FEDERAL GROUND WATER QUALITY PROTECTION PROGRAMS

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Thank you for the invitation to meet with you today. I have spoken here before, enjoy the association and always learn a great deal about water in New Mexico. It also provides an opportunity to visit New Mexico and its scenic mountains. I would like to take a moment to introduce Lee Harris and Kathy Hollar from the Office of Groundwater in Region VI. Kathy manages the ground water protection programs in New Mexico, working closely with the New Mexico Environmental Improvement Division. Lee is the Chief of the Office of Groundwater.

We recognize that in New Mexico, pollution of shallow ground water has the potential to contaminate private drinking water wells. The environmentally sensitive river valleys and floodplains, which often contain shallow aquifers, are the focus for high density populations in New Mexico. Among the five states covered by our regional office, (Louisiana, Arkansas, Oklahoma, Texas, and New Mexico), New Mexico is of particular interest to us with regard to ground water contamination because of the strong dependence on ground water here and because the area's geology renders the limited ground water supplies vulnerable to contamination.

Approximately 87% of the population in New Mexico depends on ground water for drinking water and it is the only source of water in many parts of the state. Compare this to approximately 50% in Arkansas, 69% in Louisiana, 41% in Oklahoma, 47% in Texas, and it is easy to understand the importance of ground water in New Mexico.

The Environmental Protection Agency (EPA) has awarded grants to the New Mexico Environmental Improvement Division for developing and implementing ground water protection programs. Since 1985, a total of just under $300,000 has been allocated to the state for ground water protection.

With respect to ground water protection in the United States today, it is clear that a complex network of federal, state, and local agencies are sharing the responsibility, based on their particular authorities and abilities. Some of these agencies have had a role in ground water protection for many years, while other agencies have only recently added ground water protection to their other responsibilities. In some states, new agencies have even been established to handle the protection of ground water. New Mexico took the

initiative to protect ground water resources a decade ago when the New Mexico Water Quality Control Commission adopted a comprehensive set of state ground water protection regulations. New Mexico's regulatory program for the protection of ground water quality is well established, workable and effective. The ground water laws of some sixteen states reflect New Mexico's influence.

Legislation that protects ground water is found at all levels of government; however, there is no single, overriding ground water statute at the federal level. Instead, fifteen separate laws address ground water in some way (see Figure 1). Many of these federal statutes control specific contaminants and sources of contamination, while others establish programs to preserve or restore the ground water.

Historically, states have had the principal ground water protection responsibility. Although federal source-related statutes have been enacted, no overriding federal legislation similar to that for surface water or air exists for ground water. While some groups are calling for omnibus legislation, the EPA administration has taken the position that states should retain the primary responsibility.

At the federal level, eleven separate agencies have some jurisdiction over ground water (see Figure 2). Of these agencies, EPA has the lead responsibility for ground water quality and implements regulatory and research programs designed to protect ground water. Some of the other federal agencies that also play major roles in the protection of ground water include: land management agencies within the Department of Interior and the United States Department of Agriculture; source control agencies such as the Nuclear Regulatory Commission and the Department of Defense; and, finally, scientific agencies such as the United States Geological Survey which characterizes the ground water resource and conducts broad-based site-specific research aimed at understanding the sources, movement, and fate of both natural and man-made chemicals in ground water, and the United States Department of Agriculture which conducts research on the agricultural aspects of ground water.

Within EPA, ground water protection has become an integral part of many programs which were originally established to meet other objectives. The organization chart in Figure 3 shows the EPA offices with ground water responsibilities at the national level. The organization chart in Figure 4 shows the offices and programs with ground water responsibilities for Region VI. For the most part, these programs address one or more discrete sources of ground water contamination. For example, programs originally established to promote waste recycling and recovery, in order to reduce health risks from

STATUTES
Atomic Energy Act
Clean Water Act
Coastal Zone Management Act
Comprehensive Environmental Response, Compensation, and Liability Act
Federal Insecticide, Fungicide, and Rodenticide Act
Federal Land Policy and Management Act (and associated mining laws)
Hazardous Materials Transportation Act
National Environmental Policy Act
Reclamation Act
Resource Conservation and Recovery Act
Safe Drinking Water Act
Surface Mining Control and Reclamation Act
Toxic Substances Control Act
Uranium Mill Tailings Radiation Control Act
Water Research and Development Act

Source: Office of Technology Assessment, Protecting the Nation's Groundwater from Contamination (Washington, D.C.: U.S. Congress, Office of Technology Assessment, 1984), p. 65.

Figure 1. Federal Laws Related to the Protection of Ground Water Quality

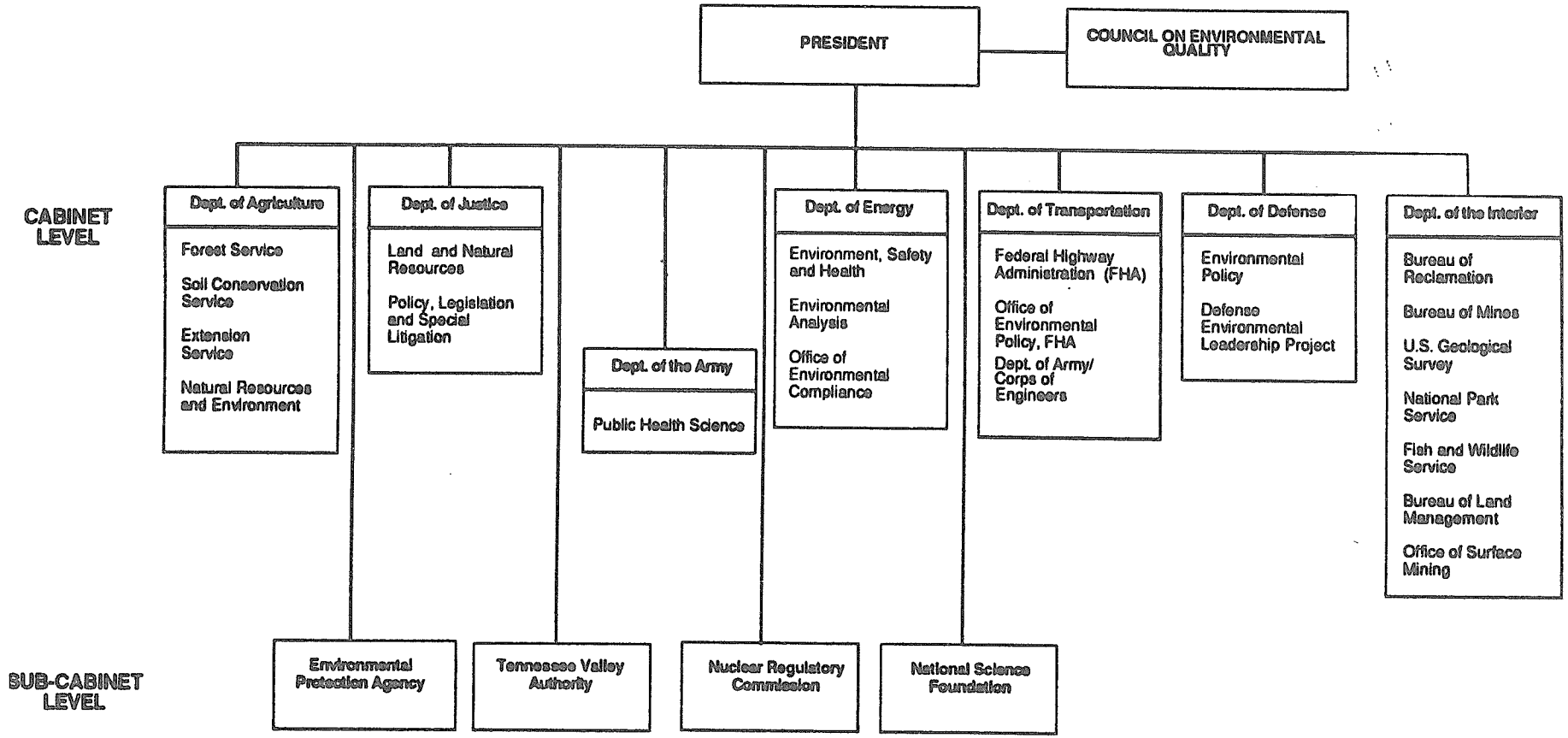
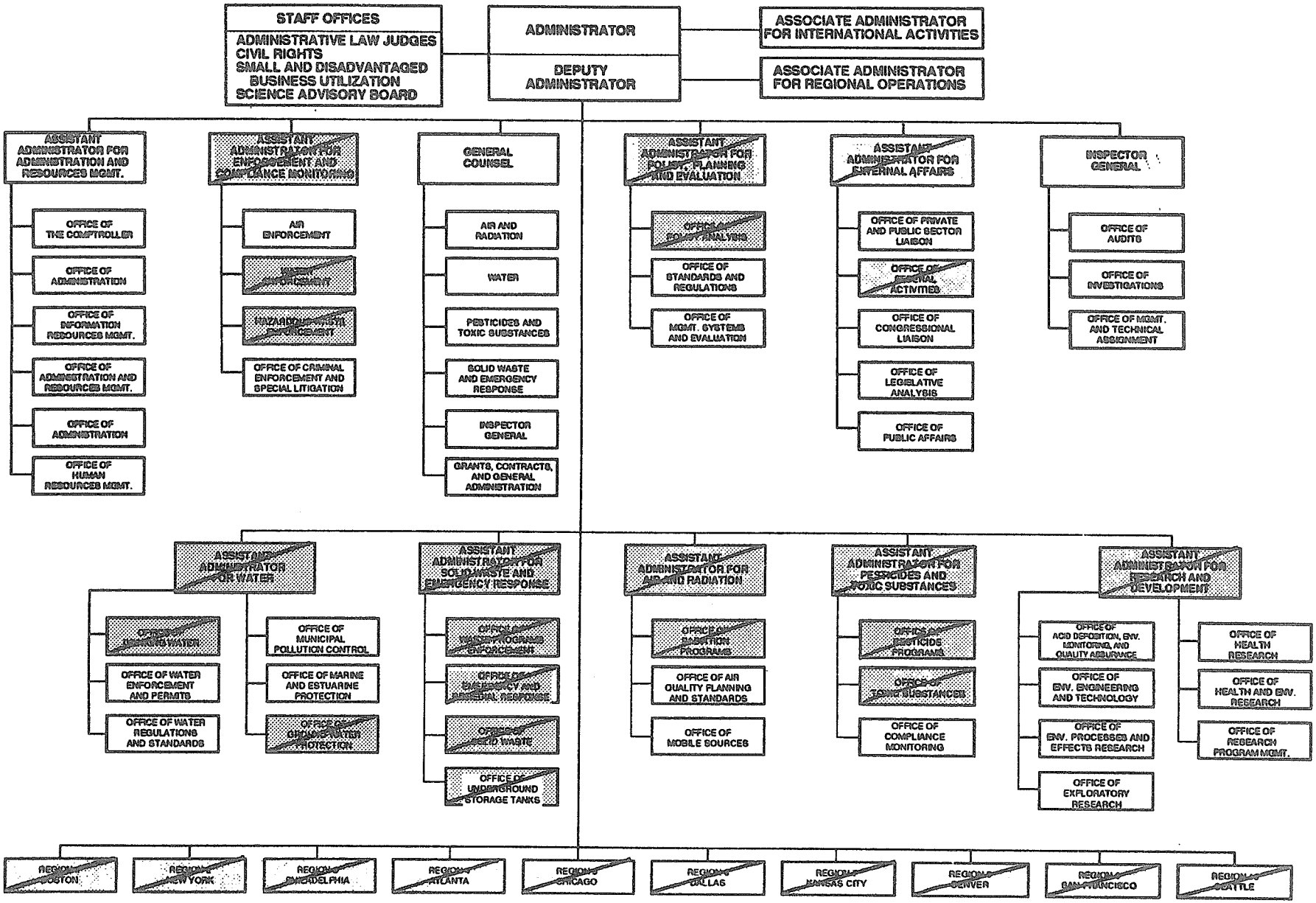


Figure 2. Federal Agencies with Ground Water Protection Roles



Source: U.S. Environmental Protection Agency

Figure 3. Organization of the U.S. EPA

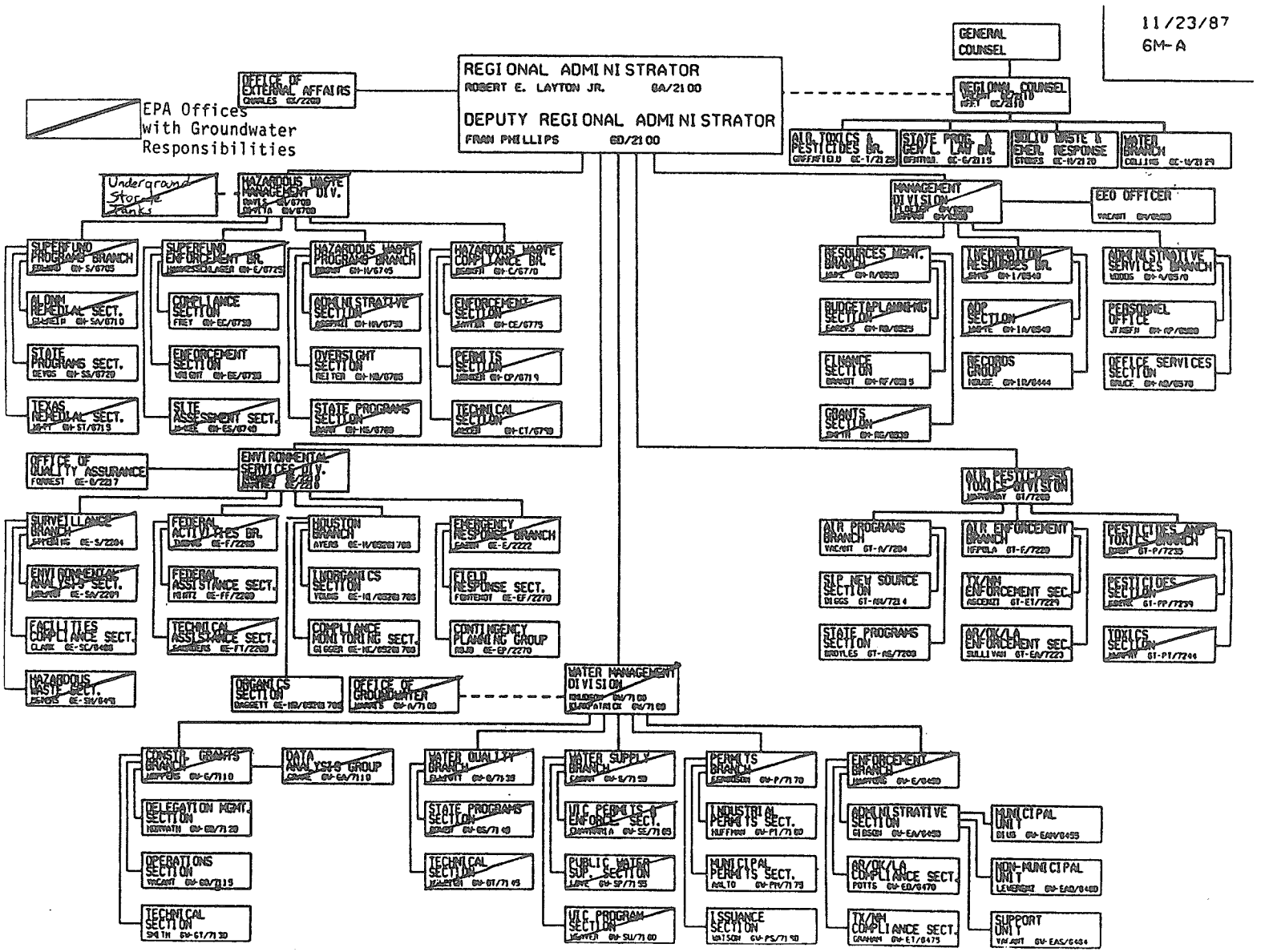


Figure 4. Region 6 Organization Chart

dumps, municipal landfills, lagoons, and other waste repositories, now have a predominant ground water protection orientation.

Ground water protection is one of the EPA's top priorities. Many of our major programs and a large percentage of our budget directly support the protection, maintenance, and restoration of ground water quality. Protecting the vital ground water resource is also one of the agency's most complex environmental issues since it involves potentially millions of individual sources of contamination and an enormous array of domestic, commercial and industrial practices. On a national scale, protecting ground water involves addressing about 1500 hazardous waste land disposal facilities, 951 Superfund sites, (only 4 in New Mexico) thousands of non-hazardous waste disposal facilities, hundreds of thousands of injection wells, over a million underground tanks, 23 million residential septic systems, and the use of millions of pounds of pesticides and millions of tons of fertilizers. The potentially regulated community encompasses not only a few large industries and businesses, but also small businesses, individual homeowners and farmers.

Several important statutes administered by the EPA deal with various aspects of ground water protection and cleanup. The Resource Conservation and Recovery Act of 1976, as amended, prevents contamination of ground water from hazardous waste facilities, municipal landfills, impoundments, and underground tanks. The Comprehensive Environmental Response, Compensation and Liability Act (Superfund) provides the EPA with major authorities and resources to compel or carry out the cleanup of prior and current releases of hazardous substances to the environment. Through the Federal Insecticide, Fungicide and Rodenticide Act, the EPA controls the availability and use of pesticides which may leach into ground water. Under the Safe Drinking Water Act, the EPA sets drinking water standards used in ground water protection decisions and controls the injection of fluids into the underground.

The EPA also provides assistance to states in the development and implementation of ground water protection strategies through the Clean Water Act (CWA). In addition, under the Safe Drinking Water Act Amendments of 1986, the EPA is providing guidance to assist states in protecting the ground water entering the wellhead areas of all public water wells. The agency provides, through these and other statutes such as the Toxic Substances Control Act and the Atomic Energy Act, a wide range of standard setting, institution building, technical assistance, compliance enforcement, research, monitoring and other activities geared toward protecting ground water.

Escalating public concern over ground water contamination has prompted environmental and health officials to apply existing authorities more explicitly for ground water protection. In the last few years, there has been a gradual recognition throughout the United States of the need to move toward protection of the resource itself, rather than focusing regulatory efforts on discrete sources of contamination. Some progress toward that goal has been realized since 1984. Under the agency's Ground Water Protection Strategy, the EPA has: promoted the use of consistent policy for prevention and cleanup of ground water contamination; strengthened its internal organization for protecting groundwater; and, begun to address a broader range of sources.

A central feature of EPA's Ground Water Protection Strategy is a policy framework for agency programs according different levels of protection to ground water based on its use, value to society, and vulnerability to contamination. The strategy divides ground water into three classes:

-Class I: Ground waters are given special protection because of their vulnerability and their value as a drinking water source or their value to sensitive ecological systems.

-Class II: Ground waters are current or potential sources of drinking water or have other beneficial uses. They would receive a baseline level of protection consistent with current protection under the EPA programs.

-Class III: Ground waters are not considered potential sources of drinking water and are of limited beneficial use.

This classification system began its first circulation in draft form for internal review of technical and policy issues in October of 1984, and the final draft for public comment was released in December 1986. We expect another draft of the classification this month and a high level review in December, 1987.

Ground water classification has the potential to impact many EPA programs, for example: the hazardous waste, Superfund, and the pesticide programs; the Underground Injection Control program; and the National Pollution Discharge Elimination System permits program. This classification system is designed as a site-specific system to be used for individual localities. The general intention is that it will be used in EPA's regulatory programs for such action as permitting or enforcement at existing or proposed sites. We will be holding training sessions for state personnel and our own program personnel as soon as the classification system is launched next year.

In order to provide a focus for activities related to ground water protection, the EPA established offices of ground water protection in our headquarters office in Washington and in each of our ten regional offices. In Region VI, the Office of Groundwater manages the ground water protection portions of the Section 106 and Section 319 programs of the Clean Water Act as well as the Sole Source Aquifer (SSA), the Sole Source Aquifer Demonstration (SSAD), and the Wellhead Protection (WHP) Programs in Texas, New Mexico, Oklahoma, Arkansas, Louisiana and Indian lands belonging to the sixty-eight tribes in Region VI. I would like to elaborate on these programs.

Since 1985, states have been eligible for grant money to develop and implement state ground water protection programs under Section 106 of the Clean Water Act. Ground water protection by most states under Section 106 is largely a result of EPA policies described in the EPA Ground-Water Protection Strategy published in 1984. One of the major goals expressed in that strategy is that EPA assist states in developing their own ground water protection programs and state strategies. Recognizing that each state or region of the country has a different set of ground water problems to face, a different philosophical and institutional framework, and a different set of measures already in place to protect ground water, the EPA has allowed a great deal of flexibility to the states in designing their ground water protection programs.

Section 319 of the Clean Water Act as amended this year gives new direction and authorizes significant federal financial assistance for the implementation of state non-point source programs. The Water Quality Act gives states the opportunity and flexibility to design and implement non-point source programs for both surface and ground water.

The Sole Source Aquifer Program was created in 1974 with the passage of the Safe Drinking Water Act. Upon receipt of a complete petition, the EPA may designate the petitioned aquifers or aquifer systems as sole or principal source aquifers which provide 50% or more of the drinking water for a particular area. Following such designation, the EPA reviews proposed federally funded projects in the Sole Source Aquifer area and may prevent funding or require redesigning of a project if the project has the potential to contaminate the aquifer. Designation has no effect on proposed projects which do not receive federal financial assistance such as projects funded by state, local, or private concerns. As a ground water protection program, the Sole Source Aquifer program primarily ensures that the federal government will not support projects which can contaminate unique water supplies. Nationwide, there are currently twenty-one designated sole source aquifers. The Edwards Aquifer in the San Antonio, Texas area is the only one in our five state region to date; however, we have several petitions under review.

The Sole Source Aquifer Demonstration (SSAD) Program was part of the 1986 Amendments to the Safe Drinking Water Act. The purpose of the SSAD program is to establish demonstration programs for Critical Aquifer Protection Areas (CAPAs) within designated sole source aquifers. The EPA issued a rule outlining criteria for identifying these critical areas that considers aquifer vulnerability, population using ground water for drinking purposes, and the economic, social, and environmental benefits and costs of ground water protection. Protection of critical aquifers will occur through the development and implementation of a comprehensive management plan ensuring maintenance of ground water quality for protection of human health, environment and ground water. All or part of an aquifer must be a designated sole source aquifer and meet CAPA criteria to be included within the demonstration program. The aquifer could be an existing designated sole source aquifer or be designated by June 1988. The SSAD Program is a limited one and may entitle successful applicants to receive matching grants. The total amount of the grant cannot exceed $4 million per aquifer per year as authorized by law; however, Congress has not appropriated any SSAD funds for FY88 at this time.

The Wellhead Protection Program, scheduled to begin next year, will develop and implement programs to protect public water supply wells. In New Mexico, the Environmental Improvement Division has been designated by the governor to administer the program. The program is intended to prevent contamination of ground water in the vicinity of public water supply wells by controlling activities which are located within certain distances of each well. The state will be responsible for deciding how large the protected areas around each well should be, and what types of controls will be applied within those areas. Unlike the other federal environmental programs, this one will not set requirements the states must meet. Rather, the EPA will provide leadership by setting some broad goals and in helping states meet those goals. We have been advised that the house appropriations subcommittee has recommended no funding for the program in FY88, although the President's budget included $8 million dollars. I might add that a state is not required by the Safe Drinking Water Act to implement a wellhead protection program. Unlike other EPA programs, it is optional.

Those of you who are municipal officials may be asking, what interest do I, as a municipal official, have in this program ... it sounds like most of the action will be at the state level. First and foremost, the Wellhead Protection Program is designed to protect <u>your</u> drinking water - whether you buy water from another source or control the source yourself. The law itself encourages public participation, and there are several areas where you may want to have input. For example, you will want to work with the state to

identify municipal versus state responsibilities. You will want to help identify potential sources of contamination in your area. You certainly want to be aware of the impacts emergency contingency plans may have on you. Will you be called upon to provide water to neighboring cities in an emergency basis? Also, if you anticipate ever constructing new wells, you will want to have a say in any siting and construction requirements developed. On a local level, you may want to consider zoning ordinances to protect your water supply. The Wellhead Protection Program is a good example of how local officials can make the state aware of local problems. I encourage you to let your state agency officials know of your interest in the program and to take advantage of all opportunities for public participation.

In summary, ground water quality protection at the federal level is a complex matrix of different statutes, agencies, and programs. There are currently in the United States Congress several different bills under consideration involving further ground water protection. There is a great challenge ahead for all of to ensure that our future generations have an adequate supply of safe ground water for the many purposes it serves. Thank you for your attentiveness and the privilege to be here with you today.