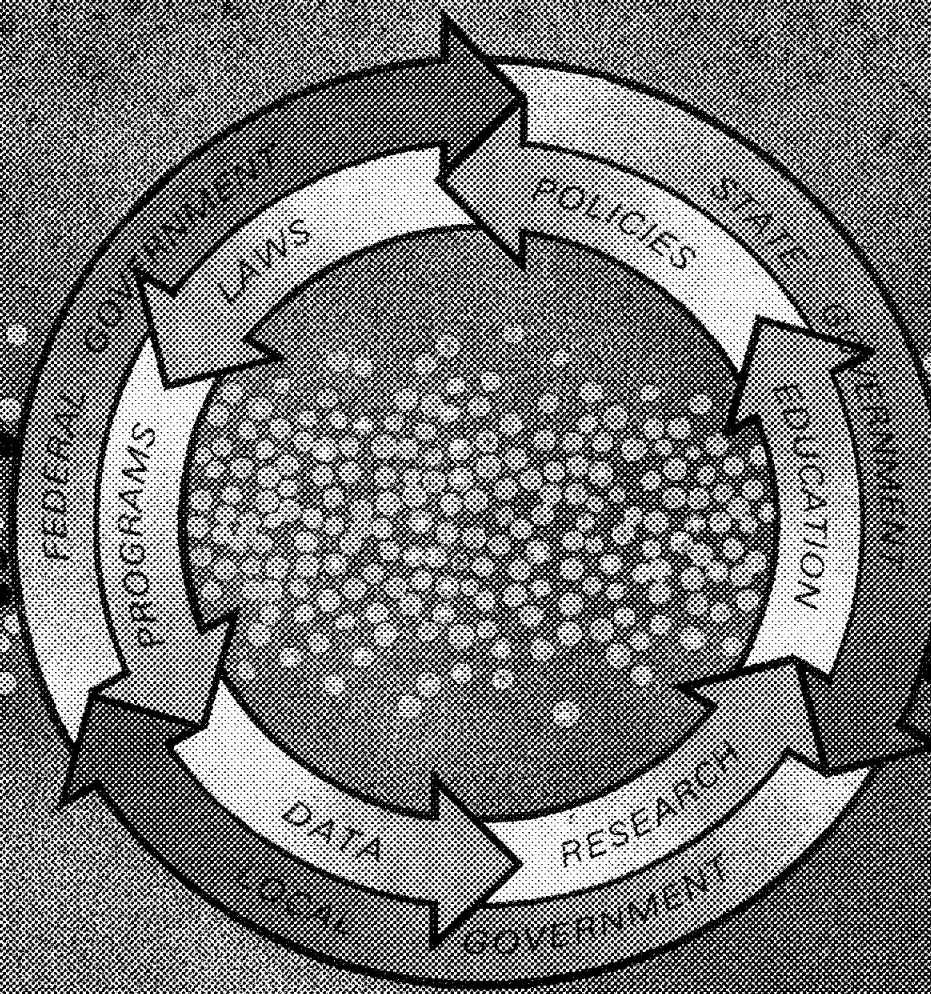


US EPA ARCHIVE DOCUMENT



Protecting The Nation's Ground Water: EPA's Strategy For The 1990s

The Final Report Of The EPA Ground-Water Task Force



Comprehensive Ground-Water Protection

NOTE TO THE READER:

This Ground-Water Task Force Report is a statement of Agency policy and principles. It does not establish or affect legal rights or obligations. This guidance document does not establish a binding norm and is not finally determinative of the issues addressed. Agency decisions in any particular case will be made by applying the law and regulations to the specific facts of the case.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 28 1991

OFFICE OF
THE ADMINISTRATOR

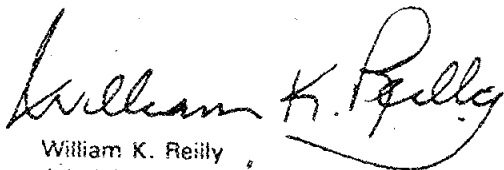
Dear Friends:

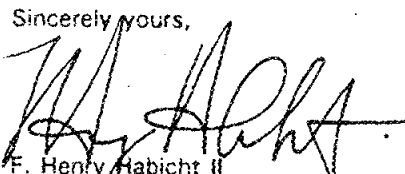
Ground-water resources are of vital importance to this country -- to the health of our citizens, the integrity of many of our ecosystems, and the vigor of our economy. We must make every effort to protect the quality of these resources, which are increasingly threatened by a variety of human activities from industrial by-products, to excessive use of agricultural chemicals, to faulty business operations, and to improper disposal of household wastes.

In 1984, the Environmental Protection Agency (EPA) issued a Ground-Water Protection Strategy which articulated what was known about protecting ground-water resources and set out an appropriate role for the Agency. Over the last several years, EPA and the States have made significant strides under the Agency's 1984 Strategy. Last year, the time was right to take a hard look at the Agency's ground-water protection efforts, and to develop a more integrated approach for moving forward with this issue in the 1990s. We formed an EPA Ground-Water Task Force of senior Agency managers from all offices with ground-water related responsibilities to develop recommendations for providing a more integrated and effective approach to *comprehensive* protection of ground-water resources. Significant input was provided to the Task Force by State and local governments, other Federal agencies, environmentalists, industry, and public interest groups.

The outcome of this review is the report "Protecting the Nation's Ground Water: EPA's Strategy for the 1990s." This report states Agency policy, accompanied by implementation principles that reflect an aggressive approach to protecting the Nation's ground-water resources; they will guide the course of EPA and State efforts over the coming years. The policy puts clear priority on preventing ground-water contamination, recognizes that ground water is a uniquely local resource for which States and local governments must assume primary responsibility, and strives to improve EPA's coordination of ground-water activities under all our statutes and programs. This policy will be reflected in EPA programs and resource allocations as we continue our partnership with State and local governments, private industry and the public in addressing this issue.

Protecting our ground-water resources is one of the most complex environmental issues we face in the 1990s. With over 50 percent of the population relying on ground water as their primary source of drinking water, and the recent EPA Science Advisory Board report which ranks the contamination of drinking water as one of the higher risks to human health, we cannot delay protecting this resource. This Task Force Report reflects the accomplishments and experience of the States and EPA over the last few years. Under this new and integrated cross-program framework for action, we can all work together to ensure that this vital resource is available for use by the present and future generations.


William K. Reilly
Administrator

Sincerely yours,

F. Henry Habicht II
Deputy Administrator



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Executive Summary

Background

A number of Federal statutes provide EPA with the authority to prevent and control sources of ground-water contamination, as well as to clean up existing contamination. During the early 1980s, EPA recognized that these authorities to protect ground water were fragmented among many different statutes and were largely undefined. As a result, in 1984 the Agency adopted a Ground-Water Protection Strategy to articulate both the problem and EPA's role in a national ground-water protection program. Under this Strategy, the Agency has focused its efforts on four major objectives:

- Building State capacity;
- Addressing sources of contamination;
- Establishing ground-water policy direction and program consistency; and
- Coordinating EPA programs

While this strategy was effective in creating momentum for States to develop and implement ground-water programs, the passage of time and growing body of experience indicated that gaps remained in protection efforts across the country. It became clear that there was a need to assess our progress and adjust our approach to take into account recent changes in statutory authorities and our increased knowledge of the issue by promoting *comprehensive* protection on the State and local level.¹

In July 1989, EPA Administrator William Reilly established a Ground-Water Task Force, chaired by Deputy Administrator F. Henry Habicht II, to review the Agency's ground-water protection program and to develop concrete principles and objectives to ensure effective and consistent decision-making in all Agency decisions affecting the resource. The Task Force included membership from all Headquarters offices with ground-water protection responsibilities and selected

Regional representation. Several work groups were created to develop recommendations on issues of special interest. In addition, a substantial outreach effort succeeded in obtaining input on two key issues - Agency principles and the character of the Federal/State relationship - from major Federal, State, local, public interest, industry and agricultural leadership groups and the Governors and agency officials of all States.

The outcomes of this effort are policy and implementation principles that are intended to set forth an aggressive approach to protecting the nation's ground-water resources and direct the course of the Agency's efforts over the coming years. It will be reflected in EPA policies, programs, and resource allocations, which will guide EPA, States and local governments, and other parties with whom we work in carrying out the Agency's ground-water responsibilities. This approach is characterized by:

¹ Under Federal statutes and EPA policy, Indian Tribes may be recognized as States for the purpose of operating national environmental programs. Throughout this report, references to States also refer to Tribal governments as well as the U.S. Territories.

- **Clear Statement of Policy:**

This document sets forth a clear statement of Agency policy, which will serve as a decision-making framework for all Agency programs relating to the ground-water resource.

- **Focus on Comprehensive Resource Management:**

This policy builds on current State activities by providing financial incentives for filling in gaps in protection efforts and building comprehensive protection programs on the State level. Under this resource-based approach to protection, States are to take into account the total impact of all sources of contamination as well as the unique hydrogeologic features of their resource. A critical first step in developing and implementing protection programs and setting priorities is to ensure that currently used and reasonably expected sources of drinking water do not present adverse health risks.



Ron Heller

- **Emphasis on Prevention of Ground-Water Contamination:** Under this policy, the Agency will place an increased emphasis on prevention of ground-water contamination and strive to achieve a greater balance between prevention and remediation activities.

- **Clear Federal and State Roles:** EPA's policy clearly articulates the principles defining the EPA/State relationship in ground-water protection and provides for developing the framework on the State level for integrating Federal and State actions relating to the resource.

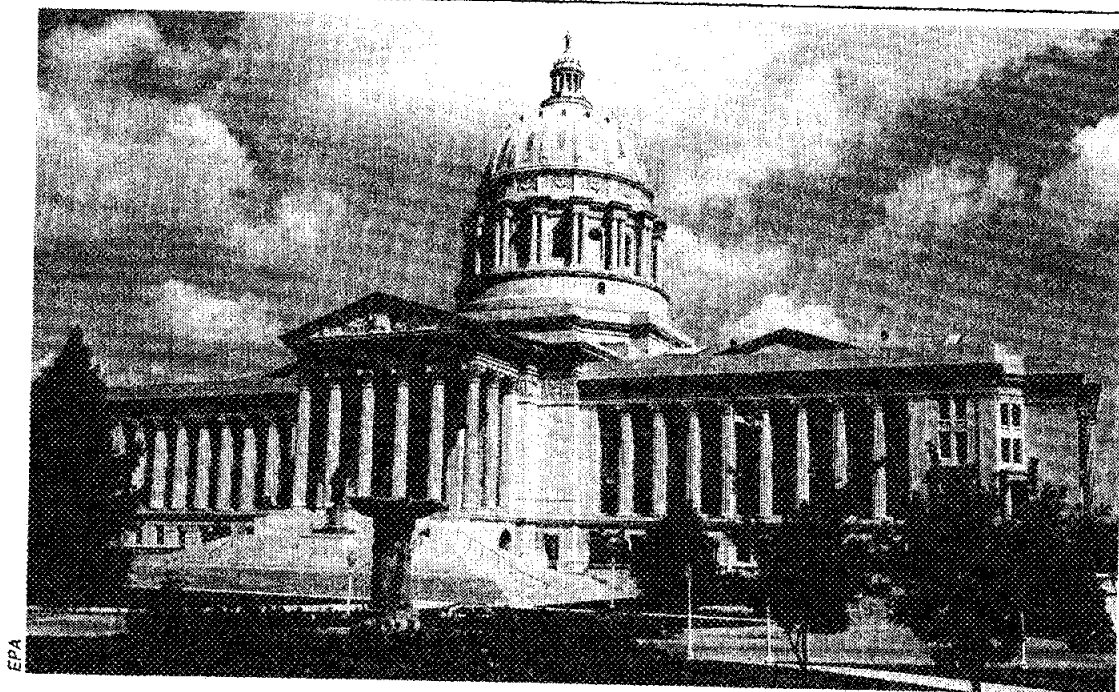
- **Adequacy of State Programs:** The Agency's new policy describes EPA's intention to refine over the next year the definition of the elements of a State Ground-Water Protection Program, and how each of the elements must be addressed to develop a program that is "adequate" to comprehensively protect a State's resource. It also describes how EPA will work to provide greater flexibility to a State in implementing Agency programs when that State has achieved an "adequate" ground-water protection program which affords comprehensive protection of the resource.

- **EPA Oversight:** In keeping with the recognition that States will develop and implement their own unique but adequate programs, EPA oversight in the Agency's ground-water related programs will shift from a program-specific basis to a cross-program, resource-based approach to be further defined over the coming year.

- **Coordinated Funding:** In contrast with Agency tradition, EPA will shift from a traditional grants mode into one characterized by coordinated management of current ground-water related grants and the incentive of increased funding for States showing progress with comprehensive protection of the resource.

Documents to Guide the Agency's Future Agenda

A. EPA's Ground-Water Protection Principles — This document establishes that the "overall goal of EPA's Ground-Water Policy is to prevent adverse effects to human health and the environment, and to protect



the environmental integrity of the nation's ground-water resources." It also states that, "... in determining appropriate prevention and protection strategies, EPA will also consider the use, value, and vulnerability of the resource, as well as social and economic values." Additionally, the document establishes principles related to prevention, remediation, and Federal, State and local responsibilities.

B. The Federal/State Relationship in Ground-Water Protection — This document contains an initial section

that outlines the broadly applicable principles of the Federal/State relationship, e.g., the role of the States and EPA, and the importance of resource-based prevention efforts. This document also includes a second section that describes EPA's new approach for promoting comprehensive protection of the resource and provides a list of the program elements commonly found in "mature" State ground-water protection programs that provide comprehensive protection of the resource. This document serves as an initial

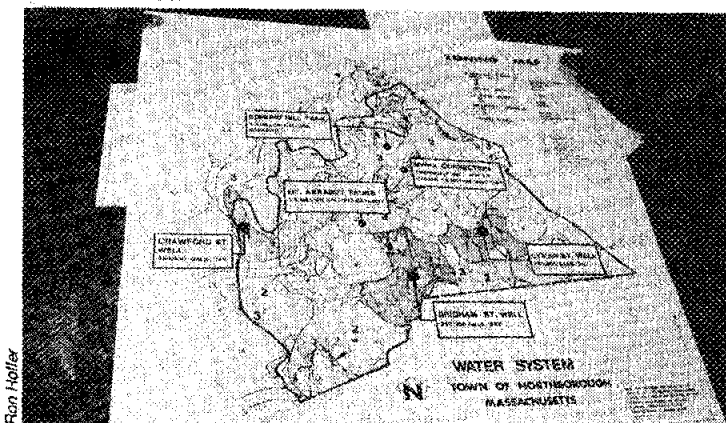
framework for future work in this area. In 1991, EPA will hold workshops around the country to provide the Agency with State input on both further refining the elements and their descriptions and on defining an "adequate" State program. In 1992, EPA will work with each State to complete a profile of its ground-water protection programs based on the final elements and criteria for adequacy. These profiles will identify gaps in State programs and will serve as the basis for grant agreements for the States' FY 1993 program efforts.

C. EPA's Approach to Implementation — This section describes the specific roles and responsibilities of EPA program offices, both in Headquarters and the Regional Offices, in implementing the Ground-Water Protection Principles and ensuring the development and implementation of State ground-water programs, which will provide comprehensive protection (Parts A and B of the report). It also describes the initial implementation actions the Agency will take over the next few years.

D. Agency Policy on EPA's Use of Quality Standards in Ground-Water Prevention and Remediation Activities — This policy statement describes how EPA will use maximum contaminant levels (MCLs) under the Safe Drinking Water Act and water quality standards (WQSs) under the Clean Water Act as "reference points" in carrying out ground-water programs. It also describes how these reference points will be applied differently in prevention and remediation activities.

E. Ground-Water Data Management — This document discusses the status of EPA's ground-water data availability, accessibility, and utilization. It discusses how data collected by EPA and others are used in ground-water planning and decision-making at the Federal, State, and local levels. Several specific recommendations for improvement developed by the Task Force follow. Also, an extensive computer and data system modernization effort now being undertaken by EPA's Office of Information Resources Management, should result in a substantial improvement in the availability and utility of ground-water data over the coming years. In FY 1991 the Agency is moving ahead with this initiative as well as recommendations relating to data consistency, quality and automation, accessibility, and data utilization.

F. Office of Research and Development (ORD) Ground-Water Research Plan — This document describes the research EPA plans to undertake over the coming years in response to the needs of Agency programs. It discusses research activities needed to provide the scientific knowledge base for successfully preventing and remediating ground-water contamination. In FY 1991 and beyond, ORD will conduct new research and technology transfer relating to three key areas of the Agency's ground-water protection efforts: the Wellhead Protection Program; State information systems for preventing ground-water contamination from pesticides; and, subsurface cleanup and mobilization processes.



Ron Hoffer

Part A

EPA's Ground-Water Protection Principles

The overall goal of EPA's Ground-Water Policy is to prevent adverse effects to human health and the environment and to protect the environmental integrity of the nation's ground-water resources; in determining appropriate prevention and protection strategies, EPA will also consider the use, value, and vulnerability of the resource, as well as social and economic values.

- In all events, EPA will execute this goal and the principles below in accordance with Federal law.
- Adverse effects mean those risks that are significant to the affected population and determined to be unreasonable where appropriate under relevant statute.
- EPA's fundamental premise is that the attainment of this goal is necessary to achieve the sustainability of the resource and closely hydrologically connected surface water systems, not just for the near term but for the future as well.
- In addition, because ground-water cleanup is extremely costly, and usually difficult and in some cases impossible to achieve and demonstrate, EPA's goal is to emphasize prevention of pollution where appropriate.

In order to achieve this goal, the Agency's principles are:

WITH RESPECT TO PREVENTION:

- ◆ Ground water should be protected to ensure that the nation's currently used and reasonably expected drinking water supplies, both public and private, do not present adverse health risks and are preserved for present and future generations.
- ◆ Ground water should also be protected to ensure that ground water that is closely hydrologically connected to surface waters does not interfere with the attainment of surface water quality standards, which is necessary to protect the integrity of associated ecosystems.
- ◆ Ground-water protection can be achieved through a variety of means including: pollution prevention programs; source controls; siting controls; the designation of wellhead protection areas and future public water supply areas; and the protection of aquifer recharge areas. Efforts to protect ground water must also consider the use, value, and vulnerability of the resource, as well as social and economic values.

- Ground water is a uniquely local resource due to the ease with which small sources can affect it, and the impact that use and hydrologic characteristics (e.g. vulnerability) can have on its quality. As such, ground-water programs will require an appropriate blend of several protection methods.

WITH RESPECT TO REMEDIATION:

- ◆ Ground-water remediation activities must be prioritized to limit the risk of adverse effects to human health first and then to restore currently used and reasonably expected sources of drinking water and ground water closely hydrologically connected to surface waters, whenever such restorations are practicable and attainable.
- Given the costs and technical limitations associated with ground-water cleanup, a framework should be established that ensures the environmental and public health benefit of each dollar spent is maximized. Thus, in making remediation decisions, must take a realistic approach to restoration based upon actual and reasonably expected uses of the resource as well as social and economic values.
- In an ideal world of unlimited funds, prioritization would be unnecessary. However, because resources do not permit all contamination to be addressed at once, the need for prioritization must be recognized.
- Moreover, given the expense and technical difficulties associated with ground-water remediation, EPA is emphasizing early detection and monitoring so that it can address the appropriate steps to control and remediate the risk of adverse effects to human health and the environment.

WITH RESPECT TO FEDERAL, STATE, AND LOCAL RESPONSIBILITIES:

- ◆ The primary responsibility for coordinating and implementing ground-water protection programs has always been and should continue to be vested with the States. An effective ground-water protection program should link Federal, State, and local activities into a coherent and coordinated plan of action.
- ◆ EPA should continue to improve coordination of ground-water protection efforts within the Agency and with other Federal agencies with ground-water responsibilities.

- Since ground water in any given area may be subject to contamination from a wide variety of point and non-point source activities, coherence and coordination in any plan of action are vitally important. EPA must ensure that the ground-water protection programs it implements under the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), the Safe Drinking Water Act (SDWA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and the research programs that it funds under these Acts, are directed toward achieving the principles outlined above. In the design and timing of regulatory initiatives, EPA will address the highest risks. In addition, the authority of each State to allocate water within its jurisdiction should not be abrogated.
- Given the uniquely local nature of ground-water pollution and use, the States and localities must have primary responsibility for assessing and prioritizing risks to the resource and for implementing programs to protect the resource within each state so that it is available for various uses. However, where specific Federal responsibilities are provided for under the law, the requirements of the law must prevail.
- Not only must Federal, State, and local activities be linked to form a coherent plan of action; but air, water, and land practices, to the extent practicable, must also be examined in an integrated fashion to ensure protection of the ground-water resource.