMONSTRATE LOW AGRICULTURAL CHEMICAL INPUT FARMING PRACTICES ARE ELIGIBLE FOR GRANTS FROM THE WATER DEVELOPMENT AND RENEWABLE RESOURCE DEVELOPMENT GRANT PROGRAMS; DIRECTING THE BOARD OF NATURAL RESOURCES AND CONSERVATION TO AMEND RULE 36.17.103; amending sections 85-1-605, and 90-2-111, MCA."

STATEMENT OF INTENT

A statement of intent is required for this bill in order to clarify that the department of natural resources and conservation is directed to amend Rule 36.17.103 to emphasize that public entities may receive funding from the water development program for projects and activities that provide research and demonstration of farming practices that enhance water quality protection through reduction of agricultural chemical use. Private entities may also receive water development funds for reduced chemical input farming projects. The purpose of [section 2] is only to emphasize that public entities can obtain water development funds for reduced chemical input farming projects.

The eligibility of private entities to apply for funds for these types of projects is not affected by the rule amendment.

Be it enacted by the Legislature of the State of Montana:

**Section 1.** Section 85-1-605, MCA, is amended to read:

**"85-1-605. Grants, loans, and bonds for state and local government assistance.** (1) The department may recommend to the legislature that grants and loans be made from coal severance tax proceeds deposited in the water development state special revenue account, that loans be made from water development bond proceeds deposited in the water development account, and that coal severance tax bonds be authorized pursuant to Title 17, chapter 5, part 7, to provide financial assistance to a department, agency, board, commission, or other division of state government or to a city, county, or other political subdivision or local government body of the state. The legislature may approve by appropriation or other appropriate means those grants and loans it finds consistent with the policies and purposes of the program.

(2) In addition to implementing those projects approved by the legislature, the department may request up to 10% of the funds available for grants from the water development special revenue account in any biennium to be used for emergencies. These emergency projects must be approved by the department and be defined as those projects which, if delayed until legislative approval can be obtained, will cause substantial damages or legal liability to the project sponsor. In allocating such funds, the

department shall inform the legislative finance committee of the legislature.

(3) The grants and loans provided for by this section may be made for the purchase, lease, development, or construction of water development projects and activities for the conservation, management, use, development, or protection of the water and related agricultural, land, fish, wildlife, and water recreation resources in the state, including projects and activities that provide research and demonstration of farming practices that enhance water quality protection through reduction of agricultural chemical use; for the purpose of feasibility and design studies for such projects; for development of plans for and the rehabilitation, expansion, and modification of water development projects; for other water development projects and activities that will enhance the water resources of the state; and for similar purposes approved by the legislature."

NEW SECTION. **Section 2.** The Board of Natural Resources and Conservation shall amend Rule 36.17.103, Administrative Rules of Montana, to read:

"36.17.103 ELIGIBILITY FOR PROGRAM (1) Public entities may receive funding for "the purchase, lease, development, or construction of water development projects and activities for the conservation, management, use, development or protection of the water and related agricultural, land, fish, wildlife, and water recreation ~~resource~~ resources in the state, including projects and activities that provide research and demonstration of farming practices that enhance water quality protection through reduction

of agricultural chemical use; for the purpose of feasibility and design studies for such projects; for development of plans for the rehabilitation, expansion, and modification of water development projects; for other water development projects and activities that will enhance the water resources of the state; and for similar purposes approved by the legislature." Section 85-1-605, MCA.

(2) Private entities may receive funding for "the construction and development of water development projects and activities." Section 85-1-606, MCA. Private individuals may receive funding for the purchase, lease, development, or construction of water development projects and activities for the conservation, management, use, development or protection of the water and related agricultural, land, fish, wildlife, and water recreation resource in the state; for the purpose of feasibility and design studies for such projects; for development of plans for the rehabilitation, expansion, and modification of water development projects; for other water development projects and activities that will enhance the water resources of the state; and for similar purposes approved by the department. These projects and activities may include but are not limited to: irrigation system development or repair, saline seep abatement, offstream and tributary storage, canal lining, providing access to water recreation areas, streambank stabilization, erosion control, or rural water supply development."

**Section 3.** Section 90-2-111, MCA, is amended to read:

**"90-2-111. Grants to state and local government.** (1) The department of natural resources and conservation may recommend to the governor that grants from the renewable resource development account provided for by this part be made to any department, agency, board, commission, or other division of state government or to any political subdivision of state government.

(2) The department shall solicit and consider in its evaluation of proposed projects the views of interested and affected departments, boards, agencies, and other subdivisions of state and federal government and of other interested and affected persons.

(3) The governor shall submit those grant proposals having his approval to the legislature by the 20th day of any legislative session. Those grant proposals approved by the legislature shall be administered by the department.

(4) The grants provided for by this section may be made for the purchase, lease, or construction of projects for the conservation, management, utilization, development, or preservation of the land, vegetation, fish, wildlife, recreational, and other renewable resources in the state, <u>including projects that provide research and demonstration of farming practices that reduce agricultural chemical use</u>; for the purpose of feasibility and design studies for such projects; for development of plans for the rehabilitation, expansion, or modification of existing projects; and for such other and further similar purposes as the legislature may approve.

(5) In recommending grants under this section, the department and the governor shall consider the special requirements and benefits of proposals that provide for the long-term compilation and management of information on the natural resources of Montana. These proposals contribute to the efficient management of renewable resources, benefit a variety of public and private users, and require a continuing commitment of resources to maintain currency and utility. In consequence of these values and conditions, projects providing for the long-term compilation and management of natural resource information may be considered for funding in consecutive funding cycles and may not be penalized for having received funds previously from the renewable resource development program.

(6) The department may adopt rules as required to govern the terms and conditions for making grants pursuant to this section."

-END-

**** Bill No. ***

Introduced By **********

By Request of ENVIRONMENTAL QUALITY COUNCIL

A Bill for an Act entitled: "AN ACT TO REQUIRE PESTICIDE REGISTRANTS TO SUBMIT TO THE DEPARTMENT OF AGRICULTURE RESULTS OF PESTICIDE LEACHIBILITY TESTS COMPLETED ON OR AFTER OCTOBER 1, 1991; REQUIRING THE DEPARTMENT OF AGRICULTURE TO PROVIDE COPIES OF TESTS AND TEST RESULTS TO INTERESTED PERSONS; AUTHORIZING THE DEPARTMENT TO CHARGE A FEE COMMENSURATE WITH THE DEPARTMENT'S COSTS OF OBTAINING AND PROVIDING THE INFORMATION; AND amending sections 80-8-201, 80-8-303, and 80-15-302, MCA."

STATEMENT OF INTENT

A statement of intent is required for this bill in order to provide guidance to the department of agriculture concerning rulemaking. The department shall adopt rules identifying the characteristics of pesticides that contribute to significant potential to impair ground water, including but not limited to a pesticide's persistance in the environmental generally and in the subsurface, and pesticide mobility. The department may also adopt rules identifying the specific ingredients in pesticides that are known to have significant potential to impair ground water. The purpose of these rules is to identify those pesticides and ingredients for which pesticide registrants must

submit leachibility tests and test results to the department of agriculture that are completed on or after October 1, 1991.

Be it enacted by the Legislature of the State of Montana:

**Section 1.** Section 80-8-201, MCA, is amended to read:

**"80-8-201. Registration.** (1) Every pesticide distributed, sold, or offered for sale within this state or delivered for transportation or transported in intrastate commerce or between points within this state shall be registered with the department. The registration shall be renewed annually by the manufacturer, formulator, or distributor of the pesticide. The department shall register all federally approved pesticides, and those registered are subject to registration fees and all other provisions of this chapter. All registrations of pesticides expire on December 31 following the date of issuance unless otherwise terminated.

(2) The applicant for registration shall file with the department a statement including:

(a) the name and address of the applicant and the name and address of the person whose name will appear on the label, if other than the registrant;

(b) a complete copy of the label of the pesticide, the United States environmental protection agency registration number if the pesticide is so registered, and a statement of all claims to be made for it, including directions for use;

(c) the trade and chemical name of the pesticide;

(d) <u>a full description of tests and results on pesticide leachibility that are completed on or after October 1, 1991, for</u>

pesticides that have significant potential to impair ground water. The department shall adopt rules identifying the characteristics of pesticides that contribute to significant potential to impair ground water, and the department may identify pesticide ingredients known to have significant potential to impair ground water;

(e) if requested by the department, a full description of tests made other than the tests specified in subsection (d) and the results upon which the claims are based. In the case of renewal of registration, a statement shall be required only with respect to information which is different from that furnished when the pesticide was registered or last reregistered.

(3) Upon the written request of any person, the department shall obtain and provide a copy of tests and results completed by registrants referenced in subsections (2)(d), (2)(e), and (6), that are not otherwise protected by the confidentiality requirements of 80-8-107 and 80-15-108. The department may charge a reasonable fee for this service commensurate with the department's costs of obtaining and providing the requested information. Fees collected by the department under this section must be deposited in the department of agriculture agricultural chemical ground water protection account established by 80-15-301.

(4) Any pesticide imported into this state which is subject to the provisions of any federal act providing for the registration of pesticides and has been registered under the provisions of a federal act shall be registered in the state.

However, the state may restrict the sale or use and application of the pesticide by type of dealer, applicator, time, and place and may establish special registrations of pesticides as outlined in subsection (8) of this section and 80-8-105(3). The annual registration fee must also be paid, and registration information required by the department must be provided.

~~(4)~~ (5) The applicant shall pay an annual fee of $75 for each pesticide registered. A registration fee is not required to register a federally approved experimental use permit. Fees collected shall be deposited in the state treasury to the credit of the general fund.

~~(5)~~ (6) The department may require the submission of the complete formula and certified analytical standards of any pesticide. If it appears to the department that the composition of the article warrants the proposed claims for it and if the article and its labeling and other material required to be submitted comply with the requirements of 80-8-202, it shall register the article.

~~(6)~~ (7) If it does not appear to the department that the article warrants the proposed claims for it or if the article and its labeling and other material required to be submitted do not comply with this chapter, it shall notify the applicant of the manner in which the article, labeling, or other material required to be submitted fails to comply with the chapter so as to afford the applicant an opportunity to make the necessary corrections. If the applicant does not make the corrections upon receipt of the notice, the department may refuse to register the article.

The department may suspend or cancel the registration of a pesticide whenever it does not appear that the article or its labeling comply with this chapter or whenever scientific evidence proves that the article endangers man or the general environment afforded protection under 80-8-105(3)(a). When an application for registration is refused or the department proposes to suspend or cancel a registration, the registrant may pursue administrative remedies under the Montana Administrative Procedure Act and rules of the department.

~~(7)~~ (8) Registration is not required in the case of a pesticide shipped from one plant in this state to another plant in this state by the same person.

~~(8)~~ (9) (a) The departments of health and environmental sciences, agriculture, and fish, wildlife, and parks shall review all applications for registration of an experimental-use permit or a registration for special local needs. The applicant shall pay a one-time fee of $75 for a special local need or experimental-use permit registration. The departments shall utilize the same requirements and standards for reviewing registrations established by the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, and regulations adopted thereunder. The department of agriculture shall provide the departments of health and environmental sciences and fish, wildlife, and parks with a complete copy of the application, related correspondence, and a statement of the department of agriculture's proposed action on the application. The departments of health and environmental sciences and fish, wildlife, and

parks shall approve or disapprove the application within 10 days after the receipt of the application. If the departments of health and environmental sciences, agriculture, and fish, wildlife, and parks are in agreement with the proposed registration, the department of agriculture shall issue the registration.

(b) The department of agriculture shall establish a time and place for an interagency conference for the purposes of resolving the registration of any pesticide or device. If two of the departments approve the proposed registration, the department of agriculture shall issue the registration.

(c) The registrant applying for registration shall be notified as to proposed changes in registration. If the departments cannot resolve the proposed registration following the interagency conference, the registrant may request a joint administrative hearing before the departments of agriculture, health and environmental sciences, and fish, wildlife, and parks.

(d) Following the interagency conference and, if requested, the administrative hearing, if the proposed registration of a pesticide or device has not been resolved, the department of agriculture shall appoint an advisory council as outlined in 80-8-108 to resolve by majority vote the registration of any pesticide. The advisory council's recommendations on the registration shall be accepted by the departments and implemented by the department of agriculture.

~~(9)~~ (10) Pesticides registered under any federal law when canceled for sale and use in total or in part by a federal agency

responsible for registration are considered canceled in total or in part for sale and use in Montana. The cancellation is effective on the final date of sale or use allowed under the federal law and rules or orders of the federal agency. If the federal cancellation allows existing stock to be used past the final date of cancellation, such sale or use in this state may not exceed 2 years. The department shall provide technical assistance to any person in possession of such products to insure their proper disposal, relabeling, or removal."

**Section 2.** Section 80-8-303, MCA, is amended to read:

"**80-8-303. Embargo.** (1) Whenever a duly authorized agent of the department of agriculture finds or has probable cause to believe that any pesticide or device is adulterated or misbranded, has not been registered under the provisions of ~~80-8-201(5)~~ 80-8-201(6), fails to bear on its label the information required by this chapter, or is a white powder pesticide and is not colored as required under this chapter, he shall affix to such article a tag or other appropriate marking giving notice thereof and stating that the article has been detained or embargoed and warning all persons not to remove or dispose of such article by sale or otherwise until permission for removal or disposal is given by such agent or the court. Any person who removes or disposes of such detained or embargoed article by sale or otherwise, without prior permission, or removes or alters the tag or marking, is guilty of a misdemeanor and may be charged accordingly or may be subjected to appropriate administrative proceedings, or both.

(2) When an article detained or embargoed under subsection (1) has been found by such agent to be in violation, if after 30 days the violation has not been resolved, he may petition the district court in whose jurisdiction the article is detained or embargoed for a condemnation of such article. When such agent has found that an article so detained or embargoed is not adulterated or misbranded, he shall remove the tag or other marking.

(3) If the court finds that a detained or embargoed article is in violation of this chapter or rules adopted thereunder, such article shall after entry of the decree be destroyed at the expense of the claimant thereof, under the supervision of such agent, and all court costs and fees and storage and other proper expenses shall be assessed against the claimant of such pesticide or device or his agent, provided that when the adulteration or misbranding can be corrected by proper labeling or processing of the article, the court, after entry of the decree and after such costs, fees, and expenses have been paid and a good and sufficient bond has been executed, conditioned upon the proper labeling or processing of such pesticide or device, may by order direct that such article be delivered to the claimant thereof for such labeling or processing under the supervision of an agent of the department. The expense of such supervision shall be paid by claimant. The article shall be returned to the claimant of the pesticide or device on the representation to the court by the department that the article is no longer in violation of this chapter and that the expenses of such supervision have been paid."

**Section 3.** Section 80-15-302, MCA, is amended to read:

**"80-15-302. Special funding.** (1) A fee of $15 is assessed for the registration of pesticides in addition to the fee imposed by ~~80-8-201(4)~~ 80-8-201(5).

(2) A fee of $10 is assessed for the registration of fertilizers in addition to the fee imposed by 80-10-201(1). The additional fee must be used for the ground water protection responsibilities of the department relating to fertilizers. Revenues collected from this fee must be credited to the commercial fertilizer account within the state special revenue fund for the administration of this chapter."

-END-