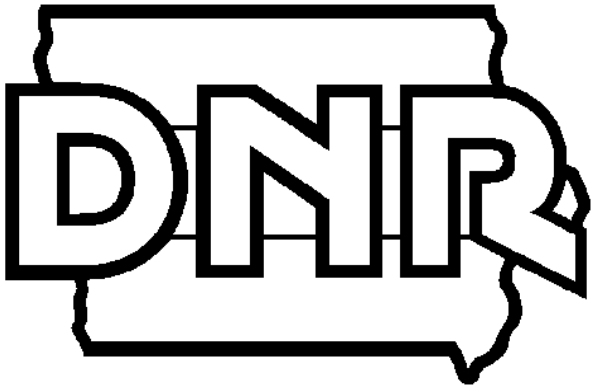
State of Iowa
Public Drinking Water Program
1997 Annual Compliance Report



Environmental Protection Division
Water Quality Bureau
Drinking Water Supply Section

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Iowa Department of Natural Resources
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Introduction

The Iowa Department of Natural Resources (IDNR) - Environmental Protection Division administers the Public Drinking Water Program in Iowa under delegation of authority from the United States Environmental Protection Agency (EPA). The mission of the Public Drinking Water Program at the IDNR is to protect and enhance public health and safety, and the quality of life for all persons by ensuring the public drinking water is safe to drink. This mission is accomplished by ensuring that drinking water quality is monitored on a routine basis, and that public water supply systems (PWS's) are designed, operated, and maintained to minimize the possibility of contamination.

The 1996 reauthorized Safe Drinking Water Act (SDWA) required that each State with primary enforcement responsibility for the SDWA must prepare, make readily available to the public, and submit to the EPA an annual report on violations of national primary drinking water regulations by public water supply systems in the state.

This report fulfills this responsibility in Iowa for the 1997 calendar year.

This report includes violations with respect to:

- Maximum Contaminant Levels (MCL)
- Treatment Technique Requirements (TT)
- Variances and Exemptions
- Monitoring and Reporting Requirements (M/R) - violations which are determined to be significant by the EPA Administrator after consultation with the States (Significant Non-Compliers, or SNC's).

Report Summary

In this reporting year, IDNR assured compliance with MCL's and monitoring requirements, issued construction and operation permits, completed public water supply inspections, and responded to drinking water complaints.

- Of the 1920 active public water supply systems in Iowa in 1997, 92.1% were in compliance with the maximum contaminant level drinking water quality standards. There was a 0.5% decrease in MCL compliance by Iowa PWS's in 1997 from 1996, which is due to the inclusion of existing pre-1997 radionuclide MCL violations that were not addressed in the 1996 report. These existing pre-1997 violations were from PWS's which continued to exceed the MCL in 1997 from previous years. If these continuing radionuclide MCL violations are not included in the 1997 data, there is a 0.5% increase in MCL compliance by Iowa PWS's in 1997 from 1996. Figure 1 illustrates the MCL compliance by all of the Iowa PWS's in 1997.

- Of the 83 regulated contaminants, 12 were found at levels above the MCL: arsenic, benzene, cadmium, carbon tetrachloride, coliform bacteria, fluoride, nitrate, nitrite, total phthalates, radium 226 & 228, tetrachloroethylene, and total trihalomethanes. There were also violations of both the lead and copper action levels, and of the treatment techniques for turbidity, contact time, and residual disinfectant. In contrast, there were eight contaminants above the MCL in 1996.

- Of Iowa's active public water supplies, 98.0% complied with monitoring and reporting requirements to a significant extent, and thereby did not meet the definition of an SNC. This is an improvement of 1.2% in compliance with the SNC monitoring and reporting requirements from 1996. Figure 2 illustrates the SNC monitoring and reporting compliance by Iowa PWS's in 1997.

- No waterborne disease outbreaks or deaths were reported as being attributed to drinking water from regulated public water supply systems.

Figure 1: MCL Compliance by Iowa PWS's in 1997

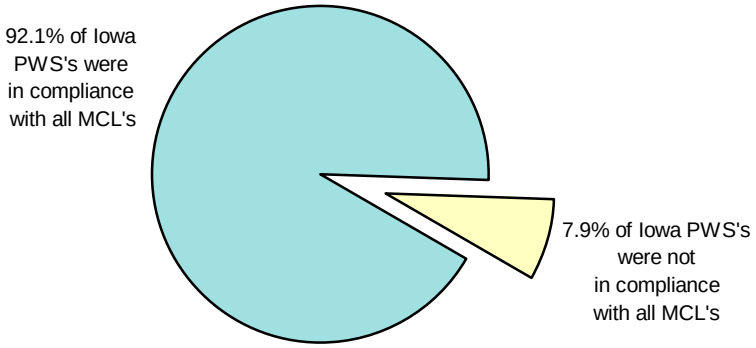
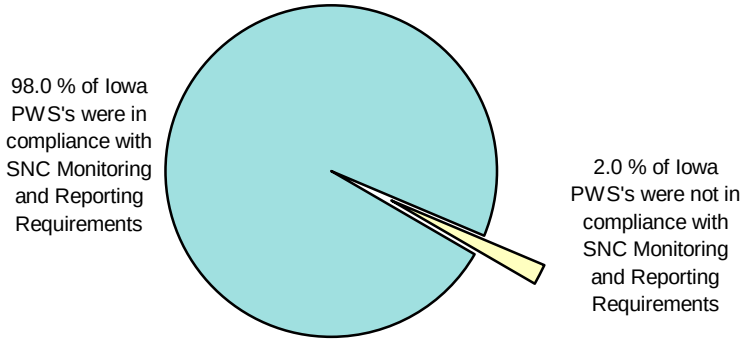


Figure 2: SNC Monitoring & Reporting Compliance by Iowa PWS's in 1997



The Public Drinking Water Program: An Overview

The United States Environmental Protection Agency (EPA) established the Public Water System Supervision (PWSS) Program under authority of the 1974 Safe Drinking Water Act and subsequent amendments.

- EPA sets national limits on allowable contaminant levels in public drinking water supplies (PWS's) to ensure the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCL's).
- For some contaminants, EPA establishes Treatment Techniques (TT's) or Action Levels (AL's) in lieu of a MCL to control unacceptable levels of contaminants in public drinking water.
- EPA also regulates how often PWS's monitor for contaminants and requires those monitoring results be reported to the agency administering the PWSS Program in the state or territory. Generally, the larger the population served by a PWS, the more frequent the monitoring and reporting (M/R) requirements.
- The SDWA also requires PWS's to monitor for unregulated contaminants to provide data for future regulation development.
- EPA requires PWS's to notify the public they serve when violations of the drinking water regulations occur. Public notification must include a clear and understandable explanation of the nature of the violation, potential adverse health effects resulting from the violation, steps the PWS is taking to correct the violation, and the availability and necessity of using alternative water supplies until the violation is corrected.

The SDWA applies to all 50 States, the District of Columbia, Native American Indian Lands, Puerto Rico, the Virgin Islands, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau.

The SDWA allows States and Territories to seek EPA approval to administer the PWSS Program within their state or territory, which is called primacy. To receive primacy, States must meet certain requirements set forth in the SDWA regulations, including adoption of drinking water regulations which are at least as stringent as federal regulations, and demonstration that the state or territory can enforce the program requirements. Of the 57 states and territories, all but Wyoming and the District of Columbia have primacy. The EPA Regional Offices administer the PWSS programs within those two jurisdictions.

Native American Indian Tribes must meet the same requirements as a state in order to receive primacy. To date, no Native American Indian Tribe has been granted primacy, and EPA administers the PWSS program on all tribal lands. The two PWS's operated by Native American Indian Tribes in Iowa have not received primacy, and are monitored directly by EPA. These two PWS's are the Winn-A-Vegas Casino in Sloan, Iowa, located in Woodbury County, and the Sac & Fox Community in Tama, Iowa, located in Tama County.

Primacy states send quarterly reports to EPA on their PWS inventory statistics; incidence of MCL, TT, and M/R violations; and enforcement actions taken to address violations. The annual

compliance report that states are presently required to submit to EPA illustrates the numbers of violations for the four different violation categories:

- MCL Violations
- Treatment Technique Violations
- Variances and Exemptions
- SNC Monitoring and Reporting Violations

EPA regional offices also report to the states any enforcement actions taken by EPA within their jurisdiction. All SDWA data for a state is stored in an automated database called the Safe Drinking Water Information System (SDWIS). This database currently contains an inventory of PWS's and violations data, but not individual analytical results.

This Annual Report is based largely on data retrieved from the Iowa version of the Federal Safe Drinking Water Information System (SDWIS/FED), which in Iowa is called the Water System Facility List (WSFL). The quality of the Iowa data retrieved from the federal SDWIS/FED database is suspect since it is not validated and verified for accuracy by IDNR staff, and does not match all of the original Iowa WSFL database. The SNC Monitoring/Reporting Violation Report data originates from the SDWIS/FED database. The remaining data used in this annual compliance report originates from the Iowa WSFL database, which is considered more accurate than the SDWIS/FED data.

Iowa's Public Water Supply Systems

In order to understand this report, definitions of the various types of public water supplies are needed.

A **public water supply system** is a system which provides piped water for human consumption to the public. The system must have at least 15 service connections or regularly serve an average of at least 25 individuals daily at least 60 days out of the year. A farmstead is an example of a **private water supply system** which does not meet the definition of a public water supply system.

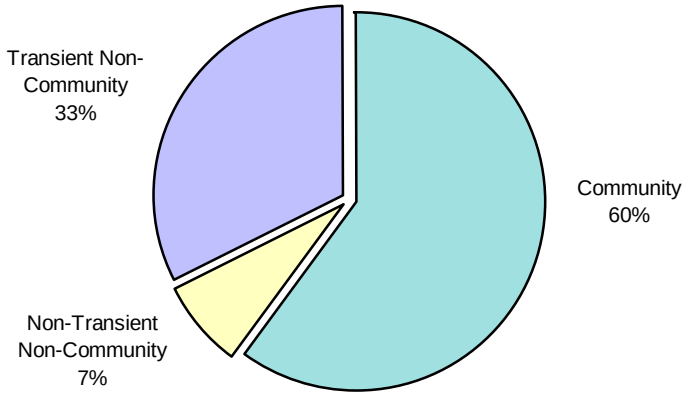
There were 1920 active PWS's in Iowa in 1997. A public water supply system is either a community water system or a noncommunity water system. A **community water system** (CWS) is a public water supply system which has at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Examples of CWS's include municipalities, subdivisions, and mobile home parks. There were 1152 active CWS's in Iowa in 1997.

A **noncommunity water system** is a public water supply system that is not a community water system, and there are two types of regulated noncommunity water systems. A **nontransient noncommunity water system** (NTNCWS or NTNC) is a public water system which regularly serves at least 25 of the same persons four hours or more per day, for four or more days per week, for 26 or more weeks per year. Examples of NTNC's are schools, day-care centers, factories, and offices. Other service-oriented businesses, such as hotels, resorts, hospitals, and restaurants, are classified as NTNC's if they employ at least 25 people and are open for 26 or more weeks of the year. There were 142 active NTNC's in Iowa in 1997.

A **transient noncommunity water system** (TNCWS or TNC) is a public water system other than a CWS or NTNC which regularly serves at least 25 individuals daily at least 60 days out of the year. Examples of TNC's are convenience stores, bars, restaurants with fewer than 25 employees, golf courses, camps, parks, and recreation areas. There were 626 active TNC's in Iowa in 1997.

Figure 3 illustrates the three types of PWS's in Iowa.

Figure 3: Types of Iowa Public Water Supplies



There are three type of water sources in Iowa: surface water (rivers and reservoirs), groundwater, and groundwater under the direct influence of surface water (also called influenced groundwater or IGW). An example of an IGW source is a shallow well into which surface water could penetrate. Since a PWS can use any combination of water sources in its system, the PWS is classified by its most vulnerable source. For example, a PWS with non-IGW groundwater and surface water sources is classified as a surface water source.

Figure 4 depicts the water souce classifications of Iowa PWS's.

Figure 4: Water Sources of Iowa Public Water Supplies

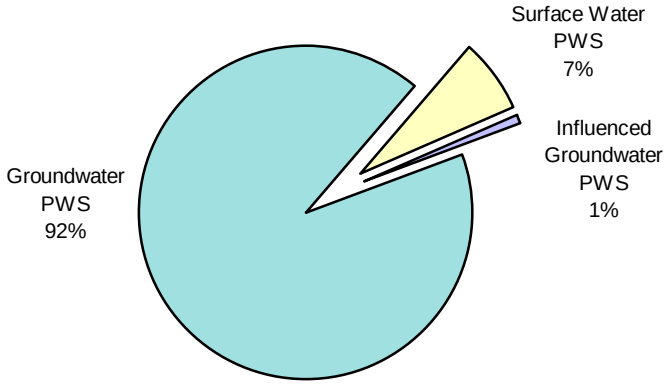
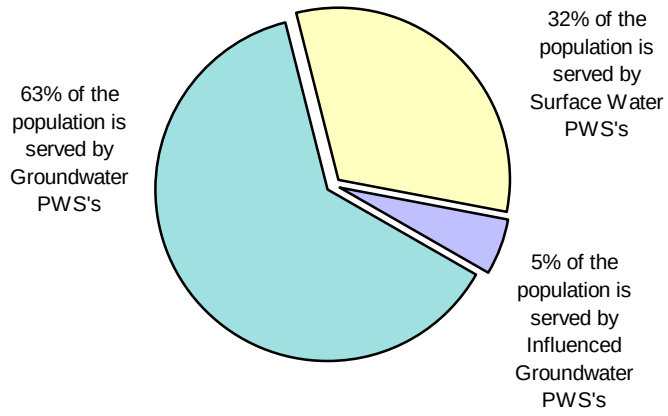


Figure 5 depicts the percentage of Iowa's population which is served by the three types of public water supply sources.

Figure 5: Iowa Population Served by Various Public Water Supply Sources



The IDNR's Role in the Drinking Water Program

The IDNR has four separate groups of people working in the drinking water area: field office staff, compliance and enforcement staff, engineering and water use staff, and legal services staff.

There are six Field Offices in the state, located in the following cities: Manchester, Mason City, Spencer, Atlantic, Des Moines, and Washington. There are staff in each of these regions who specialize in drinking water. Their responsibilities include on-site inspections of every PWS in the state at least every five years, site surveys for well and treatment facility placement, response to complaints from the public, emergency response to spills which may threaten the environment (particularly the water resources), and provision of technical assistance to water supply operators.

The remaining drinking water staff are located in the Des Moines Central Office. The compliance and enforcement staff write the water supply operation permits for each PWS at least every three years, monitor the compliance by the PWS with the SDWA requirements through the use of computerized databases, prepare the violation notices for those supplies which are not in compliance with the SDWA requirements, and provide technical assistance to PWS for monitoring and reporting compliance issues. The engineering staff review design specifications for wells, distribution systems, and treatment plants, and approve and issue construction permits for PWS projects. They also provide assistance to the PWS and consulting engineers in various treatment technologies for specific water quality problems. The water use staff allocate and track the withdrawal of water from Iowa's aquifers and surface waters, and issue water use permits. The legal services staff provide support to the drinking water staff when additional enforcement action is necessitated by a PWS who fails to comply with the SDWA.

Maximum Contaminant Levels (MCL's)

The definitions of terms and enforcement actions listed in the following sections are from the Iowa Administrative Code (IAC).

Coliform Bacteria, including fecal coliforms and *E. coli*

567-41.2(1) (455B)

Non-Acute MCL: The MCL is determined by the presence or absence of total coliforms in a sample. Any coliform-positive routine or repeat/check sample that also is negative for fecal coliforms or *E. coli* constitutes a non-acute MCL based on the following criteria:

- If a routine sample is total coliform-positive, the PWS must collect a set of repeat/check samples within 24 hours of being notified of the positive result.
- For a PWS which collects 40 samples or more per month, no more than 5.0 percent of the samples collected during a month may be total coliform-positive.
- For a PWS which collects less than 40 samples per month, no more than one sample collected during a month may be total coliform-positive.

Acute MCL: When total coliforms are present in any sample, that sample is also analyzed for fecal coliform and *E. coli*. Any fecal coliform-positive repeat sample or *E. coli*-positive repeat/check sample, or any total coliform-positive repeat/check sample following a fecal coliform-positive or *E. coli*-positive routine sample is a violation of the MCL for total coliforms.

Contaminant	Number of PWS with Non-Acute MCL Violations in 1997	Number of PWS with Acute MCL Violations in 1997
Coliform Bacteria	88	21

Source of Contamination: Total coliforms are common in the environment and are generally not harmful themselves. Fecal coliforms and *E. coli* are generally not harmful but their presence in drinking water is serious because they usually are associated with sewage or animal waste. The presence of these bacteria in drinking water generally is a result of a problem with water treatment or the pipes which distribute the water, and indicates that the water may be contaminated with organisms that can cause disease (pathogens).

Health Effects: If the coliform MCL standard is violated, it indicates a pathway is present for microorganisms that are potentially pathogenic to enter the water system. At greatest risk are children, pregnant women, infants, elderly persons, and persons with compromised immune systems. Disease symptoms may include diarrhea, cramps, nausea, headaches, and fatigue. Chlorination of the drinking water will provide disinfection. Boiling water in the home is also an effective method of sterilizing the drinking water. Drinking water that meets the standard is associated with little risk to health and is considered safe with respect to these contaminants.

Out of Compliance: A PWS is out of compliance when the MCL is exceeded in any one compliance period assigned either as a monthly or quarterly (by calendar) requirement.

Returned to Compliance: A PWS is returned to compliance when repeat/check samples and follow-up sampling yield results which are free of coliform bacteria. A PWS must have six months of levels below the MCL with no monitoring violations in order to be returned to compliance.

Nitrate/Nitrite---567-41.3 (455B)

Acute MCL: The MCL is the maximum allowable concentration of the Nitrate or Nitrite level in a sample, and is measured in milligrams per liter (mg/L). The MCL standards for Nitrate and Nitrite are as follows:

Contaminant	MCL, mg/L	Number of PWS with MCL Exceedances in 1997
Nitrate, as N*	10	18
Nitrite, as N	1.0	3

*Includes one individual combined nitrate-nitrite MCL violation.

Source of Contamination: These inorganic chemicals may result from the natural decay of organic materials such as leaves and crop residue, are used in commercial fertilizers, and also are found in human sewage and wastes from farm animals.

Health Effects: Excessive levels of nitrate in drinking water have caused serious illness and sometimes death in infants under six months of age. Nitrate converts to nitrite, which interferes with the oxygen-carrying capacity in the child's blood (methemoglobinemia). This is an acute disease because symptoms can develop rapidly in infants. In most cases, health deteriorates over a period of days. Symptoms include shortness of breath and blueness of the skin. Clearly, expert medical advice should be sought immediately if these symptoms occur. Boiling the water will only concentrate nitrates in drinking water, and should not be attempted. Alternative sources of water should be used, such as Food and Drug Administration (FDA) approved bottled drinking water with low levels of nitrate clearly listed on the packaging. Drinking water that meets the standard is associated with little risk to health and is considered safe with respect to these contaminants.

Out of Compliance: A PWS is out of compliance when the MCL is exceeded in any one compliance period, assigned either as a monthly, quarterly, or yearly (by calendar) requirement. A violation of the nitrate or nitrite MCL is considered an acute violation with respect to public notification.

Returned to Compliance: A PWS is returned to compliance when the average of a confirmation sample result and the original sample are less than the MCL, or the results of successive monthly testing are below the MCL. A PWS must have six months of levels at or below the MCL with no monitoring violations in order to be returned to compliance.

Inorganic Chemicals---567-41.3 (455B)

Non-Acute MCL: Compliance with the MCL is generally determined using the average annual concentration using four quarterly results, is compared to the maximum allowable concentration of the inorganic contaminant in a sample, and is measured in milligrams per liter (mg/L). The MCL's for the Inorganic Chemicals are listed in the following table.

Contaminant	MCL, mg/L	Number of PWS with MCL Exceedances in 1997
Antimony	0.006	0
Arsenic *	0.05	2
Barium	2	0
Beryllium **	0.004	0
Cadmium	0.005	1
Chromium	0.1	0
Cyanide (as free cyanide) **	0.2	0
Fluoride	4.0	2
Mercury	0.002	0
Nickel **	0.1	0
Selenium	0.05	0
Thallium	0.002	0

* Because EPA is currently promulgating new rules that may change the arsenic MCL, the IDNR currently requires a PWS with an arsenic MCL violation to conduct quarterly public notification and sample collection.

** These compounds were included in the statewide interim monitoring waiver program, and were not required for a portion of 1997.

Source of Contamination: Inorganic contaminants generally leach into drinking water after dissolving from naturally occurring minerals in the ground, or from leaching and runoff from industry and landfills.

Health Effects: If the MCL is exceeded for any of the inorganic contaminants, it means that a long-term risk to health is possible. These chemicals may damage organs such as the kidneys and liver, damage the nervous system causing loss of feeling and control in the legs, and are sometimes associated with high blood pressure and cancer. High levels of fluoride may cause dental mottling (fluorosis) of the teeth.

Out of Compliance: Generally, a PWS is out of compliance when the running 12-month average exceeds the MCL.

Returned to Compliance: A PWS is returned to compliance when the running 12-month average is below the MCL. A PWS must have 6 months of levels at or below the MCL with no monitoring violations in order to be returned to compliance.

Organic Chemicals---567-41.5 (455B)

Non-Acute MCL: Compliance with the MCL is generally determined using the average annual concentration of four quarterly results, is compared to the maximum allowable concentration of the organic contaminant in a sample, and is measured in milligrams per liter (mg/L). The MCL's for the Regulated Organic Chemicals are listed in the following tables.

Regulated Volatile Organic Chemicals (VOC's)

Contaminant	MCL, mg/L	Number of PWS with MCL Exceedances in 1997
Benzene	0.005	1
Carbon tetrachloride	0.005	1
Chlorobenzene (mono)	0.1	0
1,2-Dichlorobenzene (ortho)	0.6	0
1,4-Dichlorobenzene (para)	0.075	0
1,2-Dichloroethane	0.005	0
1,1-Dichloroethylene	0.007	0
cis-1,2-Dichloroethylene	0.07	0
trans-1,2-Dichloroethylene	0.1	0
Dichloromethane	0.005	0
1,2-Dichloropropane	0.005	0
Ethylbenzene	0.7	0
Styrene	0.1	0
Tetrachloroethylene	0.005	1
Toluene	1	0
1,2,4-Trichlorobenzene	0.07	0
1,1,1-Trichloroethane	0.20	0
1,1,2-Trichloroethane	0.005	0
Trichloroethylene	0.005	0
Vinyl chloride	0.002	0
Xylenes (total)	10	0

Regulated Synthetic Organic Chemicals (SOC's)

Contaminant	MCL, mg/L	Number of PWS with MCL Exceedances in 1997
Alachlor (Lasso)	0.002	0
Atrazine (Atrex)	0.003	0
Benzo(a)pyrene	0.0002	0
*Carbofuran (Furadan)**	0.04	0
*Chlordane**	0.002	0
2,4-D	0.07	0
Dalapon	0.2	0

*1,2-Dibromo-3-chloropropane**	0.0002	0

Regulated Synthetic Organic Chemicals (SOC's), continued

Contaminant	MCL, mg/L	Number of PWS with MCL Exceedances in 1997
Di(2-ethylhexyl)adipate	0.4	0
Di(2-ethylhexyl)phthalate	0.006	1
Dinoseb	0.007	0
*Diquat**	0.02	0
*Endothall**	0.1	0
*Endrin**	0.002	0
*Ethylene dibromide**	0.00005	0
*Glyphosate (Roundup)**	0.7	0
*Heptachlor**	0.0004	0
*Heptachlor epoxide**	0.0002	0
*Hexachlorobenzene**	0.001	0
*Hexachlorocyclopentadiene**	0.05	0
*Lindane**	0.0002	0
*Methoxychlor**	0.04	0
*Oxamyl (Vydate)**	0.2	0
Pentachlorophenol	0.001	0
Picloram (Tordon)	0.5	0
*Polychlorinated biphenyls (PCB's)**	0.0005	0
Simazine	0.004	0
*2,3,7,8-TCDD (Dioxin)**	0.00000003	0
*Toxaphene**	0.003	0
2,4,5-TP (Silvex)	0.05	0

* These compounds were included in the statewide interim monitoring waiver program, and were not required for a portion of 1997.

Total Trihalomethanes

Contaminant	MCL, mg/L	Number of PWS with MCL Exceedances in 1997
Total Trihalomethanes (TTHM's) (defined as the sum of the concentrations of bromodichloromethane, bromoform, dibromochloromethane, and chloroform, as measured at the point of maximum residence time in the distribution system)	0.10	3

Unregulated Volatile and Synthetic Organic Contaminants

Community water systems and nontransient noncommunity water systems monitor for the following unregulated contaminants at IDNR's discretion, and particularly if the PWS is found to be vulnerable to contamination of one of the following chemicals.

The EPA Health Advisory (HA) for lifetime exposure is defined as the concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects over a lifetime of exposure, with a margin of safety. The lifetime HA is used for unregulated contaminants, and the MCL is used for regulated contaminants. Exceedances of the HA for a contaminant are calculated in the same manner as the MCL for a similar compound type. If the HA is exceeded for an unregulated or discretionary contaminant, the PWS is required to conduct public notification each quarter in which the exceedance is in effect.

Unregulated VOC and SOC Contaminants

Contaminant	Health Advisory, mg/L	Number of PWS with HA Exceedances in 1997
Acrylamide	0.05% dosed at 1 ppm	0
*Aldrin**	0.002	0
Bromobenzene	**	**
Bromodichloromethane	0.1	0
Bromoform	0.1	0
Bromomethane	0.01	0
Butachlor	**	**
*Carbaryl**	0.7	0
Chlorodibromomethane	0.1	0
Chloroethane	**	**
Chloroform	0.1	0
Chloromethane	0.003	0
o-Chlorotoluene	0.1	0
p-Chlorotoluene	0.1	0
Dibromomethane	**	**
Dicamba	0.2	0
1,3-Dichlorobenzene (meta)	0.6	0
1,1-Dichloroethane	**	**
1,3-Dichloropropane	**	**
2,2-Dichloropropane	**	**
1,1-Dichloropropene	**	**
1,3-Dichloropropene	0.02	0
*Dieldrin**	0.002	0
Epichlorohydrin	0.01% dosed at 20 ppm	0
*Hydroxycarbofuran**	**	**
*Methomyl**	0.2	0
Metolachlor (Dual)	0.1	0
Metribuzin	0.2	0
Propachlor	0.9	0
1,1,1,2-Tetrachloroethane	0.07	0
1,1,2,2-Tetrachloroethane	**	**
1,2,3-Trichloropropane	0.4	0

* These compounds were included in the statewide interim monitoring waiver program, and were not required for a portion of 1997.

** no HA has been established

Discretionary Volatile Organic Series

Monitoring for the following compounds is only required at the discretion of the IDNR:

Discretionary VOC Contaminants

Contaminant	Health Advisory, mg/L	Number of PWS with HA Exceedances in 1997
Bromochloromethane	0.01	0
n-Butylbenzene	*	*
sec-Butylbenzene	*	*
tert-Butylbenzene	*	*
Dichlorodifluoromethane	1	0
Hexachlorobutadiene	0.001	0
Isopropylbenzene	*	*
p-Isopropyltoluene	*	*
Naphthalene	0.02	0
n-Propylbenzene	*	*
1,2,3-Trichlorobenzene	*	*
Trichlorofluoromethane	2	0
1,2,4-Trimethylbenzene	*	*
1,3,5-Trimethylbenzene	*	*

* no HA has been established

Sources of Contamination: Organic contaminants come from petroleum solvents, paint removers, degreasers, cleaning fluids, pesticides, gasoline, electrical transformers, manufacturing processes, chemical production, and the production of plastics. Agricultural runoff, improper waste disposal, and improper handling and storage techniques contribute to drinking water contamination via percolation of the contaminant through the soil into the groundwater.

Health Effects: If the MCL is exceeded for any of the organic contaminants, the exceedance represents a possible long-term risk to health. Cancer, as well as damage to the heart and liver, the nervous system, or the immune system may occur through long term exposure to these organic contaminants. Drinking water that meets the standard is associated with little risk to health and is considered safe with respect to these contaminants.

Out of Compliance: Generally, a PWS is out of compliance when the running 12-month average exceeds the MCL.

Returned to Compliance: A PWS is returned to compliance when the running 12-month average is below the MCL. A PWS must have 6 months of levels at or below the MCL with no monitoring violations in order to be returned to compliance. For TTHM's, because EPA is

currently promulgating new rules that may change the TTHM MCL, the IDNR currently requires a PWS with a TTHM MCL violation to conduct quarterly public notification and sampling.

Radionuclides---567-41.8 (455B)

Non-Acute MCL: Compliance with the MCL is determined using the average annual concentration of at least four quarterly results, is compared to the maximum allowable concentration of the contaminant in a sample, and is measured in either picocuries per liter (pCi/L) or as a dose in millirems per year (mrem/yr). A composite sample may be used in lieu of having four separate quarterly samples analyzed individually. The composite sample consists of four samples, each of which is collected in a specific quarter during a 12 month period. Those four samples are composited into one sample, which is then analyzed for radionuclide content. If the results of that composite sample exceed the MCL, it is a non-acute MCL violation.

Because EPA is currently promulgating new rules that may change the radionuclide MCL's, the IDNR currently requires a PWS with a radionuclide MCL violation to conduct quarterly public notification and collect a four-quarter composite sample every four years. Because of this sampling schedule, there are PWS's which had unresolved MCL violations in 1997 which initially occurred prior to 1997. The new radionuclide MCL violations in 1997, as well as the continuing unresolved MCL violations in 1997, are shown in the following table.

Radionuclides

Contaminant	MCL	Number of PWS with new MCL Violations in 1997	Number of PWS with continuing unresolved MCL Violations in 1997*
Gross Alpha Particle Activity (excluding Radon and Uranium)	15 pCi/L	0	2
Combined Radium-226 and Radium 228	5 pCi/L	3	20
Gross Beta Particle and Photon Activity	4 mrem/yr	0	0

* The two PWS's which exceeded the gross alpha MCL also exceeded the combined radium MCL.

Source of Contamination: Radionuclides occur naturally in certain groundwaters in the state, particularly in the deeper aquifers.

Health Effects: If the MCL is exceeded for any of the radionuclide contaminants, it represents a possible long-term risk to health from cancer. Drinking water that meets the standard is associated with little risk to health and is considered safe with respect to these contaminants.

Out of Compliance: A PWS is out of compliance when the annual average exceeds the MCL, assigned either as a once-per-4-year grab sample (single) or as a composite sample requirement.

Returned to Compliance: A PWS is returned to compliance when the previous 12 month average is below the MCL.

MCL Public Notification---567-41.10 (455B)

The SDWA requires a PWS to notify the state and the water consumers when the following violations occur:

1. a MCL has been exceeded;
2. a compliance schedule has not been met; or
3. a monitoring violation has occurred.

To comply with the reporting and notification requirements of a violation, the PWS must do three things:

1. Notify the IDNR within 48 hours after the violation occurred;
2. Notify the consumers by the required public notification procedures; and
3. Provide proof of such public notice to the IDNR.

Health Effects: If a public notification requirement is not met, the public health is placed at risk because the public is unaware of the potential health effects of the water being consumed. Children, pregnant women, the elderly, and persons with compromised immune systems are placed at the greatest risk.

Out of Compliance: A PWS is in violation of the public notification rule when it does not issue public notification specific to its violation and does not provide proof of same to the IDNR.

Returned to Compliance: A PWS is returned to compliance when it publishes the appropriate public notification language within the required amount of time and provides proof of same to the IDNR.

Treatment Technique (TT) Requirements

EPA established TT's in lieu of MCL's to control unacceptable levels of some contaminants. Two rules fall under this definition: Lead & Copper and the Surface Water Treatment Rule (SWTR). If a PWS exceeds the action level of either lead or copper, that exceedance is a treatment technique violation. If a PWS exceeds the turbidity limit, does not meet the residual disinfectant requirements, or does not meet the contact time (CT) ratio, that PWS has incurred a treatment technique violation.

Lead/Copper Action Levels---567-41.4 (455B)

Action Level Exceedance: Lead and Copper are regulated differently than other contaminants, because they have an action level (AL) rather than a MCL. The AL is based upon the number of samples collected. The lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period is greater than 0.015 mg/L (i.e., if the "90th percentile" lead level is greater than 0.015 mg/L). The copper action level is

exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period is greater than 1.3 mg/L (i.e., if the "90th percentile" copper level is greater than 1.3 mg/L). If the action level at the 90th percentile is exceeded for either lead or copper, it represents a long-term risk to health.

Contaminant	Action Level, mg/L	Number of PWS with new AL Exceedances in 1997	Number of PWS with continuing unresolved AL Exceedances in 1997
Copper	1.3	2	93
Lead	0.015	6	54
Copper and Lead	(see above AL's)	0	12

Source of Contamination: Lead is a common metal found in lead-based paint, household dust, and certain types of pottery, porcelain, and pewter. It can be found in drinking water due to leaching from lead pipes, from lead solder on indoor plumbing, or from brass faucets and fixtures. Copper is often used to plumb residential and commercial structures that are connected to water distribution systems, and leaching of copper from these sources can result in contamination of the drinking water.

Health Effects: Lead builds up in the body over many years and can cause damage to red blood cells and kidneys, as well as damage to the brain, which causes mental retardation. Copper, at high doses, can cause stomach and intestinal distress, liver and kidney damage, and anemia. Drinking water that meets the standard for both lead or copper is associated with little risk to health and is considered safe with respect to these contaminants.

Out of Compliance: A PWS is out of compliance when the action level is exceeded in any one compliance period, assigned either as a 6-month (by calendar), annual, or triennial requirement. Once the action level is exceeded for either lead or copper, the PWS must collect water quality parameters, develop a corrosion control treatment study, and implement steps to control the corrosion in the water, plus collect additional samples to demonstrate return to compliance with the action level standard. Public education is also required which advises the water customers of the problem and how they can protect themselves during a lead action level exceedance. The public education requirement remains in effect until the PWS has one full valid sampling round which is less than the lead action level.

Returned to Compliance: Generally, a PWS is returned to compliance when the sample results for two compliance periods are under the action levels for both lead and copper. This process can take several years to accomplish because of the lengthy corrosion control process, which is followed by a year of sampling before a PWS can return to compliance.

Lead Action Level Exceedance Public Education Program
567-41.10(3) (455B)

The SDWA requires a PWS to notify the IDNR and the population served by the PWS when the action level for lead is exceeded.

1. Mandatory language must be provided to the consumers and general public every twelve months, in the following form:
   a. Newspaper announcement;
   b. Pamphlets and brochures to doctors, clinics, schools, daycare facilities, etc.;
   c. Attachments to customer's water bills;
   d. A message alerting the public must be printed directly on the water bill; and
   e. A public service announcement must be issued to television and radio for broadcasting.
2. At least every six months, a public service announcement must be issued to television and radio for broadcasting.

Health Effects: If a public education requirement is not met, the public health is placed at risk because the public is unaware of the potential health effects of the water being consumed. All children are at risk from long term exposure to lead.

Out of Compliance: A PWS is in violation of the public education requirement when it does not issue public education and does not provide proof of same to the IDNR.

Returned to Compliance: A PWS is returned to compliance with the public education requirement when it publishes the appropriate public education materials in the required format at the required cycle of time and provides proof of same to the IDNR. Resource limitations have prevented the IDNR from assuring PWS's compliance with public education requirements in 1997.

Turbidity Requirements---567-41.7 (455B)

Treatment Technique: The MCL's (treatment technique requirements) for turbidity are applicable to community and noncommunity PWS's using surface water or groundwater under the direct influence of surface water in whole or in part. For PWS's using conventional or direct filtration, the turbidity level of representative samples of a PWS's filtered water must be less than or equal to 0.5 nephelometric turbidity units (NTU) in at least 95% of the measurements taken each month, with no single sample result exceeding 5 NTU's. Violation of the turbidity standard is a treatment technique violation.

Contaminant	TT Criteria *	Number of PWS with TT Violations in 1997
Turbidity	• 5% of samples > 0.5 NTU • any sample >5 NTU	• 3 • 0

* > means "greater than"

Sources of Contamination: If a violation occurs of the turbidity standard, it indicates that there are particles suspended in the water that can interfere with disinfection and tests for bacteria. It can also prevent maintenance of an effective disinfectant residual throughout the distribution system.

Health Effects: Excessive turbidity can allow disease-causing organisms such as viruses and protozoans (*Giardia lamblia* and *Cryptosporidium)* to enter the distribution system by masking their presence.

Out of Compliance: A PWS is out of compliance when the MCL is exceeded in any one month.

Returned to Compliance: A PWS is returned to compliance when turbidity results are consistently below the MCL standards, and it may take several months to a year for a PWS to be returned to compliance.

Residual Disinfectant Requirements---567-41.7 (455B)

Treatment Technique: All PWS's using a surface water source or a groundwater source under the direct influence of surface water must provide disinfection to provide inactivation or removal of 99.9% *Giardia lamblia* cysts and 99.99% viruses. The chlorine residual in drinking water is a measure of the amount of available chlorine in the water. It also allows the maintenance of an effective disinfectant agent throughout the PWS's distribution system.

1. The disinfectant entering the distribution system cannot be lower than 0.3 mg/L free residual chlorine for more than 4 hours.
2. The disinfectant within the distribution system, measured as total chlorine, combined chlorine, or chlorine dioxide, cannot be undetectable in more than 5% of the samples each month for any 2 consecutive months. This also applies to heterotrophic plate counts (HPC's), which could be done in lieu of disinfectant monitoring. The HPC must be less than or equal to 500 colony forming units per milliliter of sample in order to have acceptable disinfectant residual.

All PWS's using a surface water source or a groundwater source under the direct influence of surface water must determine their contact time (CT) on a daily basis.

1. The CT in drinking water is determined by multiplying the disinfectant concentration by the amount of time that the disinfectant is in contact with the water. Each system must achieve a specific CT depending on water quality parameters, which include the pH and temperature of the water.
2. Insufficient CT can allow disease-causing organisms such as *Giardia lamblia* or viruses to survive and thereby be distributed throughout the system.

Contaminant	TT Criteria*	Number of PWS with TT Violations in 1997
Residual Disinfectant	**	1

Contact Time	CT ratio of <1	2

* < means "less than"

** See previous section entitled "Residual Disinfectant Requirements - Treatment Techniques" for the criteria.

Health Effects: Insufficient chlorine or disinfectant residual levels can allow disease-causing organisms to survive and thereby be distributed throughout the system.

Out of Compliance: A PWS is out of compliance with the TT standard when the CT ratio or residual disinfectant requirement is insufficient. If a PWS continues to experience TT violations, that PWS could be required to make modifications to the treatment process to achieve compliance.

Returned to Compliance: A PWS is returned to compliance with the TT standard when the CT ratio is sufficient, and the residual disinfectant requirements have been met. The PWS could be returned to compliance in the next month, or the time period could be longer, depending upon the action needed to correct the violation.

TT Public Notification---567-41.10 (455B)

The SDWA requires a PWS to notify the state and the water consumers when the following violations occur:

1. a required treatment technique has been violated;
2. a compliance schedule has not been met; or
3. a monitoring violation has occurred.

To comply with the reporting and notification requirements of a violation, the PWS must do three things:

1. Notify the IDNR within 48 hours after the violation occurred;
2. Notify the consumers by the required public notification procedures; and
3. Provide proof of such public notice to the IDNR.

Health Effects: If a public notification requirement is not met, the public health is placed at risk because the public is unaware of the potential health effects of the water being consumed. Children, pregnant women, the elderly, and persons with compromised immune systems are placed at the greatest risk.

Out of Compliance: A PWS is in violation of the public notification rule when it does not issue public notification specific to its violation and does not provide proof of same to the IDNR.

Returned to Compliance: A PWS is returned to compliance with the public notification rule when it publishes the appropriate public notification language within the required amount of time and provides proof of same to the IDNR.

Variances and Exemptions

The IDNR, in accordance with the federal regulations, has the authority to issue variances or exceptions for certain exceedances of AL's, MCL's, or TT requirements. In Iowa, variances or exceptions are not allowed for exceedances of microorganism standards, acute concentrations of any contaminant, any violations of the surface water treatment rule, or lead exceedances. Basically, a variance or exception is a means to allow an extended schedule for a PWS to permanently correct the violation(s). In 1996, the conditions that the IDNR and a PWS were required to meet prior to granting a variance or exception made it impractical to utilize these provisions. Instead of issuing variance or exceptions, the IDNR used its authority to extend schedules for returning to compliance through the water supply operation permit program.

Iowa did not have rules on variances and exemptions for any contaminant during the reporting period of January 1, 1997 through December 31, 1997. Both historically and currently, Iowa does not issue variances and exemptions for violations of MCL's, TT's, AL's, or M/Rs.

SNC Monitoring & Reporting (M/R) Requirements

The violation data in this section is only listed for those contaminants that had 1997 violations.

Coliform Bacteria

Monitoring/Reporting Requirement: All PWS's must collect total coliform samples at sites which are representative of water quality throughout their distribution systems according to a written sampling plan.

1. Community PWS's and noncommunity PWS's serving schools or daycare facilities must base the number of samples on the population served by the PWS. The minimum number of samples collected per month is determined by population groups as listed in Chapter 41.2(1)c(1)3 (455B) of the IAC.
2. Regional PWS's, such as rural water districts, sample at a frequency based on miles of pipe in the distribution system, which is deemed equivalent to population.
3. Transient noncommunity PWS's, such as parks and rest areas, must monitor each calendar quarter at a minimum, or if the population served is over 1000 persons, monitor at the same frequency as a like-sized community PWS. EPA makes provisions for reducing the monitoring to annual, but in Iowa this is not considered sufficient protection for public health.
4. If a routine sample is total coliform positive, the PWS must collect repeat samples. That PWS must also collect a minimum of five routine samples during the next month the PWS is in operation.

Contaminant	Number of M/R Violations in 1997	Number of Individual PWS's with M/R Violations in 1997
Coliform Bacteria	80	28

SNC Violation: There are two types of monitoring/reporting violations for coliform bacteria:

1. If a PWS fails to monitor for any routine, repeat, or follow-up samples, that PWS has incurred a monitoring violation which is identified by EPA as being a MAJOR monitoring violation.
2. If a PWS fails to monitor for only a portion of the required routine, repeat, or follow-up samples, that PWS has incurred a monitoring violation which is identified by EPA as being a MINOR monitoring violation.
3. NOTE: The significance of MAJOR and MINOR relates to whether a violation places the PWS on the EPA Significant Non-Complier list (SNC). Four or more MAJOR monitoring violations in a 12-month period automatically places the PWS on the SNC list.

Out of Compliance: A PWS is out of compliance when the PWS fails to collect and have analyzed the required number of samples in any one compliance period.

Returned to Compliance: A PWS is returned to compliance when the samples are collected and the results are in the IDNR's electronic database (WSFL).

Nitrate/Nitrite

Monitoring/Reporting Requirement: All PWS's, including community, noncommunity, and transient noncommunity PWS's, must monitor to determine compliance with the MCL for nitrate and nitrite at the following frequency:

1. All PWS's must monitor for nitrate at least on an annual basis and for nitrite at least once.
2. If a PWS exceeds one-half the MCL for either nitrate or nitrite, it must monitor on a quarterly basis.
3. If a PWS exceeds the MCL for either nitrate or nitrite, it must monitor for that contaminant on a monthly basis.

Contaminant	Number of M/R Violations in 1997	Number of Individual PWS's with M/R Violations in 1997
Nitrate	27	20

SNC Violation: If a PWS fails to monitor for nitrate or nitrite for two consecutive monthly or quarterly compliance periods, or one annual requirement, it automatically meets the definition of an EPA SNC.

Out of Compliance: A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

Returned to Compliance: A PWS is returned to compliance when the samples are collected and the results are in the IDNR's electronic database (WSFL).

Inorganic Chemicals

Monitoring/Reporting Requirement: Community and nontransient noncommunity PWS's must monitor to determine compliance with the MCL for inorganic contaminants. The IDNR issues a sampling schedule through an operation permit which may vary from quarterly to once every nine years, with the frequency determined by past analytical results.

There were no SNC M/R violations for inorganic chemicals in 1997.

SNC Violation: If a PWS fails to monitor for inorganics for two consecutive quarterly compliance periods, it automatically meets the definition of an EPA SNC. If a PWS fails to meet a yearly or less frequent monitoring requirement for inorganics, it automatically meets the definition of an EPA SNC.

Out of Compliance: A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

Returned to Compliance: A PWS is returned to compliance when the samples are collected and the results are in the IDNR's electronic database (WSFL).

Organic Chemicals

Monitoring/Reporting Requirements: Community and nontransient noncommunity PWS's must monitor to determine compliance with the MCL for organic contaminants. The IDNR issues a sampling schedule through an operation permit which may vary from quarterly to once every five years, the schedule being based on past analytical results.

Contaminant	Number of M/R Violations in 1997	Number of Individual PWS's with M/R Violations in 1997
Atrazine	1	1
Di-(2-ethylhexyl)phthalate	3	1

SNC Violation: If a PWS fails to monitor for organics for two consecutive quarterly compliance periods it automatically meets the definition of an EPA SNC. If a PWS fails to monitor a three- or five-year requirement for organics it automatically meets the definition of an EPA SNC.

Out of Compliance: A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

Returned to Compliance: A PWS is returned to compliance when the sample is collected and the results are in the IDNR's electronic database (WSFL).

Lead/Copper

Monitoring/Reporting Requirement: All community and nontransient noncommunity PWS's must monitor to determine compliance with the Action Level for lead and copper at sites according to a written sampling plan which targets sites that have specific home plumbing materials with lead and copper. The number of samples collected is based on the population served. Additionally, water quality parameters and source water sampling are collected when the action level for either lead or copper is exceeded. Follow-up monitoring is continued on a routine schedule regardless of analytical results.

Contaminant	Number of M/R Violations in 1997	Number of Individual PWS's with M/R Violations in 1997
Lead & Copper	27	23

SNC Violation: If a PWS fails to monitor for lead or copper, it automatically meets the definition of an EPA SNC.

Out of Compliance: A PWS is out of compliance when the PWS fails to collect the required number or type of samples in any one compliance period, either six-month, annual, or triennial.

Returned to Compliance: A PWS is returned to compliance when the samples are collected, the results are in the IDNR's electronic database (WSFL), and the 90th percentile report has been received by the IDNR.

Turbidity, Residual Disinfectant, and CT Ratio

Monitoring/Reporting Requirements: Community and noncommunity PWS's using surface water or groundwater under the direct influence of surface water in whole or in part are required to conduct turbidity monitoring and report the results to the IDNR on a monthly basis. The number of samples is based on the population served, and must be either collected every four hours or be continuously monitored. Residual disinfectant sampling requirements are applicable to community and noncommunity PWS's using surface water or groundwater under the direct influence of surface water in whole or in part. When a coliform bacterial sample is collected, that sample must be analyzed for residual disinfectant immediately. The residual disinfectant must also be measured at a minimum of every four hours at the entry point to the distribution system. Depending upon the size of the system, continuous monitoring may be required. The CT ratio must be calculated and recorded daily, and the lowest ratio in each month must be reported.

There were no SNC M/R violations for turbidity, residual disinfectant, or CT ratio in 1997.

SNC Violation: If a PWS fails to monitor or report turbidity, residual disinfectant, or CT ratio in four or more months out of a twelve-month period, it meets the definition of a SNC and must issue public notification.

Out of Compliance: A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

Returned to Compliance: A PWS is returned to compliance when the samples are collected and the results are reported to the IDNR.

Radionuclides

Monitoring/Reporting Requirement: Community PWS's must monitor to determine compliance with the MCL for radionuclides. The IDNR issues a sampling schedule which may vary from a quarterly sample to a composite sample once every four years, depending on past results.

There was no SNC M/R violation for radionuclides in 1997.

SNC Violation: If a PWS fails to monitor for radionuclides, that PWS has incurred a monitoring violation and automatically meets the definition of an EPA SNC.

Out of Compliance: A PWS is out of compliance when the PWS fails to collect the required number of samples in any one compliance period.

Returned to Compliance: A PWS is returned to compliance when the sample is collected and the result is in the IDNR's electronic database.

M/R Public Notification

Reporting Requirement: All PWS's, including community, noncommunity, and transient noncommunity PWS's, must issue public notification for: failure to monitor; exceeding a MCL or an AL; failure to achieve a TT; or failure to meet a compliance schedule for remediation for a MCL, AL, or TT violation. The IDNR issues a Notice of Violation (NOV) which includes the Public Notification instructions and mandatory language example for the public notification.

SNC Violation: A PWS has incurred a SNC violation when the PWS fails to issue any portion of the required public notification.

Out of Compliance: A PWS is out of compliance when the PWS fails to issue any required public notification.

Returned to Compliance: A PWS is returned to compliance when the PWS issues the required public notification and submits a copy of same to the IDNR.

Public Education Program for Lead

Reporting Requirement: All community and non-transient noncommunity PWS's must conduct a public education program if they exceed the lead action level. Note that Public Education is not the same as public notification. Public notification is a portion of public education but the reverse is not true. Public education includes several different methods of public notification, all of which are critical to the public education effort.

SNC Violation: A PWS has incurred a SNC violation when the PWS fails to issue any portion of the required public education program.

Returned to Compliance: A PWS is returned to compliance when the PWS initiates or resumes the required public education and submits a copy of same to the IDNR.

Distribution of this Report

The SDWA requires both summary and detailed reports from the states to be accessible to the EPA, the Governor of the State, and the public. The State of Iowa has determined that the following options will be utilized to make this report readily available to the public. The IDNR will:

- Supply the detailed report to the EPA Headquarters in Washington, DC, by the statutory deadine.
- Supply the detailed report to the EPA Regional Headquarters in Kansas City, KS.
- Supply the detailed report to the Office of the Governor of Iowa.
- Publish an official notice of report availability.
- Include notices of availability on the IDNR internet website.
- Make the detailed report available for downloading from the IDNR Internet website.
- Supply the detailed report to the public water systems identified in the detailed report.
- Make the detailed and summary report available for individuals and organizations upon request.

Summary Report

The **Violations Summary Report**, listed in Table A, is strictly a numerical summary of all the violations of each contaminant being monitored for SDWA compliance. Discretionary and unregulated organic compounds are not listed in this table, since they do not have MCL's. This report lists the number of violations of each contaminant categorized by both MCL and Monitoring/Reporting Violations.

The MCL data originated from the Iowa WSFL database. There is no duplicate reporting of non-acute bacteria MCL's in this report.

The SNC M/R data originated from the SDWIS/FED database.

Report Legend

Column (from left to right)	Description of Heading
1	The first column identifies the contaminant name
2	The second column identifies the MCL for that contaminant
3	The third column identifies the number of MCL violations for that contaminant
4	The fourth column identifies the number of PWS's with MCL violations for that contaminant
5	The fifth column identifies the number of TT violations
6	The sixth column identifies the number of PWS's with TT violations
7	The seventh column identifies the number of EPA SNC M/R violations for that contaminant
8	The eighth column identifies the number of PWS's with EPA SNC M/R violations for that contaminant

TABLE A: VIOLATIONS SUMMARY REPORT

NOTE: This is an EPA formatted table.

State:	Iowa	Reporting Interval:	January 1, 1997 through December 31, 1997

Organic Contaminants	MCL (mg/L)	MCL's		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems with Violations	Number of Violations	Number of Systems with Violations	Number of Violations	Number of Systems with Violations
1,1,1-Trichloroethane	0.2	-0-	-0-			-0-	-0-
1,1,2-Trichloroethane	0.005	-0-	-0-			-0-	-0-
1,1-Dichloroethylene	0.007	-0-	-0-			-0-	-0-
1,2,4-Trichlorobenzene	0.07	-0-	-0-			-0-	-0-
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	-0-	-0-			-0-	-0-
1,2-Dichloroethane	0.005	-0-	-0-			-0-	-0-
1,2-Dichloropropane	0.005	-0-	-0-			-0-	-0-
2,3,7,8-TCDD (Dioxin)	0.00000008	-0-	-0-			-0-	-0-
2,4,5-TP	0.05	-0-	-0-			-0-	-0-
2,4-D	0.07	-0-	-0-			-0-	-0-
Acrylamide		NA	NA			NA	NA
Alachlor	0.002	-0-	-0-			-0-	-0-
Atrazine	0.003	-0-	-0-			1	1
Benzene	0.005	2	1			-0-	-0-
Benzo[a]pyrene	0.0002	-0-	-0-			-0-	-0-

Carbofuran	**0.04**	-0-	-0-			-0-	-0-
Carbon tetrachloride	**0.005**	1	1			-0-	-0-

Contaminant	MCL (mg/L)	MCL's		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Chlordane	0.002	-0-	-0-			-0-	-0-
cis-1,2-Dichloroethylene	0.07	-0-	-0-			-0-	-0-
Dalapon	0.2	-0-	-0-			-0-	-0-
Di(2-ethylhexyl)adipate	0.4	-0-	-0-			-0-	-0-
Di(2-ethylhexyl)phthalate (Total Phthalates)	0.006	1	1			3	1
Dichloromethane	0.005	-0-	-0-			-0-	-0-
Dinoseb	0.007	-0-	-0-			-0-	-0-
Diquat	0.02	-0-	-0-			-0-	-0-
Endothall	0.1	-0-	-0-			-0-	-0-
Endrin	0.002	-0-	-0-			-0-	-0-
Epichlorohydrin		NA	NA			NA	NA
Ethylbenzene	0.7	-0-	-0-			-0-	-0-
Ethylene dibromide	0.00005	-0-	-0-			-0-	-0-
Glyphosate	0.7	-0-	-0-			-0-	-0-
Heptachlor	0.0004	-0-	-0-			-0-	-0-
Heptachlor epoxide	0.0002	-0-	-0-			-0-	-0-
Hexachlorobenzene	0.001	-0-	-0-			-0-	-0-
Hexachlorocyclopentadiene	0.05	-0-	-0-			-0-	-0-

Lindane	**0.0002**	-0-	-0-			-0-	-0-
Methoxychlor	**0.04**	-0-	-0-			-0-	-0-

Contaminant	MCL (mg/L)	MCL's		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Monochlorobenzene	0.1	-0-	-0-			-0-	-0-
o-Dichlorobenzene	0.6	-0-	-0-			-0-	-0-
Oxamyl (Vydate)	0.2	-0-	-0-			-0-	-0-
para-Dichlorobenzene	0.075	-0-	-0-			-0-	-0-
Pentachlorophenol	0.001	-0-	-0-			-0-	-0-
Picloram	0.5	-0-	-0-			-0-	-0-
Simazine	0.004	-0-	-0-			-0-	-0-
Styrene	0.1	-0-	-0-			-0-	-0-
Tetrachloroethylene	0.005	1	1			-0-	-0-
Toluene	1	-0-	-0-			-0-	-0-
Total polychlorinated biphenyls	0.0005	-0-	-0-			-0-	-0-
Toxaphene	0.003	-0-	-0-			-0-	-0-
trans-1,2-Dichloroethylene	0.1	-0-	-0-			-0-	-0-
Trichloroethylene	0.005	-0-	-0-			-0-	-0-
Vinyl chloride	0.002	-0-	-0-			-0-	-0-
Xylenes (total)	10	-0-	-0-			-0-	-0-
Total trihalomethanes	0.10	10	3			-0-	-0-

Contaminant	MCL (mg/L)	MCL's		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Inorganic Contaminants							
Antimony	**0.006**	-0-	-0-			-0-	-0-
Arsenic	**0.05**	3	2			-0-	-0-
Asbestos *	**7 million fibers/ 10 µm long**	-0-	-0-			-0-	-0-
Barium	**2**	-0-	-0-			-0-	-0-
Beryllium	**0.004**	-0-	-0-			-0-	-0-
Cadmium	**0.005**	1	1			-0-	-0-
Chromium	**0.1**	-0-	-0-			-0-	-0-
Cyanide (as free cyanide) *	**0.2**	-0-	-0-			-0-	-0-
Fluoride	**4.0**	6	2			-0-	-0-
Mercury	**0.002**	-0-	-0-			-0-	-0-
Nitrate	**10 (as Nitrogen)**	33	17			27	20
Nitrite	**1 (as Nitrogen)**	5	3			-0-	-0-
Selenium	**0.05**	-0-	-0-			-0-	-0-
Thallium	**0.002**	-0-	-0-			-0-	-0-
Total nitrate and nitrite	**10 (as Nitrogen)**	1	1			-0-	-0-

* No monitoring was required in 1997 for this parameter.

Contaminant	MCL	MCL's *		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Radionuclide MCL's							
Gross alpha	**15 pCi/L**	-0-	-0-			-0-	-0-
Radium-226 and radium-228	**5 pCi/L**	3	3			-0-	-0-
Gross beta	**4 mrem/year**	-0-	-0-			-0-	-0-
Subtotal		3	3			-0-	-0-

* These are the new violations incurred in 1997, and do not include the continuing unresolved violations from previous years.

Contaminant	MCL (mg/L)	MCL		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Total Coliform Rule							
Acute MCL violation	**Presence**	23	21				
Non-acute MCL violation	**Presence**	105	88				
Major routine and follow up monitoring						80	28
Sanitary survey						**State initiates Sanitary survey**	**State initiates Sanitary survey**
Subtotal		128	109			80	28

Contaminant	MCL (mg/L)	MCL's		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Surface Water Treatment Rule *							
Filtered systems *							
Monitoring, routine/repeat						0	0
Treatment techniques				10	3		
Unfiltered systems *							
Monitoring, routine/repeat							
Failure to filter							
Subtotal				10	3	0	0

* All surface water PWS's in Iowa have filtration.

Contaminant	Action Level	Action Level Exceedance *		Treatment Techniques *		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Lead and Copper Rule	**Lead: 0.015 mg/L Copper: 1.3 mg/L**	Lead: 6 Copper: 2	Lead: 6 Copper: 2	Lead: 6 Copper: 2	Lead: 6 Copper: 2	-0-	-0-
Initial lead and copper tap M/R						-0-	-0-
Follow-up or routine lead and copper tap M/R						27	23

Treatment installation						-0-	-0-
Public education						-0-	-0-
Subtotal		Lead: 6 Copper: 2	Lead: 6 Copper: 2	Lead: 6 Copper: 2	Lead: 6 Copper: 2	27	23

* These are the new violations incurred in 1997, and do not include the continuing unresolved violations in 1997 from previous years.

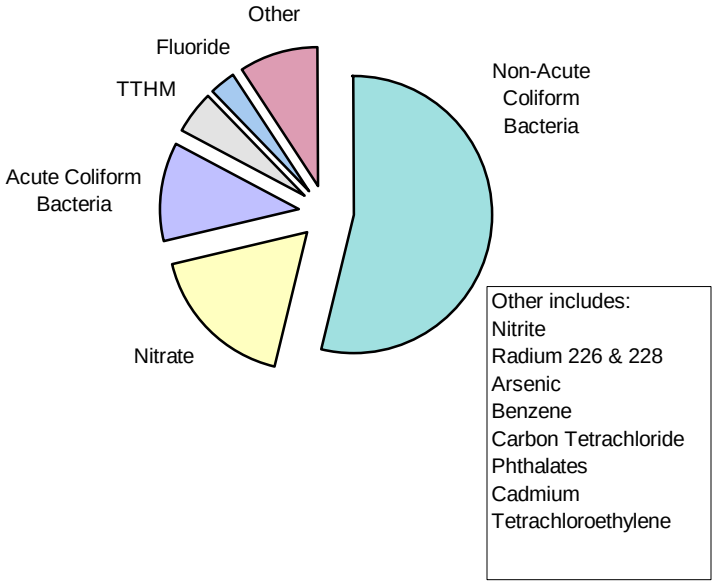
Statistical Summary

The MCL and M/R violation data are summarized in various charts in this section.

Maximum Contaminant Level Violations

Maximum contaminant level (MCL) violations are listed in Table B. For this reporting period there were a total of 195 MCL violations incurred by 132 PWS's. There were 1920 active PWS's in the State of Iowa in 1997, and 6.9% of those PWS's incurred a new MCL violation for at least one contaminant in 1997. Figure 6 only includes the new 1997 MCL violations.

Figure 6: MCL Violations by Contaminant



Contaminant	Number of Violations	Number of PWS's with Violations	% Violations (# Viol./Total # Viol.)
Cadmium	1	1	0.5
Total Phthalates	1	1	0.5
Tetrachloroethylene	1	1	0.5
Carbon Tetrachloride	1	1	0.5
Benzene	2	1	1.0
Arsenic	3	2	1.5
Radium 226 & 228	3	3	1.5
Nitrite	5	3	2.6
Fluoride	6	2	3.1
Total Trihalomethanes (TTHM)	10	3	5.1
Coliform Bacteria - Acute MCL	23	21	11.8
Nitrate	34	18	17.4
Coliform Bacteria - Non-Acute MCL	105	88	54.0
Total	195	132 *	100

* Some PWS's had MCL violations for more than one contaminant, and are only counted once in the total.

The number and types of Enforcement Actions for the 195 MCL violations in 1997 are listed in Figure 7.

Figure 7: Enforcement Actions for 1997 MCL Violations

Type of Enforcement Actions	Number of Enforcement Actions
Formal Notice of Violation	2
Referred for Administrative Order	2
Administrative Order without Penalty	13
Administrative Order with Penalty	14
Bilateral Compliance Agreement Signed	17
Public Notification Requested	20
Public Notification Received	20
Compliance Achieved	107

The total number of samples collected compared to the number of 1997 MCL violations by contaminant are shown in Figure 8.

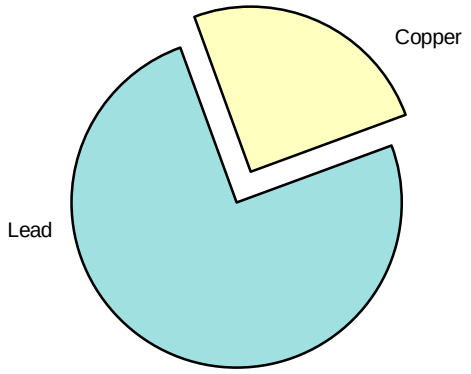
Figure 8: MCL Violations and Total Number of Samples Collected for each Contaminant

Contaminant	Number of MCL Violations	Total Number of Samples Collected	% of MCL Violations/Total Samples
Cadmium	1	176	0.57
Total Phthalates	1	254	0.39
Tetrachloroethylene	1	298	0.34
Carbon Tetrachloride	1	263	0.38
Benzene	2	261	0.77
Arsenic	3	194	0.15
Radium 226 & 228	3	150	2.0
Nitrite	5	541	0.09
Fluoride	6	484	1.2
Total Trihalomethanes (TTHM's)	10	279	3.6
Nitrate *	34	3,418	0.99
Coliform Bacteria	128	51,180	0.25
Total	195	57,498	0.34 %

* Includes one individual combined nitrate-nitrite MCL violation.

Action Level Exceedances for Lead & Copper in 1997 are listed in Figure 9.

Figure 9: New Lead or Copper Action Level Exceedances in 1997



Contaminant	# of new AL Exceedances in 1997	# of PWS with new AL exceedances in 1997	# of Continuing Unresolved AL Exceedances	# of PWS's with Continuing Unresolved Exceedances
Copper	2	2	93	93
Lead	6	6	54	54
Copper & Lead	0	0	12	12
Total	8	8	171 total # of violations *	159 total # of PWS's in violation

* There were 105 Copper and 66 Lead Action Level Exceedances. This total represents all of the exceedances counted separately as Copper or Lead.

Treatment technique violations of the Surface Water Treatment Rule (SWTR) are shown in Figure 10.

Figure 10: 1997 SWTR Treatment Technique Violations

Type of Treatment Technique	Number of Violations	Number of PWS's with Exceedances
Residual Disinfectant	1	1
CT Ratio	3	2
Turbidity (average)	6	3
Total	10	3*

* Two PWS's had multiple treatment technique type violations.

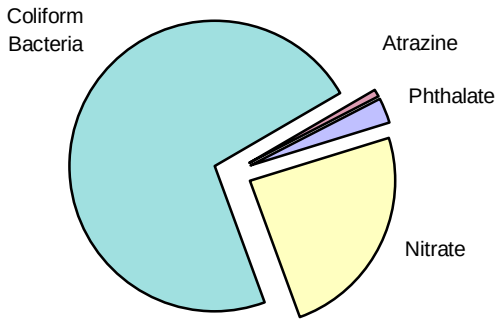
SNC Monitoring and Reporting Violations

Monitoring and Reporting (M/R) Violations that are significant (SNC's), as determined by the EPA Administrator in consultation with the States, are listed in Table A and itemized in Table C.

For this reporting period there were 111 M/Rs incurred by 39 PWS's which met the criteria of an SNC. A total of 2.0% of Iowa's 1920 active PWS's were identified as SNC's for failure to monitor.

Figure 11 lists the M/R violations for each specific contaminant.

Figure 11: 1997 SNC Monitoring/Reporting Violations by Contaminant



Contaminant	Number of Violations	Number of PWS's with Violations	% Violations (# Violations/Total)
Atrazine	1	1	0.9
Di(2-ethyl hexyl) phthalate [Total Phthalate]	3	1	2.7
Nitrate	27	20	24.3
Coliform Bacteria	80	28	72.1
Total	111	39*	100

* A PWS can have SNC M/R violations for more than one contaminant.

The most recent enforcement action for each of the 111 SNC M/R violations in 1997 are shown in Figure 12.

Figure 12: Most Recent Enforcement Action for Each SNC M/R Violation

Types of Enforcement Actions	Number of Enforcement Actions
Referred to Attorney General (AG)	1
Referred for Administrative Order	2
Bilateral Compliance Agreement Signed	3
Administrative Order without Penalty	4
Administrative Order with Penalty	16
Compliance Achieved	85

The types of the various SNC M/R violations are listed in Figure 13.

Figure 13: Number and Types of SNC M/R Violations

Violation Type	Number of Violations
Repeat (coliform) MINOR Monitoring Violation	1
Routine (coliform) MINOR Monitoring Violation	12
Repeat (coliform) MAJOR Monitoring Violation	15
Regular Monitoring Violation (all other non-coliform contaminants)	31
Routine (coliform) MAJOR Monitoring Violation	52
Total	111

The violations for failure to monitor and for failure to report the 90th percentiles for the Lead & Copper program in 1997 are listed in Figure 14. This lead and copper data is from the IDNR's database, not from the SDWIS/FED database.

Figure 14: Lead & Copper Monitoring and Reporting Violations

Violation Type	Number of Violations	Number of PWS with Violations
Lead & Copper Monitoring Violation	19	15
Lead & Copper 90th Percentile Reporting Violation	8	8
Total	27	23

Full Report

The Full Report is a detailed listing of all the MCL, SNC, Lead & Copper Rule, and TT violations of each regulated SDWA contaminant, along with the name of the PWS which incurred that violation. Violations can be resolved in a number of ways, as discussed below. The individual reports are listed in Tables B - Table G.

1997 MCL Violations Report

The **1997 MCL Violations Report**, shown in Table B (page 44), lists all of the MCL violations within the 1997 reporting period. The MCL data originated from Iowa's WSFL database.

Report Legend for Table B

PWS NAME	Business name of the Public Water System
POP.	Population which could use the water, reported to IDNR by the PWS. For municipal systems, it is the most recent official census
PWSID NUMBER	Public Water System Identification number, a unique and dedicated number permanently assigned to each PWS
COUNTY	County location of PWS
NAME OF CONTAMINANT	An analyte which is monitored under the SDWA
VIOL. NUMBER	A unique and dedicated identification number assigned to each violation as it occurs. (IDNR use only)
DATE OF VIOLATION	Date or time period the violation occurred
TYPE OF ENFORCEMENT	Most recent action taken by the PWS and/or the IDNR in response to the violation
DATE OF ACTION	Date the follow-up action or enforcement action occurred

General Description of MCL Violations and Enforcement Actions

A MCL violation can occur for any regulated contaminant where EPA has determined a MCL. The monitoring frequency is dependent upon both the type of contaminant and the levels previously found in a particular PWS for that contaminant. The most frequent possible occurrence of a MCL violation is once a month. Once a MCL violation has occurred, a supply must have six consecutive months without a MCL or M/R violation for that contaminant before it is considered to be returned to compliance. The violation is then coded Compliance Achieved in the WSFL database.

For multiple repeat MCL violations of a contaminant, the IDNR issues a revised operation permit with conditions that require the PWS to remediate the MCL violation by correcting operation deficiencies, adding treatment, blending water sources, or obtaining an alternative source of

drinking water. Alternative sources may include construction of a new well or connection to another PWS. The violation is coded BCA (Bilateral Compliance Agreement) Signed. Once the violation is resolved, it is coded Compliance Achieved in the WSFL database.

A BCA is a Water Supply Operation Permit which has an appendix attached that defines remediation of a violation with a schedule for completion of that remediation (corrective action). For coliform bacteria, if two non-acute MCL violations or one acute MCL violation occur in a 12-month period, the IDNR issues a revised operation permit with conditions that require that PWS to remediate the MCL problem. The violation is coded as BCA Signed, and once the violation is resolved, it is coded as Compliance Achieved in the WSFL database.

If four acute nitrate/nitrite MCL violations occur in a 12-month period, the IDNR issues a revised operation permit with conditions that require that PWS to remediate the MCL problem. The violation is coded as BCA Signed, and once the violation is resolved, it is coded as Compliance Achieved in the WSFL database.

When a PWS continues to violate the MCL for a particular contaminant or is unwilling or unable to remediate the MCL, the IDNR issues an Administrative Order (AO), which is the next step in legally enforcing the BCA. The violation is coded as AO w/ Penalty (Administrative Order with monetary Penalty) or AO w/o Penalty (Administrative Order without monetary Penalty). AO's are generally issued with a monetary penalty, but may be issued without a penalty under certain circumstances. AO's issued to a PWS due to MCL violations are usually accompanied by a BCA which outlines the compulsory schedule for remediation.

For those PWS's listed in this report that show Compliance Achieved, BCA Signed, AO With Penalty (AO w/ Penalty), AO Without Penalty (AO w/o Penalty), Referred to Attorney General (AG), or Formal Notice of Violation Issued (NOV), under the TYPE OF FOLLOW-UP ACTION, appropriate enforcement actions have been taken by the State.

The other follow-up actions listed indicate the most recent action taken by the PWS. Those PWS's listed in this report that show Public Notice Requested or Public Notice Received under the TYPE OF FOLLOW-UP ACTION, have not been returned to compliance as of the date of this report. All of these PWS's are currently being tracked by the IDNR. When the criteria for Compliance Achieved are met, the violation is appropriately coded. Failure to achieve compliance may result in the issuance of a BCA with a schedule for remediation and/or an AO with penalty.

There were 195 new MCL violations from 132 PWS's for this reporting period.

The Radionuclides category is the only MCL category which can have unresolved violations from previous years. The **Continuing Combined Radium 226 and 228 MCL Violations (Pre-1997) Report**, shown in Table C (page 55), lists the PWS's with these unresolved violations.

Report Legend for Table C

PWS NAME	Business name of the Public Water System
POP.	Population which could use the water, reported to IDNR by the PWS. For municipal systems, it is the most recent official census.
PWSID NUMBER	Public Water System Identification number, a unique and dedicated number permanently assigned to each PWS
COUNTY	County location of PWS
BEGINNING DATE OF COMPLIANCE SAMPLE	Date of the first of four consecutive quarter samples which comprise the composite sample
COMPLIANCE STATUS	Compliance status - all of the violations are currently unresolved

1997 SNC Monitoring/Reporting Violations Report

The **1997 SNC M/R Violations Report**, listed in Table D (page 56), specifies the Monitoring and Reporting (M/R) violations that are significant as determined by the EPA Administrator in consultation with the States. The PWS's with these significant M/R violations are designated as Significant Non-Compliers (SNC's). The SNC M/R data originated from the SDWIS/FED database, and does not include any data from the Lead & Copper Rule.

Report Legend for Table D

PWS NAME	Business name of the Public Water System
POP.	Population which could use the water, reported to IDNR by the PWS. For municipal systems, it is the most recent official census.
PWSID NUMBER	Public Water System Identification number, a unique and dedicated number permanently assigned to each PWS
COUNTY	County location of PWS
NAME OF CONTAMINANT	An analyte which is monitored under the SDWA
VIOL. TYPE	Type of violation
VIOL. NUMBER	A unique and dedicated identification number assigned to each violation as it occurs (IDNR use only)
DATE OF VIOLATION	Date or time period the violation occurred, which has already been converted during data transmission from WSFL to SDWIS/FED to reflect the beginning of the monitoring period when the sample was due
TYPE OF ENFORCEMENT	Most recent action taken by the PWS and/or the IDNR in response to the violation
DATE OF ACTION	Date the follow-up action or enforcement action occurred

General Description of Monitoring/Reporting Violations and Enforcement Actions

The monitoring requirements for the contaminant types vary, depending upon the specific contaminant type as well as the historic levels of each specific contaminant found in the water supply. The most frequent monitoring requirement is for a monthly sample, and the least frequent monitoring requirement is for one sample every nine years.

The criteria for referral for legal action is dependent upon the number of M/R violations assigned to the PWS for a given contaminant.

> Monthly monitoring requirements:
> The criteria for an AOP for M/R violations is four or more monthly M/R violations in a 12-month period. If the PWS meets this criteria, the IDNR will issue an AOP for failure to collect the required monthly compliance samples.
>
> Quarterly monitoring requirements:
> The criteria for an AO for M/R violations is two or more quarterly M/R violations in a 12-month period. If the PWS meets this criteria, the IDNR will issue an AOP for failure to collect the required quarterly compliance samples.
>
> Six-month or less frequent monitoring requirements:
> If a M/R violation occurs for a contaminant on a six-month, annual, once per three years, once per four years, once per five years, or once per nine years sampling frequency, a NOV and a BCA is issued by the IDNR with a stipulated schedule for sample collection, which is usually one additional calendar quarter. If the PWS does not meet this deadline, the IDNR will immediately issue an AOP for failure to collect the required compliance sample. Any M/R violation of a contaminant with a semi-annual sampling frequency immediately meets the EPA SNC criteria.

Any PWS on the SNC list must be brought back into compliance within one calendar quarter of identification from EPA to the States. Otherwise, IDNR must take a formal compliance action such as issuance of an AOP, or else EPA may issue an NOV directly to the State or the PWS.

There were 111 SNC M/R violations from 39 PWS's for this reporting period.

1997 Treatment Techniques Violations Report

The **1997 Treatment Techniques Violations Report**, listed in Table E (page 61), specifies the Treatment Technique Violations for Iowa PWS's in 1997. These violations include both the Lead and Copper Rule and the Surface Water Treatment Rule.

Report Legend for Table E

PWS NAME	Business name of the Public Water System
POP.	Population which could use the water, reported to IDNR by the PWS. For municipal systems, it is the most recent official census.
PWSID NUMBER	Public Water System Identification number, a unique and dedicated number permanently assigned to each PWS
COUNTY	County location of PWS
TT VIOLATION TYPE	Specific type of treatment technique which was not achieved
DATE OF VIOLATION	Time period the violation occurred
TYPE OF ENFORCEMENT/ NEXT REQUIRED ACTION	Most recent enforcement action taken by the PWS and/or the IDNR in response to the violation; or next required action by the PWS
DATE OF ACTION	Date the most recent follow-up or enforcement action occurred

There were 18 TT violations from 10 Iowa PWS's in this reporting period, which includes the TT violations from the Surface Water Treatment Rule and Lead & Copper Program.

The Lead and Copper program requires remediation of the action level exceedances which may take several years to implement. Until the PWS has two acceptable sampling rounds after exceeding an action level, it is considered to be out of compliance. Those PWS's which had an unresolved action level exceedance in 1997 are listed in Table F (page 62): **Continuing Lead and Copper Action Level Exceedances (Pre-1997)**.

Report Legend for Table F

PWS NAME	Business name of the Public Water System
POP.	Population which could use the water, reported to IDNR by the PWS. For municipal systems, it is the most recent official census.
PWSID NUMBER	Public Water System Identification number, a unique and dedicated number permanently assigned to each PWS
COUNTY	County location of PWS
EXCEEDANCE: LEAD / COPPER	Contaminant which exceeded the action level
CURRENT CORROSION CONTROL & SAMPLING STATUS	Action: Next action required of the PWS for both corrosion control program and sample collection Due Date: Date when the action must be completed

In 1997, there were 171 pre-1997 continuing unresolved action level exceedances from 159 Iowa PWS's.

1997 Treatment Techniques Monitoring/Reporting Violations Report

The **1997 Treatment Techniques Monitoring/Reporting Violations Report**, listed in Table G (page 73), specifies the PWS's who incurred monitoring/reporting violations in 1997. These violations were all for the Lead and Copper Rule.

Report Legend for Table G

PWS NAME	Business name of the Public Water System
POP.	Population which could use the water, reported to IDNR by the PWS. For municipal systems, it is the most recent official census.
PWSID NUMBER	Public Water System Identification number, a unique and dedicated number permanently assigned to each PWS
COUNTY	County location of PWS
MONITORING PERIOD	97ra or rt: June 1 - September 30, 1997 97Q1&2: January 1 - June 30, 1997 97Q3&4: July 1 - December 31, 1997
VIOLATION	Type of violation
TYPE OF ENFORCEMENT	Most recent enforcement action taken by the PWS or IDNR, or current status of the violation
DATE OF ACTION	Date of the most recent action

There were 27 TT monitoring/reporting violations from 23 Iowa PWS's in this reporting period.

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
ACKLEY MUNICIPAL WATER WORKS	1696	IA4201001	HARDIN	Non-Acute Bacteria	19970001299	5/7/97	Compliance Achieved	11/07/97
ADEL MUNICIPAL WATER WORKS	3304	IA2503003	DALLAS	Non-Acute Bacteria	19980000213	12/3/97	PN Received	01/14/98
AG PROCESSING INCORPORATED	75	IA9774002	WOODBURY	Non-Acute Bacteria	19970001513	6/16/97	Compliance Achieved	11/14/97
AMBER WATER SUPPLY	60	IA5303038	JONES	Non-Acute Bacteria	19970002124	9/10/97	Compliance Achieved	04/28/98
AMERICAN HONDA MOTOR CO	173	IA8222180	SCOTT	Non-Acute Bacteria	19980000069	10/29/97	Referred for AO	05/19/98
ANCHOR INN (GARBER)	35	IA2232776	CLAYTON	Nitrate	19980000031	9/29/97	BCA Signed	12/22/97
			CLAYTON	Nitrate	19980000168	11/18/97	BCA Signed	12/22/97
			CLAYTON	Nitrate	19980000223	12/15/97	BCA Signed	12/22/97
ANTHONY'S RESORT	50	IA3183877	DUBUQUE	Acute Bacteria	19970001954	7/1/97	AO w/o Penalty	08/22/97
ANTIQUE ACRES	28	IA0709637	BLACK HAWK	Nitrate	19970000493	1/1/97	AO w/o Penalty	08/01/97
			BLACK HAWK	Nitrate	19970001321	4/1/97	AO w/o Penalty	08/01/97
			BLACK HAWK	Nitrate	19970001888	7/1/97	AO w/o Penalty	08/01/97
			BLACK HAWK	Nitrate	19970001976	8/1/97	AO w/o Penalty	08/01/97
			BLACK HAWK	Nitrate	19970002135	9/1/97	AO w/o Penalty	08/01/97
			BLACK HAWK	Nitrate	19980000022	10/8/97	AO w/o Penalty	08/01/97
			BLACK HAWK	Nitrate	19980000192	11/26/97	AO w/o Penalty	08/01/97
			BLACK HAWK	Nitrate	19980000231	12/16/97	AO w/o Penalty	08/01/97
ASHLEY INN MOTEL & TRAILER CT.	40	IA1700649	CERRO GORDO	Arsenic	19970001289	3/31/97	BCA Signed	01/13/97
BACKBONE STATE PARK	25	IA2821906	DELAWARE	Non-Acute Bacteria	19970001042	3/17/97	Compliance Achieved	10/07/97

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
BACKBONE STATE PARK	25	IA2821906	DELAWARE	Acute Bacteria	19970001048	3/26/97	Compliance Achieved	10/07/97
			DELAWARE	Nitrate	19970001047	3/26/97	Compliance Achieved	03/03/98
BAHL WATER CORPORATION #2	70	IA3126303	DUBUQUE	Radium 226 & 228 Combined	19980000633	4/25/97	BCA Signed	02/26/98
BEAVER HILLS COUNTRY CLUB	107	IA0709886	BLACK HAWK	Non-Acute Bacteria	19970001643	7/9/97	PN Received	07/28/97
BEDFORD WATER WORKS	1528	IA8709096	TAYLOR	Total Trihalomethanes	19970000969	1/7/97	PN Received	03/11/97
			TAYLOR	Total Trihalomethanes	19970001639	4/1/97	PN Received	07/31/97
			TAYLOR	Total Trihalomethanes	19970001983	7/1/97	PN Requested	08/21/97
BEEDS LAKE HOME OWNERS ASSOCIATION	75	IA3500933	FRANKLIN	Non-Acute Bacteria	19970001927	7/29/97	Compliance Achieved	03/25/98
BEN HAVEN MOBILE HOME PARK	100	IA1074601	BUCHANAN	Non-Acute Bacteria	19980000303	12/30/97	AO w/ Penalty	04/02/98
BIG ROCK COUNTRY CLUB	52	IA3342890	FAYETTE	Acute Bacteria	19980000083	10/31/97	PN Received	11/15/97
BLUFF LAKE CATFISH FARM	125	IA4950794	JACKSON	Non-Acute Bacteria	19970000978	1/1/97	Compliance Achieved	11/24/97
			JACKSON	Non-Acute Bacteria	19970000843	1/29/97	Compliance Achieved	11/24/97
BROOKLYN WATER DEPARTMENT	1439	IA7909047	POWESHIEK	Radium 226 & 228 Combined	19980000735	6/30/97	PN Requested	04/08/98
BROWN BOTTLE RESTAURANT	225	IA0709201	BLACK HAWK	Non-Acute Bacteria	19970001913	7/30/97	Compliance Achieved	03/25/98
CASEYS GENERAL STORE	706	IA5221201	JOHNSON	Non-Acute Bacteria	19970001990	8/19/97	PN Received	09/01/97
			JOHNSON	Non-Acute Bacteria	19980000088	11/5/97	PN Received	11/20/97
CASTANA MUNICIPAL WATER SUPPLY	159	IA6715083	MONONA	Non-Acute Bacteria	19970000814	1/1/97	Compliance Achieved	07/08/97
CHESTNUT RIDGE	50	IA5784312	LINN	Non-Acute Bacteria	19970002112	9/4/97	Compliance Achieved	04/07/98
CLARINDA MENTAL HEALTH INST	2500	IA7329501	PAGE	Non-Acute Bacteria	19970001483	6/12/97	Compliance Achieved	01/05/98

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
CLARINDA MENTAL HEALTH INST	2500	IA7329501	PAGE	Non-Acute Bacteria	19970001654	7/16/97	Compliance Achieved	01/05/98
CLEAR LAKE BAKERY INC.	225	IA1716895	CERRO GORDO	Non-Acute Bacteria	19970000959	1/8/97	Compliance Achieved	09/30/97
CORALVILLE LAKE-WEST OVERLOOK	1144	IA5225411	JOHNSON	Non-Acute Bacteria	19970002091	8/26/97	Compliance Achieved	04/23/98
COUNTRY HILLS WATER CORP	41	IA3122301	DUBUQUE	Non-Acute Bacteria	19980000027	9/30/97	Compliance Achieved	03/31/98
COUNTRY HOME ESTATES	39	IA1900638	CHICKASAW	Non-Acute Bacteria	19970002127	9/9/97	Compliance Achieved	03/02/98
COUNTRY LIVING CARE CENTER	40	IA8600901	TAMA	Non-Acute Bacteria	19970001298	5/6/97	Compliance Achieved	03/25/98
DARRELL'S PLACE	150	IA0533714	AUDUBON	Non-Acute Bacteria	19980000212	12/3/97	PN Requested	12/08/97
DAWSON WATER WORKS	174	IA2525010	DALLAS	Non-Acute Bacteria	19970001655	7/14/97	Compliance Achieved	02/19/98
DIAMOND EAGLE VILLAGE	37	IA2258603	CLAYTON	Acute Bacteria	19970001640	7/1/97	Compliance Achieved	02/03/98
			CLAYTON	Acute Bacteria	19970001953	7/1/97	Compliance Achieved	02/03/98
			CLAYTON	Non-Acute Bacteria	19970001932	7/29/97	Compliance Achieved	02/03/98
DIETRICK MOBILE HOME PARK	92	IA3800600	GRUNDY	Acute Bacteria	19980000005	10/2/97	Compliance Achieved	04/02/98
DIKE WATER SUPPLY	875	IA3815042	GRUNDY	Acute Bacteria	19980000160	11/11/97	Compliance Achieved	05/11/98
DOLLIVER MUNI WATER SUPPLY	103	IA3215044	EMMET	Acute Bacteria	19980000078	11/7/97	PN Received	12/02/97
DONNELLSON MUNI WATER WORKS	940	IA5620046	LEE	Non-Acute Bacteria	19970002094	8/25/97	Compliance Achieved	03/02/98
DOT-4 (I-680 RA 024N LOVELAND)	255	IA7838728	POTTAWATTAMIE	Non-Acute Bacteria	19970002136	9/15/97	Compliance Achieved	03/02/98
EASTERN IA PORK MANUFACTURING INC	80	IA2825101	DELAWARE	Nitrate	19980000170	11/18/97	BCA Signed	04/14/98
			DELAWARE	Nitrate	19980000291	12/18/97	BCA Signed	04/14/98
ELBERON WATER SUPPLY	203	IA8631003	TAMA	Non-Acute Bacteria	19970001978	7/31/97	Compliance Achieved	01/05/98

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
ELECTRIC PARK CAMPGROUNDS	35	IA7465429	PALO ALTO	Non-Acute Bacteria	19970001909	7/29/97	PN Requested	07/31/97
EMMETSBURG MUNI UTIL WATER DEPT	3940	IA7428021	PALO ALTO	Non-Acute Bacteria	19980000232	12/15/97	PN Received	02/02/98
EVERLY WATER SUPPLY	706	IA2115029	CLAY	Nitrate	19980000175	11/11/97	BCA Signed	01/23/98
			CLAY	Nitrate	19980000229	12/9/97	BCA Signed	01/23/98
FAMILY TABLE RESTURANT	210	IA1656750	CEDAR	Acute Bacteria	19970002134	9/15/97	Compliance Achieved	03/30/98
FORT DODGE ANIMAL HEALTH-CHARLES CITY	475	IA3405120	FLOYD	Non-Acute Bacteria	19980000037	10/13/97	Compliance Achieved	04/13/98
FT MADISON MUNI WATER WORKS	11618	IA5625062	LEE	Non-Acute Bacteria	19980000222	12/12/97	PN Received	01/02/98
GALVA WATER SUPPLY	398	IA4715072	IDA	Benzene	19970000970	1/21/97	Compliance Achieved	11/07/97
			IDA	Benzene	19970001505	4/1/97	Compliance Achieved	11/07/97
			IDA	Nitrate	19970001512	6/18/97	Compliance Achieved	05/14/97
			IDA	Nitrate	19970002201	9/17/97	Compliance Achieved	11/07/97
			IDA	Nitrate	19980000042	10/21/97	Compliance Achieved	11/07/97
GEORGIA PACIFIC CORP GYPSUM DIV.	160	IA9433188	WEBSTER	Acute Bacteria	19970001283	4/30/97	Compliance Achieved	09/18/97
			WEBSTER	Non-Acute Bacteria	19970001371	5/15/97	Compliance Achieved	09/18/97
			WEBSTER	Acute Bacteria	19970001465	6/2/97	Compliance Achieved	09/18/97
			WEBSTER	Non-Acute Bacteria	19980000299	12/22/97	PN Requested	12/29/97
GLOECKNERS SUBDIVISION	44	IA3128387	DUBUQUE	Non-Acute Bacteria	19970001987	8/31/97	Compliance Achieved	03/23/98
GRAFTON WATER SUPPLY	282	IA9825097	WORTH	Non-Acute Bacteria	19970001641	7/1/97	Compliance Achieved	01/16/98
HARBOR HOUSE	105	IA0330705	ALLAMAKEE	Non-Acute Bacteria	19970001885	7/21/97	Compliance Achieved	12/09/97

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
HARGRAVE-MCELENEY, INC.	185	IA5225202	JOHNSON	Phthalates, Total	19970001376	3/31/97	Compliance Achieved	01/05/98
HICKORY ESTATES	44	IA8227301	SCOTT	Non-Acute Bacteria	19980000081	10/30/97	PN Requested	11/10/97
			SCOTT	Non-Acute Bacteria	19980000190	11/26/97	PN Requested	11/10/97
			SCOTT	Non-Acute Bacteria	19980000287	12/15/97	PN Requested	11/10/97
HICKORY GROVE (GOLF COURSE)	28	IA3353746	FAYETTE	Nitrate	19980000002	9/29/97	PN Requested	10/02/97
HICKORY HILLS SECOND ANNEX	116	IA8215373	SCOTT	Non-Acute Bacteria	19970000979	1/3/97	Compliance Achieved	06/25/97
HOLDEN'S FOUNDATION SEEDS # 3	110	IA4884834	IOWA	Acute Bacteria	19970001891	7/24/97	PN Requested	07/28/97
HUBBARD GOLF & RECREATION	25	IA4254801	HARDIN	Non-Acute Bacteria	19970000805	1/31/97	Compliance Achieved	09/30/97
IBP INC COLUMBUS JCT	1300	IA5815101	LOUISA	Non-Acute Bacteria	19970001466	6/2/97	Compliance Achieved	11/25/97
INDEPENDENCE MOBILE HOME PARK	60	IA1000600	BUCHANAN	Acute Bacteria	19970001663	6/1/97	Compliance Achieved	11/25/97
INDEPENDENCE WATER DEPT	5972	IA1037070	BUCHANAN	Non-Acute Bacteria	19970001959	8/1/97	Compliance Achieved	03/23/98
INDIAN HILLS GOLF & COUNTRY CLUB	60	IA5879826	LOUISA	Non-Acute Bacteria	19970001067	4/15/97	Compliance Achieved	07/28/97
IOWA CO PK-IOWA CONSERVATION	52	IA4840959	IOWA	Non-Acute Bacteria	19970002225	9/24/97	PN Requested	09/02/97
IRA WATER ASSOCIATION	70	IA5031301	JASPER	Nitrite	19970000490	1/31/97	Compliance Achieved	12/19/97
			JASPER	Nitrite	19970000972	2/28/97	Compliance Achieved	12/19/97
			JASPER	Nitrite	19970001066	4/30/97	Compliance Achieved	12/19/97
			JASPER	Non-Acute Bacteria	19970001458	5/1/97	Compliance Achieved	12/19/97
J WOOD PARK	25	IA2234441	CLAYTON	Non-Acute Bacteria	19970002117	9/9/97	BCA Signed	12/05/97
KENDALL YOUNG PARK	144	IA4063403	HAMILTON	Non-Acute Bacteria	19970001884	7/22/97	Compliance Achieved	02/18/98

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
KLEMME RECREATION CLUB	50	IA4155201	HANCOCK	Acute Bacteria	19970001853	7/14/97	Compliance Achieved	06/23/97
			HANCOCK	Non-Acute Bacteria	19970002226	9/23/97	AO w/ Penalty	08/18/97
LAKE LAJUNE ESTATES	40	IA4728301	IDA	Non-Acute Bacteria	19970000962	2/5/97	Compliance Achieved	08/27/97
LAKE ODESSA CABIN OWNERS ASSOC.	41	IA5879424	LOUISA	Non-Acute Bacteria	19980000038	10/15/97	Compliance Achieved	04/30/98
LEHIGH WATER SUPPLY	534	IA9453071	WEBSTER	Radium 226 & 228 Combined	19980000550	9/30/97	Formal NOV	02/09/98
LONG BRANCH MAINTENANCE CORP.	350	IA3900300	GUTHRIE	Fluoride	19970001038	2/22/97	BCA Signed	12/27/96
			GUTHRIE	Fluoride	19970001494	4/1/97	BCA Signed	12/26/96
LOUISA-MUSCATINE COMMUNITY SCHOOL	1190	IA5847537	LOUISA	Non-Acute Bacteria	19980000215	11/21/97	Compliance Achieved	05/20/98
LUND'S CAMP	72	IA0300641	ALLAMAKEE	Acute Bacteria	19970001589	6/30/97	PN Requested	07/03/97
MALVERN WATER SUPPLY	1210	IA6545020	MILLS	Nitrate	19980000309	12/22/97	PN Received	02/05/98
MARENGO WATER SUPPLY	2270	IA4843033	IOWA	Non-Acute Bacteria	19970001931	7/28/97	Compliance Achieved	02/17/98
MEREDITH PARK	30	IA7633902	POCAHONTAS	Nitrate	19970001076	4/24/97	Compliance Achieved	06/30/97
MILLERSBURG WATER DEPT	188	IA4852082	IOWA	Non-Acute Bacteria	19970000844	1/28/97	Compliance Achieved	06/19/97
MOUNT AYR WATER TREATMENT PLANT	1796	IA8055014	RINGGOLD	Total Trihalomethanes	19970000870	1/13/97	PN Received	03/21/97
			RINGGOLD	Total Trihalomethanes	19970001566	4/1/97	PN Received	07/16/97
			RINGGOLD	Total Trihalomethanes	19970002224	9/9/97	PN Requested	09/29/97
			RINGGOLD	Total Trihalomethanes	19980000302	12/2/97	PN Requested	01/02/98
MOVILLE WATER SUPPLY	1306	IA9753022	WOODBURY	Nitrate	19970000989	1/29/97	Compliance Achieved	07/21/97
NORTHWOOD WATERWORKS	1940	IA9855077	WORTH	Tetrachloroethylene (PCE)	19980000226	11/17/97	Formal NOV	12/17/97

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
OAKWOOD PARK WATER ASSOCIATION	25	IA1700352	CERRO GORDO	Acute Bacteria	19970002090	8/28/97	Compliance Achieved	03/25/98
ORAN TAP & CAFE	51	IA3357769	FAYETTE	Non-Acute Bacteria	19970001928	7/29/97	Compliance Achieved	12/30/97
			FAYETTE	Non-Acute Bacteria	19970002092	8/26/97	Compliance Achieved	12/30/97
ORDER OF EAGLES/AERIE 4074	42	IA0709207	BLACK HAWK	Nitrate	19970000478	1/1/97	Compliance Achieved	06/30/97
			BLACK HAWK	Nitrate	19970001267	4/1/97	Compliance Achieved	06/30/97
OSAGE MUNICIPAL WATER SUPPLY	3439	IA6663001	MITCHELL	Non-Acute Bacteria	19970001930	7/29/97	Compliance Achieved	02/18/98
OSCEOLA WATER WORKS	4164	IA2038038	CLARKE	Total Trihalomethanes	19970000974	3/31/97	Compliance Achieved	01/22/98
			CLARKE	Total Trihalomethanes	19970001548	6/30/97	Compliance Achieved	01/22/98
			CLARKE	Total Trihalomethanes	19980000035	9/30/97	Compliance Achieved	01/22/98
PALO MINIMART	25	IA5765203	LINN	Nitrate	19970002230	9/18/97	AO w/ Penalty	03/27/98
			LINN	Nitrate	19980000044	10/22/97	AO w/ Penalty	03/27/98
			LINN	Nitrate	19980000230	11/25/97	AO w/ Penalty	03/27/98
PANORA WATER WORKS	1100	IA3971026	GUTHRIE	Nitrate	19970001391	4/1/97	Compliance Achieved	12/03/97
PARK HILLS UTILITY	70	IA6361301	MARION	Non-Acute Bacteria	19980000079	10/31/97	PN Requested	11/10/97
PARK MOTEL AND MOBILE HOME PK	20	IA5200642	JOHNSON	Non-Acute Bacteria	19970000977	1/1/97	Compliance Achieved	03/13/98
			JOHNSON	Non-Acute Bacteria	19970001964	8/13/97	Compliance Achieved	03/13/98
			JOHNSON	Non-Acute Bacteria	19970002126	9/11/97	Compliance Achieved	03/13/98
PATHWAY CHRISTIAN SCHOOL	77	IA9233501	WASHINGTON	Non-Acute Bacteria	19980000068	10/28/97	AO w/ Penalty	02/20/98
			WASHINGTON	Non-Acute Bacteria	19980000189	11/25/97	AO w/ Penalty	02/20/98

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
PELLA WATER WORKS DEPARTMENT	9481	IA6368033	MARION	Non-Acute Bacteria	19970001633	7/30/97	Compliance Achieved	02/17/98
PICTURED ROCKS METHODIST CAMP	29	IA5343413	JONES	Non-Acute Bacteria	19970002095	8/25/97	AO w/ Penalty	03/05/98
			JONES	Non-Acute Bacteria	19970002125	9/8/97	AO w/ Penalty	03/05/98
			JONES	Non-Acute Bacteria	19980000021	10/6/97	AO w/ Penalty	03/05/98
			JONES	Non-Acute Bacteria	19980000166	11/17/97	AO w/ Penalty	03/05/98
			JONES	Non-Acute Bacteria	19980000220	12/10/97	AO w/ Penalty	03/05/98
PINE LAKE CHRISTIAN CENTER	25	IA4236404	HARDIN	Non-Acute Bacteria	19980000072	10/27/97	Compliance Achieved	04/22/98
PIONEER WATER SYSTEM	46	IA4664043	HUMBOLDT	Non-Acute Bacteria	19970001284	4/29/97	Compliance Achieved	03/25/98
PLAINFIELD WATER SUPPLY	455	IA0960045	BREMER	Acute Bacteria	19980000026	9/30/97	AO w/ Penalty	12/22/97
			BREMER	Non-Acute Bacteria	19980000217	12/10/97	AO w/ Penalty	12/29/97
POWESHIEK WATER ASSOCIATION	9100	IA8670701	TAMA	Non-Acute Bacteria	19970001984	8/31/97	Compliance Achieved	04/13/98
PRAIRIE VALLEY COMMUNITY SCHOOL	355	IA1320501	CALHOUN	Non-Acute Bacteria	19980000028	10/8/97	Compliance Achieved	05/14/98
QUAIL CREEK GOLF COURSE	83	IA5252804	JOHNSON	Non-Acute Bacteria	19980000043	10/21/97	PN Received	11/04/97
RAYBURN COURT FOR MOBILE HOMES	45	IA1700628	CERRO GORDO	Arsenic	19970000976	3/31/97	BCA Signed	08/05/97
			CERRO GORDO	Arsenic	19970001926	6/30/97	BCA Signed	07/21/97
RICKETTS WATER SUPPLY	122	IA2441084	CRAWFORD	Non-Acute Bacteria	19970001308	5/12/97	Compliance Achieved	12/22/97
			CRAWFORD	Non-Acute Bacteria	19970001848	6/18/97	Compliance Achieved	12/22/97
RIVERSIDE LUTHERAN BIBLE CAMP	71	IA8584401	HAMILTON	Non-Acute Bacteria	19970001033	3/12/97	Compliance Achieved	09/30/97
RIVERTON WATER WORKS	333	IA3655071	FREMONT	Non-Acute Bacteria	19970002078	8/18/97	Compliance Achieved	04/13/98

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
ROCK VALLEY WATER SUPPLY	2540	IA8482096	SIOUX	Non-Acute Bacteria	19980000032	10/14/97	Compliance Achieved	05/14/98
RODNEY WATER SUPPLY	71	IA6743930	MONONA	Nitrate	19970000465	1/1/97	Compliance Achieved	07/07/97
ROWLEY ELEMENTARY SCHOOL	145	IA1080568	BUCHANAN	Non-Acute Bacteria	19970002198	9/30/97	Compliance Achieved	02/12/98
SAC COUNTY GOLF AND COUNTRY CLUB	35	IA8144817	SAC	Nitrate	19970001061	4/8/97	Compliance Achieved	02/10/98
SAGEVILLE ELEMENTARY SCHOOL	435	IA3126590	DUBUQUE	Non-Acute Bacteria	19970002077	8/19/97	Compliance Achieved	02/03/98
SALEM LUTH.CHRCH/CORRECTIONVILLE	68	IA9721883	WOODBURY	Nitrate	19970001857	6/29/97	Compliance Achieved	09/11/97
SCENIC VALLEY CONFERENCE CENTER & CAMP	42	IA0819402	BOONE	Non-Acute Bacteria	19980000159	11/10/97	Compliance Achieved	04/06/98
SCOTT CO PK-PINE GROVE	27	IA8251999	SCOTT	Non-Acute Bacteria	19970001413	5/22/97	BCA Signed	09/16/97
			SCOTT	Non-Acute Bacteria	19970001497	6/11/97	BCA Signed	09/16/97
SIOUX CITY WATER SUPPLY	80505	IA9778054	WOODBURY	Acute Bacteria	19970002079	8/20/97	Compliance Achieved	02/23/98
SLEEPY HOLLOW ENTERPRISES	55	IA5260601	JOHNSON	Cadmium	19970001305	3/31/97	Compliance Achieved	02/13/98
SOUTHDALE HOME OWNERS ASS'N	72	IA5500822	KOSSUTH	Non-Acute Bacteria	19980000188	11/25/97	Compliance Achieved	05/25/98
SOUTHEAST WEBSTER COMMUNITY SCHOOL	400	IA9414503	WEBSTER	Non-Acute Bacteria	19970000990	3/1/97	Compliance Achieved	09/05/97
SPRINGBROOK WATER DEPT	125	IA4984086	JACKSON	Acute Bacteria	19970002202	9/30/97	Compliance Achieved	02/02/98
ST.JOHN LUTH. CHURCH (MINEOLA)	25	IA6549801	MILLS	Non-Acute Bacteria	19980000218	12/8/97	PN Requested	12/15/97
STRAWBERRY POINT INDUSTRIAL PARK	102	IA2279101	CLAYTON	Nitrate	19980000293	12/17/97	BCA SIgned	04/16/98
SUBURBAN UTILITIES ASSOCIATION	54	IA8222306	SCOTT	Non-Acute Bacteria	19970001307	5/8/97	Compliance Achieved	11/06/97
			SCOTT	Acute Bacteria	19970001467	5/13/97	Compliance Achieved	11/06/97
SWISS VALLEY PARK	185	IA3126942	DUBUQUE	Non-Acute Bacteria	19970001594	7/3/97	Compliance Achieved	12/16/97

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
SWISS VALLEY PARK	185	IA3126942	DUBUQUE	Non-Acute Bacteria	19970001883	7/23/97	Compliance Achieved	12/16/97
SYLVAN ACRES	26	IA0732301	BREMER	Non-Acute Bacteria	19970002080	8/21/97	Compliance Achieved	02/09/98
TERRACE PARK MOBILE HOME COURT	45	IA5200649	JOHNSON	Acute Bacteria	19980000082	10/30/97	Compliance Achieved	04/29/98
THE NEW SHACK TAVERN	70	IA5715812	LINN	Non-Acute Bacteria	19970002231	9/25/97	PN Received	10/13/97
			LINN	Non-Acute Bacteria	19980000074	10/31/97	PN Received	11/18/97
THE ROSE BOWL	26	IA1750708	CERRO GORDO	Acute Bacteria	19980000167	11/17/97	Compliance Achieved	05/04/98
UNDERWOOD MOTEL	27	IA7869801	POTTAWATTAMIE	Nitrate + Nitrite	19980000290	11/18/97	Referred for AO	05/11/98
UNION WATER SUPPLY	448	IA4291038	HARDIN	Non-Acute Bacteria	19980000073	10/28/97	Compliance Achieved	04/28/98
VINTON MUNICIPAL WATER DEPT	5103	IA0688053	BENTON	Carbon Tetrachloride	19980000227	11/24/97	PN Received	12/31/97
WALNUT GROVE WATER COMPANY	65	IA8222303	SCOTT	Acute Bacteria	19970001442	5/29/97	Compliance Achieved	03/13/98
WAPSIE RIDGE GOLF COURSE, INC.	47	IA0965201	BREMER	Non-Acute Bacteria	19980000020	10/8/97	PN Received	10/15/97
WAPSIE VALLEY COM SCH-FAIRBANK	165	IA1025554	BUCHANAN	Non-Acute Bacteria	19970000491	1/1/97	Compliance Achieved	12/02/97
			BUCHANAN	Non-Acute Bacteria	19970001030	2/3/97	Compliance Achieved	12/02/97
WASHINGTON PRAIRIE LUTHERAN CHURCH	35	IA9630809	WINNESHIEK	Non-Acute Bacteria	19980000025	9/30/97	PN Requested	10/13/97
			WINNESHIEK	Non-Acute Bacteria	19980000067	10/28/97	PN Requested	10/31/97
			WINNESHIEK	Non-Acute Bacteria	19980000161	11/12/97	PN Requested	11/18/97
WESTERN HILLS (MOBILE) ESTATES	811	IA5208600	JOHNSON	Non-Acute Bacteria	19970001967	8/31/97	Compliance Achieved	04/01/98
WHISPERING OAKS	28	IA5200868	JOHNSON	Non-Acute Bacteria	19980000288	12/17/97	PN Received	12/31/97
WHITE OAKS HOMEOWNERS ASSOCIATION	40	IA7709302	POLK	Fluoride	19970000975	3/31/97	AO w/o Penalty	10/28/97

TABLE B: 1997 MCL VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. NUMBER	DATE VIOL. CREATED	TYPE OF ENFORCEMENT	DATE OF ACTION
WHITE OAKS HOMEOWNERS ASSOCIATION	40	IA7709302	POLK	Fluoride	19970001285	4/1/97	AO w/o Penalty	10/28/97
			POLK	Fluoride	19970001887	9/30/97	AO w/o Penalty	10/28/97
			POLK	Fluoride	19980000071	12/31/97	AO w/o Penalty	10/28/97
WILLIAMSBURG PUBLIC WATER SUPPLY	2380	IA4884023	IOWA	Nitrite	19970002128	8/4/97	PN Requested	09/16/97
WOODWARD STATE HOSPITAL	400	IA0800923	BOONE	Nitrite	19970001632	9/30/97	PN Received	07/22/97

TABLE C: CONTINUING COMBINED RADIUM 226 and 228 MCL VIOLATIONS (PRE-1997)

NAME	POPULATION	PWSID	COUNTY	BEGINNING DATE OF COMPOSITE SAMPLE*	COMPLIANCE STATUS **
AINSWORTH WATER WORKS	506	IA920300	WASHINGTON	9/5/97	Continuing MCL Violation
ARCADIA WATER SUPPLY	485	IA140306	CARROLL	7/26/95	Continuing MCL Violation
BELLEVUE MUNI UTILITIES	2239	IA491000	JACKSON	1/14/97	Continuing MCL Violation
BOXHOLM WATER SUPPLY	214	IA082503	BOONE	1/16/96	Continuing MCL Violation
BURT WATER SUPPLY	575	IA551006	KOSSUTH	2/18/97	Continuing MCL Violation
CALLENDER WATER SUPPLY	384	IA941706	WEBSTER	3/25/95	Continuing MCL Violation
CLERMONT WATER SUPPLY	523	IA331704	FAYETTE	12/11/95	Continuing MCL Violation
DENMARK MUNIC WATER SUPPLY ***	337	IA561702	LEE	8/21/96	Continuing MCL Violation
GALT MUNICIPAL WATER SUPPLY	43	IA993207	WRIGHT	8/21/95	Continuing MCL Violation
KLEMME WATER WORKS	587	IA415503	HANCOCK	5/12/97	Continuing MCL Violation
LANSING WATER SUPPLY	1007	IA034505	ALLAMAKEE	4/24/96	Continuing MCL Violation
LE GRAND WATER WORKS	854	IA645707	MARSHALL	2/5/96	Continuing MCL Violation
MARQUETTE WATER SUPPLY	479	IA225604	CLAYTON	4/29/97	Continuing MCL Violation
MORNING SUN WATER DEPARTMENT	841	IA585701	LOUISA	3/28/96	Continuing MCL Violation
MOUNT PLEASANT MUNICIPAL UTILITIES	8027	IA445301	HENRY	7/25/94	Continuing MCL Violation
ODEBOLT WATER SUPPLY ***	1158	IA814408	SAC	1/22/96	Continuing MCL Violation
PLANTATION VILLAGE MHP	110	IA290060	DES MOINES	12/31/96	Continuing MCL Violation
WALDENBERG COMMUNITY WATER SYSTEM	90	IA480230	IOWA	9/3/96	Continuing MCL Violation
WELLMAN MUNICIPAL WATERWORKS	1155	IA927609	WASHINGTON	4/16/96	Continuing MCL Violation
WHAT CHEER WATER SUPPLY	762	IA549301	KEOKUK	5/8/97	Continuing MCL Violation

* A composite sample requires one sample in each of four consecutive quarters. This date is the date the first sample was collected.
** Quarterly public notification and one four quarter composite sample every four years are required at this time.
*** Also exceeded Gross Alpha MCL of 15 pCi/L.

TABLE D: 1997 SNC MONITORING/REPORTING VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. TYPE	VIOL. NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
ALGONA COUNTRY CLUB	47	IA5502832	KOSSUTH	Nitrate	Regular	98 00102	4/1/96	Compliance Achieved	12/1/97
			KOSSUTH	Coliform (TCR)	Routine Major	97 01229	1/1/97	Compliance Achieved	4/7/97
ANCHOR INN (GARBER)	35	IA2232776	CLAYTON	Coliform (TCR)	Routine Major	97 01192	1/1/97	Compliance Achieved	4/14/97
			CLAYTON	Nitrate	Regular	97 00896	1/1/97	Compliance Achieved	4/14/97
			CLAYTON	Nitrate	Regular	97 01100	3/1/97	Compliance Achieved	4/14/97
			CLAYTON	Coliform (TCR)	Routine Major	98 00244	11/1/97	Compliance Achieved	1/13/98
			CLAYTON	Coliform (TCR)	Routine Major	98 00407	12/1/97	Compliance Achieved	1/13/98
ANTHONY'S RESORT	50	IA3183877	DUBUQUE	Coliform (TCR)	Routine Major	97 01338	4/1/97	AO without Penalty	8/22/97
			DUBUQUE	Coliform (TCR)	Routine Major	97 01526	5/1/97	AO without Penalty	8/22/97
			DUBUQUE	Coliform (TCR)	Routine Minor	97 01769	6/1/97	AO without Penalty	8/22/97
			DUBUQUE	Coliform (TCR)	Routine Minor	97 02015	7/1/97	Compliance Achieved	8/8/97
			DUBUQUE	Coliform (TCR)	Routine Minor	98 00124	10/1/97	Referred for AO	11/17/97
BEAVER HILLS COUNTRY CLUB	107	IA0709886	BLACK HAWK	Coliform (TCR)	Repeat Major	98 00452	10/1/97	Compliance Achieved	3/31/98
			BLACK HAWK	Coliform (TCR)	Routine Major	98 00277	11/1/97	Compliance Achieved	12/15/97
BLAIRS FERRY MANOR	75	IA5784316	LINN	Nitrate	Regular	98 00373	7/1/96	BCA Signed	2/6/98
			LINN	Nitrate	Regular	97 01091	1/1/97	Compliance Achieved	9/11/97
			LINN	Atrazine	Regular	98 00544	10/1/97	Compliance Achieved	3/16/98
BRISTOW MUNI WATER SUPPLY	200	IA1222044	BUTLER	Nitrate	Regular	97 01084	1/1/97	Compliance Achieved	5/7/97
CAMP HITAGA	84	IA5792401	LINN	Nitrate	Regular	98 00186	4/1/96	Compliance Achieved	5/4/98
CAMP TANAGER	87	IA5715401	LINN	Nitrate	Regular	97 02132	4/1/96	BCA Signed	9/18/97
CARPENTER BAR/GRILL	52	IA6616772	MITCHELL	Coliform (TCR)	Routine Major	97 01234	1/1/97	AO with Penalty	6/10/96
			MITCHELL	Nitrate	Regular	97 01093	1/1/97	AO with Penalty	6/10/96
			MITCHELL	Coliform (TCR)	Routine Major	97 01800	4/1/97	AO with Penalty	6/10/96

TABLE D: 1997 SNC MONITORING/REPORTING VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. TYPE	VIOL. NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
CARPENTER BAR/GRILL	52	IA6616772	MITCHELL	Nitrate	Regular	97 01680	4/1/97	AO with Penalty	6/10/96
			MITCHELL	Coliform (TCR)	Routine Major	97 02423	7/1/97	AO with Penalty	6/10/96
			MITCHELL	Nitrate	Regular	97 02251	7/1/97	AO with Penalty	6/10/96
			MITCHELL	Coliform (TCR)	Routine Major	98 00431	10/1/97	AO with Penalty	6/10/96
			MITCHELL	Nitrate	Regular	98 00377	10/1/97	AO with Penalty	6/10/96
CASEYS GENERAL STORE	706	IA5221201	JOHNSON	Coliform (TCR)	Repeat Major	98 00459	10/1/97	Compliance Achieved	11/5/97
CHARLIE'S SUPPER CLUB	85	IA5502731	KOSSUTH	Coliform (TCR)	Routine Major	97 01228	1/1/97	Compliance Achieved	9/30/97
			KOSSUTH	Coliform (TCR)	Routine Major	97 01792	4/1/97	Compliance Achieved	9/30/97
			KOSSUTH	Coliform (TCR)	Routine Major	98 00425	10/1/97	Referred for AO	6/8/98
D & S LAND COMPANY	36	IA1750761	CERRO GORDO	Coliform (TCR)	Routine Major	97 01190	1/1/97	Compliance Achieved	10/1/97
			CERRO GORDO	Coliform (TCR)	Routine Major	97 01756	4/1/97	Compliance Achieved	10/1/97
DAYS INN 2ND ADDITION	95	IA4884726	IOWA	Nitrate	Regular	98 00006	4/1/96	Compliance Achieved	10/20/97
DOT-4 (I80RA 029W & 30E UNDERWOOD)	1190	IA7869716	POTTAWATTAMIE	Coliform (TCR)	Routine Minor	97 02036	7/1/97	Compliance Achieved	8/12/97
			POTTAWATTAMIE	Coliform (TCR)	Routine Minor	98 00262	11/1/97	Compliance Achieved	12/3/97
FAMILY TABLE RESTURANT	210	IA1656750	CEDAR	Coliform (TCR)	Routine Major	97 01003	2/1/97	AO with Penalty	9/2/97
			CEDAR	Coliform (TCR)	Repeat Major	97 01361	4/1/97	AO with Penalty	9/2/97
			CEDAR	Coliform (TCR)	Routine Minor	97 01332	4/1/97	AO with Penalty	9/2/97
			CEDAR	Coliform (TCR)	Repeat Major	97 01820	6/1/97	AO with Penalty	9/2/97
			CEDAR	Coliform (TCR)	Repeat Major	97 02045	7/1/97	AO with Penalty	9/2/97
			CEDAR	Coliform (TCR)	Routine Minor	97 02323	9/1/97	AO without Penalty	9/24/97
			CEDAR	Coliform (TCR)	Routine Minor	98 00115	10/1/97	Compliance Achieved	3/30/98
GEORGIA PACIFIC CORP GYPSUM DIV.	160	IA9433188	WEBSTER	Coliform (TCR)	Repeat Minor	97 01840	4/1/97	Compliance Achieved	9/18/97
			WEBSTER	Coliform (TCR)	Repeat Major	97 01836	4/1/97	Compliance Achieved	9/18/97

TABLE D: 1997 SNC MONITORING/REPORTING VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. TYPE	VIOL. NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
GEORGIA PACIFIC CORP GYPSUM DIV.	160	IA9433188	WEBSTER	Coliform (TCR)	Routine Major	97 02070	7/1/97	Compliance Achieved	9/18/97
			WEBSTER	Coliform (TCR)	Routine Major	98 00140	10/1/97	Compliance Achieved	12/17/97
			WEBSTER	Coliform (TCR)	Routine Major	98 00267	11/1/97	Compliance Achieved	12/17/97
			WEBSTER	Coliform (TCR)	Repeat Major	98 00475	12/1/97	Compliance Achieved	3/26/98
GOLD KEY MOTEL	58	IA3544720	FRANKLIN	Nitrate	Regular	98 00057	7/1/96	Compliance Achieved	10/20/97
HICKORY ESTATES	44	IA8227301	SCOTT	Coliform (TCR)	Repeat Major	97 02534	9/1/97	Compliance Achieved	11/4/97
			SCOTT	Coliform (TCR)	Repeat Major	98 00272	11/1/97	Compliance Achieved	2/18/98
			SCOTT	Coliform (TCR)	Routine Minor	98 00283	11/1/97	Compliance Achieved	2/18/98
			SCOTT	Coliform (TCR)	Repeat Major	98 00471	12/1/97	Compliance Achieved	2/18/98
HIDDEN VALLEY MHP	46	IA9200600	WASHINGTON	Coliform (TCR)	Repeat Major	97 01366	4/1/97	Compliance Achieved	5/21/97
			WASHINGTON	Coliform (TCR)	Routine Major	97 02176	8/1/97	Compliance Achieved	4/7/98
			WASHINGTON	Coliform (TCR)	Routine Major	97 02479	9/1/97	Compliance Achieved	4/7/98
			WASHINGTON	Coliform (TCR)	Routine Major	98 00139	10/1/97	Compliance Achieved	4/7/98
			WASHINGTON	Coliform (TCR)	Routine Major	98 00266	11/1/97	Compliance Achieved	4/7/98
			WASHINGTON	Coliform (TCR)	Routine Major	98 00445	12/1/97	Compliance Achieved	4/7/98
HILLVIEW PK-PLYMOUTH	38	IA7528901	PLYMOUTH	Nitrate	Regular	97 02206	4/1/96	Compliance Achieved	9/26/97
HOLMES WATER FUND	25	IA9942027	WRIGHT	Nitrate	Regular	98 00202	7/1/96	Compliance Achieved	2/16/98
INDEPENDENCE MOBILE HOME PARK	60	IA1000600	BUCHANAN	Nitrate	Regular	98 00015	7/1/96	Compliance Achieved	12/29/97
			BUCHANAN	Di(2-Ethylhexyl)	Regular	97 01107	1/1/97	Compliance Achieved	12/29/97
			BUCHANAN	Coliform (TCR)	Routine Major	97 01001	2/1/97	Compliance Achieved	3/31/97
			BUCHANAN	Di(2-Ethylhexyl)	Regular	97 01694	4/1/97	Compliance Achieved	12/29/97
			BUCHANAN	Coliform (TCR)	Routine Minor	97 02060	7/1/97	Compliance Achieved	9/30/97
			BUCHANAN	Di(2-Ethylhexyl)	Regular	97 02263	7/1/97	Compliance Achieved	12/29/97

TABLE D: 1997 SNC MONITORING/REPORTING VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. TYPE	VIOL. NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
LAKE HENDRICKS PARK (EAST WELL)	192	IA4515957	HOWARD	Nitrate	Regular	98 00066	7/1/96	Compliance Achieved	11/17/97
LONG BRANCH TAVERN	35	IA4955725	JACKSON	Coliform (TCR)	Routine Major	97 01220	1/1/97	Compliance Achieved	7/15/97
			JACKSON	Coliform (TCR)	Routine Major	97 01786	4/1/97	Compliance Achieved	7/15/97
			JACKSON	Coliform (TCR)	Routine Major	98 00419	10/1/97	Referred to AG	6/18/97
LOYAL ORDER OF THE MOOSE-AMES	101	IA8503204	STORY	Nitrate	Regular	98 00495	10/1/96	Compliance Achieved	4/6/98
			STORY	Coliform (TCR)	Routine Major	98 00496	8/1/97	Compliance Achieved	4/6/98
			STORY	Coliform (TCR)	Routine Major	98 00497	9/1/97	Compliance Achieved	4/6/98
			STORY	Coliform (TCR)	Routine Major	98 00498	11/1/97	Compliance Achieved	4/6/98
			STORY	Coliform (TCR)	Routine Major	98 00499	12/1/97	Compliance Achieved	4/6/98
LOYAL ORDER OF THE MOOSE-IOWA	71	IA4260208	HARDIN	Nitrate	Regular	98 00061	4/1/96	Compliance Achieved	2/16/98
MANCHESTER LIVESTOCK	123	IA2839202	DELAWARE	Nitrite	Regular	98 00573	10/1/94	Compliance Achieved	5/18/98
MARENGO GOLF CLUB	35	IA4843897	IOWA	Nitrate	Regular	97 02213	4/1/96	BCA Signed	9/25/97
			IOWA	Coliform (TCR)	Routine Major	97 01783	4/1/97	Compliance Achieved	7/21/97
MEADOW VIEW COUNTRY CLUB	42	IA5722748	LINN	Nitrate	Regular	97 01979	4/1/96	AO with Penalty	9/2/97
			LINN	Coliform (TCR)	Routine Major	97 01797	4/1/97	AO with Penalty	9/2/97
MIKE'S FISHERMAN'S WHARF	52	IA3126204	DUBUQUE	Coliform (TCR)	Routine Major	97 00330	11/1/96	AO with Penalty	2/4/97
			DUBUQUE	Nitrate	Regular	97 01668	4/1/97	Compliance Achieved	8/4/97
			DUBUQUE	Coliform (TCR)	Routine Minor	97 01843	6/1/97	Compliance Achieved	8/4/97
			DUBUQUE	Coliform (TCR)	Routine Minor	98 00147	10/1/97	Compliance Achieved	12/11/97
			DUBUQUE	Nitrate	Regular	98 00350	10/1/97	Compliance Achieved	2/3/98
			DUBUQUE	Coliform (TCR)	Routine Major	98 00247	11/1/97	Compliance Achieved	12/11/97
MINIFARM ACRES	30	IA1689402	CEDAR	Coliform (TCR)	Routine Major	97 01188	1/1/97	Compliance Achieved	6/17/97
NEW FRONTIER MOTEL	26	IA8503703	STORY	Coliform (TCR)	Routine Major	97 01029	2/1/97	Compliance Achieved	4/14/97

TABLE D: 1997 SNC MONITORING/REPORTING VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	NAME OF CONTAMINANT	VIOL. TYPE	VIOL. NUMBER	DATE OF VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
PATHWAY CHRISTIAN SCHOOL	77	IA9233501	WASHINGTON	Coliform (TCR)	Repeat Major	98 00274	11/1/97	Compliance Achieved	4/27/98
			WASHINGTON	Coliform (TCR)	Repeat Major	98 00474	12/1/97	Compliance Achieved	4/27/98
PICTURED ROCKS METHODIST CAMP	29	IA5343413	JONES	Nitrate	Regular	97 01089	1/1/97	Compliance Achieved	5/19/97
			JONES	Coliform (TCR)	Repeat Major	97 02521	7/1/97	Compliance Achieved	2/2/98
			JONES	Coliform (TCR)	Routine Major	97 02065	7/1/97	Compliance Achieved	2/2/98
			JONES	Coliform (TCR)	Repeat Major	98 00460	10/1/97	Compliance Achieved	2/2/98
			JONES	Nitrate	Regular	98 00370	10/1/97	Compliance Achieved	2/2/98
ROCKY KNOLL MHP	65	IA9525601	WINNEBAGO	Coliform (TCR)	Routine Major	97 02040	7/1/97	Compliance Achieved	3/11/98
			WINNEBAGO	Coliform (TCR)	Routine Major	97 02178	8/1/97	Compliance Achieved	3/11/98
			WINNEBAGO	Coliform (TCR)	Routine Major	97 02482	9/1/97	Compliance Achieved	3/11/98
			WINNEBAGO	Coliform (TCR)	Routine Major	98 00141	10/1/97	Compliance Achieved	3/11/98
			WINNEBAGO	Coliform (TCR)	Routine Major	98 00269	11/1/97	Compliance Achieved	3/11/98
			WINNEBAGO	Coliform (TCR)	Routine Major	98 00448	12/1/97	Compliance Achieved	3/11/98
SPORTMEN'S CLUB (ROSSVILLE)	45	IA0385201	ALLAMAKEE	Coliform (TCR)	Routine Major	97 01181	1/1/97	Compliance Achieved	6/10/97
SPORTSEEZZ	41	IA2330790	CLINTON	Coliform (TCR)	Routine Major	97 01195	1/1/97	Compliance Achieved	9/10/97
			CLINTON	Coliform (TCR)	Routine Major	97 01761	4/1/97	Compliance Achieved	9/10/97
			CLINTON	Coliform (TCR)	Routine Major	98 00408	10/1/97	Compliance Achieved	2/5/98
THE NEW SHACK TAVERN	70	IA5715812	LINN	Coliform (TCR)	Routine Major	97 02066	7/1/97	Compliance Achieved	9/25/97
THE ROSE BOWL	26	IA1750708	CERRO GORDO	Coliform (TCR)	Routine Major	97 01755	4/1/97	Compliance Achieved	11/17/97

TABLE E: 1997 TREATMENT TECHNIQUE VIOLATIONS REPORT (includes Lead & Copper Rule and Surface Water Treatment Rule)

PWS NAME	POP.	PWSID NUMBER	COUNTY	TT VIOLATION TYPE	DATE OF VIOLATION	TYPE OF ENFORCEMENT OR NEXT REQUIRED ACTION *	DATE OF ACTION
ALBIA MUNI WATER WORKS	3870	IA6803010	MONROE	Turbidity (average)	August	Compliance Achieved	10/31/1997
				Turbidity (average)	September	Compliance Achieved	10/31/1997
CAL GRADE & HIGH SCHOOL	300	IA3554505	FRANKLIN	Lead AL exceedance	1997	OCCTS and resample in 1998	
CLARINDA WATER PLANT	5104	IA7329029	PAGE	CT Ratio	March	Compliance Achieved	4/30/1997
				Turbidity (average)	July	Compliance Achieved	8/31/1997
				CT Ratio	August	Compliance Achieved	9/30/1997
				Turbidity (average)	November	Compliance Achieved	12/31/1997
CRYSTAL LAKE WATER SUPPLY	266	IA4115092	WINNEBAGO	Copper AL exceedance	1997	OCCTS and resample in 1998	
EMERSON WATER DEPT.	476	IA6520019	MILLS	Lead AL exceedance	1997	Initial round is <AL; second round must be collected in 1998	
KEOKUK MUNI WATER WORKS	12451	IA5640019	LEE	CT Ratio	February	Compliance Achieved	4/30/1997
				Turbidity (average)	February	Compliance Achieved	4/30/1997
				Residual Disinfectant	March	Compliance Achieved	4/30/1997
				Turbidity (average)	March	Compliance Achieved	4/30/1997
				Lead AL exceedance	1997	OCCTS and resample in 1998	
MALVERN WATER SUPPLY	1210	IA6545020	MILLS	Copper AL exceedance	1997	OCCTS and resample in 1998	
RICKETTS WATER SUPPLY	122	IA2441084	CRAWFORD	Lead AL exceedance	1997	OCCTS and resample in 2000	
STRAWBERRY POINT IND. PARK	102	IA2279101	CLAYTON	Lead AL exceedance	1997	OCCTS and resample in 1999	
XENIA RWA - MADRID	40	IA0848701	BOONE	Lead AL exceedance	1997	OCCTS and resample in 2000	

* For Lead or Copper AL exceedances, OCCTS (optimal corrosion control treatment study) and additional sampling are required to be completed. For Lead AL exceedances, public education must be conducted every six months in which the system exceeds the AL.

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
ABBE CENTER FOR COMMUNITY CARE	350	IA5700900	LINN	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
ACKLEY MUNICIPAL WATER WORKS	1696	IA4201001	HARDIN	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
ADAIR-CASEY COMMUNITY SCHOOL	587	IA0105509	ADAIR		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
ADEL MUNICIPAL WATER WORKS	3304	IA2503003	DALLAS		X	Compliance Achieved	6/30/97
ALBERT CITY MUNI WATER SUPPLY	779	IA1103009	BUENA VISTA		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
ALEXANDER WATER DEPARTMENT	170	IA3503014	FRANKLIN		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
ALGONA MUNICIPAL UTILITIES	6015	IA5502015	KOSSUTH	X	X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
ALLEMAN WATER SUPPLY	398	IA7705022	POLK		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
ALTA VISTA HOMEOWNERS ASSOCIATION	39	IA8503303	STORY	X		Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
ALTON MUNICIPAL WATER DEPARTMENT	1063	IA8403029	SIOUX		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
ALVORD MUNICIPAL WATER SUPPLY	204	IA6003032	LYON	X	X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
APLINGTON WATER SUPPLY	1034	IA1207061	BUTLER	X	X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
ARMSTRONG WATER SUPPLY	1025	IA3203066	EMMET		X	Corrosion control study due Collect next set of samples	6/30/98 98Q1&2
BEACHWOOD INN	40	IA2800622	DELAWARE	X		Compliance Achieved	6/30/97
BELLE PLAINE WATER DEPARTMENT	2834	IA0610099	BENTON		X	Compliance Achieved	11/18/97
BENEFIT WATER DISTRICT #2 (BOONE)	95	IA0819305	BOONE		X	Compliance Achieved	12/31/97

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
BONAPARTE WATER SUPPLY	465	IA8914031	VAN BUREN	X		Compliance Achieved	12/31/97
BOONE WATER WORKS	12392	IA0819033	BOONE	X	X	Monitor and report follow-up Collect next set of samples	1/1/98 98Q1&2 **
BOXHOLM WATER SUPPLY	214	IA0825036	BOONE	X		Implement corrosion control treatment Collect next set of samples	1/1/00 00Q1&2
BOYDEN MUNI WATER SUPPLY	651	IA8409037	SIOUX		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
BRADDYVILLE WATER WORKS	219	IA7324038	PAGE		X	Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
BRONSON WATER SUPPLY	209	IA9709046	WOODBURY		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
BROOK HILL SUBDIVISION	36	IA2330301	CLINTON	X		Compliance Achieved	11/04/97
CAMP DODGE WATER SUPPLY	650	IA7700901	POLK	X	X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2 **
CARROLL MUNICIPAL WATER SUPPLY	9579	IA1415072	CARROLL	X	X	Implement corrosion control treatment Collect next set of samples	1/1/99 99Q3&4
CEDAR RAPIDS WATER PLANT	113458	IA5715093	LINN	X		Compliance Achieved	12/31/97
CHELSEA WATER SUPPLY	336	IA8609019	TAMA	X		Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
CLIMAX MOLYBDENUM COMPANY	150	IA5625140	LEE		X	Implement corrosion control treatment Collect next set of samples	7/1/99 98Q3&4 **
COAL VALLEY WATER DISTRICT	100	IA0819303	BOONE	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
COLFAX WATER SUPPLY	2462	IA5009056	JASPER		X	Compliance Achieved	9/17/97
COLLEGE SPRINGS WATER SUPPLY	230	IA7341059	PAGE		X	Compliance Achieved	5/20/98
COLUMBUS CITY PUBLIC WTR SUPPLY	328	IA5809063	LOUISA		X	Compliance Achieved	12/31/97
COLUMBUS JUNCTION WATER SUPPLY	1616	IA5815064	LOUISA		X	Compliance Achieved	5/1/98

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
CONRAD WATER SUPPLY	964	IA3809067	GRUNDY	X		Compliance Achieved	12/31/97
COON RAPIDS MUNICIPAL UTILITIES	1266	IA1427070	CARROLL		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
COUNTRY TERRACE/LARTIUS PROP.	120	IA0800601	STORY	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q1&2 **
DEDHAM WATER SUPPLY	264	IA1433016	CARROLL		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
DIKE WATER SUPPLY	875	IA3815042	GRUNDY		X	Compliance Achieved	12/31/97
DOERFER ENGINEERING COMPANY	80	IA0709205	BLACK HAWK		X	Compliance Achieved	12/31/97
DOON WATER SUPPLY	476	IA6015047	LYON		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
DUANE ARNOLD ENERGY CENTER	550	IA5715150	LINN	X		Compliance Achieved	4/28/97
DUNKERTON MUNI WATER SUPPLY	746	IA0717084	BLACK HAWK		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
EDINBURGH MANOR (SCOTCH GROVE)	49	IA5300901	JONES	X		Compliance Achieved	2/21/97
ELDORA WATER SUPPLY	3038	IA4236005	HARDIN		X	Implement corrosion control treatment Collect next set of samples	1/1/99 98Q3&4 **
ELDRIDGE WATER SUPPLY	3638	IA8230008	SCOTT		X	Compliance Achieved	4/30/97
ELKHART WATER SUPPLY	388	IA7730012	POLK		X	Compliance Achieved	12/15/97
ELLSWORTH PUBLIC WATER SUPPLY	451	IA4009016	HAMILTON		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
EMMETSBURG MUNI UTIL WATER DPT	3940	IA7428021	PALO ALTO		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
ESSEX WATER SUPPLY	916	IA7349023	PAGE		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
ESTHERVILLE YOUTH CORPORATION	60	IA3290601	EMMET		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
FONDA WATER SUPPLY	731	IA7603045	POCAHONTAS	X	X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
GARWIN WATER SUPPLY	533	IA8637079	TAMA		X	Compliance Achieved	12/31/97
GEORGE WATER SUPPLY	1066	IA6028081	LYON		X	Compliance Achieved	11/17/97
GILBERT WATER SUPPLY	796	IA8531083	STORY		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
GLENBROOK COVE AREA	310	IA5751040	LINN		X	Compliance Achieved	6/17/98
GLOECKNERS SUBDIVISION	44	IA3128387	DUBUQUE		X	Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
GRANDVIEW MUNI WATER DEPARTMENT	514	IA5842000	LOUISA		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
GREENWOOD ACRES WATER COMPANY	240	IA7709395	POLK		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
GRISWOLD WATER SUPPLY	1049	IA1528010	CASS		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
HANCOCK WATER SUPPLY	201	IA7833025	POTTAWATTAMIE		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
HARGRAVE-MC ELENEY, INC. Cu	185	IA5225202	JOHNSON		X	Implement corrosion control treatment Sampling not assigned until plan is approved	12/31/97
HARGRAVE-MC ELENEY, INC. Pb	185	IA5225202	JOHNSON	X		Compliance Achieved	6/30/97
HARTWICK WATER SYSTEM	115	IA7940037	POWESHIEK		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
HIGHLAND HIGH SCHOOL	305	IA9260528	WASHINGTON	X		Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
HULL WATER SUPPLY	1724	IA8444063	SIOUX		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
IBP, INC. (PERRY PLANT)	900	IA2561101	DALLAS	X		Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
IDA GROVE WATER UTILITY	2357	IA4728067	IDA		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
IRETON WATER SUPPLY	597	IA8447098	SIOUX		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
JEFFERSON WATER DEPARTMENT	4292	IA3742004	GREENE	X		Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
JEWELL WATER SUPPLY	1106	IA4027010	HAMILTON		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
JOHN MORRELL & COMPANY	1325	IA9778897	WOODBURY	X		Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
JULIEN CARE FACILITY	215	IA3100901	DUBUQUE	X		Merge with another PWS Collect next set of samples	1/1/99 99Q1&2
K MART (OELWEIN)	875	IA3353201	FAYETTE	X	X	Compliance Achieved	9/16/97
KAMRAR WATER DEPARTMENT	203	IA4033013	HAMILTON		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
KENSETT WATER SUPPLY	298	IA9840018	WORTH	X		Compliance Achieved for monitoring, but incomplete public education requirement	6/19/98
KEOSAUQUA WATER WORKS	1020	IA8938026	VAN BUREN	X		Compliance Achieved	10/1/97
KIND AND KNOX	350	IA9778108	WOODBURY		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
KINGSLEY WATER SUPPLY	1266	IA7537032	PLYMOUTH		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
KIRKMAN WATER SUPPLY	98	IA8350033	SHELBY	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
KNIERIM WATER SUPPLY	71	IA1340001	CALHOUN		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
LAKE LAJUNE ESTATES	40	IA4728301	IDA	X	X	Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
LAKE MILLS MUNI WATER DEPT - SO.	2413	IA9545044	WINNEBAGO	X		Compliance Achieved	12/31/97
LAURENS	1550	IA7614063	POCAHONTAS	X		Collect next set of samples	98Q1&2 **
LEMARS WATER DEPARTMENT	9435	IA7540174	PLYMOUTH		X	Continue corrosion control treatment Collect next set of samples	 98Q3&4
LONE TREE MUNI WATER SYSTEM	1024	IA5240095	JOHNSON		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
LORIMOR WATER SUPPLY	377	IA8834098	UNION	X		Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
LOUIS RICH COMPANY (SIGOURNEY)	200	IA5475101	KEOKUK	X		Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
LOUISA GENERATING STATION WS 2	100	IA5842102	MUSCATINE	X	X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
LOUISA-MUSCATINE COMMUNITY SCHOOL	1190	IA5847537	LOUISA		X	Submit corrosion control plan Collect next set of samples	6/30/98 98Q1&2
LYON-SIOUX RWS - ROCK RAPIDS	850	IA6000800	LYON		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
MAKADA HOMEOWNERS ASSOCIATION	75	IA5225304	JOHNSON		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q1&2 **
MALLARD WATER SUPPLY	860	IA7450019	PALO ALTO		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
MANSON WATER SUPPLY	1844	IA1351027	CALHOUN	X		Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
MC GREGOR WATER DEPARTMENT	797	IA2258012	CLAYTON	X		Compliance Achieved	9/19/97
MINDEN WATER SUPPLY	539	IA7849086	POTTAWATTAMIE		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
MORLEY MUNICIPAL WATER SUPPLY	85	IA5349001	JONES	X		Compliance Achieved	7/20/97
MOVILLE WATER SUPPLY	1306	IA9753022	WOODBURY		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
MT. JOY MOBILE HOME PARK	173	IA8222603	SCOTT	X		Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
NEOLA LIGHT AND WATER	909	IA7853043	POTTAWATTAMIE		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
NEW PROVIDENCE WATER SUPPLY	240	IA4271062	HARDIN	X		Compliance Achieved	3/5/97
NORTH LIBERTY WATER SUPPLY	4000	IA5252072	JOHNSON		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2 **
NORTH LINN MIDDLE SCHOOL	155	IA5786533	LINN	X		Compliance Achieved	11/18/97
NORTH WINNESHIEK COMM. SCHOOL	512	IA9630530	WINNESHIEK	X		Compliance Achieved	12/31/97
OAKDALE HOSPITAL WATER SYSTEM	450	IA5200982	JOHNSON		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
OAKRIDGE LAKE ESTATES	88	IA5225302	JOHNSON			Compliance Achieved	4/23/97
OAKVILLE WATER SUPPLY	442	IA5868085	LOUISA		X	Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
ODESSA RESIDENTIAL CARE	40	IA5800901	LOUISA		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4
OGDEN MUNICIPAL UTILITIES	1909	IA0858090	BOONE		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
ONAWA MUNICIPAL WATER PLANT	2936	IA6739095	MONONA	X	X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
ORANGE CITY MUNI WATER DEPT	4940	IA8474097	SIOUX		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
OSCEOLA COUNTY RWS-SOUTH	1733	IA7177701	OSCEOLA		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
OSCEOLA WATER WORKS	4164	IA2038038	CLARKE	X		Compliance Achieved	6/15/98
PARK VIEW WATER COMPANY	2500	IA8200855	SCOTT		X	Compliance Achieved	6/30/97
PINEO GROVE WATER COMPANY	72	IA8273062	SCOTT		X	Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
PIONEER WATER SYSTEM	46	IA4664043	HUMBOLDT	X		Compliance Achieved	7/18/97
POLK CITY WATER SUPPLY	2134	IA7770050	POLK		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
POMEROY WATER SUPPLY	762	IA1363051	CALHOUN	X		Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
RAKE WATER SUPPLY	238	IA9575068	WINNEBAGO		X	Compliance Achieved	6/30/97
RATHBUN RWS (RATHBUN)	22196	IA0400900	APPANOOSE	X		Compliance Achieved	12/31/97
RIPPEY MUNICIPAL WATER SUPPLY	275	IA3754088	GREENE		X	Compliance Achieved	12/31/97
ROCK VALLEY WATER SUPPLY	2540	IA8482096	SIOUX		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
ROWAN MUNI WATER SUPPLY	189	IA9958004	WRIGHT		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
SAINT MARY'S WATER CORPORATION	113	IA9176019	MADISON	X		Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
SANBORN WATER SUPPLY	13445	IA7165025	O'BRIEN		X	Monitor and report follow-up Collect next set of samples	6/30/98 98Q3&4
SEYMOUR MUNI UTILITY WATER DEPT	869	IA9368035	WAYNE	X		Compliance Achieved	12/31/97
SHEFFIELD WATER SUPPLY	1174	IA3570037	FRANKLIN	X	X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
SHELDON WATER DEPARTMENT	5005	IA7170040	O'BRIEN		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
SIBLEY MUNICIPAL UTILITIES	2815	IA7245047	OSCEIOLA	X		Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
SIDNEY WATER SUPPLY	1253	IA3661048	FREMONT		X	Implement corrosion control treatment Collect next set of samples	1/1/00 00Q1&2
SIOUX CITY WATER SUPPLY	80505	IA9778054	WOODBURY		X	Compliance Achieved	12/31/97
SPRING GREEN	52	IA5784306	LINN		X	Compliance Achieved	6/30/97
STACYVILLE WATER SUPPLY	481	IA6677089	MITCHELL		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
STANHOPE WATER DEPARTMENT	447	IA4045090	HAMILTON	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
STOCKPORT WATER SUPPLY	260	IA8973095	VAN BUREN	X		Collect next set of samples	98Q1&2 **
STORY CITY WATER DEPARTMENT	2959	IA8584000	STORY	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
SYCAMORE APARTMENTS	50	IA5525807	JOHNSON		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
TABOR WATER SUPPLY	994	IA3667012	FREMONT		X	Monitor and report follow-up Collect next set of samples	12/31/98 98Q3&4
TAMA WATER SUPPLY	2697	IA8670013	TAMA		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
THE DIAL CORPORATION	540	IA5625141	LEE	X		Compliance Achieved	2/14/97
TREYNOR WATER DEPARTMENT	897	IA7866031	POTTAWATTAMIE		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
TRI CENTER COMMUNITY SCHOOL	775	IA7853561	POTTAWATTAMIE		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
TRIPOLI WATER SUPPLY	1206	IA0975032	BREMER		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
TRUESDALE WATER SUPPLY	132	IA1182035	BUENA VISTA		X	Implement corrosion control treatment Collect next set of samples	1/1/98 98Q3&4 **
TRURO WATERWORKS	391	IA6167036	MADISON	X		Compliance Achieved	4/30/97
UTE WATER SUPPLY	395	IA6762043	MONONA	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
VAIL WATER SUPPLY	388	IA2452044	CRAWFORD		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3*4
VENTURA WATER WORKS	590	IA1785032	CERRO GORDO		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
VOLGA WATER SUPPLY	306	IA2285055	CLAYTON		X	Compliance Achieved	5/30/97
WAPSI VALLEY COMM SCHOOL	165	IA1025554	BUCHANAN		X	Submit corrosion control plan	6/30/98
WEST BRANCH WATER WORKS	1908	IA1694000	CEDAR		X	Implement corrosion control treatment Collect next set of samples	7/1/99 99Q3&4
WESTERN HILLS ESTATES	811	IA5208600	JOHNSON	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
WESTSIDE WATER SUPPLY	348	IA2458023	CRAWFORD		X	Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
WHEATLAND CITY WATER SUPPLY	723	IA2394017	CLINTON	X		Implement corrosion control treatment Collect next set of samples	1/1/98 98Q1&2
WHITING WATER SUPPLY	802	IA6769018	MONONA	X		Implement corrosion control treatment Collect next set of samples	7/1/98 98Q3&4
WOODBURN WATER SUPPLY	240	IA2052001	CLARKE	X		Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2
WOODS AND MEADOWS SUBDIVISION	115	IA8245357	SCOTT	X		Compliance Achieved	10/13/97
WOODWARD STATE HOSPITAL	400	IA0800923	BOONE	X		Compliance Achieved	6/30/97
XENIA RWD (EAST)	1140	IA0844006	BOONE		X	Compliance Achieved	10/1/97

TABLE F: CONTINUING LEAD OR COPPER ACTION LEVEL EXCEEDANCES (PRE-1997)

NAME	POP.	PWSID	COUNTY	EXCEEDANCE		CURRENT CORROSION CONTROL AND SAMPLING STATUS *	
				LEAD	COPPER	ACTION	DUE DATE
XENIA RWD (PANORA)	45	IA3971702	GUTHRIE		X	Collect next set of samples	98Q1&2
XENIA RWD (SOUTHWEST)	3476	IA2573701	DALLAS	X		Implement corrosion control treatment Collect next set of samples	1/1/99 99Q1&2

* The first two digits represent the year the sampling is due (i.e. 98 is 1998, 00 is 2000, etc.). The remaining four characters represent the calendar quarters which define the sampling period (i.e. Q1&2 is the first half of the year, and Q3&4 is the last half of the year).

** The first of the two consecutive six-month rounds of samples has been collected and had acceptable results which were below the lead and copper action levels. The monitoring requirement shown here is for the second set of samples. If the second round of sampling is valid, and the results are below the action levels, the PWS will be back in compliance with the lead and copper program monitoring requirements.

TABLE G: 1997 TREATMENT TECHNIQUE (LEAD AND COPPER) MONITORING AND REPORTING VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	MONITORING PERIOD	VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
ARGYLE RURAL WATER DISTRICT	175	IA560370	LEE	97ra1	90th Percentile Reporting Violation	Continuing Violation	6/1/98
ATLANTIC HEAD START	45	IA150950	CASS	97ra1	Monitoring and Reporting Violation	Continuing Violation	6/1/98
BERNARD WATER SYSTEM	148	IA311300	DUBUQUE	97Q3&4	Monitoring and Reporting Violation	Continuing Violation	6/1/98
			DUBUQUE	97Q1&2	Monitoring and Reporting Violation	Continuing Violation	6/1/98
EAGLE LANE CORPORATION	87	IA821530	SCOTT	97rt	Monitoring and Reporting Violation	Continuing Violation	6/1/98
EARLHAM MUNICIPAL WATERWORKS	1157	IA611509	MADISON	97rt	Monitoring and Reporting Violation	Continuing Violation	6/1/98
GARDEN GROVE WATER SUPPLY	229	IA272507	WAYNE	97rt	Monitoring and Reporting Violation	Continuing Violation	6/1/98
GOLDEN ACRES RETIREMENT VILLAGE	49	IA079067	BLACK HAWK	97ra1	90th Percentile Reporting Violation	Continuing Violation	6/1/98
GRACE COMMUNITY CHURCH	151	IA525280	JOHNSON	97Q3&4	90th Percentile Reporting Violation	Continuing Violation	6/1/98
HEDRICK WATER SUPPLY	810	IA543204	KEOKUK	97rt1	90th Percentile Reporting Violation	Compliance Achieved	2/10/98
HIDDEN VALLEY MOBILE HOME COURT	46	IA920060	WASHINGTON	97Q3&4	Monitoring and Reporting Violation	Continuing Violation	6/1/98
			WASHINGTON	97Q1&2	Monitoring and Reporting Violation	Continuing Violation	6/1/98
LAKE HUNTINGTON ESTATES	75	IA823030	SCOTT	97ra3	Monitoring and Reporting Violation	Continuing Violation	6/1/98
OHKIYU VILLAGE MHC	34	IA560068	LEE	97rt	90th Percentile Reporting Violation	Continuing Violation	6/1/98
ONSLOW WATER SUPPLY	216	IA535809	JONES	97rt	Monitoring and Reporting Violation	Continuing Violation	6/1/98
PLANTATION VILLAGE MHP	110	IA290060	DES MOINES	97Q1&2	90th Percentile Reporting Violation	Continuing Violation	6/1/98
RUNNELLS WATER SUPPLY	306	IA777400	POLK	97rt	Monitoring and Reporting Violation	Continuing Violation	6/1/98
SLEEPY HOLLOW ENTERPRISES	55	IA526060	JOHNSON	97Q3&4	Monitoring and Reporting Violation	Continuing Violation	6/1/98

TABLE G: 1997 TREATMENT TECHNIQUE (LEAD AND COPPER) MONITORING AND REPORTING VIOLATIONS REPORT

PWS NAME	POP.	PWSID NUMBER	COUNTY	MONITORING PERIOD	VIOLATION	TYPE OF ENFORCEMENT	DATE OF ACTION
SOUTHPARK	26	IA426060	HARDIN	97Q1&2	Monitoring and Reporting Violation	Continuing Violation	6/1/98
			HARDIN	97Q3&4	Monitoring and Reporting Violation	Continuing Violation	6/1/98
SUBURBAN UTILITIES ASSOCIATION	54	IA822230	SCOTT	97rt	90th Percentile Reporting Violation	Continuing Violation	6/1/98
TROUT VALLEY HOMES ASSOC. 1	95	IA820939	SCOTT	97rt1	90th Percentile Reporting Violation	Compliance Achieved	2/17/98
UNDERWOOD MOTEL	27	IA786980	POTTAWATTAMIE	97Q3&4	Monitoring and Reporting Violation	Continuing Violation	6/1/98
WEBB WATER SUPPLY	167	IA217809	CLAY	97Q3&4	Monitoring and Reporting Violation	Continuing Violation	6/1/98
			CLAY	97Q1&2	Monitoring and Reporting Violation	Continuing Violation	6/1/98
WENDY OAKS MHP	41	IA571560	LINN	97Q3&4	Monitoring and Reporting Violation	Continuing Violation	6/1/98
WINDING BROOK MOBILE HOME PARK	52	IA230060	CLINTON	97Q3&4	Monitoring and Reporting Violation	Continuing Violation	6/1/98

GLOSSARY

AL	Action Level
AOP	Administrative Order with Penalty
AOWP	Administrative Order without Penalty
CT	Contact Time of residual disinfectant
EPA	U.S. Environmental Protection Agency
IDNR	Iowa Department of Natural Resources
IOC	Inorganic Chemicals
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
M/R	Monitoring and Reporting
mrem/yr	millirems per year
NOV	Notice of Violation
NTU	nephelometric turbidity units
pCi/L	picocuries per liter
PWS's	Public Water Systems
PWSS	Public Water System Supervision (EPA program)
SDWA	Safe Drinking Water Act
SDWIS/FED	Safe Drinking Water Information System/Federal (EPA's electronic database)
SNC	Significant Non-Complier
SOC	Synthetic (Nonvolatile) Organic Chemical
SWTR	Surface Water Treatment Rule
TT	Treatment Technique
VOC	Volatile Organic Chemical
WSFL	Water System Facility List (Iowa's electronic database)
>	greater than
<	less than

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