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### Setting the Standards: Federal Groundwater Protection Programs

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**SETTING THE STANDARDS:  
FEDERAL GROUNDWATER PROTECTION PROGRAMS**

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**UNCOVERING THE HIDDEN RESOURCE:  
GROUNDWATER LAW, HYDROLOGY AND POLICY IN THE 1990s**

University of Colorado at Boulder  
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**SETTING THE STANDARDS:  
FEDERAL GROUNDWATER PROTECTION PROGRAMS**

I. Introduction

1. Summary

Groundwater regulation has historically been a matter of state law. Over the years, federal regulations have been developed in various programs to address specific issues such as waste disposal and protection of drinking water. In 1984, the Environmental Protection Agency (EPA) issued its "Groundwater Protection Strategy" in an effort to better coordinate federal groundwater programs. The policy establishes a framework for federal participation in groundwater protection, and has served as the foundation for later federal groundwater remediation programs.

The federal role in groundwater protection is likely to expand over the next decade of environmental controls. EPA's new focus on non-point sources of pollution, its growing emphasis on eco-system based pollution control, and the emergence of pollution prevention as a regulatory strategy point in the direction of a more comprehensive federal program for groundwater protection in the not too distant future.

2. General References

Groundwater Protection Strategy, U.S. Environmental Protection Agency, Office of Groundwater Protection, 1984.

Safe Drinking Water Act, 42 U.S.C. §300f, et seq.

Federal Water Pollution Control Act, (Clean Water Act) 42 U.S.C. §7901 et seq.

Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq.

Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §9601 et seq.

Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §136 et seq.

## **II. Legal Bases for Regulation of Groundwater**

### **1. States are the primary regulators of groundwater.**

Sources of state authority include:

a. Using innate police power authorities, states (or local governments) can regulate almost any kind of activity as necessary to protect the public health, safety and welfare. Because groundwater is an important part of many localities' drinking water supply, many states and municipalities actively regulate groundwater quality as a matter of state law.

b. Particularly in western states, groundwater withdrawals may also be regulated as a matter of state property law.

c. Under the constitutional public trust doctrine, states are the primary trustees for natural resources, including groundwater. As a trustee, states may establish reasonable regulations governing use of natural resources and (under emerging law) may recover damages for injury to natural resources.

**2. The federal government has not developed a comprehensive regulatory program for groundwater protection.**

a. The federal government has used the federal commerce clause as the legal basis to extend federal regulatory controls into areas traditionally addressed by the states. All major federal environmental laws are based upon Congressional findings that the pollution to be addressed affects interstate commerce.

b. The Clean Water Act, Congress' most comprehensive water quality protection program, applies to "waters of the U.S." The Act's jurisdictional reach has historically been limited to navigable waters and therefore provides little basis for regulation of groundwater. However, the evolution of wetlands protection is expanding federal jurisdiction and may provide a commerce clause-like basis for federal regulation in the future.

c. As specific groundwater contamination issues have arisen in federal regulatory programs, they have been addressed

on an issue by issue basis. Accordingly, federal regulation of groundwater is piecemeal, spanning a number of environmental programs.

d. Lacking a clear basis of federal authority, the Environmental Protection Agency has attempted to fashion a coordinated federal approach to groundwater protection through its "Groundwater Protection Strategy" and related policy documents. This set of guidelines may form the basis for more comprehensive federal regulations in future.

### III. Federal Statutes and Regulations

1. The Safe Drinking Water Act (SDWA) (42 U.S.C. §300f, et seq.) establishes national standards for drinking water quality. The SDWA applies to public water systems serving at least 15 households or 25 year round residents.

a. National Drinking Water Standards promulgated under the SDWA (Part A) include Primary Standards (identified as "Maximum Contaminant Levels," or MCLs, found at 40 CFR part 142), Secondary Standards (SMCLs, found at 40 CFR part 143) and Maximum Contaminant Level Goals (MCLGs, found at 40 CFR Part. 143). MCLs are enforceable standards established at levels intended to protect public health, taking into account costs and the availability of treatment technologies. SMCLs are guidelines used to address aesthetic problems such as color and odor. MCLGs reflect the level at which EPA believes no adverse effects to human health could occur; they are non-enforceable goals. In establishing MCLGs, EPA does not take into account either costs or the availability of treatment technologies.

b. If groundwater is a source of supply for a regulated public water supplier, drinking water standards must be met. Drinking water standards may also be applied as cleanup objectives in a hazardous substance cleanup (discussed below).

c. The SDWA also controls some aspects of waste disposal into groundwater. The Underground Injection Control Program (UIC) (Part C) establishes standards and criteria for

disposal of wastes (including municipal, industrial, oil/gas and mineral wastes) into aquifers. Specific UIC requirements vary depending on the nature of the wastes and the potential uses to which an aquifer might be put. The UIC regulations identify five classes of aquifer based on groundwater quality and potential yield, and establish construction, operating and reporting requirements. Like drinking water standards, UIC requirements may also be used to establish cleanup objectives.

d. In 1986, Congress added the Wellhead Protection and Sole Source Aquifer programs to the SDWA. These additions are intended to encourage states and EPA to first designate certain aquifers as sources of drinking water, then establish more aggressive regulatory programs to protect these supplies. Wellhead protection provisions direct states to protect wells and recharge areas from contamination, with technical support from EPA. If EPA has designated an aquifer as a "sole source" of drinking water supply, federal money may not be used for any project that could create contamination.

2. The Federal Water Pollution Control Act (FWPCA) (also known as the "Clean Water Act" (CWA) 42 U.S.C. §7901 et seq.) regulates discharges of almost any substance into "waters of the United States." The FWPCA applies to any "point source" discharge, including direct discharges, discharges into sanitary sewers (publicly operated treatment works) and dredge and fill activities.

a. Under the FWPCA, states first classify individual reaches of all major water bodies according to their actual or potential uses, then establish stream quality standards intended to protect or enhance those uses. EPA provides technical guidance in the form of water quality criteria and must ultimately approve state classifications.

b. Any person discharging into a water body must obtain a permit with individual limits designed to keep the waters at or above the receiving water's quality standards.



c. Groundwater may become subject to surface water standards if it is hydraulically connected to the regulated water body. This is most common in the context of soil or groundwater remediation.

d. Although EPA's focus in implementing the FWPCA has been on point sources, the Act also provides for regulation of non-point sources (such as agricultural runoff and mine drainage). In 1987 amendments to the CWA, Congress directed EPA to more aggressively pursue non-point sources of pollution. The new stormwater program (40 C.F.R parts 122-124) is the first regulatory expression of this Congressional mandate. Contamination of groundwater is a point of particular concern likely to be addressed by regulators under the non-point source program. (Contamination of surface water by contaminated groundwater is also likely to be addressed.)

3. The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (known as "Superfund," 42 U.S.C. §9601 et seq.) was passed in 1980 to address the problem of abandoned hazardous waste sites. The direction of the Superfund program has been heavily influenced by some notorious examples of groundwater contamination (such as Love Canal).

a. CERCLA applies to any "release" of "hazardous substances" into the environment. Owners or operators of the releasing "facility," waste generators and transporters may all be liable for cleanup. Liability accrues to any person (including federal, state or local governments) who incurs costs in responding to a release.

b. CERCLA is a risk-based remediation program; cleanup objectives are established based on projected impacts to human health and the environment. The National Contingency Plan (CERCLA's implementing regulations) establishes detailed procedural steps that must be followed in remediating a contaminated site.

c. Since the mid-80's, EPA has asserted that Superfund cleanups must meet all relevant standards contained in

other environmental laws. For example, if groundwater contamination is at issue, and the aquifer in question is a potential source of drinking water supply, the cleanup will be required to meet drinking water standards. Congress ratified this approach in its 1986 amendments (see 42 U.S.C. §9621).

d. Superfund is the only federal environmental program with a dedicated source of funding. This has allowed EPA to directly subsidize the development of geo-hydrology as a science, and to (perhaps unintentionally) experiment with groundwater remediation techniques. Superfund has proven to be an important source of data about the nature and extent of groundwater contamination. EPA's experience with groundwater remediation to date suggests that cleaning up contaminated groundwater may be much more complicated than anticipated.

4. The Resource Conservation and Recovery Act (RCRA) (originally part of the Solid Waste Disposal Act, both found at 42 U.S.C. §6901 et seq.) regulates the transportation and disposal of solid and hazardous wastes.

a. Under "Subtitle D" (originally the Solid Waste Disposal Act) states must establish performance standards (design, construction, operation and closure requirements) for solid waste landfills. Groundwater protection is addressed primarily through requirements for liners, leachate collection systems and groundwater monitoring. EPA is in the process of tightening requirements for solid waste landfills (as well as sludge disposal), driven primarily by concerns over groundwater contamination.

b. "Subtitle C" (RCRA) governs the transportation, treatment, storage and disposal of "hazardous wastes," a regulatorily defined subcategory of solid waste. Under RCRA, stringent design standards have been established for landfills, lagoons, wastepiles, land application, tanks and containers, aimed primarily at protecting groundwater from contamination. RCRA regulations establish specific performance standards for groundwater monitoring and leak detection, as well as

concentration limits for certain constituents ("maximum contaminant levels" identical to Safe Drinking Water Act MCLs).

c. The 1986 amendments added new "corrective action" requirements for certain treatment, storage and disposal facilities. These requirements largely mirror CERCLA's remediation steps, including establishment of cleanup objectives for contaminated media such as groundwater. Drinking water standards and stream quality standards may be used to establish cleanup objectives during a corrective action.

d. In 1986, Congress also added a new "Underground Storage Tank" (UST) program to RCRA. As part of the much heralded return to federalism, UST was designed to be implemented primarily by the states. UST establishes design and operating requirements for underground storage tanks containing either hazardous substances or petroleum products. UST also requires installation of leak detection systems; if a release (historic or new) is detected, owners and operators of USTs are required to take corrective action. A state's classification of any affected aquifers will largely determine the scope of cleanup efforts.

#### IV. The Federal Groundwater Protection Strategy and the Future of Federal Regulation.

1. EPA's 1984 Groundwater Protection Strategy establishes a blueprint for federal regulation of groundwater pollution. The Strategy recognizes that states are the primary regulators of groundwater, and seeks to build on this existing legal base through a federal/state partnership. EPA has committed to provide technical and financial support to states to build and strengthen their groundwater programs. The Agency has also undertaken a number of administrative steps designed to improve internal communication and ultimately achieve greater consistency in federal regulatory decisions.

2. Although the concept of states as "partners" is likely to survive at least insofar as implementation and enforcement of regulatory programs are concerned, we should anticipate a much

stronger federal presence in dictating groundwater quality standards in future. Groundwater contamination is perceived as one of the country's major environmental problems. Several regulatory proposals are now pending that would expand the federal role in setting groundwater standards. While none of these proposed rules can be expected to move quickly (particularly in an election year), the rules are likely to be promulgated by EPA or passed in substance by Congress within the next few years.

As EPA's understanding of environmental problems has grown, the Agency has become increasingly concerned about "cross-media" contamination. It has recently undertaken several initiatives aimed at addressing contamination problems on a geographic or eco-system basis (such as a watershed). Groundwater figures prominently in these scenarios as both a resource to be protected and a potential source of contamination to surface water.

Pollution prevention is also a major new focus for EPA, and future rules will likely aim at changing practices that contribute to groundwater contamination (such as application of fertilizers). Contamination from diffuse sources (such as non-point sources) will likely be a particular focus of concern in future rules.

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United States  
Environmental Protection  
Agency

Office of  
Ground-Water Protection  
Washington, DC 20460

August 1984

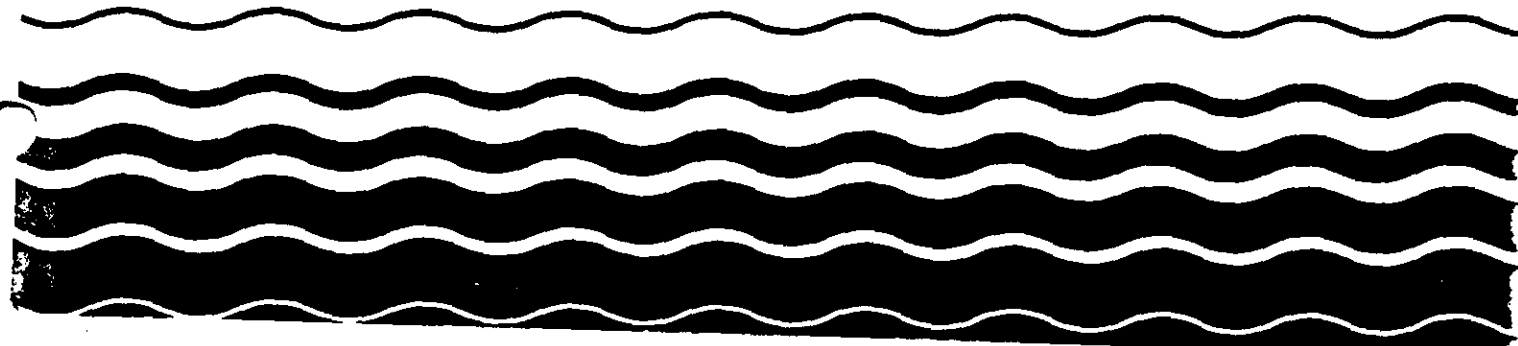
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# Ground-Water Protection Strategy

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CHAPTER I: EXECUTIVE SUMMARY

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## EXECUTIVE SUMMARY

In the last decade the public has grown increasingly aware of the potential problem of ground-water contamination. Reports of chemicals threatening drinking water supplies have mobilized State, local and Federal governments to respond. But these responses suffer from a lack of coordination among responsible agencies, limited information about the health effects of exposure to some contaminants, and a limited scientific foundation on which to base policy decisions.

Officials at all levels of government have begun to look for a definable strategy to protect ground water. The strategy presented here will provide a common reference for responsible institutions as they work toward the shared goal of preserving, for current and future generations, clean ground water for drinking and other uses, while protecting the public health of citizens who may be exposed to the effects of past contamination.

EPA Administrator William D. Ruckelshaus recognized the need to protect ground-water quality as a national concern. In response, Deputy Administrator Alvin L. Alm formed a Ground-Water Task Force to: (1) identify areas of serious inconsistencies among programs and institutions at the State, local and Federal levels; (2) assess the need for greater program coordination within EPA; and (3) help strengthen States' capabilities to protect ground-water resources as they themselves define the need. In line with EPA's mission to preserve and enhance environmental quality, this strategy document focuses on issues of ground-water quality.

(Issues of water quantity and allocation are also important, but they are outside the province of EPA. Many ground-water quality issues (for example, salt-water intrusion) are closely related to issues of ground-water quantity and allocation. States will have to approach such issues through integrated policies; topics relating primarily to quantity and allocation are not addressed in this document. With respect to EPA activities the scope and intent of this document includes only EPA's statutory and regulatory authority.)

The Task Force was composed of staff from each affected EPA Program Office and two EPA regions. The Office of Water chaired the group. Beginning work in June 1983, the Task Force delivered a draft report to the Deputy Administrator on September 1, 1983. He sought the views of senior Agency policy-makers by meeting with the involved Assistant Administrators and their key staff on many occasions to discuss the report and its implications.

As options began to narrow, this senior policy group requested additional analyses from the Task Force, consulting with Regional Administrators as it proceeded. At length, after concerted debate and broad-scale Agency involvement, the main policy elements for an EPA Ground-Water Protection Strategy emerged. Draft conclusions were discussed with Congressional staff, State organizations, and environmental and industry organizations.

A draft strategy resulting from that decision process was then distributed to State officials and to select State, business and industry, and environmental organizations for comment. Approximately 150 organizations submitted comments. After receiving comments from these interested parties, EPA revised the draft strategy for final consideration by the Deputy Administrator and Assistant Administrators. This final Ground-Water Protection Strategy is the product of that deliberation process.

#### A Perspective on Ground Water

In the 1970's, national environmental concern focused mainly on natural resources and pollutants we could see or smell. Surface water and air quality, specific types of contaminants such as pesticides, or obvious sources of contamination such as uncontrolled hazardous waste sites, were of primary concern. People concerned themselves only rarely with ground water since, hidden from view as it is, few knew or really understood how seriously the resource was being compromised.

Today, ground-water contamination looms as a major environmental issue of the 1980's. The attention of agencies at all levels of government, as well as that of industry and environmentalists, is now focused on this vital resource. As contamination has appeared in well water and wells have been closed, the public has expressed growing concern about the health implications of inappropriate use and disposal of chemicals. As concern has increased, so have demands for expanded protection of the resource.

Our understanding of the sources and dimension of the threat is limited, but increasing. Scientists can now measure specific

organic chemicals at the parts-per-billion or -trillion levels. As new health studies are completed and as we learn more about various sources of ground-water contamination, our capacity to deal with this problem increases. Scientists and engineers have also learned more about how contaminants move in the subsurface -- which ones bind to soils and which ones pass through to the water table beneath. They are now identifying technologies to prevent, control, and clean up ground-water contamination.

### Major Authorities and Responsibilities

The Task Force reviewed EPA's statutory authority as it relates to ground water and examined the current scope and extent of State programs as well. While the nature and variability of ground water makes its management the primary responsibility of States, the Task Force found that a number of Federal authorities exist to support States in the effort.

Since these Federal statutes were enacted at various times for separate purposes, inconsistency developed in EPA's regulations and in the decisions made under them. While these differences are often necessary and reasonable, there are a number that appear to hinder a cohesive approach to ground-water protection. Improving harmony among EPA's program rules affecting ground-water protection is an important need, since inconsistency in such matters leads to confusion and less effective protection than if roles, requirements, and responsibilities are clear and consistent.

In addition to its own authorities, EPA found a variety of powerful State and local statutes available for use. A number of States have begun their own programs for ground-water protection, some built on permits supported by a system of aquifer classification. Continuing the development of State programs in this area is vital, as they have the basic responsibility for the protection of the ground-water resource.

### Strategic Concerns

Given public concerns, EPA, as well as State and local governmental agencies, must decide how best to protect public health and critical environmental systems. It seems clear to many that we must direct our energies to minimize future contamination, even as we detect and manage contamination associated with past activities.

Protecting ground water will be difficult. Starting with limited knowledge of the resource and limited means to address existing or potential problems, we must expend our efforts where

groundwater contamination would cause the greatest harm. Consequently, we assign highest priority to those ground waters that are currently used as sources of drinking water or that feed and replenish unique ecosystems.

Ground-water protection is a very complex and difficult issue. It will require sustained effort at all levels of government over a long period of time before this resource will be adequately protected. Within this context, EPA developed its Ground-Water Protection Strategy.

#### EPA's Ground-Water Protection Strategy

The EPA Strategy includes four major components that address critical needs. They are:

- Short-term build-up of institutions at the State level;
- Assessing the problems that may exist from unaddressed sources of contamination--in particular, leaking storage tanks, surface impoundments, and landfills;
- Issuing guidelines for EPA decisions affecting ground-water protection and cleanup; and
- Strengthening EPA's organization for ground-water management at the Headquarters and Regional levels, and strengthening EPA's cooperation with Federal and State agencies.

These components, described in detail in Chapter IV, are summarized below.

EPA will provide support to States for program development and institution building. EPA will encourage States to make use of certain existing grant programs to develop ground-water protection programs and strategies. These funds will support necessary program development and planning, the creation of needed data systems, assessment of legal and institutional impediments to comprehensive State management, and the development of State regulatory programs such as permitting and classification. Regional Administrators will work with Governors so that funds are directed to the State agency or programs with the most complete authority and capability to undertake or continue statewide program or strategy development. EPA will also provide State agencies with technical assistance in solving ground-water problems and will continue to support a strong research program in ground water.

EPA will address contamination from underground storage tanks. Because the evidence suggests that leaking storage tanks--particularly from gasoline--may represent a major, unaddressed source of ground-water contamination, the Deputy Administrator has directed the Office of Toxic Substances to design a study to identify the nature, extent, and severity of the problem. EPA is investigating the application of the Toxic Substances Control Act (TSCA), as well as other authorities, as a potential legal basis for applying appropriate requirements on design and operation of these tanks. In the meantime, the Agency will issue chemical advisories to alert owners and operators about the problem and work with States and industry to develop voluntary steps to reduce contamination. EPA is also planning direct regulation of underground storage of hazardous waste under the Resource Conservation and Recovery Act (RCRA).

EPA will study the need for further regulation of land disposal facilities, including surface impoundments and landfills. EPA, in cooperation with the States, will conduct studies of impoundments and landfills as to the degree of danger they present, set priorities for control, review the regulatory options available, and determine if additional Federal controls are needed.

EPA will adopt guidelines for consistency in its ground-water protection programs. The guidelines will be based on the policy that ground-water protection should consider the highest beneficial use to which ground water having significant water resources value can presently or potentially be put. Under this policy, the guidelines define protection policies for three classes of ground water, based on their respective value and their vulnerability to contamination. These guidelines are intended to provide a framework for the decisions that EPA and States will have to make in implementing EPA programs. The guidelines will be used by EPA and the States to make decisions on levels of protection and cleanup under existing regulations, to guide future regulations, and to establish enforcement priorities for the future. (These regulations will then provide the legal basis for the implementation of the guidelines. It is not intended that any substantive or procedural rights are provided by this Strategy.)

The classes of ground water are as follows:

Class I: Special Ground Waters are those that are highly vulnerable to contamination because of the hydrological characteristics of the areas under which they occur and that are also characterized by either of the following two factors:

- a) Irreplaceable, in that no reasonable alternative source of drinking water is available to substantial populations; or

- b) Ecologically vital, in that the aquifer provides the base flow for a particularly sensitive ecological system that, if polluted, would destroy a unique habitat.

Class II: Current and Potential Sources of Drinking Water and Waters Having Other Beneficial Uses are all other ground waters that are currently used or are potentially available for drinking water or other beneficial use.

Class III: Ground Waters Not Considered Potential Sources of Drinking Water and of Limited Beneficial Use are ground waters that are heavily saline, with Total Dissolved Solids (TDS) levels over 10,000 mg/L), or are otherwise contaminated beyond levels that allow cleanup using methods reasonably employed in public water system treatment. These ground waters also must not migrate to Class I or II ground waters or have a discharge to surface water that could cause degradation.

EPA will accord different levels of protection to each class as described in the examples below. Chapter IV describes in more detail the regulatory approaches EPA will take to protect these ground-water classes under each statute.

To prevent contamination of Class I ground waters EPA will initially discourage by guidance, and eventually ban by regulation, the siting of new hazardous waste land disposal facilities over Special Ground Waters. Some restrictions may also be applied to existing land disposal facilities. Further, Agency policy will be directed toward restricting or banning the use in these areas of those pesticides which are known to leach through soils and are a particular problem in ground water. EPA's general policy for cleanup of contamination will be the most stringent in these areas, involving cleanup to background or drinking water levels.

Ground waters that are current and potential sources of drinking water (Class II) will receive levels of protection consistent with those now provided for ground water under EPA's existing regulations. In addition, where ground waters are vulnerable to contamination and used as a current source of drinking water, EPA may ban the siting of new hazardous waste land disposal facilities, initially through guidance, and later through regulation. While EPA's cleanup policy will assure drinking water quality or levels that protect human health, exemptions will be available to allow a less stringent level under certain circumstances when protection of human health and the environment can be demonstrated. EPA may establish some

differences in cleanup depending on whether the ground water is used as a current or potential source of drinking water or for other beneficial purposes.

Ground waters that are not considered potential sources of drinking water and have limited beneficial use (Class III) will receive less protection than Class I or II. Technology standards for hazardous waste facilities generally would be the same as for Class I and Class II. With respect to cleanup, should the hazardous waste facility leak, waivers establishing less stringent concentration limits would be considered on a case-by-case basis. Waivers would not be available, however, when a facility caused the contamination that precluded future use. EPA's Superfund program will not focus its activities on protecting or improving ground water that has no potential impact on human health and the environment.

To improve the consistency and effectiveness of EPA's current ground-water programs, the guidelines will be incorporated into each of the Agency's relevant program areas. Many of these programs are delegated to the States, and for most programs, States must demonstrate that their programs are "no less stringent" than the Federal program in order to qualify for authorization to implement the programs. However, in implementing these guidelines EPA will provide as much flexibility to the States as is possible under state delegation agreements.

Consequently, EPA will to the extent possible keep regulatory requirements based on EPA's ground-water protection guidelines general and performance-oriented. EPA will, in addition, develop guidance to accompany such regulations for use by EPA when EPA directly administers a program in a State (e.g., implementation in a non-delegated State or implementation of a program which cannot be delegated). Such accompanying guidance would not be binding on the States, but it could also be used by the States to assist them in developing their own regulatory requirements or guidelines. This guidance will, for example, define more precisely the meaning of the terms used in the Strategy, such as "vulnerable and unique habitat".

The task of actually determining whether the ground water in a particular location fits the criteria for Class I, II, or III will be a site-specific determination. In programs involving permits, such as RCRA and Underground Injection Control (UIC), for example, this determination will be made during the permitting process based on data supplied by the permit applicant. In cleanup actions under Comprehensive Environmental Response Compensation and Liability Act (CERCLA), the ground-water class will

be determined in conjunction with the assessment of the extent of contamination. Where States have already mapped or designated ground water for that location, the State classification of the ground water will provide useful guidance.

EPA will improve its own institutional capability to protect ground water. EPA has assigned ground-water coordination and development responsibilities to the Assistant Administrator for Water and he has established an Office of Ground-Water Protection to oversee the implementation of this Strategy. The Director of that Office has already started to work with other EPA offices and Regions to institutionalize EPA and State ground-water roles, plan for correction of uncontrolled sources of contamination, identify and resolve inconsistencies among EPA programs, and learn more about the nature and extent of ground-water contamination.

EPA Regional offices are also in the process of establishing Regional ground-water units. They will coordinate Regional ground-water policy and program development and assist the States through grants and technical assistance designed to increase their institutional capabilities to manage ground water.

EPA will carry out this Strategy in partnership with other Federal agencies, especially the Department of Interior (DOI), to insure that the Strategy is implemented as effectively as possible.

The body of this report contains three chapters and an Appendix. Chapter II describes the nature and extent of ground-water contamination. Chapter III describes State and Federal programs for ground-water protection. Chapter IV describes EPA's strategy to protect ground water. The appendices include a matrix describing State, local, and Federal roles and a summary of the options considered by EPA in developing this Strategy.

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