

## THE NATIONAL SAFE DRINKING WATER ACT

Dr. John W. Hernandez

### A. Purpose of the Legislation

President Ford signed the National Safe Drinking Water Act on December 16, 1974. The purpose of the legislation is to assure that water supply systems serving the public meet minimum national standards for the protection of public health. The Act is designed to achieve uniform safety and quality of drinking water in the U.S. by identifying contaminants and establishing maximum acceptable levels. Prior to this Act, the Environmental Protection Agency was authorized to prescribe Federal drinking water standards only for water supplies used by interstate carriers. In contrast, this bill permits EPA to establish Federal standards to control the levels of all harmful contaminants in the drinking water supplied by all public water systems. It also establishes a joint Federal-State system for assuring compliance with these standards. The major provisions of the Act are:

1. the establishment of primary regulations for the protection of the public health;
2. the establishment of secondary regulations that are related to taste, odor and appearance of drinking water;
3. the establishment of regulations to protective underground drinking water sources;
4. the initiation of research on health, economic and technological problems related to drinking water supplies;
5. the initiation of a survey of rural water supplies; and
6. the allocation of funds to states in improving their drinking water programs through technical assistance, training of personnel and grant support.

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B. Applicability

1. The Act applies to:
  - a. all public water supplies, both municipal and investor-owned; and
  - b. Federal agencies having jurisdiction over Federally-owned or maintained public water systems, except under waiver of compliance in the interest of national security.
2. The Act does not apply to a system if:
  - a. it consists solely of distribution and storage;
  - b. it obtains water from, but is not owned or operated by a public water system (e.g., hotels);
  - c. it does not sell water to any person (e.g., captive industrial supplies); and
  - d. it does not convey water to passengers in interstate commerce.

C. Definitions

1. A Public Water System is one that:
  - a. provides water piped to the public for human consumption and serves 15 or more service connections; or
  - b. regularly serves 25 or more persons per day during a period of at least 3 months per year; and
  - c. includes:
    - (1) any collection, treatment, storage, and distribution facilities under control of an operator and used in such a system; and
    - (2) any collection or pretreatment storage facilities used in such a system.
2. Contaminant is any physical, chemical, biological, or radiological substance or matter in water.
3. Maximum Contaminant Level is the maximum concentration of a contaminant allowable in water delivered to a user.
4. Effective Date of the Act is the date from which the adoption of both State and Federal regulations under the Act occurs after December 16, 1974.

D. National Primary Drinking Water Regulations

The Act directs EPA to adopt national drinking water regulations related to public health that are applicable to all public water supplies

and that may be enforced by either or both Federal and State governments. The following subsections review the applicability and enforcement of these primary drinking water regulations. There are provisions for exceptions and variances, for notification of violations and for monitoring and reporting under these regulations.

1. General considerations are:
  - a. these regulations are to protect health to the extent feasible, using technology, treatment techniques, and other means generally available when costs are taken into consideration;
  - b. proposed Interim Primary Drinking Water Regulations were published in the Federal Register on March 14, 1975, and are subject to comment by any person until May 15, 1975;
  - c. revised Interim Regulations are to be promulgated by June 16, 1975;
  - d. modified Interim Regulations take effect on December 17, 1976;
  - e. after submission on December 17, 1977 of a study by the National Academy of Science on the Primary Drinking Water Regulations, EPA will publish its Revised National Primary Drinking Water Regulations; and
  - f. the effective date for the Revised Primary Regulations will be September 29, 1979.
2. Specific considerations of Primary Regulations are that these regulations:
  - a. apply to all public water systems;
  - b. specify contaminants that may have any adverse effects on the health of persons;
  - c. specify for each contaminant either:
    - (1) a maximum contaminant level, if it is economically and technologically feasible to determine that level in water; or
    - (2) if it is not feasible to determine that contaminant level, they specify each known treatment technique that will reduce the contaminant concentration to a level that will meet the Regulations; and
  - d. contain criteria and procedures to ensure that a supply will dependably comply with the allowable contaminant levels, including:
    - (1) quality control and testing procedures to ensure proper operation and maintenance of a system, and
    - (2) requirements as to:
      - (a) minimum quality of water that may be taken into the system, and

(b) siting for new facilities; but

e. may not require the addition of any substance for preventive health care purposes unrelated to contamination of drinking water.

3. Revision to Primary Regulations

The Act provides for a review of the health aspects of the regulations by the National Academy of Science (NAS). Based on results of NAS study, EPA may specify additional contaminants with adverse health effects, it may establish new maximum contaminant levels, it may prescribe a list of known water treatment techniques which will reduce the concentration of any contaminant for which no maximum contaminant level is established (e.g., viruses, organics, asbestos), or it may establish requirements for operation and maintenance.

These regulations:

- a. shall be amended whenever changes in technology, treatment techniques and other means permit greater protection of the health of persons; and
- b. must be reviewed once every three years, for possible revision.

4. Variances and Exemptions from Primary Regulations

The Act provides for a system of either state or EPA issued variances and exemptions that allow at least temporary, conditional use of a water supply that fails to meet a Primary Regulation. Because of the incorporation of compliance schedules in all variances and exemptions, it is anticipated that eventually virtually all public water will comply with the Primary Regulations. Some exceptions under the variance provisions may be possible so that a system may never have to come into compliance if certain conditions exist (e.g., adequate technology is not available).

a. Exemptions

- (1) By state approval, one or more exemptions may be obtained for any supply either with respect to meeting maximum contaminant level regulations, or a treatment requirement that is specified in a Primary Regulation.
- (2) The reason for granting an exemption for systems that were in operation at the time that a Primary Regulation became effective is:
  - (a) that compelling factors such as economics prevent a public water supply system from meeting either a

- (a) (continued)  
maximum contaminant level, or a treatment technique requirement; and
  - (b) that granting an exemption will not result in an unreasonable risk to health.
- (3) Exemptions are relatively short-termed, depending on financing, construction, and other factors, and have finite deadlines for discontinuance. The conditions for granting an exemption to a public water supply are:
- (a) that within one year after granting an exemption, a state must issue a schedule of compliance that contains deadlines for increments of progress for each element in the Primary Regulations not met;
  - (b) that any control measures specified by the state as a condition must be implemented;
  - (c) that the state provides notice and opportunity for public hearing because a schedule of compliance is ordered; and
  - (d) that the public water supply meet the compliance schedule to lift the exemption, as expeditiously as practicable, but certainly by the specific deadlines.
- (4) Specific deadlines for exemptions are:
- (a) for those based on the Interim Primary Regulations, all single public water systems must be in compliance by January 1, 1981; and
  - (b) for those based on Revised Primary Regulations, seven years after the final version becomes effective (about September 27, 1979).
- (5) EPA and a state must act on an application for exemption within a reasonable period of time after it is submitted.
- (6) EPA has the responsibility for granting exemptions if a state does not have primary responsibility for enforcement under provisions of the Act.
- (7) Enforcement of an exemption compliance schedule is to be under state law, or by EPA if a state does not qualify for enforcement responsibility.

b. Variances

- (1) The reasons for granting a variance are:
  - (a) that the available sources of raw water have characteristics that cannot meet requirements respecting maximum allowable contaminant levels, despite the application of best available technology, treatment techniques, or other means, taking costs into the consideration and

- (a) (continued)
  - that unreasonable risk to public health will not result; or
  - (b) that a public water system demonstrates to the state's satisfaction that a treatment process specified by the Regulations is not necessary to protect the health of the persons, because of the nature of the raw water source of such a system. (Such a variance is conditioned on monitoring or other requirements as EPA may prescribe).
- (2) The conditions for granting variances are that:
  - (a) before a proposed variance may take effect, a state must provide notice and opportunity for public hearing;
  - (b) if a state grants a variance, it must, within one year, provide a schedule for compliance including increments of progress and the system must implement any control measure that the state may require;
  - (c) before a state-prescribed schedule may take effect, it must provide notice and hold a public hearing on granting the variance subject to the prescribed compliance schedule;
  - (d) if a variance is granted, the water supplier must undertake to meet the compliance schedule as expeditiously as practicable as the state determines may reasonably be achieved; and
  - (e) a variance must be conditioned on compliance by the public water system with the prescribed time-table in the schedule.
- (3) The Act provides for procedures for EPA approval, review and revocation of a state issued variance.
- (4) EPA has the responsibility for granting variances if a state does not have a primary responsibility for enforcement of the Act.
- (5) There are no absolute deadlines for revocation of a variance. Except as subject to the requirements of a schedule of compliance, a variance may be continued indefinitely. Variances are to be reviewed every three years, but will not be revoked or rescinded unless there is a definite change in the technology available.

## 5. Notification of Violations of the Regulations

The Act requires public water supply systems to give notice to the users of their system and to the general public of a failure to comply with various regulations and requirements of the Act.

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Bi-lingual notices may be required in certain places.

a. Public notice must be given where a water system:

- (1) fails to comply with a maximum contaminant level regulation;
- (2) fails to comply when "best treatment techniques" are required;
- (3) fails to adopt prescribed testing procedures;
- (4) fails to perform required monitoring; or
- (5) fails to meet a schedule of compliance issued as part of a variance or exemption.

b. Public notice of any of these violations must be given in each of the following ways:

- (1) via public media such a radio, television and newspaper press-releases once every three months;
- (2) by publication in local newspaper, as soon as practicable after discovery of the violation, and at least once every three months thereafter as long as the violation exists; and
- (3) notice is to be included in water bills if they are mailed every three months; if the consumer is billed more often than every three months, the notice must be included in each bill.

c. Willful failure to comply with these requirements for notification may result in the imposition of a fine up to \$5000.00.

E. Proposed Interim Primary Regulations

In Part II of Volume 40 of the Federal Register of March 14, 1975, EPA published proposed Interim Primary Drinking Water Regulations for all public water supply systems. A summary of the maximum contaminant levels established in these regulations is provided in subsections 1. through 6. below. The requirements for chemical and biological analyses and reports associated with compliance with these Interim Primary Regulations are also included (subsection 7.). The Interim Regulations differentiate between a public water system and a community system in a number of places. A community system is one where 70% of those served are residents. There are also some references to the time period during which various analysis must be accomplished; these periods of time are after the effective date of the Interim Regulations (about December 17, 1976).

The maximum contaminant levels for arsenic, barium, cadmium, chromium,

E. (continued)

cyanide, fluoride, lead, selenium and silver are the same as those in the 1962 Public Health Service Drinking Water Standards. With the exception of nitrates, all of the maximum contaminant levels of inorganic chemicals are based upon possible health effects that may occur after a lifetime of exposure of approximately two liters of water per day. Pesticide contaminants were not contained in the 1962 Standards. The maximum contaminant levels for pesticides have been derived from the recent data on effects of acute and chronic exposure to both organochlorine and chlorophenoxy pesticides. In setting specific limits for chemical constituents, the total lifetime environmental exposure of man to the specific toxicant has been taken into consideration. The limits have been determined with a factor of safety included to minimize the amount of toxicant contributed by water when other sources (milk, food, or air) are known to represent additional sources of exposure to man. On this basis maximum contaminant levels should not be regarded as fine lines between safe and dangerous concentrations.

The interim standards have a limit for turbidity because turbidity interferes with disinfection efficiency and because high turbidity often signals the presence of other health hazards. The growth of microorganisms in a distribution system is often stimulated if excessive particulate or organic matter is present. The maximum levels for microbiological contaminants are in terms of the surrogate coliform bacteria, although the purpose of the standard is to protect against disease-causing bacteria, viruses, protozoa, worms, and fungi. The analytical procedures for direct detection of these microorganisms are not well enough developed nor practicable for widespread application at this time. Total coliform counts have been used for nearly 100 years as indicators because the organisms are present in large quantity in the intestinal tracts of humans and other warm-blooded animals, thus the number remaining in a water supply provides a good correlation with sanitary significance.

1. Maximum Contaminant Levels for Inorganic Chemicals

<u>Contaminant</u>	<u>Level (mg/l)</u>
Arsenic	0.05
Barium	1.00
Cadmium	0.010
Chromium	0.05
Cyanide	0.2
Lead	0.05
Mercury	0.002
Nitrate	10.00
Selenium	0.01
Silver	0.05

2. Fluorides

When the annual average of the maximum daily air temperatures for the location in which the public water system is situated is the following, the corresponding concentration of fluoride shall not be exceeded.

<u>Temperature (in ° F)</u>	<u>Level (mg/l)</u>
50.0 - 53.7	2.4
53.8 - 58.3	2.2
58.4 - 63.8	2.0
63.9 - 70.6	1.8
70.7 - 79.2	1.6
79.3 - 90.5	1.4

3. Maximum Contaminant Levels for Organic Chemicals

The maximum contaminant level for the total concentration of organic chemicals is 0.7 mg/l.

4. Maximum Contaminant Levels for Pesticides

<u>Chlorinated Hydrocarbons</u>	<u>Level (mg/l)</u>
Chlordane	0.003
Endrin	0.0002
Heptachlor	0.0001
Heptachlor Epoxide	0.0001
Lindane	0.004
Methoxychlor	0.1
Toxaphene	0.005
<u>Chlorophenoxy</u> s	
2, 4-D	0.1
2,4, 5-TP Silvex	0.01

5. Maximum Microbiological Contaminant Levels

Two methods are used to describe the maximum coliform levels that

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must be met and the parameters used to judge compliance with these levels.

- a. When the membrane filter technique is used, coliform densities shall not exceed one per 100 milliliters as an arithmetic mean of all samples examined per month; and either,
  - (1) four per 100 milliliters in more than one standard sample when less than 20 are examined per month; or
  - (2) four per 100 milliliters in more than 5% of the standard samples when 20 or more are examined per month.
- b. When the fermentation tube method is used and when
  - (1) 10 milliliter standard portions are analyzed, coliforms shall not be present in more than 10% of the portions in any month; and either,
    - (a) three or more portions in one sample when less than 20 samples are examined per month; or
    - (b) three or more portions in more than 5% of the samples if 20 or more samples are examined per month; or
  - (2) when 100 milliliter standard portions are analyzed, coliforms shall not be present in more than 60% of the portions in any month; and either
    - (a) five or more portions in more than one sample when less than five samples are examined; or
    - (b) five or more portions in more than 20% of samples when five samples or more are examined.
- c. If a standard bacterial plate count is used, there must be no more than 500 organisms per one milliliter.

6. Maximum Contaminant Level of Turbidity

The level of turbidity at representative entry point(s) into the distribution system is one turbidity unit (1TU). A maximum of five turbidity units (5TU) may be allowed if the supplier can demonstrate to the state that this higher turbidity does not:

- a. interfere with disinfection;
- b. prevent maintenance of an effective disinfectant agent through the distribution system; and
- c. interfere with microbiological determinations.

7. Water Facility Siting Provisions

The Act and the Interim Primary Regulations both include provisions to require notice before a new water supply is developed or an existing

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supply modified. The purpose of this provision is to avoid problems associated with poor facility location choices. Before a water supplier may enter into a financial commitment for, or initiate construction of a new public water system or increase the capacity of an existing public water system, he must notify the state. To the extent practicable, a supplier should avoid locating the new or expanded facility at a site which is subject to earthquakes, floods, fires, or other man-made disasters which could cause breakdown of the public water system. Normally facilities should not be located within the floodplain of a 100 year flood.

8. Sampling and Analytical Requirements

a. Coliform Density

(1) Basic sampling requirements

Samples for microbiological analyses are to be taken at regular intervals throughout the month proportional to the population served by the system as shown below. Samples should be collected from representative locations throughout the system.

<u>Population served</u>	<u>Minimum number of samples per month</u>
25 to 2,500-----	2
2,501 to 3,330-----	3
3,301 to 4,100-----	4
4,101 to 4,900-----	5
4,901 to 5,800-----	6
5,801 to 6,700-----	7
6,701 to 7,600-----	8
7,601 to 8,500-----	9
8,501 to 9,400-----	10
9,401 to 10,300-----	11
10,301 to 11,100-----	12
11,101 to 12,000-----	13
12,001 to 12,900-----	14
12,901 to 13,700-----	15
13,701 to 14,600-----	16
14,601 to 15,500-----	17
15,501 to 16,300-----	18
16,301 to 17,200-----	19
17,201 to 18,100-----	20
18,101 to 18,900-----	21
18,901 to 19,800-----	22
19,801 to 20,700-----	23
20,701 to 21,500-----	24

(1) (continued)

<u>Population served</u>	<u>Minimum number of samples per month</u>
21,501 to 22,300-----	25
22,301 to 23,200-----	26
23,201 to 24,000-----	27
24,001 to 24,900-----	28
24,901 to 25,000-----	29
25,001 to 28,000-----	30
28,001 to 33,000-----	35
33,001 to 37,000-----	40
37,001 to 41,000-----	45
41,001 to 46,000-----	50
46,001 to 50,000-----	55
50,001 to 54,000-----	60
54,001 to 59,000-----	65
59,001 to 64,000-----	70
64,001 to 70,000-----	75
70,001 to 76,000-----	80
76,001 to 83,000-----	85
83,001 to 90,000-----	90
90,001 to 96,000-----	95
96,001 to 111,000-----	100
111,001 to 130,000-----	110
130,001 to 160,000-----	120
160,001 to 190,000-----	130
190,001 to 220,000-----	140
220,001 to 250,000-----	150
250,001 to 290,000-----	160
290,001 to 320,000-----	170

(2) Check-sample requirements

When the coliform colonies in a single standard sample exceed four per 100 milliliters, additional daily samples must be collected and examined from the same sampling point until the results obtained from at least two consecutive samples show less than one coliform per 100 milliliters. When organisms of the coliform group occur in three or more 10 ml portions of a single standard sample, daily samples must be collected from the same sampling point until the results obtained from at least two consecutive samples show no positive tubes. When organisms of the coliform group occur in all five of the 100 ml portions of a single standard sample, daily samples must be collected from the same sampling point until the results obtained from at least two consecutive samples show no positive tubes. The location at which a check sample is taken must not be eliminated from future sampling because of a history of questionable water quality. Check-samples are not included in calculating the total number of samples to be taken by a public supplier

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each month. When a particular sampling point has been confirmed by a check-sample to be in non-compliance with the maximum contaminant levels specified, the supplier of water must notify the state and make reports required by the regulations.

b. Substitution of Residual Chlorine for Coliform Measurements

A supplier may, with the approval of the state, substitute the use of chlorine residual monitoring for up to 75% of the coliform samples required for the system. The supplier of water must take chlorine residual samples at points which are representative of the conditions within the distribution system at a frequency of at least four chlorine residuals for each substituted microbiological sample. There must be at least daily determinations of chlorine residual if a supplier exercises this option and he must maintain no less than 0.2 mg/l free chlorine in the water distribution system. Public water systems serving 4,900 or fewer persons may, with the approval of the state, make a total substitution of chlorine residual measurement for the samples required for coliform measurement. Chlorine residual samples should be taken at points which are representative of the conditions within the distribution system at the rate of one per day for each microbiological sample required. When a supplier exercises this option, he must maintain no less than 0.3 mg/l free chlorine in the water distribution system.

c. Turbidity Sampling and Analysis

For turbidity monitoring, samples must be taken at a representative entry point to the water distribution system at least once per day for surface water systems and at least once per month for supplies obtained from underground sources. This requirement applies only to community water systems. In the event that a measurement indicates that the maximum allowable limit has been exceeded, the sampling and measurement must be repeated within one hour. The results of the two measurements are averaged and, if the average confirms that the maximum allowable has been exceeded, this average is reported. If the monthly average of all samples exceeds the maximum allowable limit, this fact must be reported to the state.

d. Inorganic Chemical Sampling and Analysis

To establish an initial record of water quality, an analysis of substances to determine compliance with the maximum contaminant levels specified in the regulations must be completed for all community water systems utilizing surface water sources within one year after the effective date of the regulations. These analyses are to be repeated at yearly intervals. For community water systems using ground water sources, chemical analysis of the supply must be completed within two years and this analysis repeated at

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three-year intervals. Analysis for public water systems, other than community water systems, whether supplied by surface or ground water sources must be completed within six years and these analyses are to be repeated at five-year intervals.

If a water supplier determines or has been informed by the state, that the level of any contaminant is 75% or more of the maximum contaminant level, he must analyze for the presence and quantity of that contaminant at least once per month following the initial analysis or information. If after conducting monthly testing for a period of at least one year, the supplier of water demonstrates to the satisfaction of the state that the level of such contaminant is stable and due to a natural condition of the water source, he may reduce the frequency of analysis.

If a supplier finds, or has been informed by the state that the level of any contaminant exceeds the maximum contaminant level for the substance, he must confirm the information by sampling the source within 24 hours following the initial information and then analysis must be made on samples taken at least at weekly intervals during the period of time the maximum contaminant level for the substance is exceeded. The results of such repetitive testing must be averaged and reported. To determine compliance of a public water system with the maximum contaminant levels, averages of data will be used and rounded to the same number of significance figures as the maximum contaminant level for the substance in question.

e. Pesticide and Organic Chemical Sampling and Analysis

To establish an initial record of water quality with respect to these substances, an analysis must be completed for all community water systems utilizing surface water sources within one year after the effective date of the regulations. This analysis is to be repeated at one-year intervals. An analysis for community water systems utilizing ground water sources must be completed within two years and this analysis repeated at three-year intervals. Analyses for public water systems other than community water systems must be completed within six years and repeated at five-year intervals.

f. Reports

Public water suppliers must report the results of these various analyses to the state within 40 days following the test, measurement or analysis. When a supplier determines that his system has failed to meet a particular maximum contaminant level, he must report this failure to meet the standards within 36 hours, including any failure to comply with monitoring requirements. Federal agencies make such reports to EPA. All violations must be reported. A violation occurs when adequate monitoring is not maintained, when an inorganic or pesticide maximum level is exceeded on a monthly average, when the average of two samples for turbidity,

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nitrates and carbon extractables exceed the limit or when a violation of the coliform standards is confirmed.

F. National Secondary Drinking Water Regulations

The National Safe Drinking Water Act also provides for the establishment of an additional set of standards that are to prescribe maximum limits for contaminants that tend to make water disagreeable to use, but that do not have any particular adverse public health effect. These are anticipated to be organics that result in color and odor, inorganics such as iron and manganese that cause color and turbidity, and other chemicals that impart a noticeable and disagreeable taste. These standards for esthetic quality are to be incorporated in the Secondary Drinking Water Regulations.

1. A Secondary Drinking Water Regulation is one that:
  - a. applies to all public water systems;
  - b. specifies maximum contaminant levels necessary to protect the public welfare, if these contaminants
    - (1) adversely affect the odor or the appearance of water causing a substantial number of persons to discontinue its use, or
    - (2) adversely affects the public welfare in some other way; and
  - c. is not enforceable by EPA, but may be enforced by a state and that may vary according to geographic and other circumstances.
2. The Secondary Drinking Water Regulations are to be promulgated by EPA by September 17, 1975 with a review period to last until their adoption on December 17, 1975. An opportunity for public hearings must be provided in the establishment of these regulations.
3. If within a reasonable time after promulgation of the Secondary Regulations, EPA determines that a state has not enforced these regulations and that a number of public systems have failed to comply with these regulations, then EPA may take action to ensure compliance by notifying the state that it is not taking reasonable action with respect to these regulations.

G. Enforcement of the Act

The Act clearly contemplates that the states will be responsible for enforcing the requirements of the law and the various regulations adopted by EPA. To help the states administer the Act, funds are allocated to

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each although there is a requirement for states to provide matching funds equal to 25% of the Federal funds received. A state need not take over administration of all of the elements of the Act, but can be designated by EPA to only enforce certain regulations. A state may also choose to accept responsibility for operation of the Act over a period of years.

1. Primary enforcement responsibility rests with a state providing that:
  - a. the state adopts drinking water regulations to no less stringent than the Interim or Revised Primary Regulations, whichever are in effect;
  - b. the state has adopted and is implementing adequate procedures for enforcement of the Regulations, including monitoring and inspections as may be required by EPA;
  - c. the state keeps records and reports to EPA as may be requested;
  - d. the state will not issue variances and exemptions that are less stringent than those called for by the Act and the regulations;
  - e. the state has adopted and can implement an adequate plan for provision of safe drinking water under emergency conditions; and
  - f. the state requests that it be delegated this authority.
2. Financial grants are given only to states that:
  - a. have programs for enforcing drinking water regulations;
  - b. have established (or will establish within one year of a grant) a public water system supervision program; and
  - c. will assume primary enforcement responsibility for public water supply systems within the state.
3. By June 17, 1975, EPA must prescribe the manner in which a state may apply for designation and authority to enforce the Act. The states have until September 17, 1975 to apply to EPA for approval of their enforcement plans and programs. EPA approval of state's program will be based on the following:
  - a. the period for which that approval will apply;
  - b. EPA's determination that the state enforcement program is adequate; and
  - c. public hearings held on the state enforcement program.
4. EPA may find that a state is failing to enforce the Act. The procedure in such a case is as follows:
  - a. if EPA finds that a state is not enforcing compliance of the various regulations for any system, it will notify the state and offer to

- a. (continued)  
provide advice and technical assistance that may be needed to bring the system into compliance;
  - b. if after such a notice the failure to comply extends more than 30 days EPA will:
    - (1) give public notice of its finding; and
    - (2) give the state 15 days to report on steps taken to bring the system into compliance, including reasons;
  - c. if the state does not obtain compliance after more than 60 days and if a state fails to submit a report, or if the report is unacceptable to EPA, then EPA may determine that the state has abused its discretion in carrying out its enforcement responsibility; and
  - d. EPA may commence a civil action to obtain compliance.
5. In a state without primary enforcement responsibility, EPA may find that a system is in noncompliance. It may then commence a civil action against the public water supply in U.S. District Court. The Court may enter a judgement against the water system and impose a fine of up to \$5000 per day of noncompliance. If a suit is brought and judgment rendered, the public water supply system must notify all of its customers.
6. In a state that has primary enforcement responsibility and the state makes a finding of noncompliance with the Act, on the part of a public system, it will proceed as follows:
- a. the state may petition EPA for assistance;
  - b. the state may hold public hearings to gather technical information and to determine methods of obtaining compliance;
  - c. EPA may issue recommendations based on such hearings;
  - d. the state should determine ways to bring a system into compliance in the earliest possible time; and
  - e. the state will establish the best means for maximum feasible protection of public health.
7. Citizen Suits in U.S. District Court
- The Act permits citizen suits in order to give the public an opportunity to force the states and EPA to obtain compliance with the Act and the various regulations. The conditions for such suits are as follows:

- a. a suit may be brought by any person on his own behalf (no class action suits) against:
  - (1) any person or water system,
  - (2) the U.S. Government,
  - (3) any governmental instrumentality, or
  - (4) EPA;
- b. the limitations on a citizen suit are that:
  - (1) no suit against a public water supply may be instituted between December 17, 1975 and February 1, 1978;
  - (2) no civil action may be commenced until 60 days after the plaintiff has notified EPA, the alleged violator, and the state in which violation occurred;
  - (3) no civil action may be commenced if EPA, the Attorney General or the state has commenced action to require compliance; and
  - (4) no person may commence a civil action on a variance or exemption, unless he shows that a state has failed to prescribe compliance schedules in a substantial number of cases.

#### H. Regulations to Protect Ground Water Sources

The Act provides that each state should adopt regulations to prevent pollution of ground water sources by controlling underground injections. Congress did not intend for individual septic tanks to be controlled by these regulations, but it did intend to include those from multiple dwellings and to include industrial and municipal wastewaters that may be injected into the ground. This section of the Act uses the term "underground injection" which means the subsurface emplacement of fluids by well injection. The term "well" may be interpreted broadly and the scope of these regulations will be determined by EPA in its proposed regulations. An underground injection will endanger a drinking water source if the injected fluid increases contaminant levels in water used as a supply source to the extent that water will not comply with the Primary Drinking Water Regulations, or if the water may otherwise adversely affect the health of persons.

- 1. Regulations for state underground control programs will be developed as follows:
  - a. by June 17, 1975, EPA must publish a set of proposed regulations;
  - b. EPA must then hold public hearings before a set of revised regulations are published; and

- c. by December 17, 1975, EPA must publish revised regulations.
2. For a state underground injection control program to be approved by EPA it must include:
  - a. minimum requirements to prevent underground injections that would endanger drinking water supplies;
  - b. prohibit injection after December 17, 1978, unless by special permit;
  - c. provide for permits for underground injection only when the applicant can prove that injection will not endanger drinking water sources;
  - d. provide for inspection, monitoring, record keeping, and reporting to EPA; and
  - e. no requirements that interfere with underground injection in oil or gas production or injection for secondary or tertiary oil recovery.
3. A state may provide a temporary permit system when:
  - a. EPA authorizes a state to issue temporary permits;
  - b. a system of reasonable notice and public hearings on particular injection locations is provided; and
  - c. a temporary permit is valid only until December 17, 1979.
4. For temporary permits to be issued a state must show:
  - a. that technology to permit safe injection is not available at time of the application;
  - b. that injection is less harmful to health than other disposal methods;
  - c. that available technology has been used to the fullest extent to reduce volume, toxicity, and potential health hazard of injected fluid;
  - d. that the state can not process all applications before December 17, 1978;
  - e. that the adverse effect on the environment of temporary permits is of no consequence;
  - f. that permits are to be issued only for existing injection systems; and
  - g. that adequate safeguards are provided.
5. State responsibility for the enforcement of underground injection regulations will be determined as follows:
  - a. by June 17, 1975, EPA must list all states where underground injection control programs are necessary; and
  - b. each of these states must apply to EPA for approval of its program

- b. (continued)
    - within 270 days after EPA publishes regulations on underground injection and show that:
      - (1) the state has given public notice and held hearings;
      - (2) the state has adopted and will implement a control program; and
      - (3) the state will keep records and make reports as EPA may require;
    - c. within 90 days after a state's application, EPA may approve or disapprove the state program in whole or in part;
    - d. if EPA approved, the state has primary enforcement responsibility, until EPA revokes approval; and
    - e. if EPA reviews and revokes approval for cause it has 90 days in which to rescind the disapproval or prescribe revised conditions.
  - 6. If EPA modifies its underground injection regulations, a state must submit a notice to EPA within 270 days showing that its control program meets the revised or added requirements.
  - 7. EPA may find that a state has failed to enforce its underground injection control program. The procedure in such a case is the following:
    - a. if EPA finds that the state program does not measure up to, or if there is a violation of EPA regulations, then EPA will notify the state;
    - b. if the violation lasts more than 30 days after the notification, EPA must give public notice and request the state to report within 15 days on steps being taken to comply with regulations; and
    - c. if the failure to comply lasts more than 60 days after notice or if the state's report is not satisfactory, EPA may begin civil action against the persons who are in violation of the regulations.
  - 8. If a state does not have primary enforcement responsibility for the underground injection regulations, EPA may bring civil action against any person thought to be in violation of a regulation. Violators are subject to fines of \$5000 per day of violation, or if such violation is willful, the penalty may be \$10,000 per day.
- I. Guaranteed Loans

The Act makes some funds available for loans to small public systems, but limits the amount of indebtedness for each system to \$50,000. The aggregate amount of indebtedness can not exceed \$50 million for such

I. (continued)

systems. EPA is authorized to guarantee loans to small public systems in FY 75 and 76 if:

1. improvements are necessary to meet primary drinking water regulations;
2. the system can not obtain financial assistance in any other manner; and
3. the system has limited revenue collecting capacity.

J. Emergency Powers

EPA may take whatever action is necessary when a contaminant is present in, or is likely to enter a public water system such as to pose an imminent and substantial endangerment to public health when the appropriate state and local authorities have not acted. EPA must consult with state and local authorities if practicable.

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The author has paraphrased limited sections of a number of EPA text in addition to the Act and the Interior Primary Regulations. Any errors in the author's interpretation of these materials are the responsibility of the author.