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**DRAFT NATIONAL SAFE DRINKING WATER STRATEGY**

**ONE STEP AT A TIME**

**NOVEMBER 1976**

Prepared by the Office of Water Supply  
U. S. Environmental Protection Agency  
401 M Street S. W.  
Washington, D. C. 20460

Environmental Protection Agency  
Public Information  
401 M Street S. W.  
Washington, D. C. 20460

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## Executive Summary

### Statement of Purpose

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The sub-title of this strategy, One Step at a Time, epitomizes EPA's approach to implementing the Safe Drinking Water Act (SDWA). We begin by assuming that the State and local governments, and the owners of public water supplies are actively interested in assuring that the citizens of this country have safe water to drink. We may differ in specifics, but that basic assumption of common purpose will guide all of EPA's actions in this program. We plan to approach the regulatory process embodied in the SDWA on a step-by-step basis, recognizing that we cannot correct all problems in a day -- or even in a decade in some places. Our flexibility, however, should not be confused with lack of purpose or conviction. We expect to provide flexibility where appropriate and consistent with the discretionary aspects of the statute, but where the legislation is specific we intend to uphold the law.

A draft version of this strategy, dated May 1975, was submitted to extensive public and State review. This document contains many of the same principles of that initial effort, updated and revised after an additional year of experience in the implementation of the Act.

### Principles of Implementation

This strategy proposes the basic principles that EPA will use in implementing the SDWA. They include a commitment to give highest priority to matters of public health; to assist the States in establishing their own programs, to involve local governments and consumers in all aspects of the program; to attack the worst problems first; to take costs into consideration in all phases of the program; to build on existing state and local water supply control programs; to decentralize decision-making to the EPA regional offices; to consider the environmental side-effects of actions taken under the SDWA; and to minimize "red-tape" in all actions.



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## Goals, Objectives, and Priorities

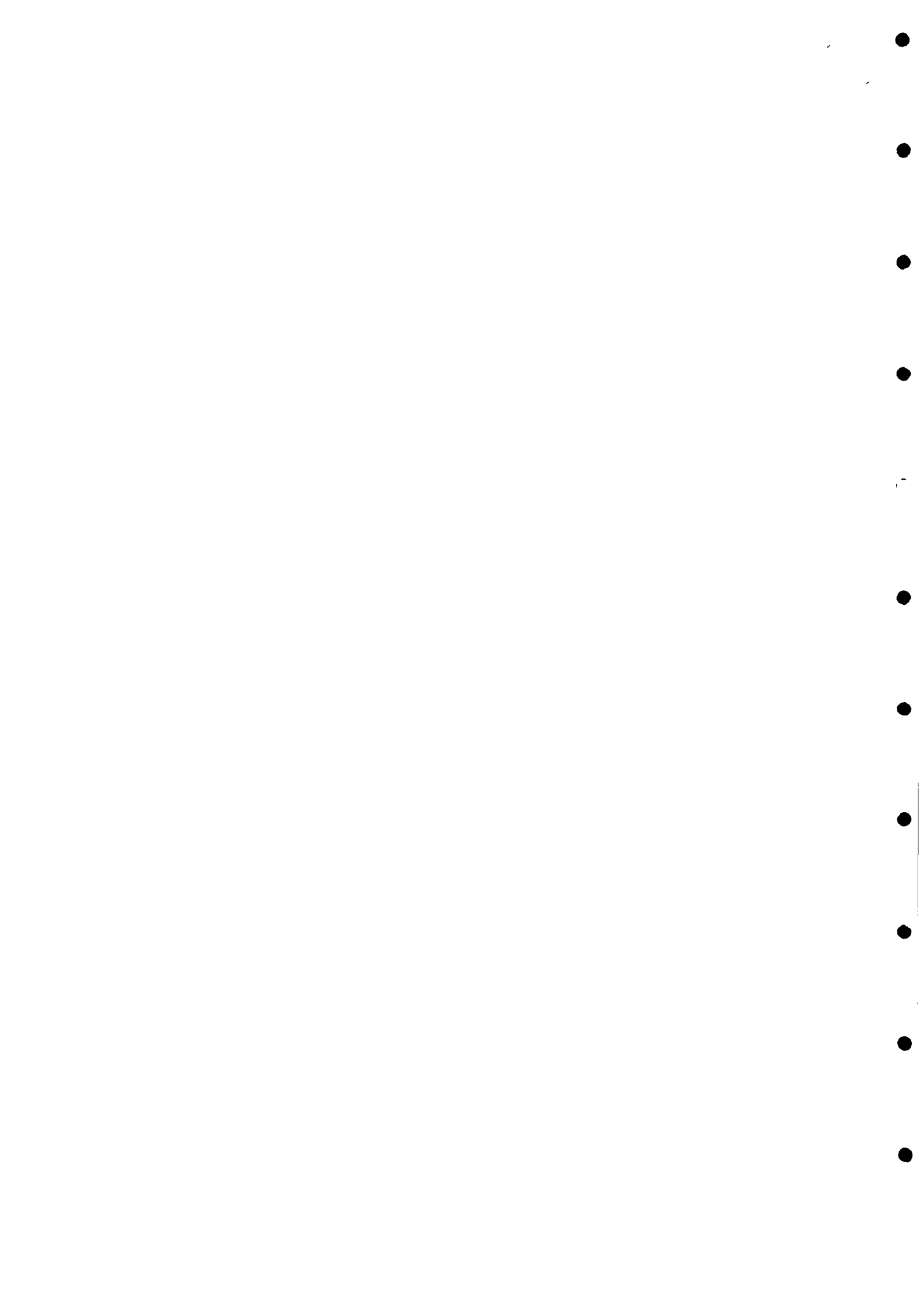
The goal of the Drinking Water program is "to ensure that all citizens have safe water to drink." The social and economic costs of reaching that goal will be considered in the programs developed to meet it. A variety of sub-goals and objectives are proposed which should facilitate the accomplishment of the overall goal in a step-by-step manner.

## Strategy Overview

### I. The Public Water System Supervision Program

The Safe Drinking Water Act did not envision the creation of a vast bureaucratic program, and EPA intends to assure that it does not come out that way. The Act is designed basically to be self-enforcing without the need for a complicated program structure. It is clearly the responsibility of the local utility to perform the required monitoring (§1415) and give public notice when its drinking water is not up to standards (§1414(c)). EPA believes that, in general, the most effective way to achieve compliance with the National Primary Drinking Water Regulations (NPDWR) (both interim and revised) is by assuring that the consumers are aware of deviations from maximum contaminant levels so that they can ensure that corrective action is taken. Where necessary, of course, a State should take action under its own regulations, or EPA may bring an action under §1414. But realistically, with approximately 250,000 public water suppliers nationally, the States and EPA must rely on the pressures generated from public notification to produce compliance for many public water systems.

This strategy proposes several options for different levels of Federal/State partnership in the enforcement of the primary drinking water regulations. The options range from complete certification of the State's program with no extensive Federal involvement (other than the program grant), to non-certification. EPA desires to certify all States for primary enforcement responsibility in accordance with the mandate of the Act. The intent of this strategy is to establish the groundrules for a true Federal/State/local partnership, based on practical and pragmatic regulations and policies that will facilitate cooperation and result in compliance with the requirements of the SDWA.



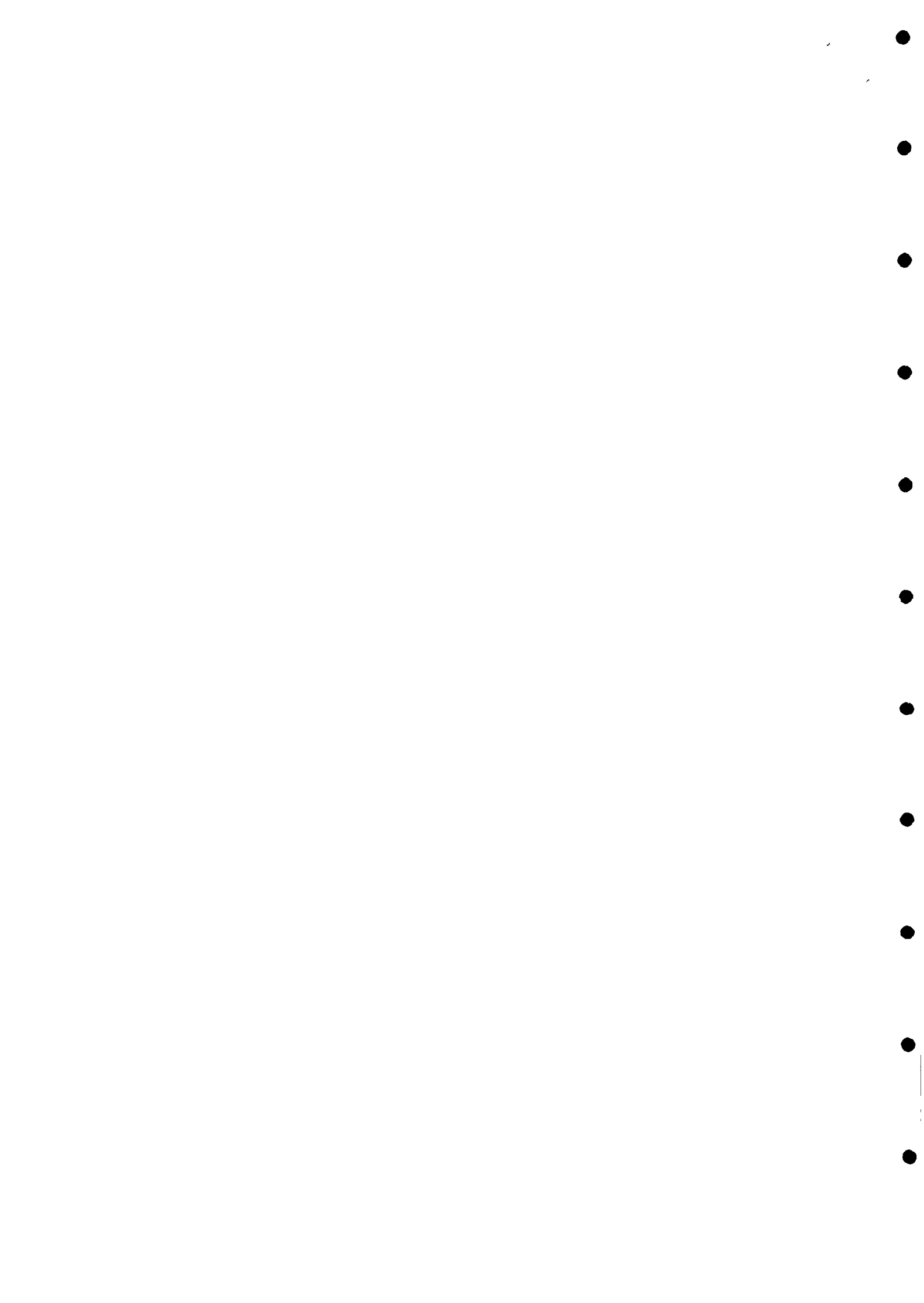
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The SDWA clearly establishes that a State must adopt regulations no less stringent than the National Primary Drinking Water Regulations before it can be granted primary enforcement responsibility. The Act includes a variety of other requirements for primacy which EPA believes can be accomplished on a step-by-step basis, building on already existing State and local procedures and organizations. EPA does not believe that all States should have identical programs in order to have primacy.

The strategy recognizes that the major impact of the SDWA program will be felt by the State, at the local level by the suppliers of water and the consumers who must pay for it. Because the Congress was concerned that the deadlines for compliance contained in the SDWA may create undue financial burdens and hardship on some communities, the Act provides for exemptions to be granted from the drinking water regulations, provided that the public health is adequately protected. However, exemptions cannot be permanent. The Act provides a maximum of five years for compliance schedules (seven years if regionalization takes place) and requires that the schedules be presented at a public hearing before adoption.

The strategy also recognizes that the monitoring requirements contained in the National Primary Drinking Water Regulations could present serious problems to small public water systems. Consequently, the promulgated NPDWR have less stringent monitoring requirements for non-community systems serving primarily transient populations than for community systems serving resident population.

One way to reduce the economic impact of the SDWA regulations at the local level is to take advantage of the economies of scale inherent in regional water supply systems and management. Regionalization, moreover, is not limited to structural, physical integration of impoundment, treatment and distribution systems. It can mean shared laboratory services, training programs, billing systems and a variety of other management services that can perhaps be provided more efficiently to a group of water supplies. EPA recognizes that there are a variety of factors which may affect the viability of regionalization and does not intend to force local communities to regionalize their systems or management; that is a local decision best handled at the local level.





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Finally, the strategy overview section analyzes some of the inter-relationships of the SDWA and the Federal Water Pollution Control Act (FWPCA). Special attention will be paid to the relationship between planning under Section 208 of FWPCA and protection of groundwater quality.

For the protection of public water supplies the Office of Water Supply has:

- . published national interim primary drinking water regulations,
- . published special monitoring regulations for organic chemicals,
- . published final standards for maximum contaminant levels for radioactivity,
- . published State implementation program regulations,
- . published State public water system supervision program grant regulations,
- . completed the Preliminary Assessment of Suspected Carcinogens in Drinking Water Report to Congress.
- . published an Advance Notice of Proposed Rule Making requesting public comment on the options for the control of organic chemical contaminants in drinking water,
- . published guidelines for State emergency response plans,
- . awarded \$7.4 million in grants to States for public water system supervision programs, and
- . continued to develop, in cooperation with the States, a State laboratory certification program.

In addition, the National Academy of Sciences is now reviewing the special study concerning the identification of contaminants and contaminant levels that may have adverse health effects.

During FY 77, the NAS study will be completed; as a result of this study the National Primary Drinking Water Regulations (NPDWR) will be revised to address the control of organic chemical contaminants in drinking water and any other areas of concern identified by the NAS study: An intensive period of coordination with the States will take place to help them meet primacy requirements, and the economic impact of regulations on small public water systems will be evaluated.



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## II. Underground Injection Control Program

EPA plans to implement the Underground Injection Control (UIC) program prescribed by the SDWA with the same step-by-step approach adopted for the water supply management program. The strategy reviews the following major issues of the UIC program:

- . Extent of protection under Part C of the Act.
- . How will EPA approach the problem of designating States which should undertake UIC programs in response to the SDWA.
- . Regulation of injections related to oil and gas production.

The Act requires EPA to develop minimum requirements for State programs to prevent the endangerment of underground sources of drinking water from the uncontrolled underground injection of fluids. After complying with such requirements, states will take the lead for the implementation of the program. It is further specified that the burden of proof of non-endangerment is placed on the injector. The injector must maintain monitoring records or report periodically to the State. All injectors, whether Federal, State, or private individuals, must comply with the regulations.

In the area of groundwater protection, the Office of Water Supply has:

- . published proposed regulations for grants for State groundwater source protection programs,
- . published proposed regulations for State underground injection control programs,
- . completed a study on "Impact on underground water sources of application of pesticides and fertilizers," and
- . completed a "Report to Congress - Waste Disposal Practices and their Effect on Groundwater" to be made available December 1976.

It is expected that these proposed regulations will be published in final form and that the first States will be listed early in 1977. To this effect, the Office of Water Supply will continue a dialogue with the States, environmentalists and any other interested parties.

## III. Section 1424(e) - Protection of Sole Source Aquifers

Section 1424(e) of the SDWA is intended to control potential contamination of sole (or principal) source aquifers by regulating Federal financially assisted projects (through a grant, contract, loan guarantee or otherwise) in areas where contamination of the aquifer could endanger the public health. Section 1424(e) does



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not apply to injection wells unless they use Federal financially assisted projects. EPA is building on the existing Federal agency guidelines for the implementation of the National Environmental Policy Act (NEPA) and Environmental Impact Statements (EIS's) as the basis for any reviews it might conduct of proposed Federal financially assisted projects on aquifers determined to be "sole or principal source" under the Act. Therefore, in most cases review of major Federal financially assisted projects will take place when the draft EIS is submitted for review. Regional Administrators may, as appropriate, expand their review power to projects other than those subject to NEPA. So far only the San Antonio, Texas area, where the Edwards underground reservoir provides the sole source of drinking water for over 1,000,000 persons, has been designated.

Finally and most importantly, EPA recognizes that all of the answers to questions on providing safe drinking water and on protecting sources of drinking water have not been found. A wide variety of "unknowns" continue to exist which will require considerable study and evaluation, both by EPA and by other levels of government, the water supply industry and the scientific and academic communities. The scientific basis for resolving questions about viruses, carcinogens, and other toxicants in drinking water and for establishing criteria and standards for wastewater reuse for potable purposes will continue to be given priority. We intend, in particular, to stress the need for developing improvements in water technology, health research and related matters and for assessing the various problems, (such as limited sources of trained manpower) which might hinder the successful implementation of the program.

Public comments on this draft strategy are encouraged.



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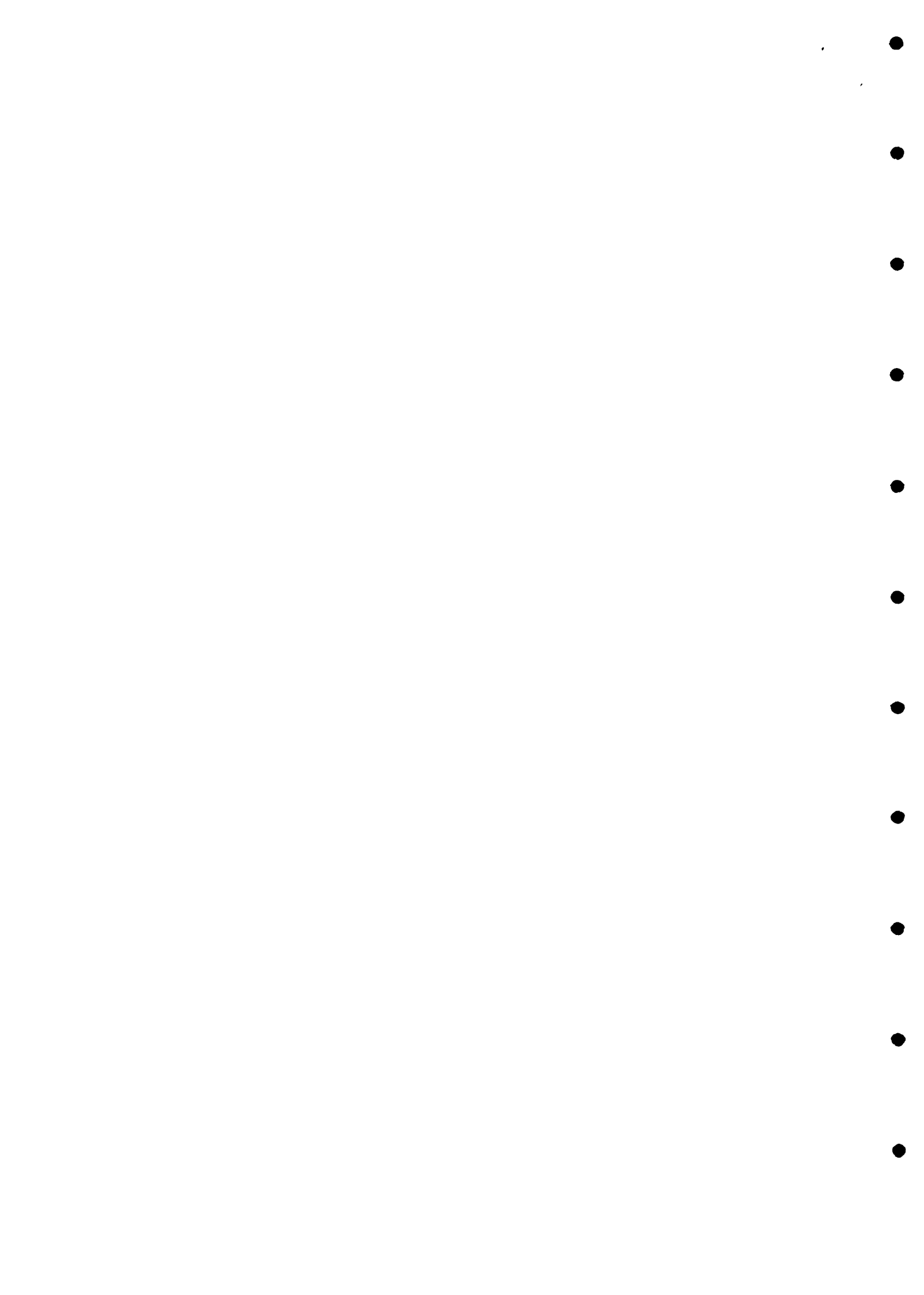
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## CHAPTER I

### INTRODUCTION

#### Purpose of the Safe Drinking Water Strategy

The safe drinking water strategy presented in this paper has been developed to clarify EPA policy with respect to implementing the Safe Drinking Water Act (SDWA).

This strategy document is not law and does not have the status of a regulation or official rule making. It is an operational plan, and it describes what EPA plans to do in light of its legislative mandate and the realities of existing Federal, State and local capabilities and resources.

Comments on this strategy are welcome from all interested parties and should be addressed to:

Deputy Assistant Administrator for Water Supply (WH-550)  
U.S. Environmental Protection Agency  
Washington, D. C. 20460

Derived from this strategy is the annual regional guidance to the Regional Administrators for their use in establishing regional priorities and objectives. The Regional Administrators, in turn, must propose to the Administrator a region specific strategy for implementing the Act. The regional strategies will be developed from the national strategy in consultation with the State and local governments and with the public. Regional strategies are due to the Administrator each August 1.

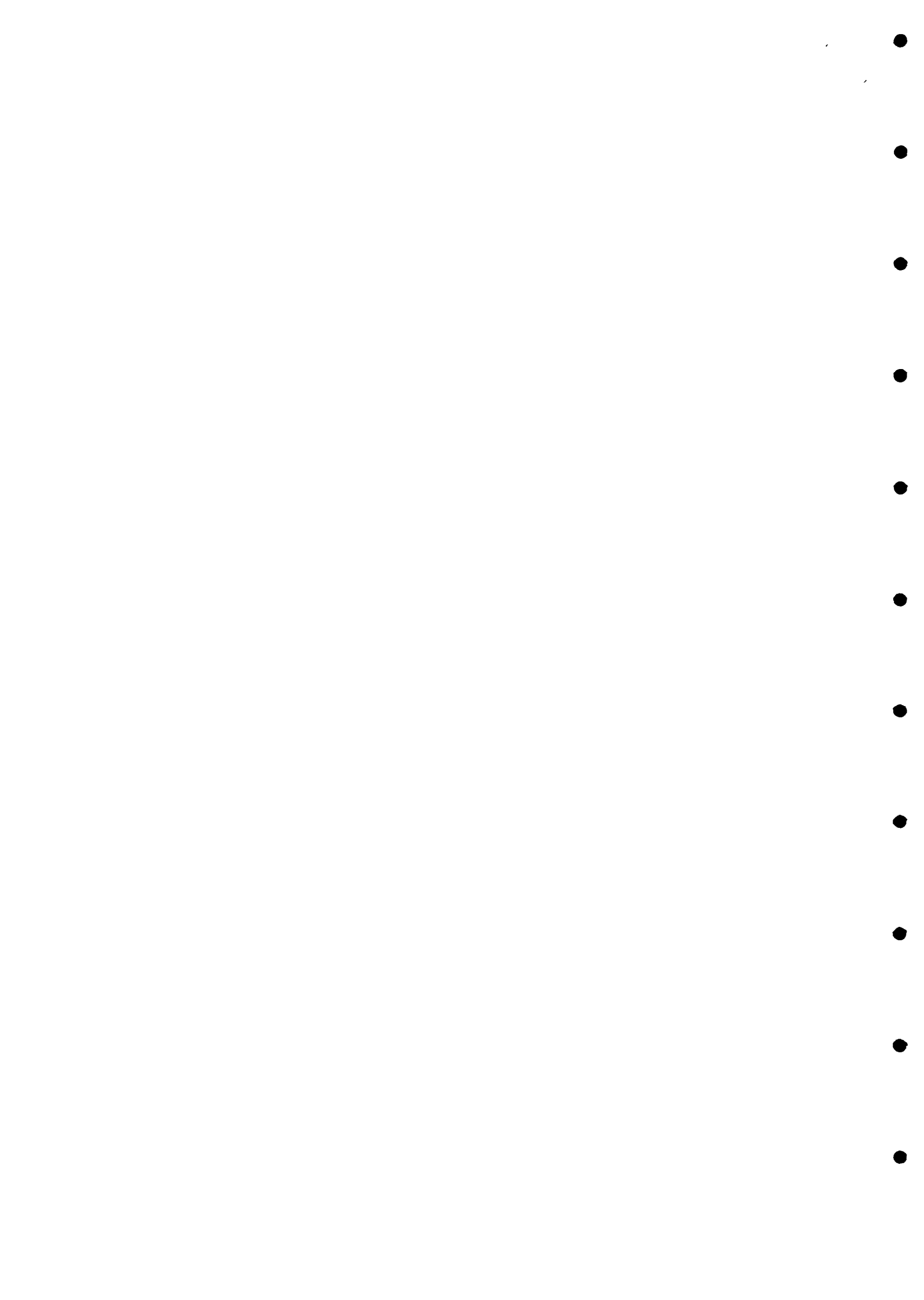


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## Principles of Implementation

The following principles of implementation will continue to guide EPA's decisions in carrying out the mandates of the Safe Drinking Water Act:

- . Public health considerations will receive highest priority
  - Questions of aesthetics, taste, and odor will be considered, but the focus of research, monitoring, and enforcement programs will be on providing the maximum feasible protection to human health.
- . The worst problems will be given first attention
  - The "worst" problems will be defined in terms of the degree of health risk involved and the population affected.
- . Take cost into consideration in all decisions made in the Safe Drinking Water Program
  - As required by the Act, EPA will take costs into consideration in promulgating regulations, implementing the regulations, and enforcing the law. The concept of cost effectiveness will be applied to any determinations under the Act.
- . Utilize existing Federal, State and local resources and reduce the need for changes in current State operations
  - EPA and State governments will attempt to utilize existing Federal-State-local programs for providing safe drinking water. In particular, EPA and States should draw on current research efforts, existing data sources, ongoing programs for monitoring and enforcement and existing training and technical assistance activities. In granting primacy to States, EPA will allow reasonable variations based on current State programs and operations.



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- . Place maximum financial responsibility for implementation of regulations on the ultimate users of drinking water except as provided by State law
- EPA recognizes that in many sections of the country, drinking water is either underpriced or inappropriately priced. Safe drinking water, however, has a real price, and EPA will generally encourage water suppliers to develop rate schedules so that users pay the appropriate costs.
- . Keep paper work and red-tape to the absolute minimum
- . Require adequate attention to the environmental impact of decisions made under the Act

## The Open Process

Consistent with EPA's policy of obtaining maximum State, local, and public participation, the following implementation principles will continue to be carried out:

- . Participation by the National Drinking Water Advisory Council

The National Drinking Water Advisory Council was created on December 16, 1974, pursuant to Section 1446 of the Safe Drinking Water Act, Public Law 93-523. The Council consists of fifteen (15) members appointed by the Administrator of the Environmental Protection Agency after consultation with the Secretary of Health, Education and Welfare. The membership includes five members from the general public, five members from State and local agencies, and five members of private organizations or groups demonstrating an active interest in the field of water hygiene and public water supply.

At the request of the House of Representatives Subcommittee on Health and the Environment, the Council encourages communication and cooperation between EPA and other governmental agencies, interested groups, the general

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public, and technical organizations involved in drinking water quality. In developing the agenda for the Council meeting, the Council attempts to schedule another governmental agency to give a presentation, discuss its activities and how they relate to EPA's responsibilities under the Safe Drinking Water Act.

The Council sets aside a portion of each meeting in order to be responsive to the needs of the public. Any outside parties interested in presenting an oral statement can petition the Council in writing. Any person who wishes to file a written statement can do so before or after Council meetings.

. Decentralize decision-making and operational responsibility for the Act to the EPA Regional Offices and to the State and local Governments

The Administrator will continue to delegate to regional offices the decision-making authority on all elements of the program. Regional offices will in particular be responsible for assisting States in taking the lead in all aspects of program implementation and for granting State primacy.

. Encourage State and local participation in decision-making

In addition to encouraging State and local participation in issuing regulations under the Safe Drinking Water Act, EPA will encourage the States to continue to play a major role in advising the Administrator on other determinations made under the Act.

. Encourage consumer participation in deliberations and decisions

EPA will continue to implement the program in the most open manner possible, assuring easy access by the public to information concerning the program, and providing maximum opportunities for citizen involvement and public participation. For example, public hearings have been conducted by EPA across the country to solicit comment on the proposed regulations for the State Underground Injection Control Program.



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## CHAPTER II

### PROGRAM STATEMENT

#### Nature of the Drinking Water Problem

The drinking water served to Americans varies in quality. During the period 1961-1970 there were 130 outbreaks of disease or poisoning attributed to drinking water, and these outbreaks resulted in 46,374 illnesses and 20 deaths. This represents only those cases that were reported, and for which the waterborne route was established as the cause. More important, these represent only the acute affects, and not the chronic effects that may take many years to aggregate their impact.

While information on operational characteristics of systems is not fully known, studies in select States have also shown that (1) more than half of the facilities providing drinking water have serious deficiencies, (2) more than three quarters of the operators were inadequately trained, (3) the vast majority of systems were unprotected from cross-connection with contaminated water, and (4) more than three-quarters of the systems were not subjected to adequate surveillance or monitoring. \* Better data will begin to become available after June 1977 when the National Primary Drinking Water Regulations become effective and monitoring is initiated.

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\*Community Water Supply Study, Analysis of National Survey Findings, U.S. Department of Health, Education and Welfare (July 1970)



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## Brief Summary of the Legislation

In summary, the SDWA:

- . Requires the Administrator of the Environmental Protection Agency to prescribe national drinking water regulations for contaminants which may adversely affect the public health.
- . Requires Public Water Systems to deliver water, to monitor and test, and to operate and maintain their systems in compliance with the drinking water regulations.
- . Requires drinking water systems to notify their customers of failure to comply with the drinking water regulations.
- . Requires the Administrator to encourage maximum levels of State involvement in the promulgation, implementation, and enforcement of regulations and programs developed under the Act.
- . Authorizes States which adopt and implement adequate standards and enforcement measures to grant certain variances from the national regulations and to grant exemptions to extend the time for compliance by any public water system; and to establish compliance schedules including interim control measures and increments of progress.
- . Authorizes the Administrator to enforce national primary drinking water regulations and to grant exemptions and variances in States which do not have primary enforcement responsibility.
- . Establishes Federal/State programs to protect underground sources of drinking water.
- . Provides for Federal grants to assist State water supply management programs under the Act.
- . Provides for certain additional grants, research and demonstrations to assist States in carrying out the above purposes.



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## Legislative Guidance

"While the Committee (on Interstate and Foreign Commerce) views the problem of unsafe drinking water as a matter which is and should be primarily the concern of State and local governments, the Committee has determined that the Federal government also has a responsibility to ensure the safety of the water its citizens drink."

## Federal, Regional, State, Local and Consumer Relationships

Public Law 93-523 (the Safe Drinking Water Act) will affect all the levels of responsibility for the provision of safe drinking water. Briefly these new roles include, but are not limited to the following:

### Federal Government

- EPA is to provide national policy guidance and regulations, offer technical and financial assistance to the States, conduct research, assure that adequate technology is available for meeting its regulatory requirements, monitor State programs, and carry out the compliance programs for the implementation of the National Primary Drinking Water Regulations and underground injection regulations in those areas where the States have not been certified for primary enforcement responsibility.
- Other Federal agencies are to advise the Administrator in his rule-making under the Act, and to ensure that Federal facilities which manage public water supplies meet the requirements of the National Primary Drinking Water Regulations, and the Underground Injection Control Program.

### State Governments

- The State governments, to the maximum extent feasible, are responsible for supervising the public water systems, implementing the provisions of the National Primary Drinking Water Regulations and the underground injection regulations within their States, and providing technical assistance to public water suppliers to enable them to meet the requirements of the applicable regulations.





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## Local Governments and Utilities

- Local public water systems are responsible for providing drinking water which complies with the National Primary Drinking Water Regulations and for the costs of monitoring. To the extent that local utilities are owned and operated by local governmental entities, action to ensure compliance rests directly within local jurisdiction. In the case of investor-owned utilities, compliance is the responsibility of the utility. Actions to ensure compliance in both cases should be subject to routine surveillance by the appropriate agency of the State government.

## Consumers

- Individual consumers and groups representing them are responsible for participating in the development of regulations under the Act; petitioning for public hearings provided by regulation; ensuring that local utilities are adequately financed; petitioning the Administrator and State authorities to carry out the emergency provisions of the Act; and finally, bringing civil suits against the utility, the Administrator or State authorities if it is believed that they have failed to properly implement the Act.
- Utilize the information derived from the public notification procedures of the Act (when a utility is out of compliance) as a guideline to indicate when consumer action is warranted.
- Paying higher prices for their drinking water, reflecting any increased costs of treatment, and for the necessary monitoring to assure that the water meets the requirements of National Primary Drinking Water Regulations.

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## The Water Supply Research Strategy

The Safe Drinking Water Act (PL 93-523) requires research and technical assistance to establish a scientific basis for protection of water supplies in the United States, provide information to establish regulations and standards and to develop an economically feasible technology to achieve a water quality that will meet the regulations.

To these ends the water supply research program is designed to address the following questions:

1. What substances occur in drinking water supplies that may adversely affect human health?
2. What are the effects of these substances and what are the maximum contaminant levels necessary to protect human health?
3. What analytic procedures should be used to monitor water to assure that the established regulations are met?
4. Since some of these substances are formed during transport, storage, treatment and distribution, what changes in treatment practices are necessary to minimize the formation of those compounds in water delivered at the consumers tap?
5. What treatment technology must be applied to reduce contaminant levels to the concentrations given in the regulations.

The major new emphasis of the research program will be on providing an information base to deal with contamination of water supplies by organic chemicals, especially those that are suspected to be carcinogenic. For example, when the National Cancer Institute study, done in cooperation with EPA, determined that chloroform was a suspect carcinogen, a treatment guide to minimize chloroform formation was developed. An Advance Notice of Proposed Rulemaking (ANPRM) soliciting public input on regulatory and technical options for control of organic chemicals, including chloroform, was also published.

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The ANPRM offered the following regulatory options for public comment:

## I. Maximum Contaminant Level (MCL) Options

- A. Establish MCL's for specific organic chemicals,
- B. Establish MCL's for general organics indicators,
- C. Combination of MCL's for specific compounds and general organics indicators.

## II. Designated Treatment Techniques to Control Either Specific Contaminants or Total Organics

EPA is presently evaluating the public comments submitted in response to the ANPRM which will, along with the economic and toxicological data available, determine if regulations for the control of organic chemicals are necessary and if so, the most reasonable regulatory option.

A large scale national monitoring program has been established to provide data on the concentration in drinking water of many organic substances, including chloroform and pesticides. In addition, the National Academy of Sciences is undertaking a comprehensive study (mandated by the SDWA) of the health effects of exposure to many substances in drinking water.

In the future additional research emphasis will be placed on determining the long range health effects of the organic and inorganic contaminants, individually and in combination. Better methods will be developed for the removal of contaminants to the levels required by standards or, in the absence of standards, technical advice will be provided on reduction of contaminant levels. Micro-biological contamination retains a relatively high public health priority because outbreaks of waterborne disease still occur in the United States, especially in poorly operated distribution systems.

Water treatment technology will be developed for small water supply systems since it is these systems that experience more difficulty in meeting drinking water standards. Problems of groundwater pollution will be defined, characterization methods developed and guidelines offered to prevent such pollution.



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EPA's research program is generally directed at resolving these unknowns. Emphasis will be placed on determining the long rather than short-term health effects of these organic and inorganic contaminants, individually and in combination. Better methods will be developed for the removal of these substances to the levels required by the drinking water standards or to a "feasible" level if the contaminant cannot be accurately measured in drinking water.

Priorities for work to be done and emphasis in the various research areas will continue to be developed jointly by the Office of Research and Development and the Office of Water Supply. These priorities will be guided by scientific and engineering information identified by user groups outside government, EPA regional offices and the operating programs as well as the Office of Research and Development and the advice of the National Drinking Water Advisory Council.

Every effort will be made to achieve a balanced research program defining economical and effective treatment techniques, improved analytic methods as well as providing results from short and long range health effects studies. Research information will be provided to the operating program and user groups through interim and progress reports in addition to formal reports written upon completion of research projects.

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## CHAPTER III

### GOALS, OBJECTIVES, AND PRIORITIES

The first step in developing a program to accomplish the mandate of the Safe Drinking Water Act is to identify a set of goals and objectives to provide a systematic national structure to provide safe drinking water. The goals of the program must be linked in an explicit and measurable manner to day-to-day activities. Only a systematic approach will make the program manageable.

The overall goal of the program can be stated as:

To assure that the public has  
safe drinking water

Congress has made it clear in the Safe Drinking Water Act that the programs which EPA develops to achieve this goal are, in all cases, to take cost into consideration, and the strategy will have to be made among all environmental programs and that where goals among the programs conflict or are incompatible, tradeoffs may be required.

Finally, EPA recognizes that a rigorous definition of the term "safe" is not being provided and that problems may arise in developing an acceptable definition. The primary emphasis throughout the strategy, nevertheless, is on protecting the public health.

Progress toward accomplishing this overall goal is generally measurable, but not easily, and it certainly does not lend itself to day-to-day metering to determine progress.



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In order to accomplish this overall goal, we must conduct three inter-related programs which have the following purposes:

- A. To ensure that all underground and surface sources of water which are (or potentially may be) used as drinking water supplies are protected to the extent feasible so that public water systems using those waters are not prevented from attaining the standards established in the National Primary Drinking Water Regulations.
- B. To ensure that all public water systems meet the requirements of the National Primary Drinking Water Regulations.
- C. To ensure that the drinking water provided to the public meets the standards established in the National Primary Drinking Water Regulations.

Progress in accomplishing this mission is generally measurable, and it is assumed that accomplishing them will, in most cases, lead directly to the attainment of the overall goal, to assure that the public has safe drinking water.

In order to be successful in implementing the three programs (sub-goals) described above, EPA and the States will have to establish a basic set of program objectives.

## Program Objectives\*\* (including examples of measureable sub-objectives)

- . To ensure an effective Federal-State partnership in the implementation of the Act.
  - certify States as having primary enforcement responsibility for the implementation of the National Primary Drinking Water Regulations;
  - certify States as having responsibilities for the implementation of the Underground Injection Control program.
- . To provide technical assistance to supplement State programs during early stages of implementation.

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\*\*Not necessarily in order of importance.

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- . To acquire data from State agencies in States without primary enforcement authority to assist EPA in its implementation of the Act.
- . To publish and revise standards, regulations, and guidelines required by the Safe Drinking Water Act in a timely manner.
- . To monitor State programs after the States obtain primary enforcement responsibility.
- . To complete research, development, and demonstration projects which will provide scientific and technical information needed to accomplish the purposes of the Safe Drinking Water program.
  - determine health effects of contaminants in drinking water;
  - determine effective ways to keep contaminants out of surface and underground drinking water supplies;
  - conduct a rural drinking water survey;
  - develop new treatment processes to remove contaminants from drinking water;
  - determine the extent of the occurrence of chemicals thought to be hazardous through extensive monitoring;
  - conduct demonstration projects.
- . To provide technical assistance on a continuing basis to State agencies, local utilities, and Federal facilities which operate public water supplies.
- . To assure that the States develop and conduct a program which will result in the granting of permits or rule making for underground injections.
- . To provide a method for granting variances and exemptions from the National Primary Drinking Water Regulations consistent with the overall goals of the program.
- . To assist States in conducting surveillance activities aimed at determining the extent of the drinking water problem and the level of compliance with regulations.
  - determine the number of water systems with contaminant levels that do not meet the MCL's of the primary regulations;
  - determine the number of water supply systems in compliance with primary drinking water regulations.

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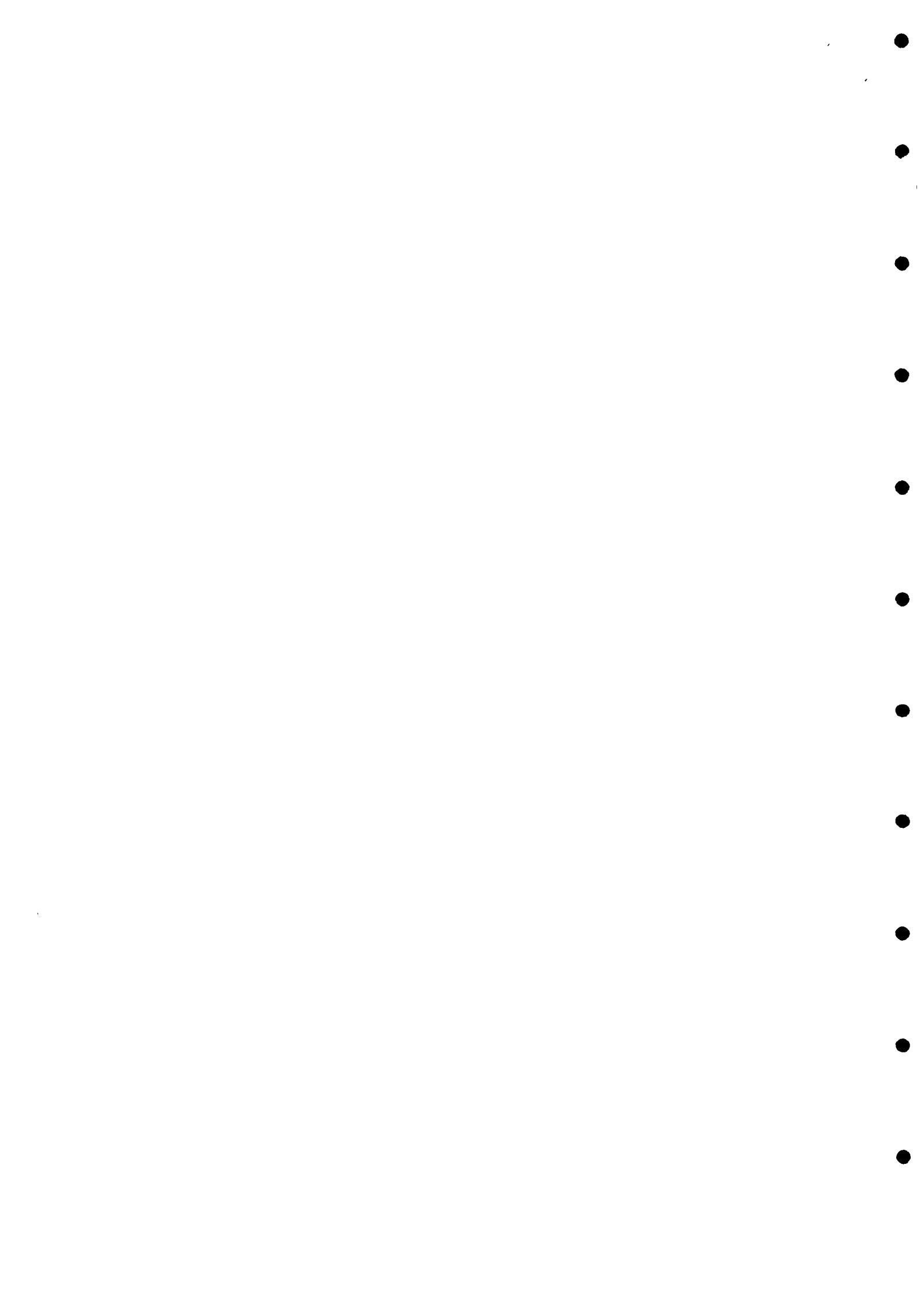
- To implement the enforcement provisions of the Act to assure compliance with regulations and the conditions of exemptions or variances granted from the regulations.
- To conduct a national program of public information activities so that the consumer will understand the nature of the problems encountered in supplying safe drinking water and to encourage consumer participation in implementation of the Act both on a national level and in all States.
  - ensure public participation in development and implementation of regulations;
  - ensure public access to information;
  - ensure public awareness of problems in drinking water systems.

Compared to the overall goal and the purposes, the program objectives included here are readily quantifiable and progress is fairly easily measured, except for the public information objectives. Some of these objectives are almost exclusively Federal activities (conduct research), but most are joint responsibilities of the Federal Government and the States.

In order to accomplish the above program objectives, EPA and the States must undertake a wide variety of program activities. There are potentially hundreds of program activities and only a few of them will be delineated here. All program activities should be easily quantified and measured. They generally fit the category of measurable objectives used by EPA's "Management-by-Objectives" program to monitor day-to-day progress of the Agency and the States. See Figure 1 for the general relationship between goals, purposes, program objectives, and a limited number of program activities.

## Priorities

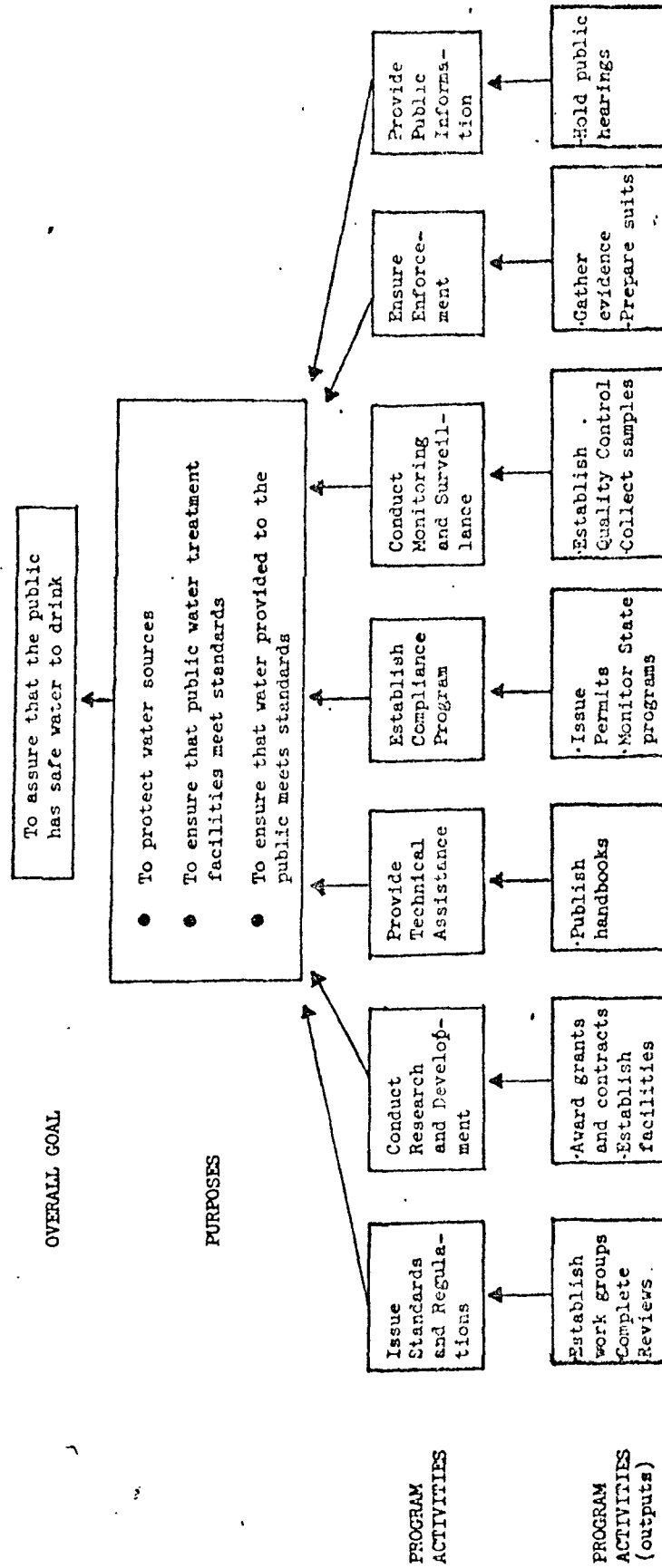
If the ultimate goals of the Safe Drinking Water Program are to be accomplished on a rational basis, it is necessary to establish, through a system of priorities, a hierarchy of activities which indicates the relative emphasis that each should be given. More specifically, a system of priorities may be used to determine the levels of resources which will be allocated to each facet of the overall program.





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Figure 1. Program Structure of the Safe Drinking Water Program





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Table I provides a list of the criteria which have been used in establishing priorities for the program activities.

TABLE I

Criteria for Establishing Activity Priorities\*

- I. Is a deadline specified in the legislation?
- II. Have actions been mandated by courts or ordered by the President?
- III. How immediate is the relationship to the program's goal and objectives?  
This criterion calls for two calculations:
  - . How crucial is the activity to the attainment of the goal of the program?
  - . How crucial is the conduct of the activity to the attainment of one or more objectives?
- IV. How sensitive is the desired program output to incremental changes in resources? Or, conversely, will a given increment of resources yield more output in one program as compared to others?
- V. Will the activity foster or hinder active State participation in the program?
- VI. Does the activity create the conditions necessary for the success of other programs that will be of high priority in the future?  
  
Factors to be taken into account in applying this criterion are illustrated by:
  - . Do the skills and the resources exist at the Headquarters, Region, State, local government and water authority level to implement the programs?
  - . Is the scientific and technological base available to support the program?

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\* Not necessarily in order of importance.

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VII. Will the activity or program lead to secondary environmental impacts? What is the relationship to other Federal programs - overlap, conflicts, or combined effects?

VIII. Is there a high level of public or Congressional interest?

Utilizing the criteria in Table I, EPA and the States must begin setting priorities for the activities which form the basis for the overall Safe Drinking Water Program. Activities within each priority grouping are not necessarily in order of priority.

## First Priority Activities

### Public Water System Supervision Program:

- . To help States obtain primacy:
  - certify States as having primary enforcement responsibility;
  - provide technical training and assistance to States;
  - certify State principal laboratories;
  - design initial framework for State recordkeeping and reporting;
  - develop program for variances and exemptions; and
  - provide automatic data processing (ADP) support to the States.
- . Prepare contingency program plans for States without primary enforcement responsibility;
- . Provide for consumer participation in program development and implementation;
- . Develop scientific basis for resolving questions about toxicants, carcinogens, and viruses in drinking water and develop research strategies for identification, evaluation, and control of toxicants in drinking water;
- . Conduct studies relating to causes and control of disease;
- . Establish monitoring programs to identify the national scope of drinking water contaminants;
- . Initiate compliance activities in States without primacy; and
- . Develop program to implement the emergency power authority.

### Groundwater Protection Program:

- . Publish lists of States requiring Underground Injection Control programs;
- . Promulgate regulations for State Underground Injection Control (UIC) Programs;

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- . Promulgate UIC program grants regulations;
- . Certify States as having primary enforcement responsibility for the Underground Injection Control programs;
- . Assist in the development of State permit programs and rulemaking procedures for underground injection control; and
- . Develop program guidance for the designation of sole source aquifers and the review of Federal financially assisted projects within such designated areas.

## Second Priority Activities (Public Water System Supervision Program and Groundwater Protection Program):

- . Initiate studies on underground drinking water problems;
- . Initiate non-emergency enforcement actions;
- . Carryout Rural Drinking Water Survey;
- . Provide for surveillance of Underground Injection Control Programs;
- . Develop and implement Public Information Programs;
- . Promulgate Secondary Drinking Water Regulations;
- . Develop scientific basis for establishing criteria and standards for wastewater reuse for potable purposes.

## Third Priority Activities (Public Water System Supervision Program and Groundwater Protection Program):

- . Begin demonstration projects;
- . Provide technical assistance which is not directly related to State acceptance of primary enforcement responsibility.

Finally, two conditions should be noted in utilizing the above priority schedule. On occasion it may become necessary to take action on a low priority item in order to accomplish a higher level activity. In those cases, the priority of the low level activity should be upgraded in emphasis as may be necessary. Secondly, different operating levels of government may require different priority schedules. EPA recognizes this and variations in the above priority heirarchy are both expected and encouraged to meet regional or local needs.



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## CHAPTER IV

### STRATEGY OVERVIEW

● Congress intended to place the principal responsibility for the implementation of the SDWA on the State and local governments.

● Similarly, it is clearly the intent of the Congress and of EPA to assure that consumers are aware of any problems in their drinking water systems. Procedures for notifying consumers of non-compliance of public water systems are an important part of the program. As noted in the letter from Russell Train to Congressman Staggers, November 28, 1973, the Administrator stated that:

● "The enforcement approach that we favor is premised on the belief that a Federal requirement that suppliers of drinking water notify consumers of contaminants in their drinking water will institute the necessary enforcement action. An informed public is the best guardian of its own health and safety. Accordingly, I believe the legislation should require that whenever water delivered by a water supply system fails to meet the health standards, the supplier be obligated to notify its users of such failure and the possible resultant health effects. Such notification provision, coupled with the citizen suit provision would, I believe render enforcement actions by Federal, State or other regulatory agencies largely unnecessary.... The possibility of a citizen suit provides a strong additional incentive to suppliers to maintain compliance with the standards."





## State Program Responsibility\*

There are a variety of factors which will determine whether or not most States will be willing to bear a significant degree of responsibility for the Act, including: the political situation in the States; the level of resources available to the States; the potential advantages (or disadvantages), as viewed by the States, of accepting responsibility for the program; and the quality of workability of the program as developed by EPA.

The first issue with which EPA is faced is determining the form of the State program. The three questions to bear in mind in reviewing a State program are:

- . Will the program provide a system whereby the actions undertaken by the State will lead to the goals of the SDWA?
- . Will the program lead to the most efficient use of State and Federal total resources, given Congress' intention that the States should have primary responsibility?
- . Will the program satisfy the legal requirements of the Safe Drinking Water Act?

State assumption of primary enforcement responsibility and the viability of the ensuing program may be constrained by a number of basic obstacles. These obstacles include:

- . Lack of funds;
- . Complexity of program;
- . Lack of trained personnel;
- . Distrust of Federal programs;
- . Legitimate disagreement with or misunderstanding of the program, including the need for a national safe drinking water program, the objectives of this program, and the role States are expected to play.

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\*Contents of this program dealing with State Underground Injection Control activities are dealt with in Chapter V.

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The degree to which EPA and the States are able to overcome these obstacles will in large part determine the success we achieve in accomplishing the important goal of fostering an effective Federal-State partnership for the implementation of the major programs under the SDWA. Together with the States we believe these obstacles can be overcome. The intention of EPA is not to force a Federal superstructure on State programs but to fit and foster State capabilities to assume the full responsibility of the Act.

## Requirements for State Primacy

The Safe Drinking Water Act specifies the requirements which States must meet before they may be certified for primary enforcement authority. Section 1413(a) of the Act establishes the five requirements for certification of State programs for primary enforcement of the NPDWR. Basically, the State must have:

- . Adopted primary drinking water regulations no less stringent than the current Federal standards.
- . Adopted and implemented procedures for enforcement of the regulations.
- . Prepared to keep records and make necessary reports.
- . Adopted procedures for variances and exemptions not less stringent than the Federal procedures. (If the State chooses to give variances and exemptions at all.)
- . Prepared an adequate plan for emergency provision of safe drinking water.

To obtain primacy the States must meet all of the above statutory requirements, there are, however, different levels or forms of State/EPA cooperation which may be used. In descending order of preference to EPA, they are:

- I. Fully operational State programs, certified for primary enforcement responsibility, without limitations or extensive Federal assistance beyond the State Program Grants.
- II. EPA retaining primary responsibility for the program with provisions for working agreements whereby the State would carry out certain aspects of the program.
- III. EPA retaining full responsibility for the program with the State assuming no part of the program.



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The promulgated regulations for the Implementation of the National Primary Drinking Water Regulations specify the minimum requirements for State primacy, as outlined above. Under the statute, no provisions exist for "shared or conditional primacy." The States still have to meet all of the statutory requirements to obtain primary enforcement responsibility. However, once the State has met those minimum requirements, EPA may, at the State's request, assist in achieving a more desirable level of implementation and enforcement through technical assistance as outlined on the following page.

The development of a program that is realistic and manageable would in itself be a powerful incentive for encouraging State involvement. Such a program would, of course, minimize red tape, minimize Federal "big-brotherism" and maximize the real responsibility in the hands of the State. Throughout this discussion, it has been noted that most States have existing programs in this area, and have had them for some time. The more that base can be utilized and built upon, the more the prospects for State involvement are enhanced. Other general incentives are:

## Flexible Implementation

The SDWA requires EPA to establish and implement a nationally consistent program. Nonetheless, that consistent program has to be implemented in 56 States and territories that vary in terms of existing laws, environmental conditions, ability, financial strength and governmental arrangements. EPA will push its discretion to the limit in all phases of the program to accommodate the diversity it faces. Regional offices of EPA will have flexibility in establishing programs which match the particular needs and capabilities of the individual States.

In particular, EPA will recognize the capability of local (e.g., county or municipal) governments in satisfying certain responsibilities under the program and will give due credit to such capabilities when evaluating State programs for certification.

## Regulations and Guidelines

The promulgation of regulations and guidelines under the Act which the States will accept requires EPA's acknowledgement of the general capabilities of the States in terms of their available resources, their administrative abilities, and their organizational and administrative structures. EPA will endeavor to minimize the provisions of the regulations which involve an unreasonable increase in resource requirements or entail organizational changes.

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### Technical Assistance

Although resources are currently very constrained, EPA will, to the degree possible, offer other financial and program services to assist States in operating safe drinking water programs. These may include:

- . Implementing a comprehensive program to aid the State in the development of their programs. This assistance would include the preparation of a model State program. By "model," of course, we do not mean that all State programs should be the same and the model will provide various strategies which States, if they choose, might employ.
- . Provide training sessions for State and local personnel in matters of administration, inspection, and enforcement. A variation of this is to give a professional association such as the American Water Works Association or the Conference of State Sanitary Engineers a grant to provide training.
- . Detailing EPA employees both from EPA Headquarters and the regions to assist States in the development of drinking water programs. EPA will advise States in both substantive areas (developing monitoring and enforcement capabilities, variance and exemptions programs and certification of State laboratories and technical assistance in the same, etc.), in procedural areas (developing adequate administrative structures, writing draft legislative programs, etc.)
- . Providing public information programs to educate the public in the provisions of the law especially related to the public notification provisions of the Act. States will be encouraged to become actively involved in public information programs.

### Sequencing

Full implementation of the requirements of the SDWA for all 250,000 public water suppliers will take several years. Efforts by EPA and the States must be sequenced and ranked so as to attack the problem in the most effective manner.

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The levels of EPA/State participation on page 30 represent the range of relative activity, and make it clear that to obtain primacy the States must meet all of the primacy requirements. Our goal is to help the States to establish fully operational State programs but this will take time, resources, and continuous State-Federal cooperation.

State capability must be considered in sequencing program implementation. A State must have enacted the necessary statutory requirements for primacy (§1413(a)(1)). Then the State's initial capability to fully implement the new program must be assessed with the full realization that the State may need several years to reach maximum effectiveness. If the State is not certified for primary enforcement responsibility, then EPA will be responsible for all aspects of the program in the State. Also, if a state is not approved, it may not receive a grant under §1443 after the first year.

The next point in sequencing is to determine what and where are the most serious drinking water problems, and what must be done first to treat those problems. The circumstances will be different in every State, and the approach should be flexible to fit with each situation, and should be largely based on the State's own evaluation of the problems it faces.

EPA should provide some general guidance to the States (and for its own use) on the emphasis to be given to various sized water systems in the implementation and enforcement of the programs. Nevertheless, regional and State offices shall have considerable flexibility in determining which problem areas should have highest priority and in determining how and where resources may best be utilized. In general, EPA will initially emphasize the need for assuring that large systems are in compliance with new standards.

State program managers will have to consider a variety of factors in determining where to allocate resources. Historically, the larger systems have been better funded, better monitored, better maintained, and have produced better water. Smaller systems have traditionally had difficulty raising funds for construction and maintenance, been less subject to State and local surveillance, and have been the cause of a higher proportion of acute disease outbreaks. This presents each program manager with the need to determine the necessary balance between the focus on large or small systems. Included in such a model





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would be, at least, the four most significant variables which should determine the level of emphasis given to a particular system or set of systems:

1. Population served by a system or class of systems.
2. Relative health risk from the system or class of systems.
3. The potential the State has for impacting on the system(s).
4. The relative cost of surveillance and enforcement for that class of systems.

## State Program Grants

Implementation of the requirements of the Act is likely to require significantly increased activity on the part of the States. To help defray these added administrative expenses, the Act authorizes EPA to make grants to the States. Funds are authorized to be appropriated in FY 76 and FY 77, and it is clearly the intent of Congress and of EPA that these funds be made available to assist States in the development of water supply supervision and underground water source protection programs that meet the primacy requirements. During FY 76, \$7.4 million were awarded in State Program Grants for the implementation a water supply supervision programs, over \$17 million will be awarded for FY 77 and this figure is likely to increase for the next fiscal year.

EPA recognizes that many States lack sufficient resources to fully implement the Safe Drinking Water Program and will require some continued financial assistance for several years. At the same time, it is recognized that the initial program grants are quite modest in comparison to total resources needed to implement all aspects of the program.

Initially, EPA will not utilize a system of positive incentives in its State program grants. EPA will set general standards of minimum performance, and a State will receive a base grant which may be withheld if a State is clearly not conducting a satisfactory program as required under §1413 for primary enforcement responsibility. There will be no EPA national policy that States should allocate any specific amount of the grant to any particular program activity. Rather the funding shall be flexible to accomodate the States own needs and priorities.



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## Variances and Exemptions

The Congress included provisions for variances and exemptions in the SDWA to assist those drinking water systems which will face particular difficulty in meeting the standards of the National Primary Drinking Water Regulations. They are designed to provide additional time to these supplies to meet the standards while at the same time assuring that the public health is not endangered.

EPA's basic policy toward the variance and exemption provisions of the Safe Drinking Water Act is that they are procedures to be used selectively by the States to bring public water systems into compliance with the National Primary Drinking Water Regulations. The objective is to bring public water systems into compliance as quickly as feasible.

The following general and specific guidelines will characterize EPA's program for variances and exemptions:

- . States will have a reasonable degree of flexibility in determining how they utilize variances and exemptions, how they monitor the increments of progress in the variances and exemptions, how they set compliance schedules within variances and exemptions and how they apply variances and exemptions to various size systems within their jurisdiction; so long as they meet the requirements of the SDWA.
- . The number of systems in compliance with the standards and meeting compliance schedules will be considered the general measure of progress in achieving the goals of the Safe Drinking Water Program. The number of systems granted variances and exemptions or meeting schedules which will eventually bring them into compliance will not be included in the measure of progress.
- . Variances and exemptions are not enforcement tools designed to beat utilities into compliance; nevertheless, EPA's procedures for granting variances and exemptions will not be so flexible that they do not effectively ensure that utilities will be brought up to acceptable standards in a reasonable amount of time.



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- . Based on an opinion of the Office of General Counsel, EPA's policy will be that variances and exemptions will be granted only for failures to meet Maximum Contaminant Levels (MCL's) and may not be granted for other program requirements of the National Primary Drinking Water Regulations such as the requirements for monitoring, siting, public notification and reporting.
- . EPA will proceed on the assumption that the need and the justification for variances may vary due to regional and State circumstances and EPA regional offices will have considerable authority in applying guidelines which reflect these circumstances. In general it will be recognized that what may be the best available treatment in one case might not be applicable in all other cases.
- . EPA will require only that amount of technical and economic information on applications for variances and exemptions which is absolutely necessary for the evaluation of the application. More specifically, EPA will permit smaller drinking water system ( and in particular, non-community systems) to provide considerably less economic justification for exemptions than will be required of larger systems.

Finally, and most importantly, EPA's key administrative objective in the implementation of this program is that all possible steps will be taken to reduce the management burden of granting variances and exemptions. In particular, we intend to reduce, to the extent feasible, the paperwork required of the utilities, the States and of EPA itself and to streamline the procedures to be used in applying for and in processing variances and exemptions. EPA intends to draw on its experiences with the NPDES program under PL 92-500 as a guide; recognizing the problems which that program faced and attempting to avoid them. Some of the administrative lessons of the NPDES program which would guide implementation of the SDWA variance and exemption procedures are that:

- . The technical problems involved in granting variances and exemptions are likely to be more manageable to an Agency like EPA or its State counterparts than are the administrative (or paperwork) problems. Staffing for the program in both the EPA Regional offices and the States should be balanced with both technical and administrative personnel.



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- . States are reluctant to assume responsibility for programs where the guidelines are not known in advance.
- . Public notification and public hearing requirements are costly and will have positive impact only if handled creatively and if the program managers genuinely desire public input.
- . Data systems to handle and keep track of variances and exemptions should be simple and direct, and should rely on easily-available "canned" programs. All data processing systems will be developed in cooperation with State agencies. EPA is working with States to develop workable ADP systems.
- . Applications for variances and exemptions will not be used as general information collecting devices and data which are requested will be only that relevant to the granting of a variance or exemption.
- . A single public hearing may be held in certain cases to review variance applications from a number of systems and to adopt implementation schedules for both variances and exemptions for more than one system.
- . EPA will operate its program for variances and exemptions through its regional offices except for the provision of an overall program guidance and, to some extent, the review required by the law, which will remain Headquarters activities. Determination on acceptable alternative treatment techniques will also be made by Headquarters. Regional Administrators will be responsible for assisting States in the development of programs, initial reviews of variances and exemptions granted by States and in developing and maintaining adequate recordkeeping systems. In States without primary enforcement responsibility, Regional offices will operate an EPA program for variances and exemptions.





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## Local Utility Impact and Regionalization

The ultimate responsibility for complying with the primary drinking water regulations set in the Safe Drinking Water program lies not with EPA or the States but with the local public water supplies that provide the nation's drinking water. At the same time, EPA recognizes the heavy burden which the Act may place on some local utilities and water suppliers and intends to develop its programs so as to reduce, to the degree possible, the difficulties they will face in complying with the new standards.

The Act, nevertheless, makes clear that local utilities will be responsible for providing any treatment facilities necessary to reach the standards contained in the regulations and for monitoring required by the regulations except as required by State law. Moreover, local water suppliers will be responsible for obtaining the resources which will be needed to meet the program's requirements. EPA does not foresee any direct Federal subsidies to local water suppliers, nor any Federal construction grants program, and expects in most cases that traditional sources of funds such as charges for water and services, municipal bonds and so forth will be utilized to provide suppliers with necessary resources.

## The Existing Situation

The Community Water Supply Study of 1969 (our most recent data) showed that a large percentage of local utilities and water suppliers will most likely face significant problems in meeting the requirements of the new regulations. Tables 2-3, taken from the CWSS, give some indication of the severity of the existing problem. As the tables show, a significant number of water systems have been unable to comply with both the mandatory and recommended Public Health Service standards. Moreover, a majority of systems of all sizes were not meeting the monitoring criteria set in the PHS regulations. It should be noted that in all cases, the most severe problems are found among the smaller systems.

## Supplying Safe Water

An evaluation of the information and data currently available to EPA suggests that a significant number of local water suppliers may face serious financial problems in meeting the interim NPDWR.

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Because many systems do not currently provide the treatment necessary to remove many of the contaminants listed in the NPDWR, there will be a substantial need to upgrade facilities. Many systems will need to invest significant sums of capital because of the high cost of some of the treatment techniques. On the other hand, other systems are in compliance or near compliance with the NPDWR and will not require substantial expenditures.

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TABLE 2

## SUMMARY OF WATER QUALITY EVALUATION

	<u>Population Group Served</u>			
	Less Than 500	500 100,000	Greater Than 100,000	All Population
Number of Systems:	446	501	22	969

	<u>Percent of Systems</u>			
Evaluation of Systems:				
Met Drinking Water Standards	50%	67%	73%	59%
Exceeded Recommended Limits	26%	23%	27%	25%
Exceeded Mandatory Limits	24%	11%	0	16%

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Note:

Study Population in Each Group in Thousands	88	4,652	13,463	18,203
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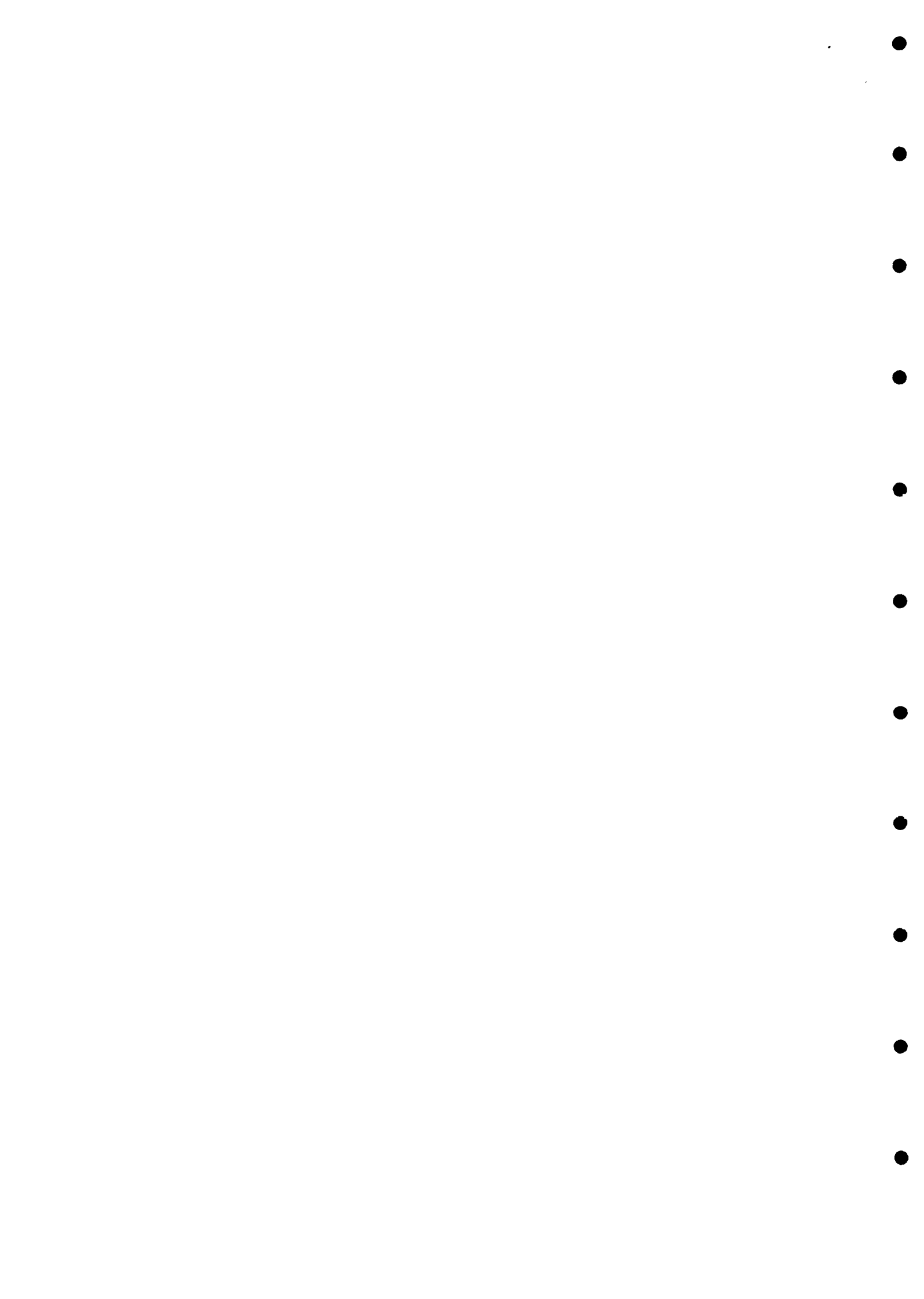
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TABLE 3  
MEETING BACTERIOLOGICAL MONITORING REQUIREMENTS

	<u>Population Group Served</u>			
	Less Than 500	500 100,000	Greater Than 100,000	All Population
Number of Systems:	466	501	22	969
	<u>Percent of Systems</u>			
Met Criteria	4%	15%	36%	10%
Did Not Meet Criteria	96%	85%	64%	90%

Source - Community Water Supply Study of 1969





100-100

The NPDWR and the State program regulations clearly recognize that some utilities and water suppliers will not be in compliance with the maximum contaminant level standards immediately. The provisions of variances as discussed above and the time phased monitoring program set forth in the NPDWR will enable a step-by-step program to achieve compliance. So long as the public health is protected, EPA will encourage States to utilize a high degree of flexibility when dealing with local water suppliers and to take into account the particular problems these systems may face in meeting the regulations.

### Regionalization

Another approach which EPA considers to be a viable solution for certain water systems for meeting the drinking water standards is regionalization. While it is recognized that regionalization may be a reasonable alternative only under certain limited conditions, it may prove to be a valuable alternative for some systems, particularly because regionalization does not necessarily have to be synonymous with total structural consolidation.

In many places, regionalization can reduce the cost and/or improve the quality of the water supplied. While regionalization customarily involves at least some structural links between systems, such as interconnecting pipelines, significant savings may be possible when merely the management of systems is combined. This allows activities such as operation, maintenance, monitoring, financial and administrative management, overhead, etc., to be carried out by a single staff.

Many factors affect whether there is a cost saving, in both structural and non-structural regionalization. These factors include: the number of service areas, the distance between them, the relationship between distance and flow, future population growth, hydrologic and topographic features, the type of treatment employed, labor costs, and even the particular functions to be combined (i. e., impoundment, conveyance, treatment, distribution, operation and labor, and management).

Despite the impact of local site characteristics on economies of scale, regionalization is a desirable alternative in many areas for the following reasons:

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- . Small systems, for which advantages of structural and non-structural regionalization are greatest, are much more likely to be in violation of drinking water standards and thus be required to make extensive alterations in their facilities.
- . Since economies of scale are generally greater for impoundment facilities than they are for treatment, regionalization will be advantageous where it is necessary to tap new sources rather than merely upgrade existing treatment processes.
- . Apart from economies of scale, small communities can benefit considerably from pooling capital resources, thereby obtaining a more favorable market for their bonds.

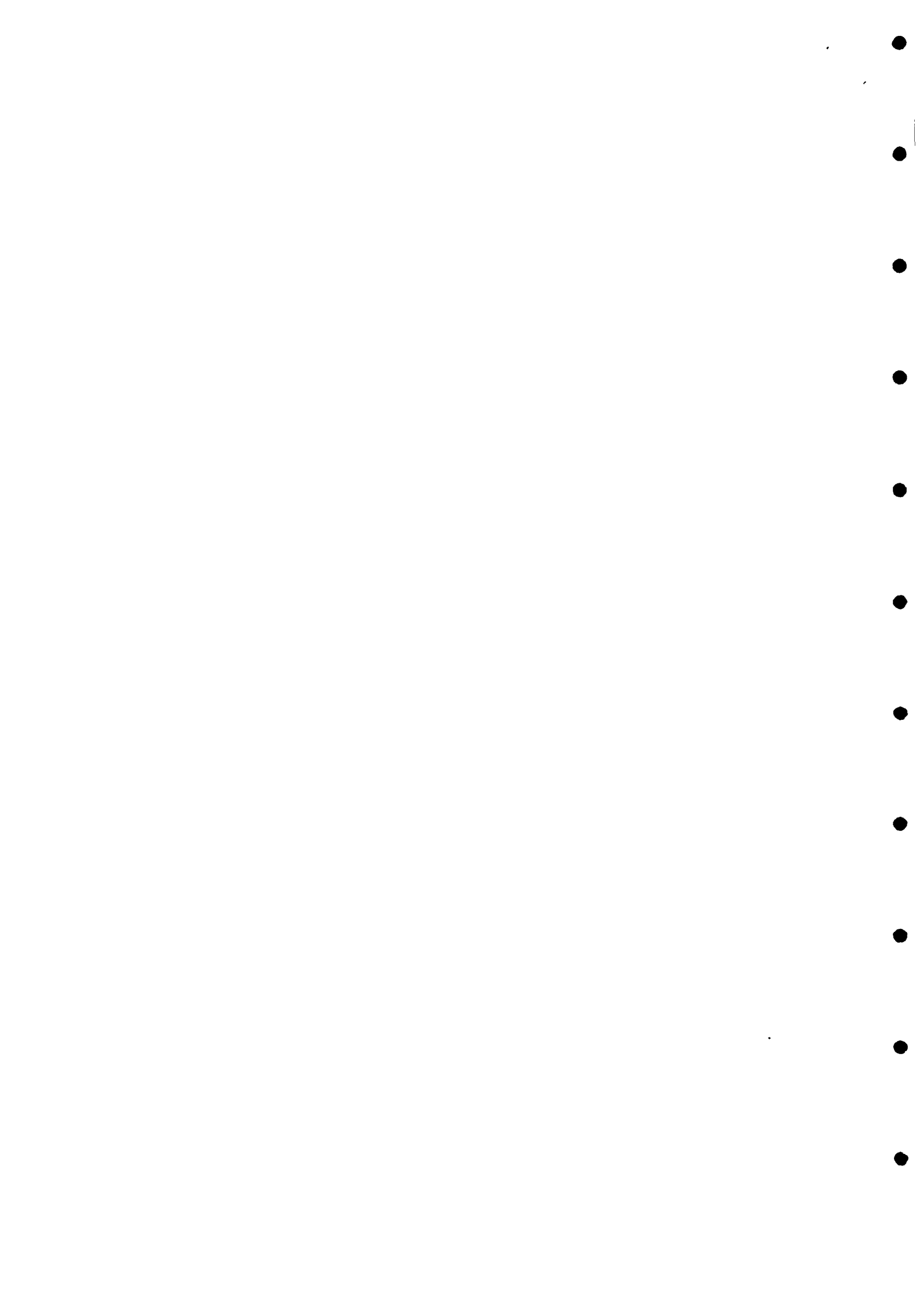
Even where its benefits are apparent, some important barriers to regionalization remain:

- . Fear of relinquishing control over water supply to a larger political body.
- . Disputes over how control of the regional entity and cost of facilities are to be shared by participating localities.
- . Genuine preference by a community for its present source of supply.

## EPA Policy on Regionalization

EPA's policy with respect to regionalization will be guided by the following points:

- . EPA will encourage regionalization wherever it is clearly appropriate, however, the Agency does not intend to dictate any regionalization plan to any public water supply or group of supplies. The benefits and costs of structural and/or management regionalization are local decisions, and the EPA will not interfere with those decisions.
- . EPA expects that prior to (or simultaneous with) applying for variances and exemptions based on cost or raw water source, smaller systems, especially those serving less than 5,000 people, will explore opportunities for regionalization.



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- . The States should assess the potential for regionalization (including integration of waste water treatment and water supply), and where cost-savings would be significant, should attempt to provide a climate conducive to regionalization including the necessary legal authorization.
- . Within the limits of its resources, EPA will provide technical assistance and support to States and communities which pursue regionalization and which can significantly benefit from doing so.
- . EPA intends to implement fully the provision of the SDWA for extending by two years the compliance period for systems holding exemptions if they have "entered into an enforceable agreement to become a part of a regional public water system..."

## Monitoring and Laboratory Facilities

With the adoption of the interim NPDWR, most drinking water systems will be required to increase significantly the frequency of monitoring. Moreover, many will begin for the first time to test for many organic, inorganic and radioactive contaminants. The step up in monitoring will be reflected in the significantly increased costs.

EPA does not intend to provide direct financial assistance to local utilities and water suppliers to cover routine costs of monitoring; however, EPA will continue and may expand its program for providing information to utilities and to laboratories on improved methods of performing monitoring. In particular, EPA will attempt to publicize information on low cost monitoring techniques which utilities and laboratories may employ.

## Availability of Laboratory Facilities

In order for water suppliers to meet the requirements of the primary drinking water regulations, there also must be an adequate number of qualified laboratories, capable of performing the monitoring tests. EPA currently is developing a program for certifying State principal laboratories for analyzing bacteriological, chemical and radiological contaminants using criteria developed by EPA as guidance. Regulations covering the certification of State principal laboratories may be written into the revised primary regulations. Presently there appears to be a large number of laboratories



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capable of testing for bacteriological contamination and, at least for larger and medium sized water utilities, there will probably be no significant problem. States appear to be tooling up to perform the required chemical analysis, but it is anticipated that EPA technical assistance will be needed to aid them with the radio-chemical work.

EPA believes that the decision on whether to expand State laboratory capability\* or to depend on the expansion of private laboratories should rest with the State. It is nevertheless EPA's policy that users should bear the ultimate costs of providing safe drinking water and hence individual drinking water systems should be responsible for monitoring costs. EPA may take certain steps to assist States, local governments and public water suppliers in complying with the monitoring requirements including:

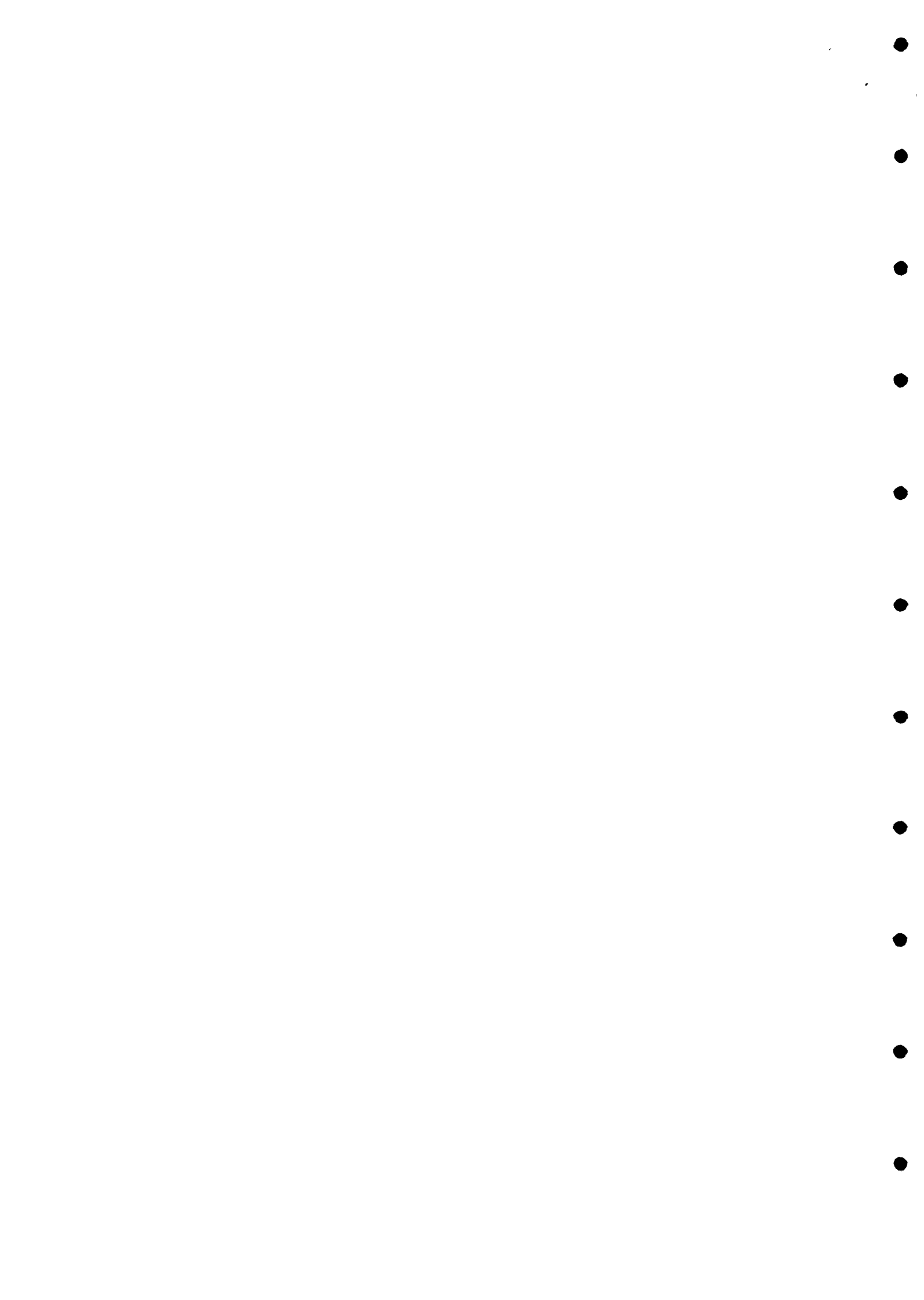
- . Expanding the EPA training program or finance training programs which might be conducted in universities, State facilities or Federal laboratories where new monitoring and testing techniques might be taught.
- . Develop, with State assistance, a directory of all existing public and private laboratories.
- . Develop, with State assistance, a laboratory quality control program.
- . Provide technical assistance to water supply laboratories.

## Sanitary Surveys and MCL Monitoring Requirements of the NPDWR

A sanitary survey means an on-site review of the water source, facilities, equipment, operation and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water. Monitoring a public water system for contaminants is part of a sanitary survey.

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\* An analysis of a sample of State monitoring programs suggested that over 85% of States currently pay for 50% or more of the costs of laboratory services for municipal systems.



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EPA recognizes that a comprehensive sanitary survey of a public water system conducted by a qualified person is essential to locate and identify health hazards which might exist in the system. On-site visits also present the opportunity to provide often needed technical assistance to the water supply system operating personnel. Ideally, a sanitary survey should be conducted of each public water system annually, in addition to the monitoring established in the National Primary Drinking Water Regulations (NPDWR).

EPA purports that a sanitary survey and water quality monitoring are both necessary for making a judgment on the satisfactory operation and acceptable quality of water supplied by a public water system.

EPA's policy with respect to supporting the sanitary survey and the monitoring requirements for MCL's promulgated in the NPDWR should be guided by the following:

- . Encourage the use of the sanitary survey to locate and identify existing and potential health hazards that might exist in a public water system.
- . Support training of EPA Regional and State water supply program personnel to provide training to State and county personnel to conduct comprehensive sanitary surveys.
- . Provide a manual for use in conducting a sanitary survey and as a reference in providing technical assistance at the time of the survey.

## Training and Energy Requirements

The most effective strategies are usually those which utilize existing organizational structures and systems. The Office of Water Supply intends to build upon the Agency's commitment to its regional structure and to the major role to be played by the States. The principal communications and training efforts will be implemented by the States as part of the function of exercising primary enforcement responsibility (primacy) under the SDWA.





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It will be the responsibility of the Regions to equip the States to implement this role, to provide guidance and support, and to monitor State operations and performance. EPA will provide basic materials, plans, and resources, and will also support the Regions with staff training to sharpen their skills as communicators and trainers, and with policy guidance and information to ensure consistent, accurate interpretation of the regulations.

The overall objective of the training strategy is to support the effective implementation of the Act by providing the information and training required by all who are affected by it. The targets, then, of this information and training plan include:

- . the general public
- . water utility owners and operators
- . industries and others engaged in underground injection
- . State and local officials (elected and program)
- . State water system agencies
- . State agencies affected by UIC Regulations
- . Indian reservations and Federal facilities
- . EPA Regional office personnel
- . other groups (national associations and organizations)
- . other Federal agencies, educational institutions, interstate carriers.

EPA intends to give serious attention to the potential overall consumption of energy and the ability of local water suppliers to afford increased energy costs. The interim NPDWR do not currently appear to require significant increases in the amount of energy which will be necessary to provide treatment by local utilities. EPA will, however, analyze the possible effects of other treatment techniques (e. g. , activated carbon) which might be needed at some later date.

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Finally, EPA in general expects non-government owned utilities to be treated equally with publically owned facilities in terms of technical assistance, access to laboratories, and so forth, except as may be required by law. EPA does not view the Safe Drinking Water Act as a tool to be used to force investor owned utilities into government operation nor conversely to pressure local governments into taking over private water companies.

## Relationships between the SDWA and the Federal Water Pollution Control Act (FWPCA)

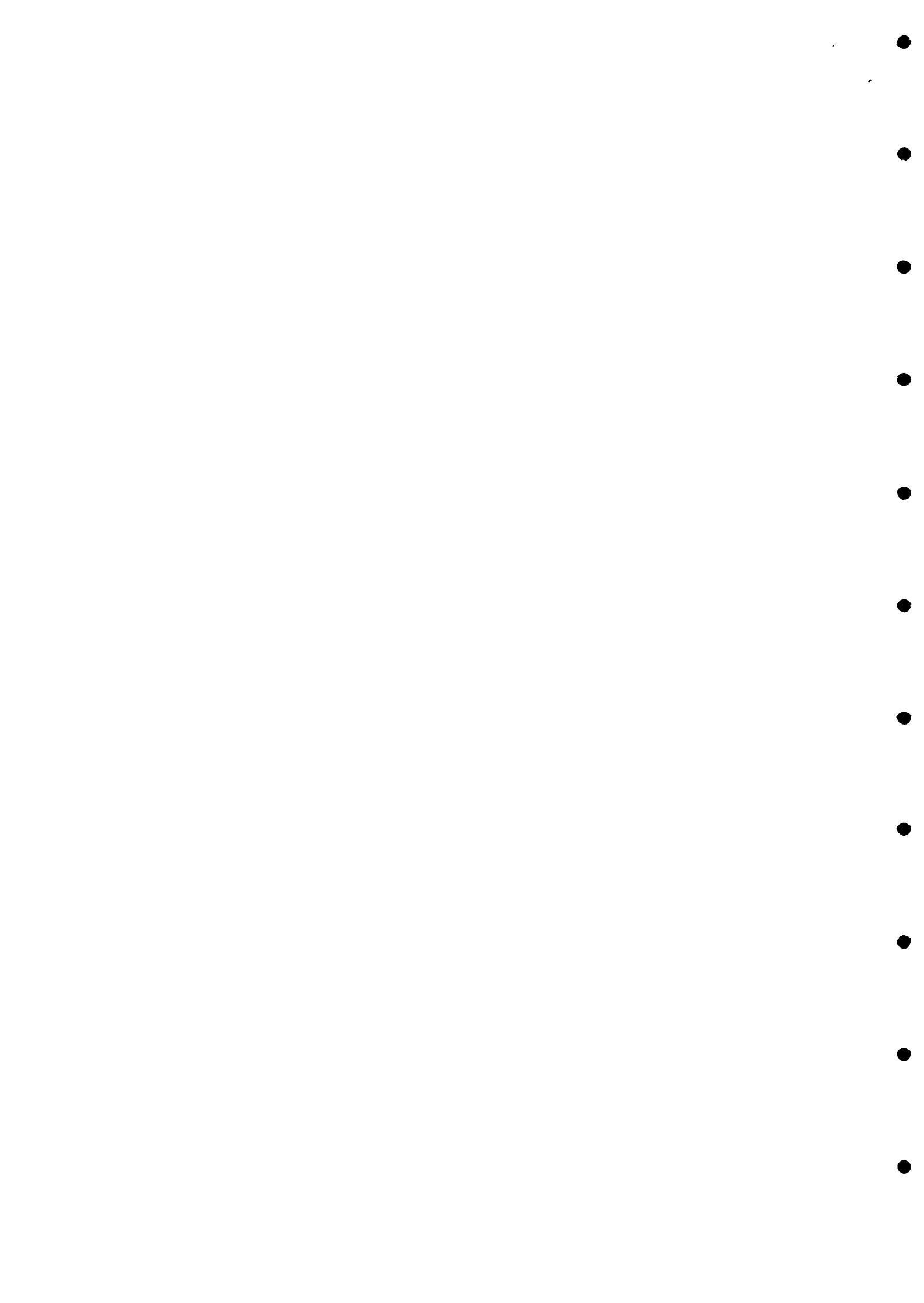
There are several areas of potential interface between the SDWA and the FWPCA. These include:

- . FWPCA water quality standards include the designation of beneficial uses, including the quality of water needed to serve drinking water supplies.
- . Standards promulgated under §304, 307, and 311 of the FWPCA would prevent contamination of surface water sources by some organic chemicals, and any reduction in organic load in raw water would help a water utility maintain good finished water quality.
- . NPDES permits issued under the FWPCA control the release of pollutants to many of the same waters used as public water supplies.
- . Some forms of underground injection may be controlled under the SDWA and through NPDES permits; the relationships need to be examined.
- . Planning under §208 of FWPCA requires consideration of the protection of both ground and surface water quality.
- . Research programs must explore the unknown along the whole range of contaminant production, transport, treatment, and toxicity.



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These and the other SDWA and FWPCA programs, such as technical and financial assistance, training, etc., should be treated as programs that have significant areas where the work can be coordinated. These areas require careful treatment, more detailed than can be handled in this paper. EPA plans to manage its water pollution control and drinking water programs concurrently, giving each the priority attention it deserves.



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## CHAPTER V

### PROTECTION OF UNDERGROUND SOURCES OF DRINKING WATER: THE UNDERGROUND INJECTION CONTROL PROGRAM

#### Scope of Groundwater Use and Problems

Ground water is an immense potential source of drinking water. It is estimated that the ground water is 2,000 to 3,000 times as plentiful as all fresh surface water combined. Although much of this ground water is brackish, it is estimated that it constitutes about 97 percent of all fresh water available in the United States. It is also estimated that 50 percent of Americans rely on underground sources for their drinking water. This constitutes a reliance on ground water by approximately 80 percent of all public supply systems supplying one-third of the population and over 95 percent of all rural domestic supplies.

Ground water is found in water bearing strata (aquifers). The groundwater flow rate is generally quite slow, ranging from a few centimeters per day to few meters per year, although in some locations flow rates can be much higher. For much of the country only episodic information is available on the extent of groundwater contamination. There are only a few areas where there is adequate data to determine the total groundwater quality.

Groundwater contamination comes in many forms and from many sources. One study prepared for the EPA identifies twenty-one sources of contamination (See Table 4). The severity of contamination from these sources varies from source to source and State to State.





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TABLE 4

## SOURCES OF GROUNDWATER CONTAMINATION\*

1. Landfills, dumps, and excavations - significance of hazard is dependent upon the nature of deposit, disposal means and local geologic conditions.
2. Wastepiles and stockpiles - may lead to contamination due to infiltration from salt supplies (for winter road spreading), certain ore stockpiles, etc.
3. Animal feedlots - infiltration of wastes from feedlots can result in excessive concentrations of nitrate, chloride, ammonia, bacteria, etc.
4. Application of fertilizers - mainly a pollution problem for surface water, but it has resulted in groundwater contamination.
5. Application of pesticides - constitutes a potential problem for shallow aquifers or where pesticides are applied near groundwater sources of water supply.
6. Accidental spills - spills of toxic substances have posed immediate health hazards for nearby water supplies.
7. Wastewater sludge and effluents - sludge and effluents disposed by various means (land application, evaporation pits) can result in groundwater contamination.
8. Highway salting - can cause serious problems where excessive amounts are used to melt snow and ice on highways.
9. Polluted surface water - can result in infiltration and direct interchange to aquifers from polluted surface waters (addressed by P. L. 92-500)
10. Air pollution - could be considered a form of land spreading of waste (controlled by the Clean Air Act)

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\*Not necessarily in order of importance



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11. Holding ponds and lagoons - widely used by industry and municipalities; poor construction or operation can result in infiltration and consequent groundwater contamination.
12. Septic tanks - potential for contamination is dependent on population density, construction methods, and soil type.
13. Storage transmission facilities - contamination results from leakage from sanitary sewers, buried gasoline tanks, etc.
14. Drainage wells and sumps - often used to dispose of surface runoff, especially in areas with little natural surface drainage.
15. Artificial recharge - used to combat salt-water intrusion, subsidence, declining water tables by percolation - infiltration or other means; can result in contamination if not properly performed or monitored.
16. Disposal wells - includes brine re-injection wells and industrial waste injection wells.
17. Secondary recovery of oil and gas - poor well design and/or construction of the wells can result in contamination of the fresh water aquifer.
18. Water supply wells - contamination can be caused by improperly constructed or abandoned wells.
19. Exploration holes and abandoned wells - abandoned oil, gas, and coal exploration and production wells have created considerable groundwater contamination problems.
20. Mining - contamination from highly mineralized and/or acidic mine leachates may be generated long after mining operations have ceased.
21. Groundwater development (pumping) - overpumping of fresh water aquifer can result in salt-water intrusion.

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There is at the present time not sufficient data available to rank these sources of contamination in order of importance according to the quantities of pollutants discharged to ground water, their relative adverse impact on human health, and feasible control techniques. Although EPA will give priority to the control of activities as mandated by the Safe Drinking Water Act, i. e. injection wells, all of these sources of contamination are of concern to the Agency which will, in conjunction with the States, study their threat to groundwater quality as the UIC Program becomes operational.

## Summary of Part C - the UIC Program

Part C of the Safe Drinking Water Act requires EPA to develop programs for the "protection of underground sources of drinking water." These Underground Injection Control (UIC) regulations will contain minimum requirements for programs to prevent endangerment of underground drinking water sources by contamination by underground injection. Section 1421(b)(1) specifically requires that a State program:

"A) shall prohibit... any underground injection... which is not authorized by a permit issued by the State (except that the regulations may permit a State to authorize underground injection by rule);..."

"B) shall require... that the applicant for a permit to inject must satisfy the State that the underground injection will not endanger drinking water sources, and... that no rule may be promulgated which authorizes any underground injection which endangers drinking water sources;..."

"C) shall include inspection, monitoring, recordkeeping, and reporting requirements;..."

"D) shall apply... to underground injections by Federal agencies, and to underground injections by any other persons whether or not occurring on property owned or leased by the United States."

The program to be developed is a joint Federal/State regulatory system. Federal regulations will be developed which will serve as the foundation for State enforced UIC programs.

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Following proposal of UIC regulations, EPA will list in the Federal Register the States for which a UIC program is necessary to assure that underground injection will not endanger drinking water sources. Since well injection is practiced in all States, all States will be listed over a few years span. Listing of a State does not imply that EPA has made any evaluation of the adequacy of the State's existing underground injection control programs but rather that there is a need for a UIC program because of the presence of injection wells in that State.

Each State, so listed, will have 270 days after promulgation of the UIC regulations to submit an application for primary enforcement responsibility showing that the State has satisfactorily adopted and will implement a UIC program. Within 90 days after the State's application, the EPA Administrator will either approve or disapprove the State program. When the program is approved, the State will have primary enforcement responsibility (primacy). If the program is disapproved, EPA must prescribe and administer a UIC program in the State. The Administrator may also approve a part of a State's program, but the State does not have primary enforcement responsibility nor can it obtain additional program grants 2 years after the effective date of the first grant unless its entire program is approved.

Part C (Section 1424) also establishes a program in areas relying on ground water as a "sole or primary source" of drinking water.

The Act emphasizes the strong role that States are to play in implementing the UIC program and EPA intends to work closely and in cooperation with the States to insure that the intent of the Act is upheld.

## Goals of the UIC Program

EPA's basic goals and policies in implementing Part C of the SDWA are essentially the same as those stated earlier in this paper for the rest of the program:

- Our principal goal is to protect the public health to the extent feasible, giving due consideration to the economic and social costs which might result.

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- . We intend to adopt a flexible, step-by-step approach to the implementation of this program, and desire that the States play the principal role in its implementation as defined by Congress in the legislation.
- . The bulk of EPA's activities in this area will be conducted by the Regional Offices, and not by headquarters, with the exception of research and regulation-preparation. These headquarters activities, however, will be closely coordinated with the Regions and the States.
- . Since resources are limited, EPA must utilize Federal and State resources in ongoing programs wherever possible.

## Objectives of the UIC Program

Chapter 3 of this document detailed the general goals of the SDWA, including the UIC Program, and outlined the objectives of the Office of Water Supply. Figure 2 shows a tentative time frame for the implementation of the UIC program based on the proposed UIC regulations. The objectives of Part C for the protection of underground sources of drinking water are:

- . Certification of States to assume primacy for the implementation of the UIC program.
- . Protection of aquifers which are the sole or principal source of water supply.

To reach the objectives the following activities will be necessary:

- . Listing of States requiring a UIC program
- . Promulgate regulations for the following:
  - State UIC program
  - State program grants
- . Develop guidance on the following:
  - Endangerment of underground sources of drinking water
  - Interpretation of permit applications
  - Coverage of the UIC program
  - Review of State Programs
  - Area designation and project review under Section 1424(e)

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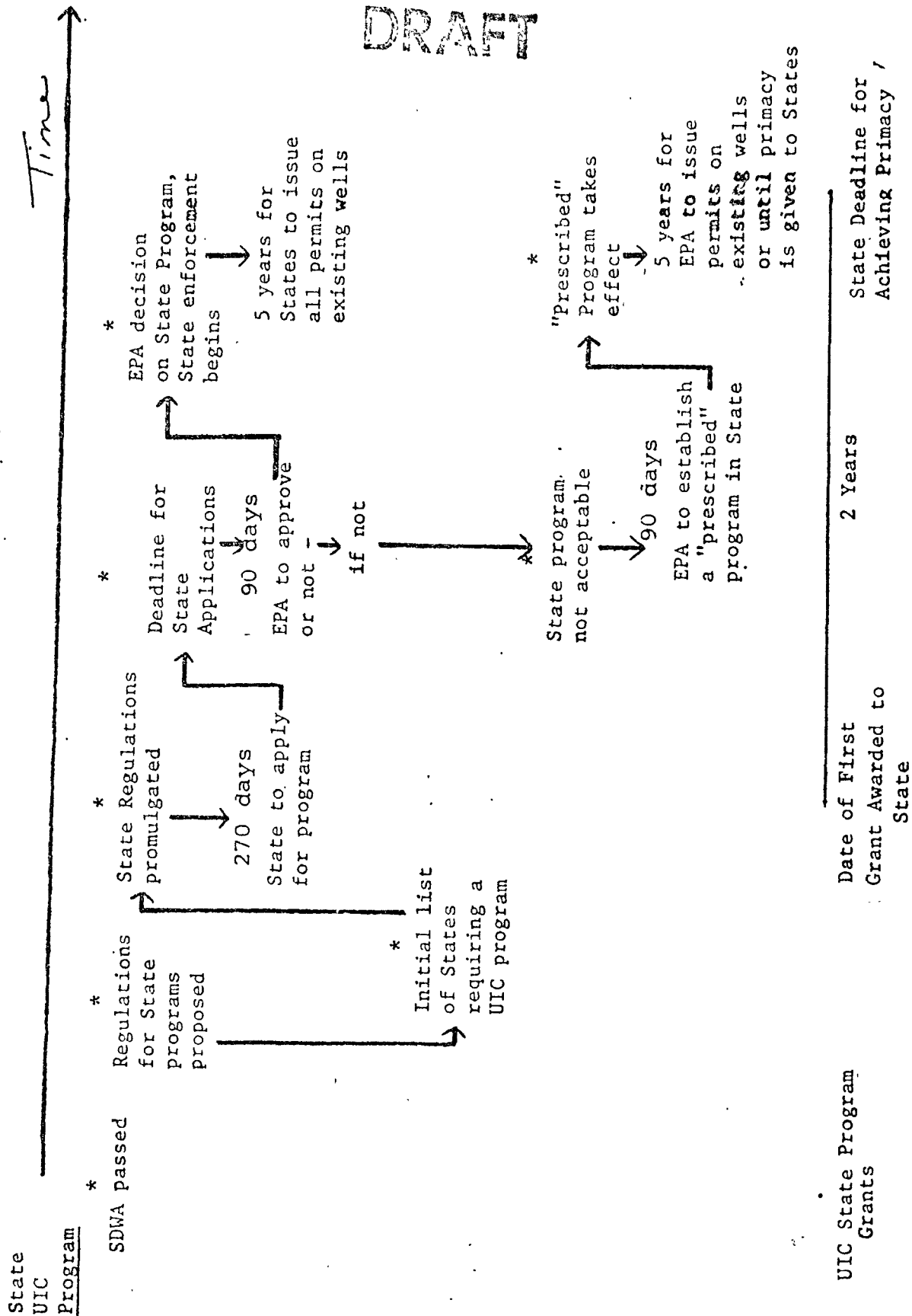
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FIGURE 2 - TIME FRAME OF UIC PROGRAM



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- . Provide technical assistance to the States on permitting, inspection, monitoring, reporting, and enforcement procedures.

## Strategy Overview - Policy Issues

This section addresses the most pressing significant policy issues facing the program.

### Extent of Protection under Part C

1. Definition of "underground injection"
2. Definition of "underground drinking water source"
3. Definition of "endangerment of an underground drinking water source."

### Program Implementation

#### A. The Underground Injection Control Program

4. Listing of States
5. Regulating existing and new underground injections
6. Regulating injections related to oil and gas production

#### B. Sole Source Aquifer Protection

7. Implementation of Section 1424(e)
8. Relation of the UIC program and PL 92-500.

### Issue #1 Definition of "Underground Injection"

Section 1421(b)(1)(A) of the Act prohibits any underground injection which is not authorized by permit or rule. Underground injection is defined as "the subsurface emplacement of fluids by well injection" (Section 1421(d)(1)).

The Act does not further clarify the definition "well," "injection," or "well injection." The legislative history clearly states that the Act applies to "deep well" injection and also to wells for the disposal of oil field brines or injection for the purpose of additional recovery of oil or natural gas. The legislative history also indicates that the definition should not be limited to waste disposal or waste injection but also cover any contaminant which may be put below ground level and which flows or moves whether the contaminant is in a semi-solid, liquid, sludge, or any other form or state. There are several

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practices which fit the definition of underground injection: industrial and municipal waste disposal wells, solution mining wells, storage wells, geothermal wells, wells for the injection of brine brought to the surface in connection with oil and gas production, injection for secondary or tertiary recovery of oil and gas, drainage wells, subsidence control wells, barrier wells and recharge wells. Less clear, however, is the inclusion of surface impoundments under the definition of underground injection. As defined by Meinzer in Outline of Groundwater Hydrology and Definitions surface impoundments are "dug" wells and, therefore, may be considered for inclusion. But as the intent of the Act is to include only well "injection," it is difficult to determine when impoundments are designed to inject and when they are not.

Consequently, in consultation with the States, EPA has proposed a definition of well injection in the UIC regulations proposed in the Federal Register on August 31, 1976, as the "subsurface emplacement of fluid through a bored, drilled, or driven well, or through a dug well where the depth is greater than the largest surface dimension, whenever the principal function of the well is the subsurface emplacement of fluids." This definition excludes surface impoundments from the permit/rulemaking portion of the regulations but the regulations require that impoundments be inventoried and their impact on underground drinking water sources be determined.

### Issue #2 Definition of "Underground Drinking Water Source"

Underground drinking water source is not defined in the Act but the legislative history indicates that any underground water containing 10,000 mg/l total dissolved solids or less should be protected. Consequently, EPA has chosen to define an underground drinking water source as "(1) an aquifer which currently supplies a public water system, or (2) an aquifer which contains water having less than 10,000 mg/l total dissolved solids." This definition allows protection of aquifers which are currently being used as a source for public water supplies and aquifers which have the potential to be used at some future date.

EPA has, however, provided flexibility to the States to designate areas where no underground sources of drinking water exist or to designate aquifers which, though underground sources of drinking water by definition, need not be protected because they are oil producing, contaminated or located in a way that would make their use impractical. The UIC program would not apply to any underground injection in those designated areas or aquifers.

Issue #3 Definition of "Endangerment of Underground Drinking Water Sources"

Section 1421(b)(1) of the Act prohibits underground injection which endangers underground drinking water sources. Endangerment is further defined by Section 1421(d)(2) to mean "if the presence of such contaminant may result in such (public water) systems not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons."

This definition presents a problem because there are several contaminants which may be found in underground sources of drinking water that are not covered by current national primary drinking water regulations and secondly, many new contaminants may be added to revised drinking water regulations. Allowing the injection of such contaminants today may make the water supply system to fail the standards tomorrow. This would be endangerment.

To alleviate these difficulties EPA has clarified the definition of "endangerment" in the Act to mean that endangerment occurs when (1) a public water system currently using the source must apply additional treatment, (2) a public water system using the source in the future must apply more extensive treatment than would otherwise have been necessary than if the injection had not occurred, or (3) if the health of persons is otherwise adversely affected by adding a substance that would make the source unfit for human consumption.

Issue #4 Listing of States

Section 1422(a) requires that the Administrator publish a list of States that require a UIC program. The States on that list then have nine months after the promulgation of the State program regulations to apply for enforcement authority under the SDWA; EPA will be providing financial assistance to States to help them obtain primacy. If some of these States do not apply or EPA determines their programs to be inadequate, EPA must prescribe a UIC program in those States.

The House Committee Report (p. 32) suggests that all 50 States should be listed. Section 1422(b)(1)(A) of the Act allows, nevertheless, for a staggered listing of the States:

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"Each State listed under subsection (a) shall, within 270 days after the date of promulgation of any regulation under Section 1421 (or, if later, within 270 days after such State is first listed, under subsection (a)) submit to the Administrator an application..."

In applying both the Committee's intent that all 50 States be included and the Act's flexibility to stagger the listing of the States, EPA proposes a strategy of listing all 50 States in stages, over a few years time. This will allow EPA to establish criteria (number of injection wells, groundwater use, etc.) for listing the States most urgently needing a UIC program, followed the next year by a second group, etc. At the end of a specified period, all 50 States will be listed.

The value of this policy is that it allows EPA to concentrate limited resources in areas such as technical assistance to the States with the highest priority need for a UIC program, rather than spreading the effort among all 50 States immediately.

## Issue #5 Regulating Existing and New Underground Injections

Section 1421(b)(1)(A) of the Act requires that State programs shall prohibit any underground injection which is not authorized by a State issued permit, except the States may authorize injection by rule provided the rule does not allow underground drinking water sources to be endangered. This provision applies to all existing as well as new underground injections. The burden of permitting new injections is relatively light with approximately 6,000 new injections each year. There are, however, approximately 150,000 existing underground injections to be permitted.

The Act stipulates (Section 1421(b)(1)(A)) that the permitting for existing injections must be completed by December 16, 1977. Section 1421(c)(1) does, however, allow the issuance of temporary permits through December 16, 1978 if a State cannot process all the permit applications.

Because EPA was not able to promulgate these UIC regulations as scheduled, it will be impossible for the States to comply with the timetable developed by the Act. Therefore, the following permitting schedule has been included in the proposed UIC regulations now undergoing public review and comment.



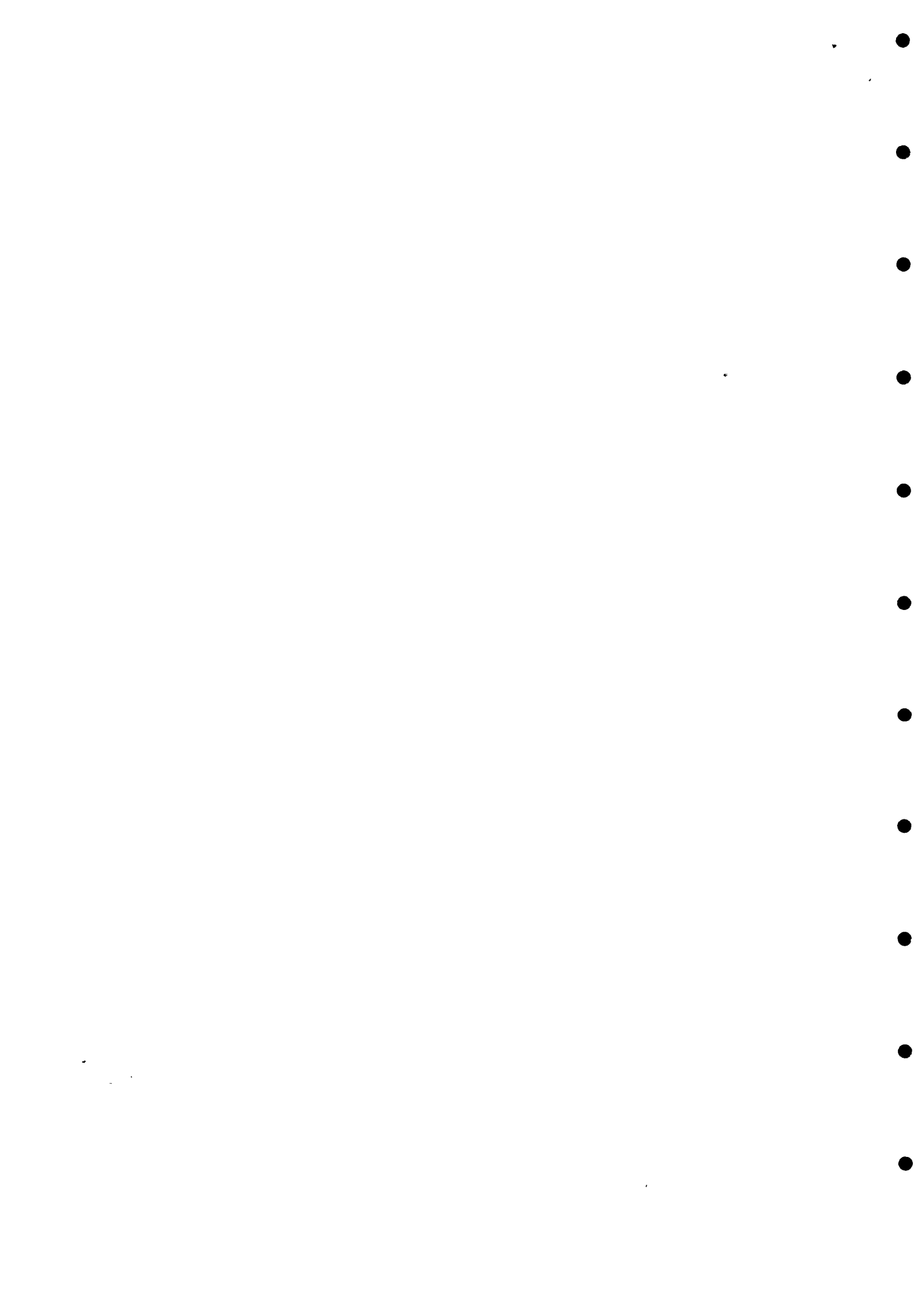
a) Waste disposal wells, engineering wells, and oil field related injections - all new wells must be permitted immediately. Existing wells can operate under rules of general applicability for up to five years during which time permits will be written. The State will determine its own method of handling the permitting of existing injections which may be by age, county, etc.

b) Drainage wells - The State is given the latitude to regulate these wells by permit or rule. A timing procedure is not specified, however, the requirement of non-endangerment still remains.

The procedure outlined above allows for the orderly permitting of all underground injections with a minimum of difficulties and delays.

#### Issue #6 Regulating Injections Related to Oil and Gas Production

The Act (Section 1421(b)(2)) specifies that State UIC programs may not prescribe requirements which interfere with or impede underground injection in connection with oil and natural gas production or the secondary or tertiary recovery of oil or natural gas unless such requirement is essential to assure that underground sources of drinking water will not be endangered by such injection. Recognizing the complexity, intensity, age and experience in regulating injection operations as they relate to oil and gas production and the fact that several alternative methods have been demonstrated to be equally effective in protection of underground sources of drinking water, the UIC proposed regulations that a State may approve alternative methods of protection to meet specific minimum requirements if the operator clearly demonstrates that (i) the requirement would stop or substantially delay oil or natural gas production at his site, and (ii) the requirement is not necessary to assure the protection of an existing or potential source of underground drinking water. This provision of alternative methods applies only to the construction and operation of the injection facility. Decisions about alternatives will be made on a case-by-case basis and will not be State-wide requirements.



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Issue #7 Implementation of Section 1424(e) of PL 93-523

Section 1424(e) states:

"If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice, no commitment for Federal financial assistance (through a grant, contract, loan guarantee, or otherwise may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public-health, but a commitment for Federal assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer."

In summary, Section 1424(e) addressees two sets of actions:

- (a) aquifer designations; and
- (b) review of Federal financially assisted projects in designated areas.

An analysis of various alternatives concluded that the only feasible way of reviewing Federal financially assisted projects is to integrate the 1424(e) review process with the review of Federal actions subject to the requirements of the National Environment Policy Act (NEPA). Therefore, Section 1424(e) review will ordinarily take place when draft and final Environmental Impact Statements (EIS's) are submitted to EPA. Unlike NEPA, 1424(e) gives EPA the authority to halt project construction. This fact alone will encourage Federal agencies to improve the quality of their EIS's and adequately implement their own NEPA guidelines. To insure that EPA and the public are informed, EPA will request that a list of projects for which EIS's will be prepared be periodically submitted to EPA and made available to the public upon request.

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This integrative approach to environmental review makes it possible to take advantage of Federal agency and the public's familiarity with the NEPA process. For those projects which are located in the recharge zones of designated areas but which do not require the comprehensive evaluation of an EIS, Federal agencies may limit their analysis of environmental impact to the inclusion of a groundwater impact evaluation in the environmental assessment. For those projects which EPA does not review on its own initiative, a public petition option will be provided.

EPA's strategy for the implementation of 1424(e) is outlined as follows:

- . Prepare national guidelines for the designation of areas and the project review process containing two major regional delegations:
  - delegation of the project review process to the Regional Administrator reserving the project veto power for the Administrator.
  - delegations of the authority to evaluate designation petitions, prepare background documents and submit a package to the Administrator along with the regional recommendation on designation.
- . Work with Federal agencies to amend their guidelines for NEPA implementation in order to address review under Section 1424(e) and strengthen the groundwater impact evaluation of the EIS's.
- . EPA, for the time being and until regional experience is gained, will not take the initiative in designating sole source aquifer areas, but respond to designation petitions.
- . Although the project review process is an EPA responsibility which may not be delegated, Regional Administrators may, if they so desire, work out memoranda of understanding with the States and regional Federal agencies to be kept informed of projects in the area.



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Although the national policy will emphasize review of projects through the NEPA process Regional Administrators, where they consider it appropriate, may ask to be informed of and expand their review power to projects other than those subject to NEPA requirements. Memoranda of understanding between the Region and the local Federal agencies will be the appropriate mechanisms to expand EPA review to projects not subject to EIS's, if Regional Administrators consider it necessary. Such agreements could, for example, periodically require lists of projects for which negative declarations will be prepared, spot check negative declarations, or obtain lists or applications for financial assistance from A-95 Clearinghouses.

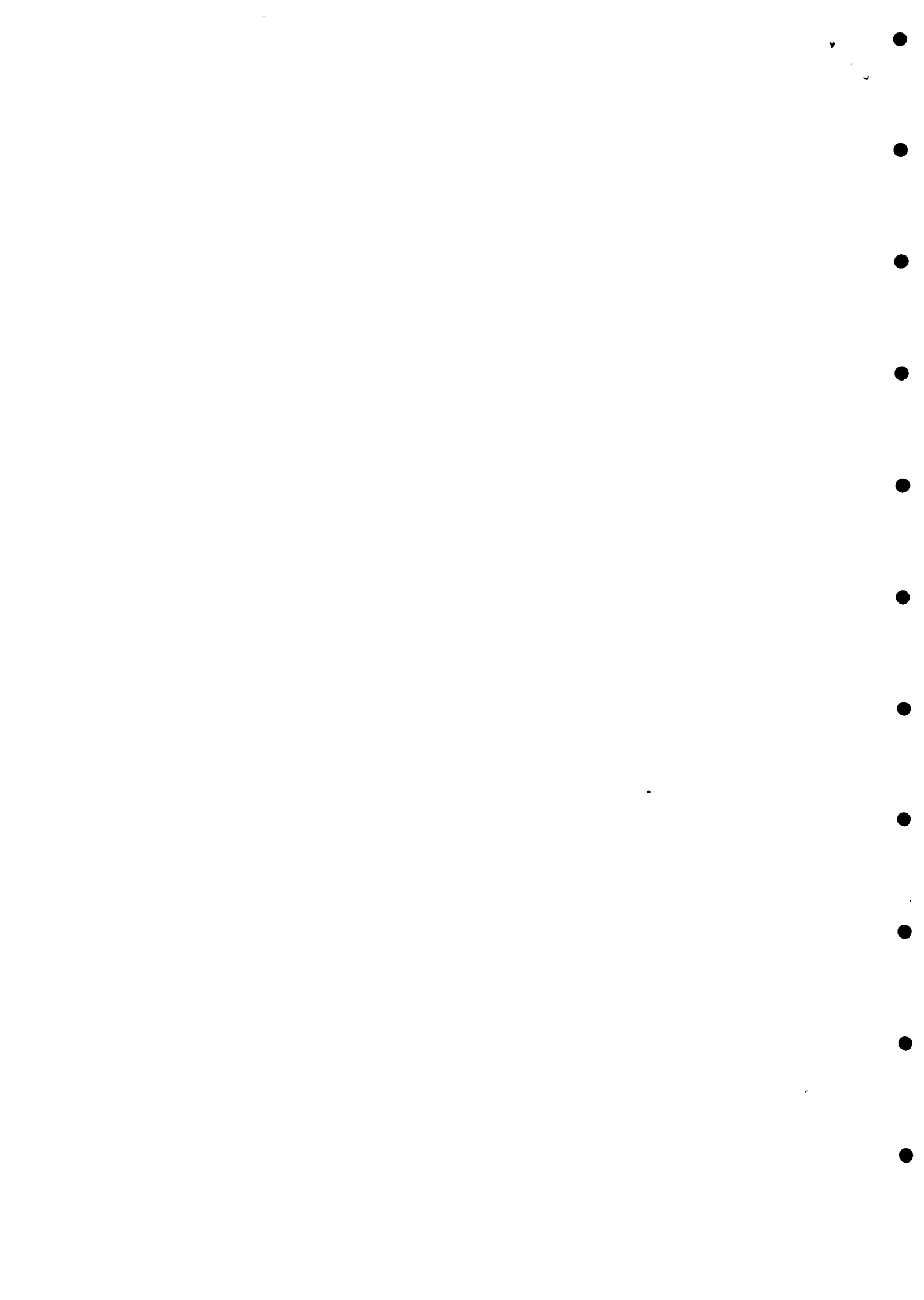
Issue #8 Relationship of the UIC Program and the Federal Water Pollution Control Act (PL. 92-500)

EPA should strive to use existing Agency programs to assist in the implementation of the UIC program.

Before the passage of the SDWA, the EPA was involved in matters related to groundwater contamination mainly through various provisions of PL. 92-500. Some of these provisions (e.g., research and reportmaking) are discussed earlier in the strategy.

Under the authority of Section 402 of PL. 92-500, EPA and the States have permitted a few hundred municipal and industrial injection wells with which there was an associated surface water discharge. However, PL. 92-500 permitting authority is restricted from the control of brine re-injection and secondary recovery wells, whereas the SDWA is not so limited. The UIC permitting program will be designed so as not to require more than one permit either from the UIC or the NPDES permits programs.

The SDWA has no planning provisions similar to those contained in PL. 92-500 for the control of aquifer contamination. EPA will, therefore, consider utilizing planning mechanisms provided under PL. 92-500 which are related to groundwater protection. The major planning provisions of PL. 92-500 related to the SDWA are:





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Section 106(e). Beginning in fiscal year 1974 the Administrator shall not make any grant under this section of any State which has not provided or is not carrying out as a part of its program --

"(1) the establishment and operation of appropriate devices, methods, systems, and procedures necessary to monitor, and to compile and analyze data on (including classification according to eutrophic condition), the quality of navigable waters and to the extent practicable, ground waters including biological monitoring; and provision for annually updating such data and including it in the report required under Section 305 of this Act."

Another major planning process of 92-500 is the Section 208 Areawide plan. The Section 208 plans are intended to be the focal point for the control of point and non-point surface water pollution. However, 208 plans are also intended to address groundwater problems.

Section 208(b)(2). Any plan prepared under such process shall include, but not be limited to--

"(K) a process to control the disposal of pollutants on land or in subsurface excavations within such area to protect ground and surface water quality."

The 303(e) continuous planning process should also be applied to the protection of ground water, in that the results of the 208 plans, especially the Statewide 208 plans, are to be incorporated into the 303(e) plans.

This reference to the FWPCA planning mechanism with provisions applicable to the SDWA is not meant to be exhaustive. However, it does illustrate the existing resources the States and EPA have in the water planning area that could be applied to this new Act. EPA is especially interested in getting comments from States and from the public on the desirability of applying these planning mechanisms to the SDWA program.

