The Texas Natural Resource Conservation Commission (agency, commission, or TNRCC) proposes amendments to Subchapter D, Rules and Regulations for Public Water Systems, §§290.38, 290.39, 290.41, 290.42, and 290.44 - 290.47; and Subchapter F, Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements for Public Water Supply Systems, §§290.102 - 290.104, 290.106 - 290.115, 290.117 - 290.119, 290.121, and 290.122.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

The commission adopted major revisions to Chapter 290 in the November 17, 2000 issue of the *Texas Register* (25 TexReg 11408), to implement state rules conforming to the federal Interim Enhanced Surface Water Treatment Rule (IESWTR) and the Stage I Disinfectant and Disinfection By-Product Rule (Stage 1 DBPR) as required by federal law (Safe Drinking Water Act (SDWA), 42 United States Code (USC), §§300g *et seq.*), and federal regulations under 40 Code of Federal Regulations (CFR) Parts 9, 141, and 142. After adopting these amendments, the commission discovered several minor typographical errors that needed to be corrected. With the current amendments, the commission proposes primarily technical and grammatical corrections to Chapter 290, Subchapters D and F. In addition to these corrections, the commission proposes amendments to incorporate the federal Public Notification Rule (40 CFR Parts 9, 141, 142, and 143; 65 Federal Register (FR) 25981-26049, May 4, 2000); incorporate the federal Lead/Copper Minor Revisions Rule (40 CFR Parts 9, 141, and 142; 65 FR 1949-2015, January 12, 2000); implement House Bill (HB) 217, §2, 77th Legislature, 2001, deleting the exemption for small municipalities to have plumbing inspections performed by a licensed plumber; update references to lab related terminology prompted by HB 2912, §18.02, transferring certification of drinking water laboratories from Texas Department of Health (TDH) to TNRCC; and

propose language from SDWA, 42 USC, §300g-1(b)(10), allowing two-year extensions to the effective dates for new regulations for maximum contaminant levels (MCLs) and treatment technique (TT) requirements when capital improvements are necessary to comply with the new requirements.

TNRCC has reviewed the public health effects of using treatment techniques other than the control of total organic carbon (TOC) for limiting the formation of disinfection by-products. These alternatives may involve the use of disinfectants such as ozone, ultraviolet light, and chloramine that form fewer regulated disinfection byproducts than chlorine, the primary disinfectant used by many public water systems. TNRCC may submit a proposal under the "Joint EPA/State Agreement to Pursue Regulatory Innovations" to pursue regulatory innovation to protect public health from disinfection by-products. Although these amendments do not propose any alternative compliance criteria other than those already contained in TNRCC regulations, the TNRCC is requesting public comment on developing rules in a future rulemaking which protect public health by adopting compliance criteria for alternative treatment techniques to reduce disinfection by-product levels.

SECTION BY SECTION DISCUSSION

Certain rewording is proposed throughout the two affected subchapters. The term "public drinking water program," which was used in the previous adoption to make clear to the regulated community the group within the commission that accepted their forms, letters, and other correspondence related to public water systems, has been replaced with the term "executive director," to conform to usage in other agency rules and the definitions in 30 TAC Chapter 3, Definitions, of the commission's rules.

The term "Water Permits and Resource Management Division" has been replace with the term "Water Supply Division" to reflect the most recent reorganization of the agency.

Subchapter D

Section 290.38, Definitions, is proposed to be renumbered to incorporate new definitions of "certified laboratory," "customer service line or pipe," "distribution system," "groundwater," "potable water customer service line," "potable water service line," "potable water main," "service line," "wastewater lateral," and "wastewater main." The definition of "approved laboratory" is proposed to be amended to incorporate the jurisdictional change from the TDH to the commission. The proposed rule would clarify the definition of "connection" to explain that alternative water from a commission-approved water provider or the water users' private well shall not be considered a connection. The proposed rule also clarifies in the definition of "contamination" that the presence of any foreign substance in water which tends to degrade its quality constitutes a hazard to health. The definition of "maximum daily demand" is proposed to be modified to account for situations in which mandatory water use restrictions have been put in place related to drought conditions.

Section 290.39, General Provisions, is proposed to be amended. Subsection (d)(1) would specify that plans and specifications prepared under the seal of a professional engineer must have the seal, signature, and dates affixed in accordance with the rules of the Texas Board of Professional Engineers. Subsection (d)(3)(C) is proposed to be amended to include a mailing address for the submission of planning materials. The proposal includes replacement of the term "public drinking water program"

with the term “executive director” for consistency with the commission’s style guidelines because the public drinking water program staff represents the executive director.

Section 290.39(f) is proposed to be amended to delete the word “proposed” to clarify that the prospective owner of the system or the person responsible for managing and operating the system must submit a business plan before construction is completed that demonstrates that the owner or operator of the system has available the financial, managerial, and technical capability to ensure future operation of the system in accordance with applicable laws and rules.

Section 290.39(h)(2) is proposed to be amended to require the design engineer or the owner to notify the executive director before construction is started rather than when construction is started. Subsection (h)(3) is proposed to be amended to change “will” to “shall” to more clearly specify that the engineer or owner is required to notify the executive director in writing. This would provide a record of the notification.

Section 290.39(j) is proposed to be amended to reorganize and reword the notification requirements for changes to a public water system’s physical facilities. Subsection (j) is proposed to be amended to include the introductory material for the notification requirements for any change in disinfection facilities at a treatment plant treating surface water or groundwater under the direct influence of surface water. Subsection (j)(1) is proposed to be amended to list the significant material changes for which public water systems shall notify the executive director prior to making any of these material changes, improvements, additions, or alterations to an existing public water system. Subsection (j)(1) is

proposed to be amended by adding "pressure maintenance facilities" to the list of changes to a system's facilities requiring notification to the executive director. Changes requiring written notice to the executive director are specified as those changes which result in either an increase or decrease in production, treatment, storage, or pressure maintenance capacity. Paragraph (1) is also proposed to be reorganized to contain specific descriptions of conditions requiring notification in subordinate subparagraphs. Paragraph (1)(A) is proposed to be added to specify the requirement of notification for changes which result in an increase in the amount of water a system can provide, store, or pressurize. Paragraph (1)(B) is proposed to be added to state the requirement for notification for changes in disinfection facilities at surface water treatment plants or plants treating groundwater under the direct influence of surface water. These requirements were previously contained in paragraph (2) of this subsection. Paragraph (1)(C) is proposed to be added to specify the requirement for notification for changes to the type of disinfectant used in the distribution system. This requirement was previously contained in paragraph (3) of this subsection. Existing paragraph (4) of this subsection is proposed to be reworded and renumbered as proposed paragraph (1)(D), and contains the requirement for notification if changes are planned to the distribution system, if those changes constitute 10% of the distribution system capacity, or 250 connections, whichever is smaller, or if the changes will affect the system's ability to comply with other capacity regulations. Paragraph (1)(E) is proposed to be added to contain the requirement that the executive director may identify other conditions under which notification is required, which was previously contained in paragraph (5) of this subsection. The material previously contained in paragraphs (2) - (4) is proposed to be deleted and incorporated into paragraph (1), as described previously. Existing paragraph (5) has been renumbered to new paragraph (2).

Section 290.39(j)(2)(B), formerly paragraph (5)(B), is proposed to be reorganized to clarify the requirements for submittal of plans. The language giving political subdivisions with internal review staff the ability to review certain of their own plans was inadvertently subordinated in the previous adoption; the proposed language corrects that error. Paragraph (2)(B)(i) is proposed to be added to set out the requirements for a political entity's internal review staff, previously contained in paragraph (5)(B). Paragraph (2)(B)(ii) is proposed to be added to contain the requirement that the political entity's professional engineer certify the legality of planned changes; this requirement was previously contained in paragraph (5)(B). Paragraph (2)(B)(iii) is proposed to be added to contain the requirement, previously in paragraph (5)(B), that certification of the internal review staff be provided with the written notice given to the executive director. Paragraph (2)(C) is added to clarify the existing requirement that if plans are submitted to the internal review staff as part of a legal agreement between two political entities, those plans may be approved in that manner, but notification is still required. Paragraph (3) is proposed to be added to specify that if the planned changes to the distribution system will cause the Certificate of Convenience and Necessity (CCN) to be changed, a CCN amended application must be submitted at the same time notice is sent to the executive director.

Section 290.39(l)(1) is proposed to be changed to replace the word "should" with the word "shall," thus making more enforceable the requirement that any request for an exception to the rules precede submission of engineering plans. This section is also proposed to be expanded to clarify that an exception request is only required if the public water system is actually seeking an exception to one or more of the regulatory provisions.

Section 290.41, Water Sources, is proposed to be amended to ensure consistency of word usage, to correct typographical errors, and to provide clarification of rule requirements. In subsection (a), the citation to Subchapter F is proposed to be made explicit. The requirement contained in §290.41(c)(1)(F), relating to sanitary control easements, is intended to ensure that the area around a well used for public drinking water be protected from potential contamination. The term "sanitary control easement" is to establish an area of protection which is recorded in county records. However, the term "sanitary control easement" describes the protected area around a drinking water well. Subparagraph (F) is proposed to be expanded to provide that political subdivisions which adopt and enforce ordinances or land restrictions that will achieve the goal of protecting a public water source may, with executive director approval, substitute those documents for sanitary control easements. Subsection (c)(3) is proposed to be amended to clarify that the subsequent subparagraphs contain the conditions for placing a new well into service for potable water. Subsection (c)(3) is also made more enforceable by deleting the phrase "special attention must be given to." The first sentence in paragraph (3)(A) is proposed to be changed to active voice, clearly stating that it is the public water system's responsibility to submit well information. Additionally, the term "to the executive director" is proposed to be added to clarify that the public water system must submit well information to the executive director. Paragraph (3)(C) is proposed to be amended to replace the word "will" with the word "shall" to make the conditions more legally enforceable. In addition, subparagraph (C) has been amended to reflect that the use of alternate methods of cementing a well may be approved only on a case-by-case basis and that the approval must be in writing. Paragraph (3)(G) is proposed to be amended to replace the term "the Texas Department of Health approved" with the term "a certified" in response to the change of authority over lab certification from TDH to TNRCC as required by HB

2912, §18.02, 77th Legislature, 2001. Additionally, paragraph (3)(G) is proposed to be amended to replace the term "public drinking water program" with the term "executive director" to clarify that chemical and microbiological tests may be required by the executive director, or his designated staff, as defined by 30 TAC §3.2(16).

Section 290.41(d)(2) is proposed to be amended to replace the term "public drinking water program" with the term "executive director."

Section 290.41(e)(1) is proposed to be amended to clarify that the area surrounding a new surface water intake must be kept free of potential drinking water contaminants. Subsection (e)(2)(D) is proposed to be amended to replace the term "public drinking water program" with the term "executive director."

Section 290.42(b)(5), Water Treatment, is proposed to be added to this subsection to specify that all plant piping shall be designed and constructed to be thoroughly tight against leakage. Proposed new paragraph (6) clarifies water systems must have sampling taps that will allow them to obtain water samples at the points specified in Subchapters D and F. Subsection (c)(4) is proposed to be amended to specify the same language as in subsection (b)(5). Subsection (c)(4) is also proposed to be amended to clarify that no cross-connection or interconnection shall be permitted between a conduit carrying potable water and a conduit carrying raw water or water in a prior stage of treatment. New paragraph (5) is proposed to include the same language as subsection (b)(6).

Section 290.42(d)(3) is amended to clarify that any discharge of wastewater shall be according to the appropriate statutes and regulations including those contained in 30 TAC Chapters 305, 309, and 319. Subsection (d)(6)(C) is proposed to be amended to specify that all chemical bulk storage facilities and day tanks shall be clearly labeled to indicate each tank's contents and a method to determine the amount of chemical remaining in the tank must be provided. Subsection (d)(6)(E), which describes chemical containment requirements to minimize the possibility of leaks and spills, is proposed to be reworded for clarification and to consider current chemical containment technology. Subparagraph (E)(i) states that the material used to construct the bulk tanks must be compatible with the chemicals being stored and must be resistant to corrosion. Subparagraph (E)(ii) is proposed to be amended to state that except as provided in this clause, adequate containment facilities shall be provided for all liquid storage tanks. This takes into account the situation in which multiple tanks utilize a common containment area. Subparagraph (E)(ii)(I) is proposed to be amended to state that the tank must be large enough to hold the maximum amount of chemical that can be stored. Subclause (II) is proposed to be amended to state that the common containment for multiple containers must be large enough to hold the volume of the largest container. Subclauses (III) and (IV) of subparagraph (E)(ii) are proposed to be renumbered from subclauses (II) and (III) respectively. Subparagraph (E)(ii)(V) is proposed to be added to include the allowance that small containers, 35 gallons or less, containing hypochlorite solution for disinfection do not need to be surrounded by a containment facility. Subparagraph (E)(ii)(VI) is proposed to be added to allow double-walled tank containment when approved by the executive director.

Section 290.42(d)(11) is proposed to be amended to specify that gravity or pressure-type filters shall be provided. Subsection (d)(11)(B) is proposed to be amended to clarify that filtration facilities shall be

designed to operate at filtration rates which assure effective filtration at all times. Subsection (d)(11)(B)(i) is proposed to be amended to delete the term design and specify that the design capacity of gravity rapid sand filters shall not exceed a maximum filtration rate of 2.0 gallons per square foot per minute. Subparagraph (B)(ii) is proposed to be amended to delete the term design and specify that high-rate gravity filters shall not exceed a maximum filtration rate of 5.0 gallons per square foot per minute. Subparagraph (B)(iii) is proposed to be amended to clarify the existing requirement that the design capacity of pressure filters shall not exceed a maximum filtration rate of 2.0 gallons per square foot per minute. Subparagraph (B)(iv) is proposed to be amended to specify that any surface water treatment plant that provides less than 7.5 million gallons per day (gpd) must be able to meet either the maximum daily demand or the minimum required 0.6 gallons per minute per connection, whichever is larger, with all filters on line. Subparagraph (B)(iv) is also proposed to be amended to delete a sentence specifying the design capacity of filtration facilities. Subparagraph (B)(v) is proposed to be amended to specify that any surface water treatment plant that provides, or is being designed to provide, 7.5 million gpd or more must be able to meet either the maximum daily demand or the minimum required 0.6 gallons per minute per connection, whichever is larger, with the largest filter off line. Subparagraph (B)(v) is also proposed to be amended to delete a sentence specifying the design capacity of filtration facilities. Subparagraph (B)(vi) is proposed to be added to incorporate the need for systems using pressure filters to meet capacity while one filter is being backwashed.

Section 290.42(e)(4) is proposed to be reworded to the language that existed in the 1997 adoption of the rules, prior to the previous adoption, based on extensive comments from stakeholders that the language adopted in 2000 inadvertently conflicted with other regulations regarding risk management and fire

protection. With a future rulemaking, specific comments will be invited from stakeholders on all of the language related to chlorine gas safety. The existing language in paragraph (4) is proposed to be deleted and replaced with new language specifying that systems that use chlorine must ensure that the risks associated with its use are limited. Specifically, paragraph (4)(A) is proposed to require that when chlorine gas is used, a full-face self-contained breathing apparatus or supplied air respirator that meets Occupational Safety and Health Administration (OSHA) standards for construction and operation, and a small bottle of fresh ammonia solution (or approved equal) for testing for chlorine leakage shall be readily accessible outside the chlorination room and immediately available to the operator in the event of an emergency. Paragraph (4)(B) is proposed to specify that housing for gas chlorination equipment and cylinders of chlorine shall be in separate buildings or separate rooms with impervious walls or partitions separating all mechanical and electrical equipment from the chlorine facilities. Proposed amendments also specify that housing shall be located above ground level as a measure of safety, and that equipment and cylinders may be installed on the outside of the buildings when protected from adverse weather conditions and vandals. Paragraph (4)(C) specifies that adequate ventilation, which includes both high-level and floor-level screened vents, shall be provided for all enclosures in which gas chlorine is being stored or fed. Paragraph (4)(C) is also proposed to be amended to clarify that enclosures containing more than one operating 150-pound cylinder of chlorine shall also provide forced air ventilation which includes: screened and louvered floor-level and high-level vents; a fan which is located at and draws air in through the top vent and discharges to the outside atmosphere through the floor-level vent; and a fan switch located outside the enclosure. Amendments are also proposed to specify that as an alternative, systems may install negative pressure ventilation as long as the facilities

also have gas containment and treatment as prescribed by the current Uniform Fire Code (UFC). Paragraphs (5) and (6) are proposed to be deleted, and paragraphs (7) and (8) are renumbered.

Section 290.44, Water Distribution, is proposed to be amended to incorporate requirements in 30 TAC Chapter 317, Design Criteria for Sewerage Systems, regarding separation distances between sewer lines and water lines. Portions of §317.2 (relating to Sewage Collection System) will be incorporated into this section. This section is also proposed to be amended to correct typographical errors and to clarify rule requirements. Section 290.44(c) is proposed to be amended for grammatical corrections and also to clarify the mandatory requirements of minimum water line sizes for domestic flows, and that larger pipe sizes shall be used when the engineer deems necessary to ensure the safe delivery of water.

Subsection (d)(4) is proposed to be amended to specify that service connections include residential, commercial or industrial connections. Paragraph (4) is also proposed to be amended to clarify that a water system that furnishes service only to itself or its employees is exempt from this requirement. Subsection (d)(6) is proposed to be amended with grammatical corrections that specify that dead ends shall be located and arranged in such a way that the ends can be connected to provide circulation.

Subsection (e) is proposed to be amended to incorporate provisions previously contained in Chapter 317. Paragraphs (1) - (5) of subsection (e) are proposed to be renumbered. Existing language in paragraph (1) is incorporated into subsection (e) and a sentence is added to clarify the location of waterlines by specifying that new mains, service lines, or laterals are those that are installed where no main, service line, or lateral previously existed; or where existing mains, service lines, or laterals are

replaced with pipes of different size or material. Existing paragraphs (2) - (9) are renumbered as paragraphs (1) - (8) of subsection (e). Renumbered paragraph (2) is proposed to be amended to change the phrase "collection line or force main" to "mains or laterals" to update current terminology. Renumbered paragraph (4)(A)(i) is proposed to be amended to add the term "lateral" and delete the terms "line" and "force" to clarify which wastewater lines are affected. The qualifying phrase "licensed in the State of Texas" is added to clarify the requirements for a licensed professional engineer. Paragraph (4)(A)(ii) is also proposed to be amended to replace the term "line" with "wastewater main or lateral" to clarify which wastewater lines are affected. Paragraph (4)(A)(iii) is also proposed to be amended to replace the term "line" with "wastewater main or lateral" to clarify which wastewater lines are affected. In paragraph (4)(B), clauses (i) - (vi) are proposed to be amended to replace the term "line" with "wastewater main or lateral" to clarify which wastewater lines are affected. Clauses (iii) and (v) are also proposed to be amended to update cross-references to §290.44(e)(4)(B)(vi). In clause (iii), subclauses (II) and (III) are also proposed to be amended to replace the term "line" with "wastewater main or lateral" to clarify which wastewater lines are affected. Clause (vi) is also proposed to be amended to recommend brown sand be used to identify pressure rated wastewater lines during construction. Renumbered paragraph (5) is proposed to be amended to clarify that pressure class pipe for waterlines shall be "at least" 150 pounds per square inch (psi). Renumbered paragraph (6) is proposed to be amended for grammatical corrections and to replace the phrase "sanitary sewer line" with "wastewater main or lateral." Renumbered paragraph (7) is proposed to be amended with grammatical corrections and to clarify that the affected lines are potable or raw water lines.

Section 290.45, Minimum Water System Capacity Requirements, is proposed to be amended to incorporate wording changes and to clarify rule requirements. Subsection (d)(2)(B)(iii) and (iv) is proposed to be amended to replace the phrase "2.0 gallons per minute per connection" with the phrase "three times the maximum demand" because the noncommunity water systems regulated under this subsection are defined as only one connection, regardless of size, making it necessary to clarify that the system must be able to provide water to all of their consumers based on the flow rate of the system rather than the number of connections. Subsection (g) is proposed to be amended to replace the word "exceptions" with the phrase "alternative capacity requirement" throughout. Stakeholders have provided comment that the wording change is needed to make it more clear to funding agencies that meeting special capacity provisions approved by the executive director constitutes compliance with the regulations. Subsection (g)(1)(F) is proposed to be amended to clarify and make explicit the previously implicit requirement that the public water system submit documentation with any alternate capacity requirement request showing that its level of service will remain equivalent to the level of service provided under the minimum capacity requirements of this section. Subsection (g)(2) is proposed to be amended to incorporate the phrase "alternative capacity requirement" to replace the word "exceptions" and to make it clear that the conditions set out in the subordinate subparagraphs and clauses applies to any minimum pressure maintenance facilities, rather than merely elevated storage. In paragraph (2)(A)(iii), the word "should" is proposed to be replaced with the word "shall" to make the regulation more enforceable. Subsection (g)(3) is proposed to be reworded to clarify that the compliance investigator may revoke any alternative capacity requirement, and if the alternative capacity requirement is revoked, the system must meet the minimum capacity requirement.

Section 290.46, Minimum Acceptable Operating Practices for Public Drinking Water Systems, is proposed to be revised to correct grammatical or typographical errors, to provide consistency with other regulations, and to clarify requirements. Subsection (b) is proposed to be amended to change "approved" lab to "certified" lab. Subsection (c) is proposed to be amended to specify that samples for chemical analysis are submitted to the executive director. Likewise, proposed amendments clarify that the executive director will provide a list of certified labs. Subsection (d) is proposed to be amended to delete the word "acceptable" because the term "acceptable" is subject to interpretation and is not defined in the rule. Subsection (d)(1) is proposed to be amended to change "facilities" to "equipment" for more specificity in the application of the rules. Subsection (d)(2) is proposed to be amended to change "in the far reaches of" to "throughout" to more clearly specify where the disinfectant residuals must be maintained.

Section 290.46(e) is proposed to be amended to refer to public water system operators as being "trained and licensed" rather than "certified" throughout, to correspond to new wording in the operator certification requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations. The exemption from these requirements for nontransient, noncommunity systems is proposed to be moved from subsection (e) to paragraph (7) of subsection (e). Subsection(e)(1) is proposed to be reworded to state the requirement that systems with 1,000 connections or less must have a single operator meeting the requirements. The requirements previously contained in subsection (e)(1)(A) - (E) are proposed to be moved to the rewritten subordinate paragraphs and subparagraphs. Subsection (e)(2) is proposed to state the requirement that systems with more than 1,000 connections must employ two operators at the license level given in the paragraphs which follow. Subsection (e)(3) is proposed to be reorganized to

more clearly describe the conditions under which a public water system must employ an operator with a given class of license. Paragraph (3)(A) is proposed to contain the requirement, previously contained in paragraph (1), that a public water system using only purchased water or groundwater must employ a single Class "D" or higher operator. Proposed paragraph (3)(B) clarifies that a system with 250 or more connections must employ a Class "C" operator, if the system uses only groundwater or purchased water. Proposed paragraph (3)(C) clarifies that a system with 250 or more connections must employ a Class "C" Groundwater or higher operator if the system uses only groundwater. Subparagraph (C) is proposed to be slightly expanded to address the current technology used for treatment of groundwater that is under direct potential of contamination from surface water. Proposed paragraph (3)(D) expands the requirements for operator levels at systems treating groundwater under the direct influence of surface water (GUI). Proposed subparagraph (D)(i) contains the requirement that GUI systems using cartridge filters employ an operator with either a Class "C" or higher surface water license or a Class "C" or higher groundwater license with the addition of a four-hour Monitoring and Reporting Course. Proposed subparagraph (D)(ii) contains the requirement that GUI systems using coagulant addition and direct filtration must employ an operator with either a Class "C" or higher surface water license or a Class "C" or higher groundwater license with the addition of a 40-hour Surface Water Production Course. Proposed subparagraph (D)(iii) contains the requirement that GUI systems using complete surface water treatments comply with the following subparagraph. Proposed subparagraph (D)(iv) contains the requirement that a GUI system either have an operator with a Class "C" or higher license at the plant when it is running or have automatic shutdowns and alarms. Proposed paragraph (3)(E) sets out the required license levels for operators if a system uses surface water. Proposed paragraph (4) states the requirements that beginning January 1, 2004, treatment facilities at all systems using chlorine

dioxide must be under the direct supervision of a licensed operator that has completed additional training. Proposed language specifies that public water systems using chlorine dioxide must place those facilities under the direct supervision of a licensed operator who has a Class "C" or higher license and has completed an approved water laboratory course. Paragraph (5) is proposed to contain the requirement that systems employ a certified operator to inspect any water treatment facilities prior to those facilities being placed into production. Paragraph (6) is proposed to contain the requirement, previously given under paragraph (5), that a system ensure that operators have training in the use of water treatment chemicals to ensure the safety of these workers. Paragraph (7) is proposed to be added to contain the exemption for transient noncommunity public water systems that do not use surface water systems, previously contained in paragraph (1).

In §290.46(f)(3)(A), the requirements for record retention for chemical use and water produced are proposed to be expanded to provide clarification, and to give appropriate requirements to very small systems serving fewer than 750 people, or 250 connections. In subparagraph (A)(i), the words “each day” are proposed to be deleted. Subclause (I) of clause (i) is proposed to be added to contain the requirements previously implicit in clause (i), that systems that treat surface water or GUI shall record chemical use daily. Subclause (II) of clause (i) is proposed to be added to require systems that serve 750 people or more, or 250 connections or more, shall record chemical use daily. Subclause (III) of clause (i) is proposed to be added to require systems that serve fewer than 250 connections and use only groundwater or purchased water shall record the amount of chemicals used in a week. Under subparagraph (A)(ii), the phrase “each day” is deleted and the volume of water used is clarified in the subclauses. Subclause (I) of clause (ii) is proposed to be added to contain the requirements, previously

implicit in clause (i), that systems that treat surface water or GUI must record the volume of water treated daily. Subclause (II) of clause (ii) is proposed to be added to require systems that serve 750 people or more, or 250 connections or more, shall record the volume of water treated daily. Subclause (III) of clause (ii) is proposed to be added to require systems that serve fewer than 250 connections, fewer than 750 people, and use only groundwater or purchased water record the amount of water treated each week.

Section 290.46(f)(3)(B) is proposed to be expanded to include the requirement for retention of disinfectant residual monitoring results for three years in proposed new clause (iii). Existing clauses (iii) - (v) are proposed to be renumbered as (iv) - (vi). Paragraph (3)(D) is proposed to be reworded to introduce the records which must be maintained as specified in the subsequent clauses. Clause (i) of subparagraph (D) is proposed to be added to state that the results of microbial analysis must be maintained. Clause (ii) of subparagraph (D) is proposed to be added to require retention of the results of tank inspections for five years. Subsection (f)(4) is proposed to be amended to replace the term "Water Permitting and Resource Management Division" with the term "Water Supply Division" to reflect recent changes within the agency.

Section 290.46(j)(4) is proposed to be amended to delete the reference to cities, towns, and villages less than 5,000 persons because HB 217, Article 2, no longer exempts municipalities of less than 5,000 population from having licensed plumbing inspectors perform plumbing inspections of all new plumbing and alterations or additions to existing plumbing within the municipal limits. Section 290.46(m) is proposed to be expanded to make specific reference to the safety and public health bases of the

requirement for maintenance of public water system facilities. In subsection (m)(4), the phrase "pressure maintenance facilities" is added to the list of physical facilities that must be maintained in good working condition. Section 290.46(n) is proposed to be expanded to clarify that a system is required to maintain its engineering records and make them available to the executive director upon request. A sentence has been added to subsection (n) to clarify that the specific records identified in the next paragraphs must be maintained by the public water system and be available for review by the executive director. Subsection (n)(3) has been revised to clarify that the items listed are examples of the well completion materials and are not an inclusive list. Section 290.46(p)(2) is proposed to be amended to specify that public water systems must provide a list annually to the executive director of the operators they employ and their license level. Section 290.46(q)(1) is proposed to be amended to replace the term "public drinking water program" with the term "executive director." Section 290.46(s)(1) is proposed to be amended to explicitly cite §290.42. Section 290.46(u) is proposed to be amended to replace the term "public drinking water program" with the term "executive director."

The figure contained in §290.47(f), Appendix F, is proposed to be amended to correct a typographical error within the table formatting. The figure contained in §290.47(g), Appendix G, is proposed to be amended to correspond with §290.46(p)(2) requirements that the public water system submit the name and license level of all the operators it employs. The figure contained in §290.47(i), Appendix I, is proposed to be amended to add dental clinics to the list of facilities that must be isolated.

Subchapter F

The title of Subchapter F is proposed to be changed to delete the word "supply" in reference to public water systems. The new title is proposed to be "Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements for Public Water Systems."

Section 290.102, General Applicability, is proposed to be amended to include provisions of the SDWA contained in 42 USC, §300g-l(b)(10) that allow for two-year extensions to new MCLs or TT requirements for systems that must make capital investments to meet the new requirements. Subsection (b) is proposed to be amended by reformatting to simplify the requirements for variances and exemptions. Proposed subsection (c) references the authorizing federal legislation and sets out the starting date as January 1, 2002, and contains the specific requirements for approval of an extension. Subsection (c)(1) states the conditions under which the two-year extension may be granted, and the specific conditions are subsection (c)(1)(A): that no acute violations be associated with the MCL or TT requirement that the extension is granted for; subsection (c)(1)(B), that the extension not result in an unreasonable risk to public health; subsection (c)(1)(C), that only systems in existence prior to promulgation of a given MCL or TT may apply for an extension; subsection (c)(1)(D), that the executive director determine that the capital improvements described by the system are needed if the system is to comply with the given MCL or TT; subsection (c)(1)(E), that the executive director finds the system's schedule for bringing the system into compliance acceptable; and subsection (c)(1)(F), that the EPA has not already incorporated a two-year extension into the effective date for the new MCL or TT. Subsection (c)(2) proposes that a request for an extension be made in writing by the owner of the water system. Subsection (c)(3) contains the authority for the executive director to address similar types or classes of extension without requiring a written request from each of the systems contained in

that type or class. Proposed new subsection (d) allows any person to file a motion to overturn the executive director's decision to grant or deny a variance, exemption, or extension under this section. Proposed new subsection (e) allows the executive director to approve the schedule and method used when collecting chemical and microbiological samples required by this chapter. Existing subsection (c) is proposed to be relettered as (f).

Section 290.103, Definitions, is proposed to be amended by adding the definition of the "N,N-diethyl-p-phenylenediamine," or "DPD," method of analysis under §290.103(6) and to add a definition of the "entry point sampling site." Definitions (7) - (9) and (11) - (21) are proposed to be renumbered to maintain correct alphabetical sequence.

Section 290.104, Summary of Maximum Contaminant Levels, Maximum Residual Disinfectant Levels, Treatment Techniques, and Action Levels, is proposed to be updated to correct three typographical errors. In subsection (b), the MCL for nitrate is proposed to be amended from the incorrect value of 10.0 mg/L to the correct value of 10 mg/L because the test accuracy is only required to 10 milligrams and not to tenths of a milligram. The MCL for nitrite is proposed to be amended from the incorrect value of 1.0 mg/L to the correct value of 1 mg/L because test results are only required to be accurate to milligrams and not tenths of a milligram. The MCL for combined nitrite and nitrate is proposed to be amended from the incorrect value of 10.0 mg/L to the correct value of 10 mg/L because test results are only required to be accurate to milligrams and not to tenths of a milligram.

Section 290.106, Inorganic Contaminants, is proposed to be amended to correct several typographic errors and to use consistent terminology. The acronym "IOC" is proposed to replace the words "inorganic contaminants" throughout the section after the first reference in subsection (a). Proposed changes to the figure in §290.106(b), change the MCL for nitrate from the incorrect value of 10.0 mg/L to the correct value of 10 mg/L because test results are only required to be accurate to milligrams and not to tenths of a milligram. The MCL for nitrite is proposed to be amended from the incorrect value of 1.0 mg/L to the correct value of 1 mg/L. The MCL for combined nitrite and nitrate is proposed to be amended from the incorrect value of 10.0 mg/L to the correct value of 10 mg/L because test results are only required to be accurate to milligrams and not to tenths of a milligram. The term "entry point" is proposed to replace the words "point of entry" throughout the section for consistency with other rules, other sections of this rule, and guidance documents. Section 290.106(f)(2) is proposed to be amended to correct a typographical error and to ensure consistency with the federal requirements. Subsection (f)(2) is proposed to be amended to include the clarification that compliance may be based on a single sample for nitrite, nitrate, or combined nitrite and nitrate, but that if a confirmation sample is collected, the results of both samples shall be averaged. Subparagraphs (A) - (C) of paragraph (2) are proposed to be deleted to remove the ability of systems to average quarterly nitrite, nitrate, or combined nitrate and nitrite results, which is inconsistent with federal requirements and which was included in the previous rule adoption as a result of a typographical error. Subsection (f)(3) is proposed to be amended to correct a typographical error and to ensure consistency with the federal requirements for inorganic contaminants other than nitrate or nitrite. Paragraph (3)(A) is proposed to be restated to clarify that the use of a single sample for compliance determination is limited to those cases in which a system is sampling annually or less frequently and a confirmation sample is not collected, consistent

with the federal requirements. Paragraph (3)(B) is proposed to clarify the requirement that when a confirmation sample is collected, its results will be averaged with the results of the initial sample when determining compliance. Paragraph (3)(D) is proposed to include the federal requirement that compliance for these contaminants be based on the running annual average of quarterly samples at each entry point, which was erroneously omitted in the previous adoption. Paragraph (3)(E) is proposed to contain the federal requirement that when a single sample will cause an annual average to exceed a given MCL, the system be immediately out of compliance, which was erroneously omitted in the previous adoption.

Section 290.107, Organic Contaminants, is proposed to be amended to clarify rule requirements and to use consistent terminology. The term “entry point” is proposed to replace the words “point of entry” and the abbreviation “mg/L” is proposed to correct the grammatical error in the abbreviation “mg/l” throughout the section for consistency with other rules, other sections of this rule, and guidance documents. Subsection (b)(3) is proposed to be amended to change ppm to the equivalent value in mg/L which is the standard used for drinking water. Subsection (c) is proposed to be amended to replace “pursuant to” with “under” to simplify rule language. Subsection (d) is proposed to be amended to replace “TDH Bureau of Laboratories” with “executive director” to reflect the transfer of responsibility for certifying labs from TDH to TNRCC. Subsection (e) is proposed to be amended to clarify reporting requirements for organic contaminants. This subsection clarifies that under the contract between TNRCC and the lab that performs the analysis, sample results are submitted to TNRCC, the water system must send in sample results within ten days upon request of the executive director. Proposed amendments also include the address to which sample results should be submitted.

In subsection (g) the term "public drinking water program" is proposed to be replaced with the term "executive director," and the phrase referring to the title of the section is deleted to comply with formatting requirements. Subsection (h) is proposed to be amended to change "best available technology" to the acronym "BAT" and to correct the address of where copies are to be mailed to reflect the new name of the Water Supply Division.

Section 290.108, Radiological Sampling and Analytical Requirements, is proposed to be amended to change the title to "Radionuclides Other Than Radon." Subsection (a) is proposed to be amended to delete the applicability to noncommunity, nontransient public water systems because the requirements of this section only apply to community water systems. Subsection (c)(3) is proposed to be added to make explicit the sampling location requirements for radionuclides other than radon. Subsection (d) is proposed to be amended for consistency with the requirements of HB 2912, §18.02, transferring responsibility for lab certification to the commission from the TDH. Subsection (e) is proposed to be amended to clarify reporting requirements for radiological contaminants. This section clarifies that according to the contract between TNRCC and the lab that performs the analysis, sample results are submitted to TNRCC, the water system must send in sample results within ten days upon request of the executive director. Proposed amendments also include the address to which sample results should be submitted. In subsection (g) the term "public drinking water program" is proposed to be replaced with the term "executive director."

Section 290.109, Microbial Contaminants, is proposed to be amended to clarify rule requirements and to use consistent terminology. The term "public drinking water program" is proposed to be replaced

with the term “executive director” throughout the section. Subsection (e) is proposed to be amended to clarify reporting requirements for microbial contaminants. This subsection clarifies that under the contract between TNRCC and the lab that performs the analysis, sample results are submitted to TNRCC, however the water system must send in sample results within ten days upon request of the executive director. Proposed amendments also include the address to which sample results should be submitted.

Section 290.110, Disinfectant Residuals, is proposed to be amended to clarify rule requirements, correct typographical errors, and to use consistent terminology. Subsection (b) is proposed to be amended to correct a typographical error by replacing the word “concentration” with “level.” Subsection (b)(5)(B) is proposed to be amended to make it clear that all community and nontransient noncommunity water systems must comply with the applicability requirements for the maximum residual disinfectant levels (MRDLs) starting January 1, 2004. Subsection (c)(5) is proposed to be amended and reworded for clarity. Paragraph (5)(A) is proposed to be reworded to make it clear that public water systems using only groundwater or purchased water sources and providing water to fewer than 250 connections, or 750 people, must measure the disinfectant residual once a week. Paragraph (5)(B) is proposed to be amended and reworded to clarify that public water systems using only groundwater or purchased water sources and providing water to 250 connections, or 750 people or more, must measure the disinfectant residual once a day. Paragraph (5)(C) is proposed to be added to make it clear that public water systems that use surface water sources or groundwater under the direct influence of surface water, must measure the disinfectant residual once daily, regardless of how many customers they serve. Paragraph (5)(D) is proposed to be amended and reworded to clarify that each

time a public water system takes a bacteriological sample, it must also measure and record the disinfectant residual. Subsection (e) and paragraph (1) of subsection (e) are proposed to be amended to replace the term "public drinking water program" with the term "executive director." In subsection (e)(2), the term "TNRCC" is replaced with the term "commission." Additionally in paragraph (2), the Surface Water Monthly Operating Report submittal form number is corrected from 01020 to 0102C. Subsection (e)(3) is proposed to be amended to state the reference to the Chlorine Dioxide Monthly Operating Report and specify that the correct form number be included. Subsection (f)(4) is proposed to be amended to update the citation to subsection (c)(3)(C) to the cited material's new location in subsection (c)(2)(B)(iii) of this section. Subsection (f)(9) is proposed to be amended to meet the federal rule requirement that if a public water system's failure to monitor makes it impossible to determine compliance with the MRDL in the distribution system, then the system has committed a violation for the entire year covered by the annual average. Subsection (g) is proposed to be amended in several places to replace the term "public drinking water program" with the term "executive director."

Section 290.111, Turbidity, is proposed to be amended to correct typographical errors, use consistent language, and clarify rule requirements. Subsection (b)(1)(A)(ii) is proposed to be amended to correct a typographical error by replacing the word "or" with the word "of." Subsection (d)(1) is proposed to be amended to replace the reference to general nephelometric turbidity methods with the more specific reference to the standard method which sets out the acceptable analytical methods. Subsection (e)(1) is proposed to be amended to make the regulation comply with federal rules that require a public water system to notify the executive director if the turbidity level in the treated water exceeds 1.0 nephelometric turbidity units (NTU) and to replace the term "public drinking water program" with the

term “executive director.” In subsection (e)(2), the term “TNRCC” is replaced with the term “commission” and the Surface Water Monthly Operating Report submittal form number is corrected from 01020 to 0102C. The correct form number for the Filter Profile Report for Individual Filters (10276) is proposed to be added to subsection (e)(3). The correct form number for the Filter Assessment Report for Individual Filters (10277) is proposed to be added to subsection (e)(4). The correct form number for the Request for Compliance CPE (10278) is proposed to be added to subsection (e)(5). The term “public drinking water program” is proposed to be replaced with the term “executive director” in subsection (g)(1) - (3). In subsection (g)(1) it is proposed that the citation to boil water notices be corrected from §290.46(s)(4) to §290.46(q)(3).

Section 290.112, Total Organic Carbon (TOC), is proposed to be amended to clarify rule requirements, correct typographical errors, and to use consistent terminology. Subsection (b)(3) and subparagraph (B) of subsection (b)(3) are proposed to be reworded to replace the term “public drinking water program” with the term “executive director.” Subparagraph (B) is also proposed to be amended to correct a typographical error. In subsection (c)(1), the phrase “within one hour of” is proposed to be replaced with the phrase “between one and eight hours after” to be consistent with the intent that the water taken for use as the finished water sample most clearly represent the source water quality at the time the source water sample was taken after treatment. Subsection (e)(2) is proposed to be updated to reference the correct form name and number. Subsection (e)(3)(F) is proposed to be deleted, because it was erroneously included in the previous rule. Paragraph (3)(G) is proposed to be renumbered because of the deletion of paragraph (3)(F). Subsection (g)(1) is proposed to be amended to replace the term “public drinking water program” with the term “executive director.”

Section 290.113, Disinfection By-products (TTHM and HAA5), is proposed to be amended to insert the term "executive director" and to clarify rule requirements. Subsection (a)(2) is proposed to be amended to clarify that all community and nontransient, noncommunity water systems must comply with the requirements of this section effective January 1, 2004. In subsection (d) the term "TDH Bureau of Laboratories" is proposed to be replaced with the term "executive director" in response to the change of authority over lab certification contained in HB 2912. Subsection (e) is proposed to be amended to clarify reporting requirements for trihalomethanes and haloacetic acids (group of five). Subsection (e) clarifies that under the contract between TNRCC and the lab that performs the analysis, sample results are submitted to TNRCC, however the water system must send in sample results within ten days upon request of the executive director. Proposed amendments also include the address to which sample results should be submitted. Subsection (f)(7) is proposed to be amended to meet the federal rule requirement that if a public water system's failure to monitor makes it impossible to determine compliance with the MCL in the distribution system, then the system has committed a violation for the entire year covered by the annual average. In subsection (g) and paragraph (1) of subsection (g) the term "public drinking water program" is proposed to be replaced with the term "executive director."

Section 290.114, Disinfection By-products Other than TTHM and HAA5, is proposed to be amended to change the title to "Other Disinfection By-products (Chlorite and Bromate)." Changes have been made in this section to insert the term "executive director" where appropriate and to clarify rule requirements. In subsection (a)(3)(C), the term "TDH Bureau of Laboratories" is proposed to be replaced with the term "executive director" in response to the change of authority over lab certification

contained in HB 2912. Subsection (a)(4) is proposed to be reworded to clarify reporting requirements for chlorite. Paragraph (4)(A) is corrected to include the correct form number, specify that the form must be submitted by the tenth day of the month following the end of the reporting period, and delete the address for submission of data, which has been moved to paragraph (4)(C). Paragraph (4)(B) is proposed to be amended to provide the specific citation for analyses covered by the reporting requirements. Paragraph (4)(C) is proposed to be added to include the address for submission of data, previously contained in paragraph (4)(A). In subsection (a)(6) and subparagraph (A) of subsection (a)(6), the term "public drinking water program" is proposed to be replaced with the term "executive director." Subsection (b)(4) is proposed to be added to clarify that under the contract between TNRCC and the lab that performs the analysis, sample results are submitted to TNRCC, however the water system must send in sample results within ten days upon request of the executive director. Proposed amendments also include the address to which sample results should be submitted. The existing paragraphs (4) and (5) are proposed to be renumbered to paragraphs (5) and (6) respectively, to maintain correct numbering after the addition of new paragraph (4). Additionally, in proposed paragraph (6), the term "public drinking water program" is proposed to be replaced with the term "executive director."

Section 290.115, Transition Rule for Disinfection By-products, is proposed to be amended to change the title by adding "(TTHM)" to the title, so the proposed new title is "Transition Rule for Disinfection By-products (TTHM)." Throughout this section, proposed amendments insert the term "executive director" and clarify rule requirements. In subsection (c)(2) - (6), the term "public drinking water program" is proposed to be replaced with the term "executive director." Also, paragraph (4) is

proposed to be amended to delete the requirement to send reports of analyses within 30 days of receipt of the results because this requirement is no longer necessary. In paragraph (7), the term "TDH Bureau of Laboratories" is proposed to be replaced with the term "executive director" in response to the change of authority over lab certification resulting from HB 2912. Paragraph (8) is proposed to be added to clarify that under the contract between TNRCC and the lab that performs the analysis, sample results are submitted to TNRCC, however the water system must send in sample results within ten days upon request of the executive director. Proposed amendments also include the address to which sample results should be submitted.

Section 290.117, Regulation of Lead and Copper, is proposed to be amended for consistency, to correct grammatical errors, and to incorporate provisions of the federal Lead/Copper Minor Revisions Rule, (65 FR 1949-2015, January 12, 2000). In subsection (a)(2)(B), the word "satisfactorily" is proposed to be removed in order to simplify enforcement procedures. Subsection (a)(3) is proposed to be amended to clarify the calculation of a ninetieth percentile when only five compliance samples are collected during a sampling period and to replace the incorrect abbreviation "mg/l" with grammatically correct "mg/L."

In §290.117(b) the word "sample" is proposed to be added to clarify the applicability of site selection and the word "materials" is amended to make a grammatical correction. Paragraph (1) is proposed to be amended to replace the term "entry point" for the term "point-of-entry" for consistency. An additional sentence is proposed to accurately reflect that public water systems must submit a sample site plan for agency approval prior to commencing to sample for lead and copper. Paragraph (2) is

proposed to be amended to make a grammatical correction to the word “materials,” and the word “sample” has been replaced with the word “sampling” to correct a grammatical inconsistency. The term “executive director” replaces the term “public drinking water program.” A reference to deleted Table 2 is eliminated. The reference to procedures required by 40 CFR §141.86 is clarified, and the word “sample” is replaced with the word “sampling” to correct a grammatical inconsistency in two places. The word “information” replaces the word “correspondence” and the term “sampling site selection document” replaces “materials survey document” to maintain a consistent title for the same document. Paragraph (3) is proposed to be added to clarify the requirement that a system must collect a specified number of samples even if none of the sites meet the preferred specifications of 40 CFR §141.86. Paragraph (3) is proposed to be expanded to clarify the term “representative site.”

Section §290.117(c)(1) is proposed to be amended to add the term “one quart” to clarify the sampling requirement volume stated as “one liter.” A sentence about kitchen tap is proposed to be added to provide directive to systems as to which part of the house is preferred for sampling compliance for consistency with 40 CFR §141.86. The word “sample” is added for clarification in the last sentence. A clause forbidding a water system to challenge the accuracy of sampling results based on errors in sample collection has been removed in paragraph (2) for consistency with 40 CFR §141.86. The word “sampling” has been added in two places in paragraph (3) to clarify the sampling site. Paragraph (5) is proposed to be amended to correct a grammatical error and the redundant term “systems” has been made singular. The requirement of two sets of initial samples instead of one set is proposed for consistency with the requirements of 40 CFR §141.86. The word “initial” is added to clarify what samples the section is referring to. The phrase “each of” is deleted for grammatical simplification and

language is added to allow for grants of sampling waivers. Paragraph (8) is proposed to be amended to delete the obsolete date references for initial monitoring during the first eight years of the rule implementation along with the corresponding obsolete Table 2. This language is proposed to be replaced with a procedural statement for bringing new systems into the sampling schedule.

Section 290.117(d) is proposed to be amended to correct a reference to §290.117(a)(3). Section 290.117(e)(4) is proposed to be amended to add required federal language from 40 CFR §141.86(d)(4)(v), allowing for accelerated reduced monitoring. This allows a system to advance to triennial monitoring one year faster if the ninetieth percentile levels for lead and copper meet federal guidelines. The language regarding public education requirements and the requirement to complete a full round of sampling during a reduced round if an exceedance is calculated at the reduced sampling level is proposed to be deleted because it is redundant. Subsection (e)(5) is also proposed to be amended to replace outdated language with the federal language from 40 CFR §141.86(d)(4)(v) for an accelerated reduced monitoring. A new subsection (f) is proposed to incorporate new federal language from 40 CFR §141.86(q) regarding invalidation of certain lead and copper tap samples. The existing subsection (f) is proposed to be relettered as subsection (h).

Proposed new §290.117(g) directly incorporates language from 40 CFR §141.86(g) allowing for waivers to systems meeting lead-free and copper-free plumbing criteria that have completed one round of lead and copper tap sampling without exceeding 0.005 mg/L lead or 0.650 mg/L copper at the ninetieth percentile. Lead and copper sampling for such systems will only be required every nine

years. The requirements previously contained in §290.117(g) are proposed to be renumbered to §290.117(i).

Section 290.117(h) is proposed to be amended to contain requirements previously contained in subsection (f). Subsection (h)(1)(B) is proposed to be amended to clarify compliance sampling time constraints for samples to be processed. Additionally, the term "monitoring and reporting" is added for grammatical clarification. Subparagraphs (D) and (F) of paragraph (1) are proposed to be amended to correct all references to Table 2 because the tables have been renumbered. Paragraph (1)(F) is proposed to be amended to replace the term "biweekly" with the term "every two weeks." The size ranges for rule applicability in subparagraphs (H) - (J) of paragraph (1) are proposed to be amended to provide clarity. Paragraph (1)(J) is proposed to be amended to add stipulations regarding a large system's lead and copper values and water quality parameter data before a large system may advance to triennial reporting for water quality parameter reports. Paragraph (1)(M) is added to reflect federal rule guidelines in 40 CFR §141.86 for entry points for water quality parameter reporting. Paragraph (1)(N) is proposed to incorporate federal rule requirements of 40 CFR §141.87(e)(4) for large water systems which stipulate that excursions from approved water quality parameters crucial to corrosion control will require that the system return to quarterly monitoring of water quality parameters for at least one year. Paragraph (1)(O) incorporates federal requirements of 40 CFR §141.87(d), which outlines the procedure for granting a reporting waiver for water quality parameters in small and medium water systems. Paragraph (1)(P) is proposed to be amended to incorporate the requirement that water quality parameter ranges must be set by the public water system or EPA, with state approval. Paragraph

(1)(Q) is proposed to incorporate the federal rule requirements in 40 CFR §141.86 that water systems operate their corrosion control treatment within approved water quality parameters ranges at all times.

Proposed amendments to §290.117(h)(2)(A) would eliminate redundant requirements for source water testing under the federal lead/copper rule by using the lead and copper values obtained through the normally scheduled inorganic SDWA compliance sampling. Paragraph (2) also incorporates the federal definition of a large water system with optimized corrosion control from 40 CFR §141.81(b)(3). The proposed language in paragraph (2)(E) supports the elimination of redundant source water sampling requirements for lead and copper. Paragraph (2)(F) is proposed to incorporate federal language from 40 CFR §141.81(b)(3)(iii) requiring a water system to notify the state prior to making any changes to the corrosion control treatment.

Section 290.117(i) is proposed to be amended to contain the requirements previously contained in §290.117(g). The material formerly contained in §290.117(i) is proposed to be moved to §290.117(k) and to be changed to incorporate new federal provisions. In the title, the term “requirements” is proposed to replace the term “procedures” for accuracy. The phrase “at the ninetieth percentile tap sample” replaces “based on first draw tap water sampling” for consistency with federal requirements. The word “as” is removed for grammatical clarification. The phrase “and according to” replaces “in accordance with” to correct the grammar. The word “stated” is removed for grammatical clarification. The last sentence clarifies the requirements and reference to §290.117(i) and incorporates the reporting requirements of 40 CFR §141.85(c)(8). Section 290.117(i)(2) is proposed to be amended to clarify the size of the water system described in the requirements of paragraph (2). Paragraph (2)(A) is proposed

to be amended to add the word "water" for clarification and to add language allowing delivery by separate mailing. In subparagraphs (A) - (D) of paragraph (2), the first word in each sentence is no longer capitalized for grammatical accuracy. The existing language in subparagraph (E) is moved to new subparagraph (H) and incorporates federal language from 40 CFR §141.86(c)(8) allowing certain systems to eliminate the requirements of §290.117(i)(2)(D). Paragraph (2)(F) is proposed to be amended to incorporate federal language of 40 CFR §141.86(c)(8) that allows certain systems to forego the requirements of §290.117(i)(2)(B) - (D). Paragraph (2)(G) is proposed to be amended to incorporate federal language from 40 CFR §141.86(c)(8) allowing systems without lead service lines to eliminate language in the federal Public Education Materials pertaining to lead service lines. Subparagraph (G) is also proposed to be amended to uniformly incorporate the requirements of the federal language found in 40 CFR §141.85(a) and requires that Public Education documents be written in language that can be "easily understood." Paragraph (2)(H) contains the statement moved from §290.117(i)(2)(E). In §290.117(i)(3), a citation reference is replaced with the new CFR citation. In compliance with the federal language of 40 CFR §141.85(c)(4), a sentence is added to paragraph (3)(B) to allow for Internet postings where applicable. Paragraph (3)(C) is proposed to contain federal language from 40 CFR §141.85(a)(2) allowing nontransient, noncommunity systems to alter public education language as applicable. Some of the contents of subparagraph (C) are proposed to be moved to a new subparagraph (D) for continuity.

Section 290.117(j) is proposed to be amended to contain the existing requirements contained in subsection (h) relating to corrosion control. The existing material contained in §290.117(j) is proposed to be moved to subsection (l). Subsection (j)(1) is proposed to incorporate new federal language of 40

CFR §141.82(g) outlining water quality parameter monitoring compliance periods. Subparagraphs (A) - (C) of paragraph (1) are proposed to be amended to incorporate the designated methods for calculating daily water quality parameters values from 40 CFR §141.82(g). Subsection (j)(2) is proposed to be amended to provide guidelines for large water systems that exceed the lead or copper action level during a reduced monitoring period since all the deadlines covered in the first part of paragraph (2) have elapsed. Subsection (j)(3) includes new federal language from 40 CFR §141.81(b)(3)(v) for medium and small systems if they exceed the lead or copper action level during a reduced monitoring period. The term "executive director" replaces the term "Public Drinking Water program" and "state" in subsection (j)(4).

Section 290.117(k) is proposed to be amended to contain the existing requirements contained in §290.117(i) relating to lead service line replacement. The existing subsection (k) is proposed to be relettered as subsection (m). Subsection (k)(1) is proposed to be amended to replace the term "in first-draw" with the term "during follow up," and incorporate new federal language from 40 CFR §141.84(b) regarding when lead service line replacement must begin. Subsection (k)(2), is proposed to be deleted. Paragraph (3) is renumbered as paragraph (2) and incorporates new federal requirements of 40 CFR §141.84(d)(1), relating to notification for residents served by lead service lines scheduled for replacement.

Section 290.117(l) is proposed to be added to contain the requirements previously contained in §290.117(j), relating to analytical and sample preservation methods. The term "or the commission" is proposed to be added to the list of agencies who may certify labs for consistency with HB 2912 which

transfers lab certification from TDH to the commission. Subsection (l)(2) is proposed to be amended to add the requirements for the laboratory's maximum detection limits, as contained in 40 CFR §141.89(a)(1)(iii). Subsection (l)(5) is proposed to be amended to maintain general consistency with federal requirements by deleting language requiring the commission to supply laboratory submission forms. Subsection (l)(6) is proposed to be deleted to remove the requirement for the commission to supply the water system with lead and copper sampling bottles.

Section 290.117(m) is proposed to be added to contain the requirements previously contained in §290.117(k), relating to reporting and recordkeeping requirements. Section 290.117(m)(1)(A) is proposed to be amended to add a deadline for submitting water quality parameters reports to the executive director for consistency with 40 CFR §141.90(a)(1). Paragraph (l)(B) is proposed to be amended to replace the term "TDH" with the word "approved" in compliance with HB 2912. New language is proposed to provide for cases of delinquent water system accounts at the laboratory. New language is also proposed to provide for the time lag between sample submission to the laboratory and when the data is released to the agency. The last sentence of paragraph (1)(B) is moved to paragraph (1)(G). In paragraph (1)(E), the reference to subsection (i) has been changed to (k). In paragraph (1)(F), the reference to subsection (g) has been changed to (i). In paragraph (1)(G), new federal language from 40 CFR §141.90(a)(1)(ii) related to sample sites used in subsequent sampling rounds is proposed to be added. A sentence from paragraph (l)(B) is transferred here. New federal language from 40 CFR §141.90(a)(1)(ii) regarding site invalidation is proposed to be added to paragraph (l)(G) and the last sentence is proposed to be deleted.

Section 290.118, Secondary Constituent Levels, is proposed to be amended for consistency and clarification. Subsection (c) is proposed to be reworded to clarify that all public water systems must measure secondary constituents and to replace the term "point of entry" with the term "entry point," throughout.

Section 290.119, Analytical Procedures, is proposed to be amended in subsection (a), to replace the term "TDH Bureau of Laboratories" with the term "executive director" in response to the change of authority over lab certification resulting from HB 2912. Subsection (b)(8) is proposed to be amended to add the method for total organic carbon analysis to the list of methods.

Section 290.121, Monitoring Plans, is proposed to be amended in subsection (c)(1) and (2) to replace the term "public drinking water program" with the term "executive director." Subsection (c)(3) is proposed to be amended to clarify that every public water system must have developed a monitoring plan by January 1, 2004, but that they only need to submit it to the commission when requested to do so. In subsection (c)(4), the term "public drinking water program" is proposed to be replaced with the term "executive director" and the word "the" is omitted.

Section 290.122, Public Notification, is proposed to be amended to incorporate the requirements of the federal Public Notice Rule (40 CFR Parts 9, 141, and 142), to be reorganized for clarity, and to correct various typographical errors. The section is proposed to be reorganized to provide a new subsection (d) that will contain general notification requirements that apply to all levels of notification. Subsection (a) is proposed to add a citation to new subsection (d) containing general requirements, and to delete

language that is now contained in subsection (d). The citation to the nitrate and nitrite MCLs in subsection (a)(1)(C) is proposed to be corrected. Subsection (a)(l)(E) is proposed to be added to include requiring public notice in the event of a waterborne disease outbreak in accordance with federal requirements. The material previously contained in subparagraph (E) is proposed to be relettered as subparagraph (F). The material currently contained in subsection (a)(2) is proposed to be moved to subsection (d). The material currently contained in paragraph (3) is proposed to be renumbered to paragraph (2). New subsection (a)(2) is proposed to be amended to include the word "initial" to differentiate between ongoing and initial notification requirements and reorganized into subparagraphs. These subparagraphs include the federal requirement that acute notice be given within 24 hours. New paragraph (2)(A) is proposed to be added to include the requirement for boil water notices and to add the citation to §290.46(s) relating to special precautions. The material previously contained in subparagraphs (A), (B), and (C) is proposed to be relettered as subparagraphs (B), (C), and (D), respectively. Paragraphs (4) and (5) of subsection (a) are proposed to be renumbered as paragraphs (3) and (4), respectively. Subsection (a)(5) is proposed to be added to require submission of copies of notification documents to the executive director within ten days of distribution.

Section 290.122(b) is proposed to be rewritten to clarify the conditions for which non-acute notification is required to include MRDLs and variance and exemption violations. The material related to general requirements for notice are proposed to be moved to subsection (d) and a reference to subsection (d) is proposed to be added. Subsection (b)(1) is proposed to be amended to initiate the list of violations that require non-acute notifications; the material previously contained in paragraph (l) is proposed to be moved to subsection (d). Subsection (b)(l)(A) is proposed to be amended to include the requirement for

notification in the event of a violation of an MCL, MRDL, or TT with non-acute potential health effects, and the material previously contained in subparagraph (A) is proposed to be moved to subsection (d). Subsection (b)(1)(B) is proposed to be amended to include the requirement for notification if a system fails to comply with the requirements of a variance, exemption or extension, and the material currently contained in subparagraph (B) is proposed to be moved to subsection (d). Subsection (b)(1)(C) is proposed to set out the requirement for notification for other circumstances deemed to have a non-acute health effect, and the material currently in subparagraph (C) is proposed to be moved to subsection (d). Subsection (b)(2) is proposed to be reworded to clarify that non-acute notice is required for all conditions listed in the subsection, and proposed to be amended to conform with the federal requirement that non-acute notice be given within 30 days of the occurrence.

Section 290.122(c) is proposed to be amended to include a citation to subsection (d), containing general requirements for notices. Subsections (c)(1) is proposed to initiate the list of circumstances under which systems must give other notice and the material currently contained in paragraph (l) is proposed to be moved to subsection (d). Subsection (c)(1)(A) is proposed to be amended to include the need for notice in case of an exceedance of the secondary constituent level for chloride and the material currently contained in subparagraph (A) is proposed to be moved to subsection (d). Subsection (c)(1)(B) is proposed to be amended to include the need for notice in case of failure to perform required monitoring or reporting and the material currently contained in subparagraph (B) is proposed to be moved to subsection (d). Subsection (c)(1)(C) is proposed to be amended to include the need for notice in case of noncompliance with analytical or procedural requirements and the material currently contained in subparagraph (C) is proposed to be moved to subsection (d). Subsection (c)(1)(D) is proposed to be

added to set out the requirement for notification for systems operating under a variance or exemption. Subsection (c)(3)(A) is proposed to be amended to allow repeat notification to be given using the Consumer Confidence Report and to require repeat notice to be issued every 12 months, in accordance with federal requirements.

Section 290.122(d) is proposed to be added to contain the general requirements for all notices. Subsection (d)(1) is proposed to contain the requirement that the notice be given in clear and readily understandable language, that it not be in small type, and that it not be designed in a manner that will frustrate the intent of the notice. Subsection (d)(2) is proposed to contain the requirement that the notice state the time an event occurred, if notice is given for a specific event. Subsection (d)(3) is proposed to contain the requirement that notices describe potential adverse health effects. Subsection (d)(3)(A) is proposed to require and cite the mandatory notification language contained in 40 CFR §141.32. Subsection (d)(3)(B) is proposed to require that the notice describe the population at risk. Subsection (d)(4) is proposed to contain the requirement that the notice include a description of the system's actions to correct any violations. Subsection (d)(5) is proposed to contain the requirement that the notice describe what actions citizens should take, such as obtaining other potable water or seeking medical help. Subsection (d)(6) is proposed to contain the requirement that the notice contain a phone number for additional information. Subsection (d)(7) is proposed to contain the requirement that, where appropriate, the notice be multilingual. Subsection (e) is proposed to be relettered to contain the material currently contained in subsection (d). Subsection (f) is proposed to be relettered to contain the material currently contained in subsection (e) and to be reworded to clarify that a copy of any notification must be sent to the executive director within ten days of the notification.

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

John Davis, Technical Specialist with Strategic Planning and Appropriations, has determined that for the first five-year period the proposed amendments are in effect, there will be fiscal implications, which are not anticipated to be significant, for units of state and local government as a result of administration or enforcement of the proposed amendments.

The proposed amendments are intended to make technical and grammatical corrections to existing public drinking water rules, and incorporate revisions from EPA's updated Public Notification and Lead/Copper Minor Revisions rules. Additionally, language from the SDWA has been added allowing two-year compliance date extensions for affected entities when capital improvements are necessary to comply with federal public drinking water rules. These actions are being taken because the agency is required by EPA to adopt these public drinking water rule updates and changes in order to retain regulatory authority for public drinking water issues in Texas.

All existing and any new public water systems in Texas would be affected by the provisions in this rulemaking. There are approximately 6,700 public water systems in Texas, with approximately 60 new public water systems created per year. Public water systems can be broken down into one of three categories: community water systems, noncommunity nontransient water systems, and noncommunity transient water systems. A public water system is defined as a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if the system has at least 15 service connections or regularly serves at least 25 individuals daily at least 60 days a year.

A community water system is defined as having at least 15 service connections used by year-round residents or if it regularly serves at least 25 year-round residents. A system such as a municipality is a community system. A nontransient noncommunity water system is defined as public water system that is not a community water system and regularly serves at least 25 of the same persons at least six months out of the year. Systems such as large employers, schools, or summer camps are nontransient noncommunity systems. Facilities such as highway rest stops, gas stations, and recreational facilities, where fewer than 25 of the same persons are served over six months of the year are transient, noncommunity systems.

Out of the 6,700 public drinking water systems affected by the proposed amendments, approximately 3,045 are operated by units of state or local governments, including cities, water districts which are also local governments, and state agencies, such as Parks and Wildlife and the Department of Criminal Justice. Some of the public water systems are operated by quasi-governmental entities such as water supply corporations, river authorities, and some water districts (which are included in the 3,045 total).

The proposed rulemaking would allow all existing or any new public water systems in Texas that are required to perform capital improvements to facilities to comply with public drinking water rules to request a two-year extension to complete the capital improvements. Exceptions would be granted if no unacceptable public health impact would result from the extension. Extensions may be granted for any situations that require capital improvement and that do not impact public health on a case-by-case basis. This provision adopts a federal extension allowance previously not incorporated in the Texas rules. This provision is intended to provide more time for affected facilities to comply with current or future

public drinking water requirements. The commission anticipates no adverse fiscal impacts to affected facilities due to the time extension provision proposed in this rulemaking. The commission anticipates this provision would benefit affected facilities by potentially delaying capital expenditures required to comply with public drinking water rules. This rulemaking does not propose measures that would require additional capital expenditures beyond what is already required to comply with existing public drinking water regulations.

The EPA's updated federal Public Notification rule revises the minimum requirements that public water systems must meet regarding the form, manner, frequency, and content of public notification. Currently, public water systems in Texas are required to give notice to persons served for all violations of the National Primary Drinking Water Regulations, including violations of MCL, MRDL, TT, monitoring, testing procedure requirements, and waterborne emergencies. The updated federal rules proposed to be incorporated into agency rules change the current violation notification requirements. The following table lists the current and proposed notification provisions.

Figure: 30 TAC Chapter 290 - Preamble

Figure: 30 TAC Chapter 290 - Preamble

Public Water System Violation	**Current Rules**	**Proposed Rules**
Violations of MCLs that pose an acute risk to human health	Provide a copy of violation notice to radio and TV stations within 72 hours, or by posting or hand delivery within 72 hours. Posting must continue as long as violation persists. Additional notices by newspaper within 14 days or posting or hand delivery if no newspaper is available; by mail within 45 days; and repeat notice every three months thereafter.	Revised to require notice within 24 hours; must use at a minimum electronic media, posting, hand deliver, or other method approved by the agency, plus any additional methods necessary to reach all persons served. Additional notice not required for same violation. The agency may require additional requirements on a case-by-case basis.
MCL, treatment technique, and variance or exemption schedule violations	Provide a copy of notice by newspaper within 14 days or by posting or hand delivery if no newspaper is available. Additional notice by mail within 45 days, and repeat notice every three months thereafter by mail or hand delivery.	Violation notice is required within 30 days unless the agency allows an extension of up to three months. Requires the Public water system to consult with the agency with 24 hours of learning of an exceedance of maximum turbidity limits. Initial notice does not require multiple methods of delivery unless needed to reach persons served. Repeat notice required every three months where violation persists, unless the agency determines less frequent repeat notice is warranted.

Monitoring and testing procedure violations, and operations under a variance or exemption	Notice required via newspaper within three months of the violation or the granting of variance or exemption, or by hand delivery or posting if no newspaper is available.	Notice required within one year unless the agency directs otherwise. Public water system must use mail or direct delivery, and other methods reasonably calculated to reach persons served.

The revised regulations require quicker public notification in case of public drinking water emergencies. Water suppliers would have up to 24 hours to notify their customers and the commission after a violation with the potential to impact human health occurs. For less dangerous violations, the water supplier would have from 30 days to one year to notify its customers, depending on the severity of the violation. The proposed amendments are also intended to provide water suppliers increased notice flexibility during emergency situations by not mandating any one type of media to be used to notify the public.

This rulemaking would also expand the number of violations that would require 24-hour notice. Examples of these violations include: fecal coliform MCL violation or failure to test for fecal contamination after total coliform test is positive; nitrate/nitrite/combined nitrate and nitrite MCL violation or failure to take confirmation sample; chlorine dioxide MRDL violation in distribution system or failure to take repeat samples in distribution system; and exceedance of maximum allowable turbidity levels resulting in an MCL or TT violation. Although the criteria for 24-hour response have been expanded, the commission anticipates that the number of emergency situations requiring 24-hour notice will not change significantly and will remain near 150 per year.

The EPA provided cost estimates to comply with the updated public notice rules in the report titled, "*National Primary Drinking Water Regulations: Public Notification Rule; Final Rule,*" May 4, 2000. In this report, the EPA estimated the following public notice costs for facilities with at least one drinking water violation, based on current public notice rules: for public water systems serving 25 - 500 persons, approximately $170 per year; for public water systems serving 501 - 3,300 persons, approximately $400 per year; for public water systems serving 3,301 - 10,000 persons, approximately $1,200 per year; for public water systems serving 10,001 - 100,000 persons, approximately $3,300 per year; and for public water systems serving over 100,000 persons, approximately $40,000 per year. The average cost for all public water systems to comply with current rules was estimated to be approximately $330 per year. The EPA then factored in the costs for the provisions proposed in this rulemaking and determined implementation of the proposed public notice provisions would result in an approximate 40% cost savings for affected facilities due to the extended time periods and notice delivery methods allowed for notifying the public regarding nonemergency public drinking water violations.

The updated federal Lead/Copper rule is intended to clarify existing rules and make minor regulatory changes, and would only affect community and noncommunity nontransient public water systems in Texas. There are approximately 2,600 community and 165 noncommunity nontransient water systems in Texas operated by units of state and local government. The changes do not affect the current Lead/Copper action levels, or the MCL goals established in 1991. Water quality parameter range exceedances will also now be considered violations under the new federal requirements. This provision will affect approximately 188 current public water systems annually, some of which will probably be

units of state and local government; however, the commission does not anticipate any significant fiscal impacts because these water systems would only have to revise their standards to meet federal standards without having to add staff or capital expenditures to comply with the provisions.

PUBLIC BENEFITS AND COSTS

Mr. Davis has also determined that for each year of the first five years the proposed amendments are in effect, the public benefit anticipated from enforcement of and compliance with the proposed amendments will be enhanced notification requirements in the case of waterborne emergencies.

The proposed amendments are intended to make technical and grammatical corrections to existing commission public drinking water rules, and incorporate revisions from EPA's updated Public Notification and Lead/Copper Minor Revisions Rules. Additionally, language from the SDWA allowing two-year compliance date extensions for affected entities when capital improvements are necessary to comply with federal public drinking water rules would be incorporated into existing agency rules. The commission does not anticipate that there will be significant fiscal impacts to individuals and businesses to incorporate these minor procedural, technical, and grammatical changes to the agency's public drinking water rules.

All existing and any new public water systems in Texas would be affected by the provisions in this rulemaking. There are approximately 3,500 nongovernment investor-owned utilities, commercial entities, and industrial facilities that operate public water systems in Texas that would be affected by the

proposed amendments. Of this total, approximately 1,910 are community water systems and 602 are noncommunity nontransient water systems that would be affected by the revised Lead/Copper rules.

The proposed rulemaking would allow all existing or any new public water systems in Texas that are required to perform capital improvements to facilities to comply with public drinking water rules to request a two-year extension to complete the capital improvements. The commission anticipates this provision would benefit affected facilities by potentially delaying capital expenditures required to comply public drinking water rules. Exceptions would be granted if no unacceptable public health impact would result from the extension. Additionally, this rulemaking proposes to incorporate EPA's updated federal Public Notification rules, which revised the minimum requirements that public water systems must meet regarding the form, manner, frequency, and content of public notification regarding public water system violations.

The EPA provided cost estimates to comply with the updated Public Notification rules in the report titled, "*National Primary Drinking Water Regulations: Public Notification Rule; Final Rule,*" May 4, 2000. In this report, the EPA estimated that current Public Notification rules costs affected entities an average of $330 per year to comply (the actual costs ranged from as little as $170 to $40,000 per year depending on the number of persons served by the water system). The EPA concluded that implementation of the updated Public Notification rules would result in an approximate 40% cost savings for public notification due to the extended time periods and notice delivery methods allowed for notifying the public regarding nonemergency public drinking water violations.

This rulemaking also intends to incorporate updated EPA Lead/Copper rule, which is intended to clarify existing rules and make minor regulatory changes. The changes do not affect the current Lead/Copper action levels, or the MCL goals established in 1991. The rule updates do not affect the Lead/Copper rule's basic requirements to optimize corrosion control and, if appropriate, treat source water, deliver public education, and replace lead service lines. Affected entities in Texas are already required to keep water quality parameter records required by the updated EPA Lead/Copper rule revision, so the commission anticipates no additional costs to comply with revised recordkeeping requirements.

SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

There will be fiscal implications that have no adverse effect on small and micro-businesses as a result of implementation and enforcement of the proposed amendments. This rulemaking is intended to make technical and grammatical corrections to existing commission public drinking water rules; incorporate revisions from to EPA's updated Public Notification and Lead/Copper Minor Revisions rules; and incorporate language into commission rules from the SDWA allowing two-year compliance date extensions for affected entities when capital improvements are necessary to comply with federal public drinking water rules.

All existing and any new public water systems in Texas would be affected by the provisions in this rulemaking. There are approximately 3,500 nongovernment investor-owned utilities, commercial entities, and industrial facilities that operate public water systems in Texas, some of which are probably small or micro-businesses, that would be affected by the proposed amendments. Of this total,

approximately 1,910 are community water systems and 602 are noncommunity nontransient water systems that would be affected by the revised Lead/Copper rules.

The proposed rulemaking would allow all existing or any new public water systems in Texas that are required to perform capital improvements to facilities to comply with public drinking water rules to request a two-year extension to complete the capital improvements. The commission anticipates this provision would benefit affected facilities by potentially delaying capital expenditures required to comply public drinking water rules. Exceptions would be granted if no unacceptable public health impact would result from the extension.

The EPA provided cost estimates to comply with the updated Public Notification rules in the report titled, "*National Primary Drinking Water Regulations: Public Notification Rule; Final Rule*," May 4, 2000. In this report, the EPA estimated that current Public Notification rules costs affected entities an average of $330 per year to comply (the actual costs ranged from as little as $170 to $400 per year depending on the number of persons served by water systems that probably qualify as small businesses). The EPA concluded that implementation of the updated Public Notification rules would result in an approximate 40% cost savings for public notification due to the extended time periods and notice delivery methods allowed for notifying the public regarding nonemergency public drinking water violations.

This rulemaking also intends to incorporate the updated EPA Lead/Copper rule, which is intended to clarify existing rules and make minor regulatory changes. The changes do not affect the current

Lead/Copper action levels, or the MCL goals established in 1991. The rule updates do not affect the Lead/Copper rule's basic requirements to optimize corrosion control and, if appropriate, treat source water, deliver public education, and replace lead service lines. Affected entities in Texas are already required to keep water quality parameter records required by the updated EPA Lead/Copper rule revision, so the commission anticipates no additional costs to comply with revised recordkeeping requirements.

LOCAL EMPLOYMENT IMPACT STATEMENT

The commission has reviewed this proposed rulemaking and determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed the proposed rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225 and determined that the rulemaking is not subject to §2001.0225 because it does not meet the definition of a "major environmental rule" as defined in the act. A "major environmental rule" means a rule, the specific intent of which, is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The intent of the rules is primarily to make technical and grammatical corrections to Chapter 290, Subchapters D and F; therefore, these rule amendments do not meet the definition of a "major environmental rule." In addition to these

corrections, the commission proposes amendments to incorporate the federal Public Notification Rule (65 FR 25981, May 4, 2000), incorporate the federal Lead/Copper Minor Revisions Rule (65 FR 1949, January 12, 2000), and propose language from SDWA, 42 USC, §300g-1(b)(10), allowing two-year extensions to the effective dates for new regulations for MCLs and TT requirements when capital improvements are necessary to comply with the rule revisions. Furthermore, the rulemaking does not meet any of the four applicability requirements listed in §2001.0225(a). Specifically, the proposed amendments do not exceed a federal standard, exceed an express requirement of state law, nor exceed a requirement of a delegation agreement. The proposed amendments were not developed solely under the general powers of the agency, but were specifically developed under Texas Health and Safety Code (THSC), §341.031(a), which allows the commission to adopt and enforce rules to implement the SDWA. The purpose of the proposed amendments is to make state rules conform to federal IESWTR and the Stage 1 DBPR as required by federal law, and the regulations under 40 CFR Parts 9, 141, and 142. In addition to these corrections, the commission proposes amendments to incorporate the federal Public Notification Rule (65 FR 25981, May 4, 2000), incorporate the federal Lead/Copper Minor Revisions Rule (65 FR 1949, January 12, 2000), and propose language from SDWA, 42 USC, §300g-1(b)(10), allowing two-year extensions to the effective dates for new regulations for MCLs and TT requirements when capital improvements are necessary to comply with the rule revisions. These amendments also implement HB 217 and HB 2912, §18.02, 77th Legislature, 2001. The commission invites public comment on the draft regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission evaluated these proposed amendments and performed a preliminary assessment of whether they constitute a takings under Texas Government Code, Chapter 2007. The following is a summary of that evaluation and preliminary assessment. The purpose of this rulemaking is to make state rules conform to federal IESWTR and the Stage 1 DBPR as required by federal law (SDWA) and the regulations under 40 CFR Parts 9, 141, and 142 by correcting technical and grammatical errors. In addition to these corrections, the commission proposes amendments to incorporate the federal Public Notification Rule (65 Federal Register (FR) 25981-26049, May 4, 2000), incorporate the federal Lead/Copper Minor Revisions Rule (65 FR 1949-2015, January 12, 2000), and propose language from SDWA, 42 USC, §300g-1(b)(10), allowing two-year extensions to the effective dates for new regulations for MCLs and TT requirements when capital improvements are necessary to comply with the rule revisions. These amendments also implement HB 217 and HB 2912, §18.02, 77th Legislature, 2001. Promulgation and enforcement of these amendments will constitute neither a statutory nor a constitutional taking of private real property. There are no burdens imposed on private real property under this rulemaking because the proposed amendments neither relate to, nor have any impact on the use or enjoyment of private real property, and there is no reduction in value of the property as a result of this rulemaking.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM (CMP)

The executive director reviewed the proposed rulemaking and found that the rules are neither identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11, relating to Actions and Rules

Subject to the Texas Coastal Management Program, nor will they affect any action or authorization identified in 31 TAC §505.11. Therefore, the proposed rules are not subject to the CMP.

ANNOUNCEMENT OF HEARING

A public hearing on this proposal will be held February 19, 2002, at 10:00 a.m. in Room 2210, Building F, located at 12100 Park 35 Circle, Austin. The hearing will be structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. There will be no open discussion during the hearing; however, a commission staff member will be available to discuss the proposal 30 minutes before the hearing and will answer questions before and after the hearing.

SUBMITTAL OF COMMENTS

Comments may be submitted to Patricia Durón, Office of Environmental Policy, Analysis, and Assessment, MC 205, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. All comments should reference Rule Log Number 2001-008-290-WT. Comments must be received by 5:00 pm, March 4, 2002. For further information, contact Melissa Estes, Policy and Regulations Division, at (512) 239-3937.

STATUTORY AUTHORITY

The amendments are proposed under the Texas Water Code, §5.103, which provides the commission the authority to adopt and enforce rules necessary to carry out its powers and duties under the laws of

this state; and under THSC, §341.031, which allows the commission to adopt rules to implement the SDWA, 42 USC, §§300f *et seq*.

The amendments implement THSC, §§341.031, 341.0315, and 341.035: which require the commission to adopt rules to protect public water systems; require public water systems to meet the requirements of commission rules; and require the executive director of the commission to approve plans and specifications for public water systems. The amendments also implement HB 2912, §18.02, and HB 217, §2(a)(2)(B), 77th Legislature, 2001.

SUBCHAPTER D : RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS

§§290.38, 290.39, 290.41, 290.42, 290.44 - 290.47

§290.38. Definitions.

The following words and terms, when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise. If a word or term used in this chapter is not contained in the following list, its definition shall be as shown in Title 40 Code of Federal Regulations (CFR) §141.2. Other technical terms used shall have the meanings or definitions listed in the latest edition of *The Drinking Water Dictionary, prepared by the American Water Works Association.* ["Glossary, Water and Wastewater Control Engineering," prepared by a joint editorial board representing the American Public Health Association, American Society of Civil Engineers, American Water Works Association, and the Water Pollution Control Federation.]

(1) - (2) (No change.)

(3) **Approved laboratory** -- A laboratory certified and approved by the commission [Texas Department of Health] to analyze water samples to determine their compliance with maximum allowable constituent levels.

(4) - (7) (No change.)

(8) **Certified laboratory** -- A laboratory certified by the commission to analyze water samples to determine their compliance with maximum allowable constituent levels.

(9) [(8)] **Community water system** -- A public water system which has a potential to serve at least 15 residential service connections on a year-round basis or serves at least 25 residents on a year-round basis.

(10) [(9)] **Connection** -- A single family residential unit or each commercial or industrial establishment to which drinking water is supplied from the system. As an example, the number of service connections in an apartment complex would be equal to the number of individual apartment units. When enough data is not available to accurately determine the number of connections to be served or being served, the population served divided by three will be used as the number of connections for calculating system capacity requirements. Conversely, if only the number of connections is known, the connection total multiplied by three will be the number used for population served. For the purposes of this definition, a dwelling or business which is connected to a system that delivers water by a constructed conveyance other than a pipe shall not be considered a connection if:

(A) the water is used exclusively for purposes other than those defined as human consumption (see human consumption);

(B) the executive director determines that alternative water from a commission-approved water system or the water users' private well [to achieve the equivalent level of public health

protection provided by the drinking water standards is] provides [provided] water for [residential or similar] human consumption, including, but not limited to, drinking and cooking; or

(C) the executive director determines that the water provided for [residential or similar] human consumption is centrally treated [or is treated at the point of entry] by a commission-approved water system [provider, a pass through entity, or the user to achieve the equivalent level of protection provided by the drinking water standards].

(11) [(10)] **Contamination** -- The presence of any foreign substance (organic, inorganic, radiological or biological) in water which tends to degrade its quality so as to constitute a health hazard or impair the usefulness of the water.

(12) [(11)] **Cross-connection** -- A physical connection between a public water system and either another supply of unknown or questionable quality, any source which may contain contaminating or polluting substances, or any source of water treated to a lesser degree in the treatment process.

(13) [(12)] **Disinfectant** -- Any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to the water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic microorganisms.

(14) [(13)] **Disinfection** -- A process which inactivates pathogenic organisms in the water by chemical oxidants or equivalent agents.

(15) **Distribution system** -- A system of pipes that conveys potable water from a treatment plant to the consumers. The term includes pump stations, ground and elevated storage tanks, potable water mains, and potable water service lines and all associated valves, fittings, and meters, but excludes potable water customer service lines.

(16) [(14)] **Drinking water** -- All water distributed by any agency or individual, public or private, for the purpose of human consumption or which may be used in the preparation of foods or beverages or for the cleaning of any utensil or article used in the course of preparation or consumption of food or beverages for human beings. The term "Drinking Water" shall also include all water supplied for human consumption or used by any institution catering to the public.

(17) [(15)] **Drinking water standards** -- The commission rules covering drinking water standards in Subchapter F of this chapter [title] (relating to Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements for Public Water Supply Systems).

(18) [(16)] **Elevated storage capacity** -- That portion of water which can be stored at least 80 feet above the highest service connection in the pressure plane served by the storage tank.

(19) [(17)] **Emergency power** -- Either mechanical power or electric generators which can enable the system to provide water under pressure to the distribution system in the event of a local power failure. With the approval of the executive director, dual primary electric service may be considered as emergency power in areas which are not subject to large scale power outages due to natural disasters.

(20) **Groundwater** -- Any water that is located beneath the surface of the ground and is not under the direct influence of surface water.

(21) [(18)] **Groundwater [Ground water] under the direct influence of surface water** -- Any water beneath the surface of the ground with:

(A) significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*, or

(B) significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions.

(22) [(19)] **Health hazard** -- A cross-connection, potential contamination hazard, or other situation involving any substance that can cause death, illness, spread of disease, or has a high probability of causing such effects if introduced into the potable drinking water supply.

(23) [(20)] **Human consumption** -- Uses by humans in which water can be ingested into or absorbed by the human body. Examples of these uses include, but are not limited to drinking, cooking, brushing teeth, bathing, washing hands, washing dishes, and preparing foods.

(24) [(21)] **Interconnection** -- A physical connection between two public water supply systems.

(25) [(22)] **Intruder-resistant fence** -- A fence six feet or greater in height, constructed of wood, concrete, masonry, or metal with three strands of barbed wire extending outward from the top of the fence at a 45 degree angle with the smooth side of the fence on the outside wall. In lieu of the barbed wire, the fence must be eight feet in height. The fence must be in good repair and close enough to surface grade to prevent intruder passage.

(26) [(23)] **L/d Ratio --** The dimensionless value that is obtained by dividing the length (depth) of a granular media filter bed by the weighted effective diameter "d" of the filter media. The weighted effective diameter of the media is calculated based on the percentage of the total bed depth contributed by each media layer.

(27) [(24)] **Licensed Professional Engineer** -- An engineer who maintains a current license through the Texas Board of Professional Engineers in accordance with its requirements for professional practice.

(28) [(25)] **Maximum daily demand** - In the absence of verified historical data or in cases where a public water system has imposed mandatory water use restrictions within the past 36 months, maximum daily demand means 2.4 times the average daily demand of the system.

(29) [(26)] **[MCL -] Maximum Contaminant Level (MCL)[.]--** The MCL for a specific contaminant is defined in the section relating to that contaminant.

(30) [(27)] [mg/l --] **Milligrams per liter (mg/L) --** [,] a measure of concentration, equivalent to and replacing parts per million (ppm) in the case of dilute solutions.

(31) [(28)] **Monthly reports of water works operations** -- The daily record of data relating to the operation of the system facilities compiled in a monthly report.

(32) [(29)] **National Fire Protection Association (NFPA) [NFPA] standards** -- The standards of the NFPA [National Fire Protection Association,] 1 Batterymarch Park, Quincy, Massachusetts, 02269-9101.

(33) [(30)] **National Sanitation Foundation (NSF) [NSF]** -- The NSF [National Sanitation Foundation] or reference to the listings developed by the foundation [Foundation,] P.O. Box 1468, Ann Arbor, Michigan 48106.

(34) [(31)] **Noncommunity water system** -- Any public water system which is not a community system.

(35) [(32)] **Nonhealth hazard** -- A cross-connection, potential contamination hazard, or other situation involving any substance that generally will not be a health hazard, but will constitute a nuisance, or be aesthetically objectionable, if introduced into the public water supply.

(36) [(33)] **Nontransient noncommunity water system** -- A public water system that is not a community water system and regularly serves at least 25 of the same persons at least six months out of the year.

(37) [(34)] **Psi** -- Pounds per square inch.

(38) [(35)] **Peak hourly demand** -- In the absence of verified historical data, peak hourly demand means 1.25 times the maximum daily demand (prorated to an hourly rate) if a public water supply meets the commission's minimum requirements for elevated storage capacity and 1.85 times the maximum daily demand (prorated to an hourly rate) if the system uses pressure tanks or fails to meet the commission's minimum elevated storage capacity requirement.

(39) [(36)] **Plumbing inspector** -- Any person employed by a political subdivision for the purpose of inspecting plumbing work and installations in connection with health and safety laws and ordinances, who has no financial or advisory interest in any plumbing company, and who has

successfully fulfilled the examinations and requirements of the Texas State Board of Plumbing Examiners.

(40) [(37)] **Plumbing ordinance** -- A set of rules governing plumbing practices which are at least as stringent and comprehensive as one of the following nationally recognized codes:

(A) Southern Standard Plumbing Code;[.]

(B) Uniform Plumbing Code; and[.]

(C) National Standard Plumbing Code.

(41) **Potable water customer service line** -- The sections of potable water pipe between the customer's meter and the customer's point of use.

(42) **Potable water service line** -- The section of pipe between the potable water main to the customer's side of the water meter. In cases where no customer water meter exists, it is the section of pipe that is under the ownership and control of the public water system.

(43) **Potable water main** -- A pipe or enclosed constructed conveyance operated by a public water system which is used for the transmission or distribution of drinking water to a potable water service line.

(44) [(38)] **Potential contamination hazard** -- A condition which, by its location, piping or configuration, has a reasonable probability of being used incorrectly, through carelessness, ignorance, or negligence, to create or cause to be created a backflow condition by which contamination can be introduced into the water supply. Examples of potential contamination hazards are:

(A) bypass arrangements;

(B) jumper connections;

(C) removable sections or spools; and

(D) swivel or changeover assemblies.

(45) [(39)] **Public drinking water program** -- Agency staff designated by the executive director to administer the Safe Drinking Water Act and state statutes related to the regulation of public drinking water. Any report required to be submitted in this chapter to the executive director must be submitted to the [The public drinking water program may be contacted at:] Texas Natural Resource Conservation Commission, Water Supply Division [Water Permitting and Resource Management Division], MC 155, P.O. Box 13087, Austin, Texas 78711-3087.

(46) [(40)] **Public health engineering practices** -- Requirements in these sections or guidelines promulgated by the executive director.

(47) [(41)] **Public water system** -- A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, which includes all uses described under the definition for drinking water. Such a system must have at least 15 service connections or serve at least 25 individuals at least 60 days out of the year. This term includes; any collection, treatment, storage, and distribution facilities under the control of the operator of such system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Two or more systems with each having a potential to serve less than 15 connections or less than 25 individuals but owned by the same person, firm, or corporation and located on adjacent land will be considered a public water system when the total potential service connections in the combined systems are 15 or greater or if the total number of individuals served by the combined systems total 25 or greater at least 60 days out of the year. Without excluding other meanings of the terms "individual" or "served," an individual shall be deemed to be served by a water system if he lives in, uses as his place of employment, or works in a place to which drinking water is supplied from the system.

(48) [(42)] **Sanitary control easement** -- A legally binding document securing all land, within 150 feet of a public water supply well location, from pollution hazards. This document must fully describe the location of the well and surrounding lands and must be filed in the county records to be legally binding.

(49) [(43)] **Sanitary survey** -- An onsite review of the water source, facilities, equipment, operation and maintenance of a public water system, for the purpose of evaluating the adequacy for producing and distributing safe drinking water.

(50) **Service line** -- A pipe connecting the utility service provider's main and the water meter, or for wastewater, connecting the main and the point at which the customer's service line is connected, generally at the customer's property line.

(51) [(44)] **Service pump** -- Any pump that takes treated water from storage and discharges to the distribution system.

(52) [(45)] **Transfer pump** -- Any pump which conveys water from one point to another within the treatment process or which conveys water to storage facilities prior to distribution.

(53) [(46)] **Transient noncommunity water system** -- A public water system that is not a community water system and serves at least 25 persons at least 60 days out of the year, yet by its characteristics, does not meet the definition of a nontransient noncommunity water system.

(54) [(47)] **Uniform Fire Code** -- The standards of the International Conference of Building Officials, 5360 Workman Mill Road, Whittier, California, 90601-2298.

(55) **Wastewater lateral** -- Any pipe or constructed conveyance carrying wastewater, running laterally down a street, alley, or easement, and receiving flow only from the abutting properties.

(56) **Wastewater main** -- Any pipe or constructed conveyance which receives flow from one or more wastewater laterals.

§290.39. General Provisions.

(a) - (c) (No change.)

(d) Submission of plans.

(1) Plans, specifications, and related documents will not be considered unless they have been prepared under the direction of a licensed professional engineer. All engineering documents must have engineering seals, signatures, and dates affixed in accordance with the rules of the Texas [State] Board of [Registration for] Professional Engineers.

(2) (No change.)

(3) The limits of approval are as follows.

(A) - (B) (No change.)

(C) The consulting engineer and/or owner must provide surveillance adequate to assure that facilities will be constructed according to approved plans and must notify the executive director [commission's public drinking water program] in writing upon completion of all work. Planning materials should be submitted to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 153, P.O. Box 13087, Austin, Texas 78711-3087.

(e) (No change.)

(f) Submission of business plans. The prospective owner of the system or the person responsible for managing and operating the system must submit a business plan to the executive director that demonstrates that the owner or operator of the [proposed] system has available the financial, managerial, and technical capability to ensure future operation of the system in accordance with applicable laws and rules. The executive director may order the prospective owner or operator to demonstrate financial assurance to operate the system in accordance with applicable laws and rules as specified in Chapter 37, Subchapter O of this title (relating to Financial Assurance for Public Drinking Water Systems and Utilities), or as specified by commission rule, unless the executive director finds that the business plan demonstrates adequate financial capability. A business plan shall include the information and be presented in a format prescribed by the executive director. For community water systems, the business plan shall contain, at a minimum, the following elements:

(1) - (13) (No change.)

(g) (No change.)

(h) Beginning and completion of work.

(1) (No change.)

(2) The executive director [commission's public drinking water program] shall be notified in writing by the design engineer or the owner before [when] construction is started.

(3) Upon completion of the water works project, the engineer or owner shall [will] notify the executive director [commission's public drinking water program] in writing as to its completion and attest to the fact that the completed work is substantially in accordance with the plans and change orders on file with the commission.

(i) (No change.)

(j) Changes in existing systems or supplies. Public water systems shall notify the executive director prior to making any significant change or addition to the system's production, treatment, storage, pressure maintenance, or distribution facilities. Public water systems shall submit plans and specifications for the proposed changes upon request. Changes to an existing disinfection process at a

treatment plant that treats surface water or groundwater that is under the direct influence of surface water shall not be instituted without the prior approval of the executive director.

(1) The following changes are considered to be significant: [Changes or additions to existing systems which result in an increase in production, treatment, or storage capacity shall require written notice to the executive director.]

(A) proposed changes to existing systems which result in an increase or decrease in production, treatment, storage, or pressure maintenance capacity;

(B) proposed changes to the disinfection process used at plants that treat surface water or groundwater that is under the direct influence of surface water including changes involving the disinfectants used, the disinfectant application points, or the disinfectant monitoring points;

(C) proposed changes to the type of disinfectant used to maintain a disinfectant residual in the distribution system;

(D) proposed changes in existing distribution systems when the change is greater than 10% of the existing distribution capacity or 250 connections, whichever is smaller, or results in the water system's inability to comply with any of the applicable capacity requirements of §290.45 of this title (relating to Minimum Water System Capacity Requirements); and

(E) any other material changes specified by the executive director.

[(2) Systems that use surface water sources or groundwater sources that are under the direct influence of surface water shall notify the executive director of any proposed change to the disinfection process used at the treatment plant including changes involving the disinfectants used, the disinfectant application points, or the disinfectant monitoring points. Changes to an existing disinfection process shall not be instituted without the prior approval of the executive director.]

[(3) Changes to the type of disinfectant used to maintain a disinfectant residual in the distribution system shall require written notice to the executive director.]

[(4) Changes or additions in existing distribution systems shall require written notification to the executive director when the change or addition is greater than 10% of the existing distribution capacity or 250 connections, whichever is smaller, or results in the water system's inability to comply with any of the applicable capacity requirements of §290.45 of this title (relating to Minimum Water System Capacity Requirements).]

(2) [(5)] The executive director shall determine whether engineering plans and specifications will be required after reviewing the initial notification regarding the nature and extent of the modifications.

(A) Upon request of the executive director, the water system shall submit plans and specifications in accordance with the requirements of subsection (d) of this section.

(B) Unless plans and specifications are required by Chapter 293 of this title (relating to Water Districts), the [The] executive director will not require another state agency or a political subdivision to submit planning material on distribution line improvements if the entity has its own internal review staff and complies with all of the following criteria [when the entity has its own internal engineering staff or is required, by local ordinance, to submit the material to another political entity for review and approval. The review staff must be separate and apart from the engineering staff or firm charged with the design of the distribution extension under review. The planning material must be reviewed and certified to be in compliance with §290.44 of this title (relating to Water Distribution) by a registered professional engineer in the employ of the review entity. The effect of the distribution system improvements on compliance with §290.45 of this title (relating to Minimum Water System Capacity Requirements) must be evaluated. Should the proposed improvements result in an exceedance of the capacity requirements, written notice of the extent of the proposed improvements must be submitted to the executive director].

(i) The internal review staff must include one or more licensed professional engineers that are employed by the political subdivision and must be separate from, and not subject to the review or supervision of, the engineering staff or firm charged with the design of the distribution extension under review.

(ii) A licensed professional engineer on the internal review staff determines and certifies in writing that the proposed distribution system changes comply with the requirements of §290.44 of this title and will not result in a violation of any provision of §290.45 of this title.

(iii) The state agency or political subdivision includes a copy of the written certification described in this subparagraph with the initial notice that is submitted to the executive director.

(C) Unless plans and specifications are required by Chapter 293 of this title, the executive director will not require planning material on distribution line improvements from any public water system that is required to submit planning material to another state agency or political subdivision that complies with the requirements of subparagraph (B) of this paragraph. The notice to the executive director must include a statement that a state statute or local ordinance requires the planning materials to be submitted to the other state agency or political subdivision and a copy of the written certification that is required in subparagraph (B) of this paragraph.

(3) If a certificate of convenience and necessity (CCN) is required or must be amended, the CCN application must be included with the notice to the executive director.

(k) (No change.)

(l) Exceptions. Requests for exceptions to one or more of these sections shall be considered on an individual basis. Any water system which requests an exception must demonstrate to the satisfaction of the executive director that the exception will not compromise the public health or result in a degradation of service or water quality.

(1) The exception must be requested in writing and must be substantiated by carefully documented data. The request for an exception shall [should] precede the submission of engineering plans and specifications for a proposed project for which an exception is being requested.

(2) - (3) (No change.)

(m) - (n) (No change.)

§290.41. Water Sources.

(a) Water quality. The quality of water to be supplied must meet the quality criteria prescribed by the commission's drinking water standards contained in Subchapter F of this chapter (relating to the Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements for Public Water Supply Systems).

(b) (No change.)

(c) Groundwater sources and development.

(1) Groundwater [Ground water] sources shall be located so that there will be no danger of pollution from flooding or from insanitary surroundings, such as privies, sewage, sewage treatment plants, livestock and animal pens, solid waste disposal sites or underground petroleum and chemical storage tanks and liquid transmission pipelines, or abandoned and improperly sealed wells.

(A) - (E) (No change.)

(F) A sanitary control easement covering that portion of the land within 150-feet [150 feet] of the well location shall be secured from all [such] property owners and recorded in the deed records at the county courthouse. The easement shall provide that none of the pollution hazards covered in subparagraphs (A) - (E) of this paragraph, or any facilities that might create a danger of pollution to the water to be produced from the well will be located thereon. For the purpose of this easement, an improperly constructed water well is one which fails to meet the surface and subsurface construction standards for public water supply wells. Residential type wells within the easement must be constructed to public water well standards. Copies of the recorded easements shall be included with plans and specifications submitted for review. With the approval of the executive director, political subdivisions which have adopted and enforce equivalent ordinances or land use restrictions may substitute these documents for sanitary control easements.

(2) (No change.)

(3) The [Special attention must be given to the] construction, disinfection, protection, and testing of a well to be used as a public water supply source must meet the following conditions.

(A) Before placing the well into service, a public water system shall furnish [the commission's public drinking water program shall be furnished] a copy of the well completion data, which includes the following items: the Driller's Log (geological log and material setting report); a cementing certificate; the results of a 36-hour pump test; the results of the microbiological and chemical analyses required by subparagraphs (F) and (G) of this paragraph; a copy of the Sanitary Control Easement; and an original or legible copy of a United States Geological Survey 7.5-minute topographic quadrangle showing the accurate well location to the executive director. All the documents listed in this paragraph must be approved by the executive director before final approval is granted for the use of the well.

(B) (No change.)

(C) The space between the casing and drill hole shall be sealed by using enough cement under pressure to completely fill and seal the annular space between the casing and the drill hole. The well casing shall be cemented in this manner from the top of the shallowest formation to be developed to the earth's surface. The driller shall [will] utilize a pressure cementation method in accordance with the AWWA Standard for Water Wells (A100-97), Appendix C: Section C.3 (Positive Displacement Exterior Method); Section C.4 (Interior Method Without Plug); Section C.5 (Positive Placement, Interior Method, Drillable Plug); Section C.6 (Placement Through Float Shoe Attached to

Bottom of Casing). Cementation methods other than those listed in this subparagraph may be used on a site-specific basis with the prior written approval of the executive director [must be approved by the executive director prior to the construction of the well]. A cement bonding log, as well as any other documentation deemed necessary, may be required by the executive director to assure complete sealing of the annular space.

(D) - (F) (No change.)

(G) A complete physical and chemical analysis of the water produced from a new well shall be made after 36 hours of continuous pumping at the design withdrawal rate. Shorter pump test periods can be accepted for large capacity wells producing from areas of known groundwater production and quality so as to prevent wasting of water. Samples must be submitted to a certified [the Texas Department of Health approved] laboratory for chemical analyses. Tentative approval may be given on the basis of tests performed by in-plant or private laboratories but final acceptance by the commission shall be on the basis of results from the certified [Texas Department of Health] laboratory. Appropriate treatment shall be provided if the analyses reveal that the water from the well fails to meet the water quality criteria as prescribed by the drinking water standards. These criteria include turbidity, color and threshold odor limitations, and excessive hydrogen sulfide, carbon dioxide or other constituents or minerals which make the water undesirable or unsuited for domestic use. Additional chemical and microbiological tests may be required after the executive director [commission's public drinking water program] conducts a vulnerability assessment of the well.

(H) - (Q) (No change.)

(4) (No change.)

(d) Springs and other water sources.

(1) (No change.)

(2) Before placing the spring or similar source into service, completion data similar to that required by subsection (c)(3)(A) of this section must be submitted to the executive director [commission's public drinking water program] for review and approval to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 153, P.O. Box 13087, Austin, Texas 78711-3987.

(3) - (4) (No change.)

(e) Surface water sources and development.

(1) To determine the degree of pollution from all sources within the watershed, an evaluation shall be made of the [proposed] surface water source [impoundment or flowing supply] in the area of diversion and its tributary streams. The area where surface water sources are diverted for drinking water use shall be evaluated and protected from sources of contamination.

(A) - (F) (No change.)

(2) Intakes shall be located and constructed in a manner which will secure raw water of the best quality available from the source.

(A) - (C) (No change.)

(D) Commission staff shall make an on-site evaluation of any proposed raw water intake location. The evaluation must be requested prior to final design and must be supported by preliminary design drawings. Once the final intake location has been selected, the executive director [commission's public drinking water program] shall be furnished with an original or legible copy of a United States Geological Survey 7.5-minute topographic quadrangle showing the accurate intake location.

(E) - (F) (No change.)

(3) (No change.)

§290.42. Water Treatment.

(a) (No change.)

(b) Groundwater [Groundwaters].

(1) - (4) (No change.)

(5) All plant piping shall be constructed to minimize leakage.

(6) All groundwater systems shall provide sampling taps for raw water, treated water, and at a point representing water entering the distribution system at every entry point.

(c) Springs and other water sources.

(1) - (3) (No change.)

(4) All plant piping shall be constructed to minimize leakage. No cross-connection or interconnection shall be permitted to exist between a conduit carrying potable water and another conduit carrying raw water or water in a prior stage of treatment.

(5) All systems using springs and other water sources shall provide sampling taps for raw water, treated water, and at a point representing water entering the distribution system at every entry point.

(d) Surface water.

(1) - (2) (No change.)

(3) [All plant piping shall be constructed so as to be thoroughly tight against leakage.] Return of the decanted water or sludge to the raw water shall be adequately controlled so that there will be a minimum of interference with the treatment process. Any discharge of wastewater shall be in accordance with all applicable state and federal [the appropriate] statutes and regulations including Chapter 305 of this title (relating to Consolidated Permits), Chapter 309 of this title (relating to Domestic Wastewater Effluent Limitation and Plant Siting), and Chapter 319 of this title (relating to General Regulations Incorporated into Permits).

(4) - (5) (No change.)

(6) Chemical storage facilities shall be designed to ensure a reliable supply of chemicals to the feeders, minimize the possibility and impact of accidental spills, and facilitate good housekeeping.

(A) - (B) (No change.)

(C) All chemical bulk storage facilities and day tanks shall be clearly labeled to indicate each tank's contents and to determine the amount of chemical remaining in the tank.

(D) (No change.)

(E) Bulk storage facilities and day tanks must be designed to minimize the possibility of leaks and spills.

(i) (No change.)

(ii) Except as provided in this clause, adequate [Adequate] containment facilities shall be provided for all liquid chemical storage tanks.

(I) Containment facilities for a single container or for multiple, interconnected containers must be large enough to hold the maximum amount of chemical that can be stored with a minimum freeboard of six vertical inches or to hold 110% of the total volume of the container(s), whichever is less. [Containment facilities must be large enough to hold the maximum amount of chemicals that can be stored in the tanks with a minimum freeboard of six inches.]

(II) Common containment for multiple containers that are not interconnected must be large enough to hold the volume of the largest container with a minimum freeboard of six vertical inches or to hold 110% of the total volume of the container(s), whichever is less.

(III) [(II)] The materials used to construct containment structures must be compatible with the chemicals stored in the tanks.

(IV) [(III)] Incompatible chemicals shall not be stored within the same containment structure.

(V) No containment facilities are required for hypochlorite solution containers that have a capacity of 35 gallons or less.

(VI) On a site-specific basis, the executive director may approve the use of double-walled tanks in lieu of separate containment facilities.

(F) - (G) (No change.)

(7) - (10) (No change.)

(11) Gravity or pressure type filters shall be provided.

(A) (No change.)

(B) Filtration facilities shall be designed to operate at filtration rates which assure effective filtration at all times.

(i) The design capacity of gravity rapid sand filters shall not exceed [be based on] a maximum [design] filtration rate of 2.0 gallons per square foot per minute. At the

beginning of filter runs for declining rate filters, a maximum filtration rate of 3.0 gallons per square foot per minute is allowed.

(ii) Where high-rate gravity filters are used, the design capacity shall not exceed a maximum [design] filtration rate of 5.0 gallons per square foot per minute. [must be used.] At the beginning of filter runs for declining rate filters, a maximum filtration rate of 6.5 gallons per square foot per minute is allowed.

(iii) The design capacity of pressure filters shall not exceed [be based on] a maximum filtration rate of 2.0 gallons per square foot per minute with the largest filter off-line.

(iv) Except as provided in clause (vi) of this subparagraph, any surface water treatment plant that provides, or is being designed to provide, less than 7.5 million gallons per day must be able to meet either the maximum daily demand or the minimum required 0.6 gallons per minute per connection, whichever is larger, with all filters on-line. [The design capacity of filtration facilities shall be based on the cumulative filter capacity with the largest filter out of service.]

(v) Any surface water treatment plant that provides, or is being designed to provide, 7.5 million gallons per day or more must be able to meet either the maximum daily demand or the minimum required 0.6 gallons per minute per connection, whichever is larger, with the largest filter off-line.

(vi) Any surface water treatment plant that uses pressure filters must be able to meet either the maximum daily demand or the minimum required 0.6 gallons per minute per connection, whichever is larger, with the largest filter off-line.

(C) - (G) (No change.)

(12) - (15) (No change.)

(e) Disinfection.

(1) - (3) (No change.)

(4) Systems that use chlorine gas must ensure that the risks associated with its use are limited as follows: [When chlorine gas is used, a full-face self-contained breathing apparatus or supplied air respirator that meets Occupational Safety and Health Administration (OSHA) standards for construction and operation, and a small bottle of fresh ammonia solution (or approved equal) for testing for chlorine leakage shall be readily accessible outside the chlorinator room and immediately available to the operator in the event of an emergency.]

(A) When chlorine gas is used, a full-face self-contained breathing apparatus or supplied air respirator that meets Occupational Safety and Health Administration (OSHA) standards for construction and operation, and a small bottle of fresh ammonia solution (or approved equal) for testing

for chlorine leakage shall be readily accessible outside the chlorinator room and immediately available to the operator in the event of an emergency.

(B) Housing for gas chlorination equipment and cylinders of chlorine shall be in separate buildings or separate rooms with impervious walls or partitions separating all mechanical and electrical equipment from the chlorine facilities. Housing shall be located above ground level as a measure of safety. Equipment and cylinders may be installed on the outside of the buildings when protected from adverse weather conditions and vandalism.

(C) Adequate ventilation, which includes both high level and floor level screened vents, shall be provided for all enclosures in which gas chlorine is being stored or fed. Enclosures containing more than one operating 150-pound cylinder of chlorine shall also provide forced air ventilation which includes: screened and louvered floor level and high level vents; a fan which is located at and draws air in through the top vent and discharges to the outside atmosphere through the floor level vent; and a fan switch located outside the enclosure. Alternately, systems may install negative pressure ventilation as long as the facilities also have gas containment and treatment as prescribed by the current Uniform Fire Code (UFC).

[(5) Gas chlorination equipment and cylinders of chlorine shall be housed in separate buildings or separate rooms with impervious walls or partitions that separate the chlorine facilities from all other mechanical and electrical equipment. Housing shall be located above ground level as a

measure of safety. Beginning January 1, 2001, chlorine cylinders and associated equipment may not be installed outside of buildings.]

[(6) Adequate ventilation, which includes both high level and floor level screened vents, shall be provided for all enclosures in which gas chlorine is being stored or fed. Enclosures containing more than one open 150 pound cylinder of chlorine shall also provide forced air ventilation which includes: screened and louvered floor level and high level vents; a fan which is located at and draws air in through the top vent and discharges to the outside atmosphere through the floor level vent; and a fan switch located outside the enclosure. Alternately, systems may install negative pressure ventilation as long as the facilities also have gas containment and treatment as prescribed by the current Uniform Fire Code (UFC).]

(5) [(7)] Hypochlorination solution containers and pumps must be housed in a secure enclosure to protect them from adverse weather conditions and vandalism. The solution container top must be completely covered to prevent the entrance of dust, insects, and other contaminants.

(6) [(8)] Where anhydrous ammonia feed equipment is utilized, it must be housed in a separate enclosure equipped with both high and low level ventilation to the outside atmosphere. The enclosure must be provided with forced air ventilation which includes: screened and louvered floor level and high level vents; a fan which is located at and draws air in through the floor vent and discharges through the top vent; and a fan switch located outside the enclosure. Alternately, systems

may install negative pressure ventilation as long as the facilities also have gas containment and treatment as prescribed by the current Uniform Fire Code (UFC).

(f) - (k) (No change.)

§290.44. Water Distribution.

(a) - (b) (No change.)

(c) Minimum water line sizes. The minimum water line sizes are [These are minimum requirements] for domestic flows only and do not consider fire flows. Larger pipe sizes shall be used [These requirements should be exceeded] when the licensed professional engineer deems it necessary. It should be noted that the required sizes are based strictly on the number of customers to be served and not on the distances between connections or differences in elevation or the type of pipe. No new water line under two inches in diameter will be allowed to be installed in a public water system distribution system. These minimum line sizes do not apply to individual customer service lines.]

Figure: 30 TAC §290.44(c) (No change.)

Maximum Number of Connections	Minimum Line Size (inches)
10	2
25	2.5

50	3
100	4
150	5
250	6
>250	8 and larger

(d) Minimum pressure requirement. The system must be designed to maintain a minimum pressure of 35 psi at all points within the distribution network at flow rates of at least 1.5 gallons per minute per connection. When the system is intended to provide fire fighting capability, it must also be designed to maintain a minimum pressure of 20 psi under combined fire and drinking water flow conditions.

(1) - (3) (No change.)

(4) Each community public water system shall provide accurate metering devices at each residential, commercial, or industrial service connection for the accumulation of water usage data. A water system that furnishes the services or commodity only to itself or its employees when that service or commodity is not resold to or used by others is exempt from this requirement. [Systems where no direct charge is made for the water shall be exempted from this requirement.]

(5) (No change.)

(6) The system shall be designed to afford effective circulation of water with a minimum of dead ends. All dead-end mains shall be provided with acceptable flush valves and discharge piping. All dead-end lines less than two inches in diameter will not require flush valves if they end at a customer service. Where dead ends are necessary as a stage in the growth of the system, they shall be located and arranged [with a view] to ultimately connect the ends [connecting them] to provide circulation.

(e) Location of waterlines. The following rules apply to installations of waterlines, wastewater mains or laterals, and other conveyances/appurtenances identified as potential sources of contamination. Furthermore, all ratings specified shall be defined by ASTM or AWWA standards unless stated otherwise. New mains, service lines, or laterals are those that are installed where no main, service line, or lateral previously existed, or where existing mains, service lines, or laterals are replaced with pipes of different size or material.

[(1) The following rules apply to installations of potable water distribution lines and wastewater collection lines, wastewater force mains and other conveyances/appurtenances identified as potential sources of contamination. Furthermore, all ratings specified shall be defined by ASTM or AWWA standards unless stated otherwise.]

(1) [(2)] When new potable water distribution lines are constructed, they shall be installed no closer than nine feet in all directions to wastewater collection facilities. All separation distances shall be measured from the outside surface of each of the respective pieces.

(2) [(3)] Potable water distribution lines and wastewater mains or laterals [collection lines or force mains] that form parallel utility lines shall be installed in separate trenches.

(3) [(4)] No physical connection shall be made between a drinking water supply and a sewer line. Any appurtenance shall be designed and constructed so as to prevent any possibility of sewage entering the drinking water system.

(4) [(5)] Where the nine foot separation distance cannot be achieved, the following criteria shall apply:

(A) New Waterline Installation - Parallel Lines.

(i) Where a new potable waterline parallels an existing, non-pressure or pressure rated wastewater [line/force] main or lateral and the licensed professional engineer licensed in the State of Texas is able to determine that the existing wastewater main or lateral [line] is not leaking, the new potable waterline shall be located at least two feet above the existing wastewater main or lateral [line], measured vertically, and at least four feet away, measured horizontally, from the existing wastewater main or lateral [line]. Every effort shall be exerted not to disturb the bedding and backfill of the existing wastewater main or lateral [line].

(ii) Where a new potable waterline parallels an existing pressure rated wastewater main or lateral [line] and it cannot be determined by the licensed professional engineer if the

existing line is leaking, the existing wastewater main or lateral [line] shall be replaced with at least [a] 150 psi pressure rated pipe. The new potable waterline shall be located at least two feet above the new wastewater line, measured vertically, and at least four feet away, measured horizontally, from the replaced wastewater main or lateral [line].

(iii) Where a new potable waterline parallels a new wastewater [line/force] main, the wastewater main or lateral [line] shall be constructed of at least 150 psi pressure rated pipe. The new potable waterline shall be located at least two feet above the wastewater main or lateral [line], measured vertically, and at least four feet away, measured horizontally, from the wastewater main or lateral [line].

(B) New Waterline Installation - Crossing Lines.

(i) Where a new potable waterline crosses an existing, non-pressure rated wastewater main or lateral [line], one segment of the waterline pipe shall be centered over the wastewater main or lateral [line] such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral [line]. The potable waterline shall be at least two feet above the wastewater main or lateral [line]. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral [line]. If the existing wastewater main or lateral [line] is disturbed or shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with at least 150 psi pressure rated pipe.

(ii) Where a new potable waterline crosses an existing, pressure rated wastewater main or lateral [line], one segment of the waterline pipe shall be centered over the wastewater main or lateral [line] such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral [line]. The potable waterline shall be at least six inches above the wastewater main or lateral [line]. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral [line]. If the existing wastewater main or lateral [line] shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with at least 150 psi pressure rated pipe.

(iii) Where a new potable waterline crosses a new, non-pressure rated wastewater main or lateral [line] and the standard pipe segment length of the wastewater main or lateral [line] is at least 18 feet, one segment of the waterline pipe shall be centered over the wastewater main or lateral [line] such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral [line]. The potable waterline shall be at least two feet above the wastewater main or lateral [line]. Whenever possible, the crossing shall be centered between the joints of the wastewater main or lateral [line]. The wastewater pipe shall have a minimum pipe stiffness of 115 psi at 5.0% deflection. The wastewater main or lateral [line] shall be embedded in cement stabilized sand (see §290.44(e)(4)(B)(vi) [§290.44(e)(5)(B)(vi)] of this title) for the total length of one pipe segment plus 12 inches beyond the joint on each end.

(iv) Where a new potable waterline crosses a new, non-pressure rated wastewater main or lateral [line] and a standard length of the wastewater pipe is less than 18 feet in

length, the potable water pipe segment shall be centered over the wastewater line. The materials and method of installation shall conform with one of the following options:

(I) Within nine feet horizontally of either side of the waterline, the wastewater pipe and joints shall be constructed with pipe material having a minimum pressure rating of at least 150 psi. An absolute minimum vertical separation distance of two feet shall be provided. The wastewater main or lateral [line] shall be located below the waterline.

(II) All sections of wastewater main or lateral [line] within nine feet horizontally of the waterline shall be encased in an 18 foot (or longer) section of pipe. Flexible encasing pipe shall have a minimum pipe stiffness of 115 psi at 5.0% deflection. The encasing pipe shall be centered on the waterline and shall be at least two nominal pipe diameters larger than the wastewater main or lateral [line]. The space around the carrier pipe shall be supported at five-foot [5 foot] (or less) intervals with spacers or be filled to the springline with washed sand. Each end of the casing shall be sealed with water tight non-shrink cement grout or a manufactured water tight seal. An absolute minimum separation distance of six inches between the encasement pipe and the waterline shall be provided. The wastewater line shall be located below the waterline.

(III) When a new waterline crosses under a wastewater main or lateral [line], the waterline shall [will] be encased as described for wastewater mains or laterals [lines] in subclause [section] (II) of this clause [above] or constructed of ductile iron or steel pipe with mechanical or welded joints as appropriate. An absolute minimum separation distance of one foot

between the water line and the wastewater main or lateral [line] shall be provided. Both the waterline and wastewater main or lateral [line,] must pass a pressure and leakage test as specified in AWWA C600 standards.

(v) Where a new potable waterline crosses a new, pressure rated wastewater main or lateral [line], one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater main or lateral [line]. The potable waterline shall be at least six inches above the wastewater main or lateral [line]. Whenever possible, the crossing shall [should] be centered between the joints of the wastewater main or lateral [line]. The wastewater pipe shall have a minimum pressure rating of at least 150 psi. The wastewater main or lateral [line] shall be embedded in cement stabilized sand (see clause (vi) of this subparagraph) for the total length of one pipe segment plus 12 inches beyond the joint on each end.

(vi) Where cement stabilized sand bedding is required, the cement stabilized sand shall have a minimum of 10% cement per cubic yard of cement stabilized sand mixture, based on loose dry weight volume (at least 2.5 bags of cement per cubic yard of mixture). The cement stabilized sand bedding shall be a minimum of six inches above and four inches below the wastewater main or lateral [sewer pipe]. The use of brown coloring in cement stabilized sand for wastewater main or lateral [line] bedding is recommended for the identification of pressure rated wastewater [force] mains during future construction.

(5) [(6)] Waterline and Wastewater Main or Lateral Manhole or Cleanout Separation. The separation distance from a potable waterline to a wastewater main or lateral manhole or cleanout shall be a minimum of nine feet. Where the nine-foot [nine foot] separation distance cannot be achieved, the potable waterline shall be encased in a joint of at least 150 psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five feet intervals with spacers or be filled to the spring line with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured sealant [seal].

(6) [(7)] Location of Fire Hydrants [hydrants]. Fire hydrants shall not be installed within nine feet vertically or horizontally of any wastewater main or lateral [sanitary sewer line] regardless of construction.

(7) [(8)] Location of Potable or Raw Water Supply or Suction [Supply/Suction] Lines. Suction mains to pumping equipment shall not cross wastewater mains or laterals [lines carrying domestic or industrial wastes]. Raw water supply lines shall not be installed within five feet of any tile or concrete wastewater main or lateral [line].

(8) [(9)] Proximity of Septic Tank Drainfields. Waterlines shall not be installed closer than ten feet to septic tank drainfields.

(f) Sanitary precautions and disinfection. Sanitary precautions, flushing, disinfection procedures and microbiological sampling as prescribed in AWWA standards for disinfecting water mains shall be followed in laying waterlines [water lines].

(1) (No change.)

(2) Special precautions must be taken when water lines are laid under any flowing or intermittent stream or semipermanent body of water such as marsh, bay or estuary. In these cases, the water main shall be installed in a separate watertight pipe encasement and valves must be provided on each side of the crossing with facilities to allow the underwater portion of the system to be isolated and tested to determine that there are no leaks in the underwater line. Alternately, and with the [Executive Director's] permission of the executive director, the watertight pipe encasement may be omitted.

(3) New mains shall be thoroughly disinfected in accordance with AWWA Standard C651 and then flushed and sampled before being placed in service. Samples shall be collected for microbiological analysis to check the effectiveness of the disinfection procedure. Sampling [which] shall be repeated if contamination persists. A minimum of one sample for each 1,000 feet of completed water line will be required or at the next available sampling point beyond 1,000 feet as designated by the design engineer.

(g) - (i) (No change.)

§290.45. Minimum Water System Capacity Requirements.

(a) - (c) (No change.)

(d) Noncommunity water systems serving other than transient accommodation units.

(1) (No change.)

(2) Groundwater supply requirements are as follows.

(A) (No change.)

(B) If 300 or more persons per day are served, the system must have the following:

(i) - (ii) (No change.)

(iii) if the maximum daily demand is less than 15 gpm, at least one service pump with a capacity of <u>three times the maximum daily demand</u> [2.0 gallons per minute per connection] must be provided;

(iv) if the maximum daily demand is 15 gpm or more, at least two service pumps with a total capacity of three times the maximum daily demand [2.0 gallons per minute per connection]; and

(v) (No change.)

(3) Each surface water supply or groundwater supply that is under the direct influence of surface water, regardless of size, shall meet the following requirements:

(A) - (F) (No change.)

(e) - (f) (No change.)

(g) Alternative capacity requirements [Exceptions]. Public water systems may request approval to meet alternative capacity requirements in lieu of the minimum capacity requirements specified in this section. [Requests for exceptions to one or more of these Minimum Water System Capacity Requirements shall be considered on an individual basis.] Any water system requesting to use an alternative capacity requirement [which requests an exception] must demonstrate to the satisfaction of the executive director that approving the request [the exception] will not compromise the public health or result in a degradation of service or water quality as specified in §290.39(l) of this title (relating to General Provisions).

(1) Alternative capacity requirement [Exceptions to the minimum capacity requirements] for public water systems may be granted upon request [application] to and approval by the executive director. The request [application] to use an alternative capacity requirement [for an exception to the minimum capacity requirements] must include:

(A) - (E) (No change.)

(F) Any other relevant data needed to determine that the proposed alternative capacity requirement will provide a level of service that is equivalent to the level of service provided by the minimum capacity requirements contained in this section [required to evaluate the exception request].

(2) Although elevated storage is the preferred method of pressure maintenance for systems of over 2500 connections, it is recognized that local conditions may dictate the use of alternate methods utilizing hydropneumatic tanks and on-site emergency power equipment. Alternative capacity requirements [Exceptions] to the elevated storage requirements may be obtained based on request [application] to and approval by [of] the executive director. Special conditions apply to systems using an alternative capacity requirement to meet minimum pressure maintenance requirements [qualifying for an elevated storage exception].

(A) The system must submit documentation sufficient to assure that the alternate method of pressure maintenance is capable of providing a safe and uninterrupted supply of water under pressure to the distribution system during all demand conditions.

(i) - (ii) (No change.)

(iii) For existing systems, the system's licensed professional engineer must provide continuous [24 hour] pressure chart recordings of distribution pressures maintained during past power failures, if available. The period reviewed shall [should] not be less than three years.

(B) - (D) (No change.)

(3) Any alternative capacity requirement granted under this subsection [exception granted pursuant to these requirements] shall be subject to review at the time of each routine sanitary survey of the system. Failure to demonstrate satisfactory survey findings may result in revocation of the alternative capacity requirement [exception]. If permission to use an alternative capacity requirement is revoked, the public water system must meet the applicable minimum capacity requirements of this section.

§290.46. Minimum Acceptable Operating Practices for Public Drinking Water Systems.

(a) (No change.)

(b) Microbiological. Submission of samples for microbiological analysis shall be as required by Subchapter F of this chapter [title] (relating to Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements for Public Water Supply Systems). Microbiological samples may be required by the executive director for monitoring purposes in addition to the routine samples required by the drinking water standards. These samples shall be submitted to a certified laboratory [the Texas Department of Health Bureau of Laboratories or one of its approved laboratories]. (A list of the certified [approved] laboratories can be obtained by contacting the executive director [Texas Department of Health Bureau of Laboratories]).

(c) Chemical. Samples for chemical analysis shall be submitted as directed by the executive director [public drinking water program].

(d) Disinfectant residuals and monitoring. A [An acceptable] disinfectant residual must be continuously maintained during the treatment process and throughout the distribution system.

(1) Disinfection equipment [facilities] shall be operated and monitored in a manner that will assure compliance with the requirements of §290.110 of this title (relating to Disinfectant Residuals).

(2) The disinfection equipment shall be operated to maintain the following minimum disinfectant residuals in each finished water storage tank and throughout [in the far reaches of] the distribution system at all times:

(A) - (B) (No change.)

(e) Operation by trained and licensed [certified] personnel. Except as provided in paragraph (7) of this subsection, all public water systems must be operated continuously under the direct supervision of an adequately trained and appropriately licensed water works operator. [All systems, except transient noncommunity that which utilize ground or purchased water, must be under the direct supervision of a certified water works operator. The operator shall ensure that the water system complies with the requirements of this section.]

(1) Systems serving no more than 1,000 connections must employ at least one operator meeting the applicable requirements of paragraph (3) of this subsection. [No district, municipality, firm, corporation, or individual, except transient noncommunity systems which utilize groundwater or purchased water, shall furnish to the public any drinking water unless the production, processing, treatment, and distribution are at all times under the direct daily supervision of a competent water works operator holding a valid certificate of competency issued under the direction of the executive director.]

[(A) A Class "D" certificate is valid for systems with 250 or fewer connections.]

[(B) Systems serving in excess of 250 connections must employ an operator with a Class "C" or higher certificate.]

[(C) Systems serving in excess of 1,000 connections must employ at least two Class "C" certified operators.]

[(D) Beginning January 1, 2004, systems that treat surface water must employ at least one operator who holds a Class "B" or higher surface water certificate.]

[(E) Until January 1, 2004, systems that treat surface water must employ at least one operator who holds a Class "B" or higher surface water certificate or who holds a Class "C" surface water certificate and has completed an executive director recognized 20-hour water laboratory course.]

(2) Systems that serve more than 1,000 connections must employ at least two operators who meet the applicable requirements of paragraph (3) of this subsection. [Each surface water treatment plant must have at least a Class "C" surface water operator on duty at the plant when it is in operation or the plant must be provided with continuous turbidity and disinfectant residual monitors with automatic plant shutdown and alarms to summon operators so as to ensure that the water produced

continues to meet the commission's drinking water standards during periods in which the plant is unattended.]

(3) The production, treatment, and distribution facilities of all public water systems must be operated at all times under the direct supervision of a water works operator who holds an applicable, valid license issued by the executive director. [Systems that have sources which are classified as groundwater under the direct influence of surface water must be under the supervision of either an operator who has at least a Class "C" groundwater certificate and has completed additional training as designated in the following subparagraphs or an operator who has at least a Class "C" surface water certificate.]

(A) Systems serving fewer than 250 connections must employ an operator with a Class “D” or higher license if they only use groundwater or purchased treated water. [Those systems which utilize cartridge filters must be under the supervision of at least a Class "C" groundwater operator who has completed an agency recognized 8-hour training course on monitoring and reporting requirements.]

(B) Systems that serve 250 or more connections must employ an operator with a Class “C” or higher license if they only use purchased treated water. [Those systems which utilize coagulant addition and direct filtration must be under the supervision of at least a Class "C" groundwater operator who has completed an agency recognized 20-hour Surface Water Production course and an agency recognized 8-hour training course on monitoring and reporting requirements.]

(C) Systems that serve 250 or more connections must employ an operator with a Class "C" or higher Groundwater license if they use groundwater and do not treat groundwater that is under the direct influence of surface water or surface water. [Those systems which utilize complete surface water treatment must comply with the requirements of paragraph (2) of this subsection.]

(D) Systems that treat groundwater that is under the direct influence of surface water and do not treat surface water must meet the following requirements related to the direct supervision of their facilities:

(i) Systems which utilize cartridge filters must employ an operator who has a Class "C" or higher Surface water license or has a Class "C" or higher Groundwater license and has completed a four-hour training course on monitoring and reporting requirements.

(ii) Systems which utilize coagulant addition and direct filtration must employ an operator who has a Class "C" or higher Surface Water license or has a Class "C" or higher Groundwater license and has completed a 40-hour Surface Water Production course.

(iii) Systems which utilize complete surface water treatment must comply with the requirements of subparagraph (E) of this paragraph.

(iv) Each plant must have at least one Class "C" or higher operator on duty at the plant when it is in operation or the plant must be provided with continuous turbidity and

disinfectant residual monitors with automatic plant shutdown and alarms to summon operators so as to ensure that the water produced continues to meet the commission's drinking water standards during periods when the plant is not staffed.

(E) Systems that treat surface water must meet the following requirements related to the supervision of their facilities.

(i) Beginning January 1, 2003, systems that treat surface water must employ at least one operator who holds a Class “B” or higher surface water license. Until January 1, 2003, these systems must employ at least one operator who holds a Class “B” or higher surface water license or who holds a Class “C” or higher Surface water license and has completed an approved 20-hour water laboratory course.

(ii) Each surface water treatment plant must have at least one Class “C” or higher surface water operator on duty at the plant when it is in operation or the plant must be provided with continuous turbidity and disinfectant residual monitors with automatic plant shutdown and alarms to summon operators so as to ensure that the water produced continues to meet the commission's drinking water standards during periods when the plant is not staffed.

(iii) Public water systems shall not allow Class “D” operators to adjust or modify the treatment processes at surface water treatment plant unless an operator who holds a Class

"C" or higher surface license is present at the plant and has issued specific instructions regarding the proposed adjustment.

(4) Beginning January 1, 2004, the treatment facilities at all systems using chlorine dioxide must be under the direct supervision of a licensed operator who has completed additional training. Unless a higher level of certification is required by paragraph (3) of this subsection, public water systems using chlorine dioxide must place those facilities under the direct supervision of a licensed operator who has a Class "C" or higher license and has completed an approved water laboratory course. [Certified operators must provide the public drinking water program with written, dated and signed notice of the public water systems which they operate or where they are employed when applying for, renewing, or upgrading their certification. This notice must be amended in writing within ten days of any change in responsibility.]

(5) Public water systems shall not allow new or repaired production, treatment, storage, pressure maintenance or distribution facilities to be placed into service without the prior guidance and approval of a licensed water works operator. [Training programs for all chemicals used in water treatment shall meet applicable standards established by the Occupational Safety and Health Administration (OSHA) or the Texas Hazard Communications Act, Health and Safety Code, Title 5, Chapter 502.]

(6) Public water systems shall ensure that their operators are trained regarding the use of all chemicals used in the water treatment plant. Training programs shall meet applicable standards

established by the Occupational Safety and Health Administration (OSHA) or the Texas Hazard Communications Act, Texas Health and Safety Code, Title 6, Chapter 502.

(7) Transient noncommunity public water systems are exempt from the requirements of this subsection if they use only groundwater or purchase treated water from another public water system.

(f) Operating records and reports. Water systems must maintain a [daily] record of water works operation and maintenance activities and submit periodic operating reports.

(1) - (2) (No change.)

(3) All public water systems shall maintain a record of operations.

(A) The following records shall be retained for at least two years:

(i) the amount of chemicals used: [each day;]

(I) Systems that treat surface water or groundwater under the direct influence of surface water shall maintain a record of the amount of each chemical used each day.

(II) Systems that serve 250 or more connections or serve 750 or more people shall maintain a record of the amount of each chemical used each day.

(III) Systems that serve fewer than 250 connections, serve fewer than 750 people, and use only groundwater or purchased treated water shall maintain a record of the amount of each chemical used each week;

(ii) the volume of water treated: [each day;]

(I) Systems that treat surface water or groundwater under the direct influence of surface water shall maintain a record of the amount of water treated each day.

(II) Systems that serve 250 or more connections or serve 750 or more people shall maintain a record of the amount of water treated each day.

(III) Systems that serve fewer than 250 connections, serve fewer than 750 people, and use only groundwater or purchase treated water shall maintain a record of the amount of water treated each week;

(iii) - (vi) (No change.)

(B) The following records shall be retained for at least three years:

(i) - (ii) (No change.)

(iii) the disinfectant residual monitoring results from the distribution system;

(iv) [(iii)] the turbidity monitoring results and exception reports for individual filters as required by §290.111 of this title (relating to Turbidity);

(v) [(iv)] the calibration records for laboratory equipment, flow meters, rate-of-flow controllers, on-line turbidimeters, and on-line disinfectant residual analyzers; and

(vi) [(v)] the records of backflow prevention device programs.

(C) (No change.)

(D) The following records [results of microbiological analyses] shall be retained for at least five years: [.]

(i) the results of microbiological analyses;

(ii) the results of inspections (as required in subsection (m)(1) of this section) for all water storage and pressure maintenance facilities; and

(iii) the results of inspections as required by subsection (m)(2) of this section for all pressure filters.

(E) - (F) (No change.)

(4) Water systems shall submit any monthly or quarterly reports required by the executive director.

(A) The reports must be submitted to the Texas Natural Resource Conservation Commission, Water Supply Division [Permitting and Resource Management Division], MC 155, P.O. Box 13087, Austin, Texas 78711-3087 by the tenth day of the month following the end of the reporting period.

(B) - (C) (No change.)

(g) - (i) (No change.)

(j) Customer service inspections. A customer service inspection certificate shall be completed prior to providing continuous water service to new construction, on any existing service when the water purveyor has reason to believe that cross-connections or other potential contaminant hazards exist, or after any material improvement, correction, or addition to the private water distribution facilities. Any customer service inspection certificate form which varies from the format found in §290.47(d) of this

title (relating to Customer Service Inspection Certificate) must be approved by the executive director prior to being placed in use.

(1) - (3) (No change.)

(4) A customer service inspection is an examination of the private water distribution facilities for the purpose of providing or denying water service. This inspection is limited to the identification and prevention of cross connections, potential contaminant hazards and illegal lead materials. The customer service inspector has no authority, and no obligation, beyond the scope of the commission's regulations. A customer service inspection is not a plumbing inspection as defined and regulated by the Texas State Board of Plumbing Examiners (TSBPE). A customer service inspector is not permitted to perform plumbing inspections. State statutes and TSBPE adopted rules require that TSBPE licensed plumbing inspectors perform plumbing inspections of all new plumbing and alterations or additions to existing plumbing within the municipal limits of all cities, towns and villages [with 5000 or more inhabitants or within smaller, like entities which have adopted the Plumbing License Law by ordinance]. Such entities may stipulate that the customer service inspection be performed by the plumbing inspector as a part of the more comprehensive plumbing inspection. Where such entities permit customer service inspectors to perform customer service inspections, the customer service inspector shall report any violations immediately to the local entity's plumbing inspection department.

(k) - (l) (No change.)

(m) Maintenance and housekeeping. The maintenance and housekeeping practices used by a public water system shall ensure the good working condition [reliability] and general appearance of the system's facilities and equipment. The grounds and facilities shall be maintained in a manner so as to minimize the possibility of the harboring of rodents, insects, and other disease vectors, and in such a way as to prevent other conditions that might cause the contamination of the water.

(1) - (3) (No change.)

(4) All water storage and pressure maintenance facilities, distribution system lines and related appurtenances shall be maintained in a watertight condition and be free of excessive solids.

(5) (No change.)

(n) Engineering plans and maps. Plans, specifications, maps and other pertinent information shall be maintained to facilitate the operation and maintenance of the system's facilities and equipment. The following records shall be maintained on file at the public water system and be available to the executive director upon request:

(1) - (2) (No change.)

(3) Copies of well completion data such as well material setting data, geological log, sealing information (pressure cementing and surface protection), disinfection information,

microbiological sample results and a chemical analysis report of a representative sample of water from the well shall be kept on file for as long as the well remains in service.

(o) (No change.)

(p) Data on water system ownership and management. The agency shall be provided with information regarding water system ownership and management.

(1) (No change.)

(2) On an annual basis, the owner of a public water system shall provide the executive director with a written list of all the operators and operating companies that the public water system employs. The notice shall contain the name, license number, and license class of each employed operator and the name and registration number of each employed operating company [each certified operator who supervises more than one water system shall provide the public drinking water program written notices containing their certificate number, address and telephone number, and the name and identification number of each public water system which they supervise. Each operating company shall provide this information for itself and for each of its operators]. See §290.47(g) of this title (relating to Appendices).

(q) Special precautions. Special precautions must be instituted by the water system owner or responsible official in the event of low distribution pressures (below 20 psi), water outages,

microbiological samples found to contain *E. coli* or fecal coliform organisms, failure to maintain adequate chlorine residuals, elevated finished water turbidity levels, or other conditions which indicate that the potability of the drinking water supply has been compromised.

(1) Boil water notifications must be issued to the customers within 24 [-] hours using the prescribed notification format as specified in §290.47(e) of this title (relating to Appendices). A copy of this notice shall be provided to the executive director [public drinking water program]. Bilingual notification may be appropriate based upon local demographics. Once the boil water notification is no longer in effect, the customers must be notified in a manner similar to the original notice.

(2) - (4) (No change.)

(r) (No change.)

(s) Testing equipment. Accurate testing equipment or some other means of monitoring the effectiveness of any chemical treatment processes used by the system must be provided.

(1) Flow measuring devices and rate-of-flow controllers that are required by §290.42(d) of this title shall be calibrated at least once every 12 months.

(2) (No change.)

(t) (No change.)

(u) Abandoned wells. Abandoned public water supply wells owned by the system must be plugged with cement according to 16 TAC Chapter 76 (relating to Water Well Drillers and Water Well Pump Installers). Wells that are not in use and are non-deteriorated as defined in those rules must be tested every five years or as required by the executive director to prove that they are in a non-deteriorated condition. The test results shall be sent to the executive director [commission's public drinking water program] for review and approval. Deteriorated wells must be either plugged with cement or repaired to a non-deteriorated condition.

(v) (No change.)

§290.47. Appendices.

(a) - (e) (No change.)

(f) Appendix F. Sample Backflow Prevention Assembly Test and Maintenance Report.

Figure: 30 TAC §290.47(f)

[Figure: 30 TAC §290.47(f)]

Figure: 30 TAC §290.47(f)

The following form must be completed for each assembly tested. A signed and dated original must be submitted to the public water supplier for record keeping purposes:

BACKFLOW PREVENTION ASSEMBLY TEST AND MAINTENANCE REPORT

NAME OF PWS: _____

PWS I.D. # _____

MAILING ADDRESS _____

CONTACT PERSON _____

LOCATION OF SERVICE: _____

The backflow prevention assembly detailed below has been tested and maintained as required by TNRCC regulations and is certified to be operating within acceptable parameters.

TYPE OF ASSEMBLY

Reduced Pressure Principle	Reduced Pressure Principle-Detector
Double Check Valve	Double Check-Detector
Pressure Vacuum Breaker	Spill-Resistant Pressure Vacuum Breaker

Manufacturer_____ Size _____

Model Number_____ Located At _____

Serial Number_____

Is the assembly installed in accordance with manufacturer recommendations and/or local codes? ____

	Reduced Pressure Principle Assembly			Pressure Vacuum Breaker	
	Double Check Valve Assembly			Air Inlet	Check Valve
	1st Check	2nd Check	Relief Valve		
Initial Test	Held at _____ psid Closed Tight ☐ Leaked ☐	Held at _____ psid Closed Tight ☐ Leaked ☐	Opened at ____ psid Did not open ☐	Opened at _____psid	Held at ____ psid
Repairs and Materials Used				Did not open ☐	Leaked ☐

Test After Repair	Held at _____ psid Closed Tight ☐	Held at _____ psid Closed Tight ☐	Opened at ____ psid	Opened at _____ psid	Held at ____ psid

Test gauge used: Make/Model_____ SN:_____ Calibration Date:_____

Remarks:_____

The above is certified to be true at the time of testing.

Firm Name _____ Certified Tester _____

Firm Address _____ Cert. Tester No. _____ Date_____

Firm Phone #_____

* TEST RECORDS MUST BE KEPT FOR AT LEAST THREE YEARS

** USE ONLY MANUFACTURER'S REPLACEMENT PARTS

(g) Appendix G. Operator and/or Employment Notice.

Figure: 30 TAC §290.47(g)

[Figure: 30 TAC §290.47(g)]

Section 290.46(p)(2), Data on water system ownership and management, requires the owner of a public water system to annually provide the executive director with a list of all the water works

operators and operating companies that the public water system employs. The following form may be used to facilitate compliance with this requirement. This notice should be submitted to the Texas Natural Resource Conservation Commission, Water Supply Division, MC-155, P.O. Box 13087, Austin, Texas 78711-3087 or provided to the executive director during on-site inspections. [Section 290.46(e), Operation by Certified Personnel, paragraph 4, requires certified operators to provide a written, dated, and signed notice listing the public water systems which they operate or are employed. This is required when applying for, renewing, or upgrading a certificate of competency. This notice must be amended in writing within 10 days of any change in responsibility.]

Operator and/or Employment Notice Form

Name of Operator or Operating Company	For Operators		For Companies
	License No.	Class of License	Registration No.
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

_____ _____

Signature of Water System Owner or Responsible Official Date

_____ _____

Name of Water System Owner or Responsible Official Title of Owner or Responsible Official

(h) (No change.)

(i) Appendix I. Assessment of Hazard and Selection of Assemblies.

Figure: 30TAC §290.47(i)

[Figure: 30TAC §290.47(i)]

The following table lists many common hazards. It is not an all-inclusive list of the hazards which may be found connected to public water systems.

Premises Isolation - Description of Premises	Assessment of Hazard	Required Assembly
Aircraft and missile plants	Health	RPBA or AG
Animal feedlots	Health	RPBA or AG
Automotive plants	Health	RPBA or AG
Breweries	Health	RPBA or AG
Canneries, packing houses and rendering plants	Health	RPBA or AG
Commercial car wash facilities	Health	RPBA or AG
Commercial laundries	Health	RPBA or AG
Cold storage facilities	Health	RPBA or AG
Connection to sewer pipe	Health	AG

Dairies	Health	RPBA or AG
Docks and dockside facilities	Health	RPBA or AG
Dye works	Health	RPBA or AG
Food and beverage processing plants	Health	RPBA or AG
Hospitals, morgues, mortuaries, medical clinics, dental clinics, autopsy facilities, sanitariums,and medical labs	Health	RPBA or AG
Metal manufacturing, cleaning, processing, and fabrication plants	Health	RPBA or AG
Microchip fabrication facilities	Health	RPBA or AG
Paper and paper products plants	Health	RPBA or AG
Petroleum processing or storage facilities	Health	RPBA or AG
Photo and film processing labs	Health	RPBA or AG
Plants using radioactive material	Health	RPBA or AG
Plating or chemical plants	Health	RPBA or AG
Pleasure-boat marinas	Health	RPBA or AG
Reclaimed water systems	Health	RPBA or AG
Restricted, classified or other closed facilities	Health	RPBA or AG
Rubber plants	Health	RPBA or AG
Sewage lift stations	Health	RPBA or AG
Sewage treatment plants	Health	RPBA or AG
Slaughter houses	Health	RPBA or AG
Steam plants	Health	RPBA or AG
Tall buildings or elevation differences where the highest outlet is 80 feet or more above the meter	Nonhealth	DCVA

Internal Protection - Description of Cross Connection	Assessment of Hazard	Required Assembly
Aspirators	Nonhealth†	AVB
Aspirator (medical)	Health	AVB or PVB

Autoclaves		Health	RPBA
Autopsy and mortuary equipment		Health	AVB or PVB
Bedpan washers		Health	AVB or PVB
Connection to industrial fluid systems		Health	RPBA
Connection to plating tanks		Health	RPBA
Connection to salt-water cooling systems		Health	RPBA
Connection to sewer pipe		Health	AG
Cooling towers with chemical additives	Health		AG
Cuspidors		Health	AVB or PVB
Degreasing equipment		Nonhealth†	DCVA
Domestic space-heating boiler		Nonhealth†	RPBA
Dye vats or machines		Health	RPBA
Fire-fighting system			
(toxic liquid foam concentrates)		Health	RPBA
Flexible shower heads		Nonhealth†	AVB or PVB
Heating equipment			
Commercial		Nonhealth†	RPBA
Domestic		Nonhealth†	DCVA
Hose bibbs		Nonhealth†	AVB
Irrigation systems			
with chemical additives		Health	RPBA
without chemical additives		Nonhealth†	DCVA, AVB,or PVB
Kitchen equipment - Commercial		Nonhealth†	AVB
Lab bench equipment		Health or Nonhealth†	AVB or PVB
Ornamental fountains		Health	AVB or PVB
Swimming pools			
Private		Nonhealth†	PVB or AG
Public		Nonhealth†	RPBA or AG
Sewage pump		Health	AG

Sewage ejectors	Health	AG
Shampoo basins	Nonhealth†	AVB
Specimen tanks	Health	AVB or PVB
Steam generators	Nonhealth†	RPBA
Steam tables	Nonhealth†	AVB
Sterilizers	Health	RPBA
Tank vats or other vessels containing toxic substances	Health	RPBA
Trap primers	Health	AG
Vending machines	Nonhealth†	RPBA or PVB
Watering troughs	Health	AG or PVB

NOTE: AG = air gap; AVB = atmospheric vacuum breaker; DCVA = double check valve backflow prevention assembly; PVB = pressure vacuum breaker; RPBA = reduced-pressure principle backflow prevention assembly.

*AVBs and PVBs may be used to isolate health hazards under certain conditions, that is, backsiphonage situations. Additional area of premises isolation may be required.

†Where a greater hazards exists (due to toxicity or other potential health impact) additional area protection with RPBAs is required.

SUBCHAPTER F: DRINKING WATER STANDARDS GOVERNING DRINKING WATER QUALITY AND REPORTING REQUIREMENTS FOR PUBLIC WATER [SUPPLY] SYSTEMS

§§290.102 - 290.104, 290.106 - 290.115, 290.117 - 290.119, 290.121, 290.122

STATUTORY AUTHORITY

The amendments are proposed under the Texas Water Code (TWC), §5.103, which provides the commission the authority to adopt and enforce rules necessary to carry out its powers and duties under the laws of this state; TWC, §5.122, which allows the commission to delegate uncontested matters to the executive director; and under THSC, §341.031, which allows the commission to adopt rules to implement the SDWA, 42 USC, §§300f *et seq*.

The amendments implement THSC, §§341.031, 341.0315, and 341.035: which require the commission to adopt rules to protect public water systems; require public water systems to meet the requirements of commission rules; and require the executive director of the commission to approve plans and specifications for public water systems. The amendments also implement HB 2912, §18.02, and HB 217, §2(a)(2)(B), 77th Legislature, 2001.

§290.102. General Applicability.

(a) (No change.)

(b) Variances and exemptions. Variances and exemptions may be granted at the discretion of the executive director according to the Safety Drinking Water Act (SDWA), 42 United States Code (USC), §300g-4 and §300g-5, and according to National Primary Drinking Water Regulations, Subpart K, 40 CFR §§142.301 - 142.313. The executive director may not approve variances or exemptions from:

(1) the maximum contaminant level (MCL) for total coliforms, nitrate, nitrite, or total nitrate and nitrite;

(2) the maximum residual disinfection level (MRDL) for chlorine dioxide; or

(3) the treatment technique requirements for filtration and disinfection.

[(1) A variance may be granted to one or more of the MCLs or treatment technique requirements if all of the following conditions apply:]

[(A) the system's raw water is such that the maximum allowable level cannot be met despite the application of the best available treatment techniques (taking costs into consideration) subject to the following conditions;]

[(B) the public water system requesting the variance was in operation on the date the MCL or treatment technique requirement became effective;]

[(C) the granting of the variance will not result in an unreasonable risk to public health; and]

[(D) a schedule, including increments of progress, is established to bring the system into compliance with the standard in question.]

[(2) An exemption may be granted to one or more of the MCLs or treatment technique requirements when a system is unable to comply with a specified allowable level because of compelling factors (which may include economic). An exemption may be granted only under the following circumstances:]

[(A) the public water system requesting the exemption was in operation on the date the MCL or treatment technique requirement became effective or for a system that was not in operation by that date, if no reasonable alternative source of drinking water is available to such new system;]

[(B) the granting of the exemption will not result in an unreasonable risk to public health; and]

[(C) a schedule is established to bring the system into compliance with the standard in question.]

[(3) Applications for such variances or exemptions must be submitted to the executive director in writing by the owner of the water system. The request must include the following:]

[(A) a statement of the standard which is not met;]

[(B) an estimate of the risk involved to public health with supporting evidence from physicians or dentists in the area;]

[(C) a general long range plan for the correction of the problem. In addition, a detailed plan or compliance schedule must be submitted within one year following written notification that a variance or exemption has been granted; and]

[(D) a detailed economic evaluation of the current and future situation.]

[(4) A variance or exemption covering a group or class of systems with a common standard which is not met may be issued by the executive director without individual application. However, individual compliance schedules will be required for each such system within one year following written notification by the executive director that such a variance or exemption has been granted. After receiving notification from the executive director that a group or class variance or exemption has been issued to their system, each system must submit the above items in accordance with paragraph (3) of this subsection.]

[(5) The executive director is required to act upon all requests for variances or exemptions within 90 days.]

[(6) Procedures for public comment and public hearings on variances, exemptions, and compliance schedules as a condition of a variance or exemption will be as stated in the EPA National Primary Drinking Water Regulations, 40 CFR §141.4 and §142.20.]

(c) Extensions. An extension to the compliance deadline for an MCL or treatment technique that becomes effective on or after January 1, 2002 may be granted at the discretion of the executive director in accordance with the SDWA, 42 USC, §300g-1(b)(10).

(1) The executive director may extend the effective date of an MCL or treatment technique for up to two years if all of the following conditions apply:

(A) there are no acute violations associated with the new MCL or treatment technique for which the extension is being granted;

(B) the executive director determines that granting the extension will not result in an unreasonable risk to public health;

(C) the extension is granted only to public water systems that were in operation on the date that the MCL or treatment technique was promulgated by the EPA;

(D) the executive director determines that capital improvements are needed to comply with the new MCL or treatment technique;

(E) the executive director approves a schedule identifying the capital improvements necessary to bring the system into compliance with the new MCL or treatment technique; and

(F) the EPA has not already incorporated a two-year extension into the effective date for the new MCL or treatment technique requirement.

(2) An application for an extension must be submitted to the executive director in writing by the owner or responsible party of the water system. The request must include a statement identifying the new MCL or treatment technique which is not being met and a general long range plan for meeting the new requirement.

(3) The executive director may issue an extension covering a group or class of systems with a common MCL or treatment technique which is not met without individual applications.

(d) Any person may file a motion to overturn the executive director's decision to grant or deny a variance, exemption, or extension under this section according to §50.139 of this title (relating to Motion to Overturn Executive Director's Decision).

(e) Monitoring Schedule. All monitoring required by this chapter shall be conducted in a manner and on a schedule approved by the executive director in concurrence with the requirements of the administrator of the EPA.

(f) [(c)] Modified Monitoring. When a public water system supplies water to one or more other public water systems, the executive director may modify the monitoring requirements imposed by this chapter to the extent that the interconnection of the systems justifies treating them as a single system for monitoring purposes. Any modified monitoring shall be conducted pursuant to a schedule specified by the executive director in concurrence with the requirements of the administrator of the EPA.

§290.103. Definitions.

The following definitions shall apply in the interpretation and enforcement of this subchapter. If a word or term used in this subchapter is not contained in the following list, its definition shall be as shown in §290.38 of this title (relating to Definitions) or in Title 40 Code of Federal Regulations (CFR) §141.2. Other technical terms used shall have the meanings or definitions listed in the latest edition of "Glossary, Water and Wastewater Control Engineering," prepared by a joint editorial board representing the American Public Health Association, American Society of Civil Engineers, American Water Works Association, and the Water Pollution Control Federation.

(1) - (5) (No change.)

(6) **DPD** – Abbreviation for N,N-diethyl-p-phenylenediamine, a reagent used in the determination of several residuals. DPD methods are available for both volumetric (titration) and colorimetric determinations, and are commonly used in the field as part of a colorimetric test kit.

(7) [(6)] **Enhanced coagulation** -- The removal of disinfection by-product precursors to a specified level by conventional coagulation and sedimentation.

(8) [(7)] **Enhanced softening** – The removal of disinfection by-product precursors to a specified level by softening.

(9) [(8)] **Entry point to the distribution system** -- Any point where a source of [freshly] treated water first enters the distribution system. Entry points to the distribution system may include points where chlorinated well water, treated surface water, rechlorinated water from storage, or water purchased from another supplier enters the distribution system.

(10) **Entry point sampling site --** A sampling site representing the quality of the water entering the distribution system at each designated entry point.

(11) [(9)] **Filter assessment** -- An in-depth evaluation of an individual filter, including the analysis of historical filtered water turbidity from the filter, development of a filter profile, evaluation of media condition, identification and prioritization of factors limiting filter performance, appraisal of the applicability of corrections, and preparation of a filter self-assessment report.

(12) [(10)] **Filter profile** -- A graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run. The filter profile must include all the data collected from the time that the filter placed into service until the time that the backwash cycle is complete and the filter is restarted. The filter profile must also include data collected as another filter is being backwashed.

(13) [(11)] **Haloacetic acids (five) (HAA5)** -- The sum of the monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid concentrations in milligrams per liter, rounded to two significant figures after adding the sum [summing].

(14) [(12)] **Halogen** -- One of the chemical elements chlorine, bromine, or iodine.

(15) [(13)] **Maximum contaminant level (MCL)** – The maximum concentration of a regulated contaminant that is allowed in drinking water before the public water system is cited for a violation. Maximum contaminant levels for regulated contaminants are defined in the applicable sections of this subchapter.

(16) [(14)] **Maximum residual disinfectant level (MRDL)** – The disinfectant concentration that may not be exceeded in the distribution system. There is convincing evidence that addition of a disinfectant is necessary for control of waterborne microbial contaminants.

(17) [(15)] **Minimum acceptable disinfectant residual** -- The lowest disinfectant concentration allowed in the distribution system for microbial control.

(18) [(16)] **Specific ultraviolet absorption at 254 nanometers (nm) (SUVA)** – An indirect indicator of whether the organic carbon in water is humic or non-humic. It is calculated by dividing a sample's ultraviolet absorption at a wavelength of 254 nm (UV254) (in m^{-1}) by its concentration of dissolved organic carbon (DOC) (in mg/L).

(19) [(17)] **Total organic carbon (TOC)** – The concentration of total organic carbon, in milligrams per liter, measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two significant figures. TOC is a surrogate measure for precursors to formation of disinfection by-products.

(20) [(18)] **Total trihalomethanes (TTHM)** – The sum of the chloroform, dibromochloromethane, bromodichloromethane, and bromoform concentrations in milligrams per liter, rounded to two significant figures after summing.

(21) [(19)] **Trihalomethane (THM)** -- One of the family of organic compounds named as derivatives of methane, wherein three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

§290.104. Summary of Maximum Contaminant Levels, Maximum Residual Disinfectant Levels, Treatment Techniques, and Action Levels.

(a) Summary table purpose. The maximum contaminant levels (MCLs), maximum residual disinfectant levels (MRDLs) [MRDLs], treatment techniques, and action levels are presented in this section as a reference source. Only the regulatory concentrations are shown in these tables. Compliance requirements are given in the specific section for each chemical.

(b) Maximum contaminant levels [(MCLs)] for inorganic compounds. The MCLs [maximum contaminant levels] for inorganic contaminants listed in this subsection [below] apply to public water systems as provided in §290.106 of this title (relating to Inorganic Contaminants).

Figure: 30 TAC §290.104(b)

[Figure: 30 TAC §290.104(b)]

Contaminant	MCL (mg/L)
Antimony	0.006
Arsenic	0.05
Asbestos	7 million fibers/liter (longer than 10μm)
Barium	2.0
Beryllium	0.004
Cadmium	0.005

Chromium	0.1
Cyanide	0.2 (as free Cyanide)
Fluoride	4.0
Mercury	0.002
Nitrate	10 [10.0] (as Nitrogen)
Nitrite	1 [1.0] (as Nitrogen)
Nitrate & Nitrite (Total)	10 [10.0] (as Nitrogen)
Selenium	0.05
Thallium	0.002

(c) - (k) (No change.)

§290.106. Inorganic Contaminants.

(a) Applicability. All public water systems are subject to the requirements of this section.

(1) Community and nontransient non-community systems shall comply with the requirements of this section regarding monitoring, reporting, and maximum contaminant levels (MCLs) [MCLs] for all inorganic contaminants (IOCs) listed in this section.

(2) - (3) (No change.)

(b) Maximum contaminant levels for IOCS [inorganic contaminants (IOCs)]. The MCLs [maximum contaminant levels] for IOCs [inorganic contaminants] listed in the following table apply to community and nontransient, non-community water systems. The MCLs [maximum contaminant levels] for nitrate, nitrite, and total nitrate and nitrite also apply to transient non-community water systems.

Figure: 30 TAC §290.106(b)

[Figure: 30 TAC §290.106(b)]

Contaminant	MCL (mg/L)
Antimony	0.006
Arsenic	0.05
Asbestos	7 million fibers/liter (longer than 10μm)
Barium	2.0
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide	0.2 (as free Cyanide)
Fluoride	4.0
Mercury	0.002
Nitrate	10 [10.0] (as Nitrogen)
Nitrite	1 [1.0] (as Nitrogen)

Nitrate & Nitrite (Total)	10 [10.0] (as Nitrogen)
Selenium	0.05
Thallium	0.002

(c) Monitoring requirements for IOCs [inorganic contaminants]. Public water systems shall monitor for IOCs [inorganic contaminants] at the locations [and] specified by the executive director. All monitoring conducted pursuant to the requirements of this section must be conducted at sites designated in the public water system's monitoring plan. Each public water system shall monitor at the time designated during each compliance period.

(1) Monitoring locations for IOCs except asbestos, antimony, [Antimony,] arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nitrate, nitrite, selenium, and thallium shall be monitored at each entry point [of entry] to the distribution system.

(A) If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point [a point of entry] that is representative of all sources and during periods of normal operating conditions when water is representative of all sources being used.

(B) Systems shall take all subsequent samples at the same entry point [of entry] to the distribution system unless the executive director determines that conditions make another entry point [of entry] more representative of the source or treatment plant being monitored.

(C) The executive director may approve the use of composite samples.

(i) (No change.)

(ii) Compositing shall be allowed only at groundwater entry points [of entry] to the distribution system.

(iii) - (v) (No change.)

(vi) If the concentration in the composite sample is greater than or equal to the proportional contribution of the MCL (e.g., 20% of MCL when five points are composited) for any inorganic chemical, then a follow-up sample must be collected from each sampling point included in the composite sample.

(I) (No change.)

(II) If duplicates of the original sample taken from each entry point [of entry] to the distribution system used in the composite are available, the system may use these instead of resampling. The duplicates must be analyzed within 14 days of the composite.

(III) (No change.)

(2) Monitoring locations for asbestos. Asbestos shall be monitored at locations where asbestos contamination is most likely to occur.

(A) A system vulnerable to asbestos contamination due solely to source water shall sample at the entry point [of entry] to the distribution system.

(B) - (D) (No change.)

(3) Monitoring frequency for IOCs except asbestos, nitrate, and nitrite. Community and nontransient non-community public water systems shall monitor for antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, selenium, and thallium at the following frequency.

(A) A public water system shall routinely monitor for antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, selenium, and thallium.

(i) Each groundwater source shall be sampled once every three years at the entry point [of entry] to the distribution system.

(ii) Each surface water source shall be sampled annually at the entry point [of entry] to the distribution system.

(iii) (No change.)

(B) - (C) (No change.)

(4) (No change.)

(5) Nitrate monitoring frequency. All public water systems shall monitor for nitrate at the following frequency.

(A) All [A] public water systems [system] shall routinely monitor for nitrate.

(i) All public water systems shall annually sample each ground water source at the entry point [of entry] to the distribution system.

(ii) A community or non-transient non-community water system shall sample each surface water source quarterly at the entry point [of entry] to the distribution system.

(iii) A transient non-community water system shall [annually] sample each surface water source annually at the entry point [of entry] to the distribution system.

(B) - (C) (No change.)

(6) (No change.)

(7) Confirmation sampling. The executive director may require a public water system to confirm the results of any individual sample.

(A) If a sample result exceeds the MCL, a public water system shall collect one additional sample to confirm the results of the initial test.

(i) Confirmation samples must be collected at the same entry point [of entry] to the distribution system as the sample that exceeded the MCL.

(ii) - (iii) (No change.)

(B) (No change.)

(8) (No change.)

(d) Analytical requirements for IOCs [inorganic contaminants]. Analytical procedures shall be performed in accordance with §290.119 of this title (relating to Analytical Procedures). Testing for inorganic contaminants shall be performed at a laboratory certified by the executive director [Texas Department of Health (TDH) Bureau of Laboratories].

(e) Reporting requirements for IOCs [inorganic contaminants]. Upon the request of the executive director, the owner or operator of a public water system must provide the executive director with a copy of the results of any test, measurement, or analysis required by this subsection. The copies must be submitted within ten days of the request or within ten days of their receipt by the public water system, whichever is later. The copies must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087. [Any owner or operator of a public water system subject to the provisions of this section is required to report to the executive director the results of any inorganic constituent analyses, measurement, or analysis required to be made by these standards within ten days following the receipt of results for such test, measurement, or analysis.]

(f) Compliance determination for IOCs [inorganic contaminants]. Compliance with this section shall be determined using the following criteria.

(1) Compliance with the MCL for each IOC [inorganic contaminant] shall be based on the analytical results obtained at each individual sampling point.

(2) A public water system that exceeds the levels for nitrate, nitrite, or the sum of nitrate and nitrite specified in subsection (b) of this section commits an acute MCL violation. Compliance shall be based on the results of the single sample. If a confirmation sample is collected, compliance shall be based on the average result of the original and confirmation samples.

[(A) For systems that are sampling annually or less frequently, compliance shall be based on the results of the single sample. If a confirmation sample is collected, the compliance will be based on the average result of the original and confirmation samples.]

[(B) For systems that are sampling more frequently than annually, compliance is based on the running annual average for each sampling point.]

[(C) If any one sample would cause the running annual average to be exceeded, then the system is out of compliance immediately.]

(3) A public water system that exceeds the levels of antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, selenium, or thallium (i.e., any IOC [inorganic contaminant] except nitrate and nitrite) specified in subsection (b) of this section commits an MCL violation.

(A) For systems that are sampling annually or less frequently, compliance may be based on the results of a single sample, if a confirmation sample is not collected. [If a confirmation sample is not collected, compliance shall be based on the results of each original sample.]

(B) For systems that are sampling annually or less frequently, if [If] a confirmation sample is collected, [the] compliance will be based on the average result of the original and confirmation samples.

(C) For systems that are sampling more frequently than annually, compliance is based on the running annual average for each sampling point.

(D) If a single quarterly sample would cause the running annual average to be exceeded, then the system is immediately out of compliance.

(4) - (5) (No change.)

(g) Public notice for IOCs [inorganic contaminants]. A public water system that violates the requirements of this section must notify the executive director and the system's customers.

(1) - (2) (No change.)

(3) A public water system that fails to meet the MCL for any of the regulated IOCs [inorganic contaminants] except nitrate and nitrite (i.e., antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, selenium, and thallium) shall notify the executive director by the end of the next business day and the water system customers in accordance with the requirements of §290.122(b) of this title.

(4) - (5) (No change.)

(h) Best Available Technology (BAT) for IOCs [inorganic contaminants]. BAT [Best available technology] for treatment of violations of MCLs in subsection (b) of this section are listed in 40 CFR §141.62.

§290.107. Organic Contaminants.

(a) (No change.)

(b) Maximum contaminant levels (MCLs) for organic contaminants. The concentration of synthetic and volatile organic chemicals shall not exceed the MCLs [maximum contaminant levels] specified in this section.

(1) - (2) (No change.)

(3) Each public water system must certify annually to the executive director (using third party or manufacturer's certification) that when acrylamide or epichlorohydrin are used in drinking water systems, the combination (or product) of dose and monomer level does not exceed 0.05% dosed at 1.0 mg/L [1 ppm] (or equivalent) for acrylamide and 0.01% dosed at 20 mg/L [20 ppm] (or equivalent) for epichlorohydrin.

(c) Monitoring requirements for organic contaminants. Public water systems shall monitor for organic contaminants at the locations and frequency in paragraphs (1) and (2) of this subsection. All

monitoring conducted under [pursuant to] the requirements of this section must be conducted at sites designated in the public water system's monitoring plan. All samples must be taken during periods of normal operation when water representative of all sources used by the system is being used.

(1) SOC monitoring requirements. Monitoring of the SOC contaminants shall be conducted at the frequency and locations given in this paragraph.

(A) SOC monitoring locations. Monitoring of the SOC contaminants shall be conducted at the following locations.

(i) Systems treating only groundwater shall sample for SOCs at every entry point [of entry] to the distribution system which is representative of each well after treatment. Subsequent samples must be taken at the same entry point [of entry] to the distribution system unless a change in conditions makes another entry point [of entry] to the distribution system more representative of each source or treatment plant. The executive director must approve any change in sampling location.

(ii) Systems using surface water and systems treating groundwater under the direct influence of surface water shall sample for SOCs at points in the distribution system that are representative of each source or at each entry point to the distribution system. Subsequent samples must be taken at the same entry points [point of entry] to the distribution system unless a change in conditions makes another entry point [of entry] to the distribution system more representative

of each source or treatment plant. The executive director must approve any change in sampling location.

(B) (No change.)

(C) Increased SOC monitoring. The executive director may change the monitoring frequency for SOCs.

(i) (No change.)

(ii) The executive director may change the monitoring frequency if an organic SOC contaminant is detected in any sample.

(I) If an organic SOC contaminant is detected in any sample, the system must monitor quarterly at each entry point [of entry] to the distribution system at which a detection occurs.

(II) - (VI) (No change.)

(iii) - (iv) (No change.)

(D) (No change.)

(E) Compositing for SOC monitoring. The executive director may reduce the total number of samples required from a system for analysis by allowing the use of compositing. Composite samples from a maximum of five entry points [of entry] to the distribution system are allowed. Compositing of samples must be done in the laboratory and analyzed within 14 days of sample collection.

(i) If, in the composite sample, a detection of one or more SOC contaminants listed in subsection (b)(1) of this section occurs, then a follow-up sample must be taken from each entry point [of entry] to the distribution system included in the composite and analyzed within 14 days of collection.

(ii) If duplicates of the original SOC sample taken from each entry point [of entry] to the distribution system used in the composite are available, the executive director may use these duplicates instead of resampling. The duplicate must be analyzed within 14 days of collection and the results reported to the executive director.

(iii) Composting may only be permitted at entry points [of entry] to the distribution system within a single system.

(F) (No change.)

(2) VOC monitoring requirements. Monitoring of the VOC contaminants shall be conducted at the frequency and locations given in this paragraph.

(A) VOC monitoring locations. Monitoring of the VOC contaminants shall be conducted at the following locations.

(i) Systems that use only groundwater shall sample for VOCs at every entry point to the distribution system which is representative of each well after treatment. Subsequent samples must be taken at the same entry point [of entry] to the distribution system unless a change in conditions makes another entry point [of entry] to the distribution system more representative of each source or treatment plant. The executive director must approve any change in sampling location.

(ii) Surface water systems, systems using groundwater under the direct influence of surface water, and systems blending groundwater and surface water shall sample for VOCs at points in the distribution system that are representative of each source or at each entry point [of entry] to the distribution system. Subsequent samples must be taken at the same entry points [of entry] to the distribution system unless a change in conditions makes another entry point [of entry] to the distribution system more representative of each source or treatment plant. The executive director must approve any change in sampling location.

(B) VOC monitoring frequency. Monitoring of the VOC contaminants shall be conducted at the following frequency.

(i) - (iii) (No change.)

(iv) Each community and nontransient groundwater system which does not detect a VOC contaminant listed in subsection (b)(2) of this section may be granted a waiver from the annual or triannual requirements of subsection (c)(2)(B)(ii) and iii [(c)(2)(B)(iii)] of this section after completing the initial monitoring. For the purposes of this section, detection is defined as an analytical result of 0.0005 mg/L or greater [>0.0005 mg/l]. A waiver shall be effective for no more than six years (two compliance periods).

(v) (No change.)

(C) Increased VOC monitoring. The executive director may change the monitoring frequency for VOCs.

(i) - (ii) (No change.)

(iii) If a VOC contaminant listed in subsection (b)(2) of this section is detected at a level exceeding 0.0005 mg/L [mg/l] in any sample, then:

(I) the system must monitor quarterly at each entry point [of entry] to the distribution system which resulted in a detection;

(II) - (IV) (No change.)

(V) Groundwater systems which have detected one or more of the following two-carbon organic compounds: trichloroethylene, tetrachloroethylene, 1,2-dichloroethane, 1,1,1-trichloroethane, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, or 1,1-dichloroethylene shall monitor quarterly for vinyl chloride. A vinyl chloride sample shall be taken at each entry point [of entry] to the distribution system at which one or more of the two-carbon organic compounds was detected. If the result of the first analysis does not detect vinyl chloride, the executive director may reduce the quarterly monitoring frequency for vinyl chloride to one sample during each compliance period. Surface water systems are required to monitor for vinyl chloride as specified by the executive director.

(iv) (No change.)

(D) Waivers for VOC monitoring. The executive director may grant a waiver after evaluating the previous use (including transport, storage, or disposal) of the contaminant within the watershed or zone of influence of the water sources. If a determination by the executive director reveals no previous use of the contaminant within the watershed or zone of influence, a waiver may be granted. If previous use of the contaminant is unknown or it has been used previously, then the following factors shall be used to determine whether a waiver is granted:

(i) - (v) (No change.)

(vi) As a condition of the waiver a groundwater system must take one sample at each entry point [of entry] to the distribution system during the time the waiver is effective (i.e., one sample during two compliance periods or six years) and update its vulnerability assessment considering the factors listed in this paragraph. Based on this updated vulnerability assessment the executive director must reconfirm that the system is not vulnerable. If the executive director does not make this reconfirmation within three years of the initial determination, then the waiver is invalid and the system is required to sample annually; and

(vii) (No change.)

(E) Compositing for VOC monitoring. The executive director may reduce the total number of samples a system must analyze by allowing the use of compositing. Composite samples from a maximum of entry points [of entry] to the distribution system are allowed. Compositing of samples must be done in the laboratory and analyzed within 14 days of sample collection.

(i) If the VOC concentration in the composite sample is 0.0005 mg/L or greater [>0.0005 mg/l] for any contaminant listed in subsection (b)(2) of this section, then a follow-up sample must be taken and analyzed within 14 days from each entry point [of entry] to the distribution system included in the composite.

(ii) If duplicates of the original sample taken from each entry point [of

entry] to the distribution system used in the composite are available, the system may use these instead of resampling. The duplicate must be analyzed and the results reported to the executive director [public drinking water program] within 14 days of collection.

(iii) Compositing may only be permitted by the executive director at entry points [of entry] to the distribution system within a single system.

(iv) (No change.)

(d) Analytical requirements for organic contaminants. Analytical procedures shall be performed in accordance with §290.119 of this title (relating to Analytical Procedures). Testing for organic contaminants shall be performed at a laboratory certified by the executive director [TDH Bureau of Laboratories].

(e) Reporting requirements for organic contaminants. Upon the request of the executive director, the owner or operator of a public water system must provide the executive director with a copy of the results of any test, measurement, or analysis required by this subsection. The copies must be submitted within ten days of the request or within ten days of their receipt by the public water system, whichever is later. The copies must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087. [Any owner or operator of a public water system subject to the provisions of this section is required to report to the public drinking water program the results of any test, measurement, or analysis required to be

made by this section within ten days following receipt of the results of such test, measurement, or analysis.]

(f) Compliance determination for organic contaminants. Compliance with the MCLs of subsection (b)(1) and (2) of this section shall be determined based on the analytical results obtained at each entry point [of entry] to the distribution system.

(1) For systems which are sampling more than once a year, compliance is determined by a running annual average of all samples taken at each entry point [of entry] to the distribution system. If the annual average at any entry point [of entry] to the distribution system is greater than the MCL, the system commits an MCL violation. If the initial sample or a subsequent sample would cause the annual average to be exceeded, then the system is out of compliance immediately. Any samples below the detection limit shall be considered to be zero for purposes of calculating the annual average.

(2) For systems which are sampling once a year or less, compliance is based on a single sample. If the level of a contaminant at any entry point [of entry] to the distribution system is greater than the MCL, the system commits an MCL violation. If a confirmation sample is required the executive director, the determination of compliance will be based on the average of the two samples.

(3) (No change.)

(g) Public notification requirements for organic contaminants. A public water system that violates the requirements of this section must notify the executive director [public drinking water program] and the system's customers. If a public water system has a distribution system separate from other parts of the distribution system with no interconnections, the executive director may allow the system to give public notice to only that portion of the system which is out of compliance.

(1) A system that violates an MCL given in subsection (b) of this section, shall report to the executive director [public drinking water program] and notify the public as provided under §290.122(b) of this title [(relating to Public Notification)].

(2) (No change.)

(h) Best available technology (BAT) for organic contaminants. BAT [Best available technology (BAT)] for treatment of violations of MCLs in subsection (b) of this section are listed in 40 CFR §141.61. Copies are available for review in the Water Supply Division [Water Permitting and Resource Management Division], Texas Natural Resource Conservation Commission, P. O. Box 13087, Austin, Texas 78711-3087.

§290.108. Radionuclides Other than Radon [Radiological Sampling and Analytical Requirements].

(a) Applicability. All community [and nontransient, noncommunity] water systems shall comply with the requirements of this section regarding radiological contaminants. Public water systems treating groundwater under the direct influence of surface water must comply with the radiological requirements for surface water systems.

(b) (No change.)

(c) Monitoring requirements. Public water systems shall measure the concentration of radiochemicals at locations and frequencies specified in the system's monitoring plan. All samples must be collected during normal operating conditions.

(1) - (2) (No change.)

(3) The radiochemicals identified in this section shall be sampled at a sampling site representing the entry point to the distribution system.

(d) Analytical requirements for radiological contaminants. Analytical procedures shall be performed in accordance with §290.119 of this title (relating to Analytical Procedures). Testing for radiological contaminants shall be performed at a laboratory certified by the executive director [TDH Bureau of Laboratories].

(e) Reporting requirements. Upon the request of the executive director, the owner or operator of a public water system must provide the executive director with a copy of the results of any test, measurement, or analysis required by this subsection. The copies must be submitted within ten days of the request or within ten days of their receipt by the public water system, whichever is later. The copies must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087. [Any owner or operator of a public water system subject to the provisions of this section is required to report to the executive director the results of any test, measurement, or analysis required to be made by this section within ten days following receipt of the results of such test, measurement, or analysis.]

(f) (No change.)

(g) Public notification. A public water system that violates the requirements of this subsection must notify the executive director [public drinking water program] and the system's customers.

(1) A public water system that violates the MCL for gross alpha particle activity or total radium shall give notice to the executive director [public drinking water program] and notify the public as required by §290.122(b) of this title [(relating to Public Notification)].

(2) The operator of a community water system that violates the MCL for man-made radioactivity shall give notice to the executive director [public drinking water program] and to the public as required by §290.122(b) of this title [(relating to Public Notification)].

(3) (No change.)

§290.109. Microbial Contaminants.

(a) (No change.)

(b) Maximum contaminant levels (MCL) for microbial contaminants. The MCL for microbial contaminants if based on the presence or absence of total coliform bacteria in a sample.

(1) - (2) (No change.)

(c) Monitoring requirements for microbial contaminants. Public water systems shall collect samples for total coliform and for fecal coliform or *Escherichia coli*. All compliance samples must be collected during normal operating conditions.

(1) - (4) (No change.)

(5) Culture analysis. If any routine or repeat sample is total coliform-positive, that total coliform-positive culture medium will be analyzed to determine if fecal coliforms or *E. coli* bacteria are present. If fecal coliforms or *E. coli* are present, the system must notify the executive director [public drinking water program] by the end of the day in accordance with subsection (g) of this section.

(d) Analytical requirements for microbial contaminants. Analytical procedures shall be performed in accordance with §290.119 of this title (relating to Analytical Procedures). Testing for microbial contaminants shall be performed at a laboratory certified by the executive director [TDH Bureau of Laboratories].

(e) Reporting requirements for microbial contaminants. Upon the request of the executive director, the owner or operator of a public water system must provide the executive director with a copy of the results of any test, measurement, or analysis required by this subsection. The copies must be submitted within ten days of the request or within ten days of their receipt by the public water system, whichever is later. The copies must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087. [Any owner or operator of a public water system subject to the provisions of this section is required to report to the public drinking water program the results of any test, measurement, or analysis required to be made by this section within ten days following receipt of the results of such test, measurement, or analysis.]

(f) (No change.)

(g) Public notification for microbial contaminants. A system that is out of compliance with the requirements described in this section must notify the public using the procedures described in §290.122 of this title [(relating to Public Notification)] for microbial contamination.

(1) (No change.)

(2) A public water system that has fecal coliforms or *E. coli* present must notify the executive director [public drinking water program] by the end of the day when the system is notified of the test result, unless the system is notified of the result after the commission's [public drinking water program's] office is closed, in which case the system must notify the executive director [public drinking water program] before the end of the next business day.

(3) A public water system which commits an MCL violation must report the violation to the executive director [public drinking water program] immediately after it learns of the violation, but no later than the end of the next business day, and notify the public in accordance with §290.122(b) of this title.

(4) A public water system which has failed to comply with a coliform monitoring requirement must report the monitoring violation to the executive director [public drinking water program] within ten days after the system discovers the violation and notify the public in accordance with §290.122(c) of this title.

§290.110. Disinfectant Residuals.

(a) (No change.)

(b) Minimum and maximum acceptable disinfectant concentrations. Public water systems shall provide the minimum levels of disinfectants in accordance with the provisions of this section. Public water systems shall not exceed the maximum residual disinfectant levels [concentrations] (MRDLs) provided in this section. The disinfection process at a system treating surface water or groundwater under the direct influence of surface water shall meet the treatment technique requirements provided in this section.

(1) - (4) (No change.)

(5) The running annual average of the free chlorine or chloramine residual of the water within the distribution system shall not exceed an MRDL of 4.0 mg/L.

(A) (No change.)

(B) Effective January 1, 2004, all community water systems and nontransient, noncommunity water systems [that serve fewer than 10,000 people and those that serve at least 10,000 people and use groundwater sources] must comply with the MRDL for chlorine and chloramine.

(c) Monitoring requirements. Public water systems shall monitor the performance of the disinfection facilities to ensure that appropriate disinfectant levels are maintained. All monitoring conducted pursuant to the requirements of this section must be conducted at sites designated in the public water system's monitoring plan.

(1) - (4) (No change.)

(5) Public water systems shall monitor the disinfectant residual at various locations throughout the distribution system.

(A) Public water systems which must [conduct daily disinfectant residual tests at representative locations in the distribution system unless they] use groundwater or purchased water sources only and serve fewer than 250 connections or 750 people daily, monitor the disinfectant residual at representative locations in the distribution system at least one every seven days.

(B) Public water systems that [which] use groundwater or purchased water sources only and serve fewer than 250 connections or 750 people daily, must monitor [test] the disinfectant residual at least once per day at representative locations in the distribution system [at least once every seven days].

(C) Public water systems using surface water sources or groundwater under the influence of surface water must monitor the disinfectant residual tests at least once per day at representative locations in the distribution system.

(D) [(C)] All public water systems must monitor the [The] residual disinfectant concentration each time that a [must be measured at least at the same points in the distribution system

and at the same time as] bacteriological sample is [samples are] collected, as specified in §290.109 of this title (relating to Microbial Contaminants).

(d) (No change.)

(e) Reporting requirements. Any owner or operator of a public water system subject to the provisions of this section is required to report to the executive director [public drinking water program] the results of any test, measurement, or analysis required by this section.

(1) Systems exceeding the MRDL for chlorine dioxide in subsection (b)(3) of this section must report the exceedance to the executive director [public drinking water program] at least by the end of the next business day.

(2) Public water systems that use surface water sources or groundwater sources under the direct influence of surface water must submit a Monthly Operating Report for Surface Water Treatment Plants each month. Until January 1, 2001, systems must submit commission [TNRCC] Form 0102A. After January 1, 2001, systems must submit commission [TNRCC] Form 0102C [00102].

(3) Public water systems that use chlorine dioxide must submit a Chlorine Dioxide Monthly Operating Report (commission Form 0690) [Monthly Report for Chlorine Dioxide Installations] each month.

(4) (No change.)

(5) Monthly and quarterly reports required by this section must be submitted to the Texas Natural Resource Conservation Commission, Water Supply Division [Water Permitting and Resource Management Division], P.O. Box 13087, MC 155, Austin, Texas 78711-3087 by the tenth day of the month following the end of the reporting period.

(f) Compliance determinations. Compliance with the requirements of this section shall be determined using the following criteria.

(1) - (3) (No change.)

(4) A public water system that uses surface water sources or groundwater sources under the direct influence of surface water and fails to meet the requirements of subsection (b)(1) or (2) of this section for a period longer than four consecutive hours commits a nonacute treatment technique violation. A public water system that fails to conduct the additional testing required by subsection (c)(1)(C) and (c)(2)(B)(iii) [(c)(3)(C)] of this section also commits a nonacute treatment technique violation.

(5) - (8) (No change.)

(9) If a public water system's failure to monitor makes it impossible to determine compliance with the MRDL for chlorine or chloramines, the system commits an MRDL violation for the entire period covered by the annual average.

(g) Public notification requirements. The owner or operator of a public water system that violates the requirements of this section must notify the executive director [public drinking water program] and the people served by the system.

(1) A public water system that fails to meet the requirements of subsection (b)(3) of this section, shall notify the executive director [public drinking water program] by the end of the next business day and the customers in accordance with the requirements of §290.122 of this title (relating to Public Notification). Public notification requirements. The owner or operator of a public water system that violates the requirements of this section must notify the executive director and the people served by the system.

(A) (No change.)

(B) A public water system that has a non-acute violation of the MRDL for chlorine dioxide must notify the customers in accordance with the requirements of §290.122(b) of this title [(relating to Public Notification)].

(2) A public water system that uses surface water sources or groundwater sources under the direct influence of surface water and fails to meet the minimum disinfection requirements of subsection (b)(1) or (2) [(b)(2)] of this section shall notify the executive director [public drinking water program] by the end of the next business day and the customers in accordance with the requirements of §290.122(b) of this title.

(3) (No change.)

(4) A public water system that fails to meet the requirements of subsection (b)(5) of this section shall notify the executive director [public drinking water program] by the end of the next business day and the customers in accordance with the requirements of §290.122(b) of this title.

(5) A public water system which fails to conduct the monitoring required by this section must notify its customers of the violation in accordance with the requirements of §290.122(c) of this title.

§290.111. Turbidity.

(a) (No change.)

(b) Treatment technique requirements for turbidity. The filtration techniques used by public water systems treating surface water or groundwater under the direct influence of surface water must ensure the system meets the following treatment technique requirements and criteria.

(1) Through December 31, 2001, the treatment process used by public water systems treating surface water or groundwater under the direct influence of surface water must achieve at least a 3-log removal or inactivation of *Giardia lamblia* cysts and a 4-log removal or inactivation of viruses before the water is supplied to any consumer. The executive director may require additional levels of treatment in cases of poor source water quality.

(A) Treatment plants using conventional media filtration must achieve the following turbidity levels.

(i) (No change.)

(ii) The turbidity level of the combined filter effluent must be 0.5 NTU or less in at least 95% <u>of</u> [or] the samples tested each month. The executive director may allow a turbidity level of up to 1.0 NTU in at least 95% of the samples if the system can achieve the required 3-log removal or inactivation of *Giardia lamblia* cysts and 4-log removal or inactivation of viruses at that higher turbidity level.

(B) (No change.)

(2) - (3) (No change.)

(c) (No change.)

(d) Analytical requirements for turbidity. All monitoring required by this section must be conducted by a facility approved by the executive director and using methods that conform to the requirements of §290.119 of this title [(relating to Analytical Procedures)]. Equipment used for compliance measurements must be maintained and calibrated in accordance with §290.46(s) of this title (relating to Minimum Acceptable Operating Practices for Public Drinking Water Systems).

(1) Turbidity must be measured with turbidimeters that use EPA Method 180.1 and Standard Method 2130B [nephelometric methods] or Great Lakes Instruments Method 2.

(2) - (4) (No change.)

(e) Reporting requirements for turbidity. Public water systems shall properly complete and submit periodic reports to demonstrate compliance with this section.

(1) A public water system that has a turbidity level exceeding 1.0 [5.0] NTU in the combined filter effluent shall notify the executive director [public drinking water program] by the next business day.

(2) Public water systems which use surface water sources or groundwater sources under the direct influence of surface water, must submit a Monthly Operating Report for Surface Water Treatment Plants each month. Until January 1, 2001, systems must submit commission [TNRCC] Form 0102A. After January 1, 2001, systems must submit commission [TNRCC] Form 0102C [01020].

(3) Public water systems that must complete the additional monitoring required by subsection (c)(5)(A) of this section must submit a Filter Profile Report for Individual Filters (commission Form 10276) with their Monthly Operating Report for Surface Water Treatment Plants.

(4) Public water systems that must complete the additional monitoring required by subsection (c)(5)(B) of this section must submit a Filter Assessment Report for Individual Filters (commission Form 10277) with their Monthly Operating Report for Surface Water Treatment Plants.

(5) Public water systems that must complete the additional monitoring required by subsection (c)(5)(C) of this section must submit a Request for Compliance CPE (commission Form 10278) with their Monthly Operating Report for Surface Water Treatment Plants.

(6) Periodic reports required by this section must be submitted to the Texas Natural Resource Conservation Commission, Water Supply Division [Water Permitting and Resource Management Division], MC 155, P.O. Box 13087, Austin, Texas 78711-3087 by the tenth day of the month following the end of the reporting period.

(f) (No change.)

(g) Public notification for turbidity. The owner or operator of a public water system that violates the requirements of this section must notify the executive director [public drinking water program] and the people served by the system.

(1) A public water system that has a turbidity level exceeding 5.0 NTU in the combined filter effluent shall notify the executive director [public drinking water program] by the next business day and the water system customers of the acute violation in accordance with the requirements of §290.46(q)(3) [§290.46(s)(4)] of this title [(relating to Minimum Acceptable Operating Practices for Public Drinking Water Systems)] and §290.122(a) of this title (relating to Public Notification).

(2) A public water system that fails to meet the treatment technique requirements of subsection (b)(1) or (2) of this section shall notify the executive director [public drinking water program] by the end of the next business day and the water system customers in accordance with the requirements of §290.122(b) of this title.

(3) (No change.)

§290.112. Total Organic Carbon (TOC).

(a) (No change.)

(b) Treatment technique. Systems must achieve the Step 1 removal requirements in paragraph (1) of this subsection, meet one of the alternative compliance criteria described in paragraph (2) of this subsection, or apply for the alternative Step 2 removal requirements described in paragraph (3) of this subsection.

(1) - (2) (No change.)

(3) If a system fails to meet the Step 1 TOC removal requirement required by paragraph (1) of this subsection and does not meet one of eight alternative compliance criteria described in paragraph (2) of this subsection, the system must apply to the executive director [public drinking water program] for approval of Step 2 removal requirements.

(A) (No change.)

(B) The system must submit the results of the Step 2 jar testing to the executive director [public drinking water program] for approval of the alternative removal requirements at least 15 days before the end of the applicable quarter.

(C) (No change.)

(c) TOC monitoring requirements. Systems must conduct required TOC monitoring during normal operating conditions at sites and at the frequency designated in the system's monitoring plan.

(1) Systems must monitor for TOC and alkalinity in the source water prior to any treatment. Between one and eight hours after [Within one hour of] taking the source water sample, systems must measure each treatment plant TOC after filtration in the combined filter effluent stream. These samples (source water alkalinity, source water TOC, and treated water TOC) are referred to as a TOC sample set.

(2) - (5) (No change.)

(d) (No change.)

(e) Reporting requirements for TOC. Systems treating surface water or groundwater under the direct influence of surface water shall properly complete and submit periodic reports to demonstrate compliance with this section.

(1) The reports must be submitted to the Texas Natural Resource Conservation Commission, Water Supply Division, [Water Permitting and Resource Management Division] MC 155, P.O. Box 13087, Austin, Texas 78711-3087 by the tenth day of the month following the end of the reporting period.

(2) (No change.)

(3) A system that does not meet the Step 1 removal requirements must submit a Request for Alternate TOC Requirements at least 15 days before the end of the quarter.

(A) - (E) (No change.)

[(F) If the system meets alternative compliance criterion Number 9, subsection (b)(2)(I) of this section, the system must report the running annual average TTHM and HAA5 concentrations as determined under the requirements of §290.113 of this title (relating to Disinfection By-products (TTHM and HAA5)).]

(F) [(G)] A system that does not meet any of the alternative compliance criteria must apply for the Step 2 alternative removal requirements and must submit the results of Step 2 jar testing.

(f) (No change.)

(g) Public Notification. A public water system that violates the treatment technique requirements of this section must notify the executive director [public drinking water program] and the system's customers.

(1) A public water system that commits a TOC treatment technique violation shall notify the executive director [public drinking water program] and the water system customers in accordance with the requirements of §290.122(b) of this title (relating to Public Notification).

(2) (No change.)

§290.113. Disinfection By-products (TTHM and HAA5).

(a) Applicability for TTHM and HAA5. All community and nontransient, noncommunity water systems shall comply with the requirements of this section.

(1) (No change.)

(2) Effective January 1, 2004, all community and nontransient, noncommunity public water systems [that serve fewer than 10,000 persons and those that serve at least 10,000 persons and use groundwater sources] must comply with the MCL for TTHM and HAA5.

(3) - (4) (No change.)

(b) - (c) (No change.)

(d) Analytical requirements for TTHM and HAA5. Analytical procedures required by this section shall be performed in accordance with §290.119 of this title (relating to Analytical Procedures). Testing for TTHM and HAA5 shall be performed at a laboratory certified by the executive director [TDH Bureau of Laboratories].

(e) Reporting requirements for TTHM and HAA5. Upon the request of the executive director, the owner or operator of a public water system must provide the executive director with a copy of the results of any test, measurement, or analysis required by this subsection. The copies must be submitted within ten days of the request or within ten days of their receipt by the public water system, whichever is later. The copies must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087. [Any owner or operator of a public water system subject to the provisions of this section is required to report to the public drinking water program the results of any test, measurement, or analysis required to be made by this section within ten days following receipt of results of such test, measurement, or analysis.]

(f) Compliance determination for TTHM and HAA5. Compliance with the provisions of this section shall be determined as follows.

(1) - (6) (No change.)

(7) If a public water system's failure to monitor makes it impossible to determine compliance with the MCL for TTHM or HAA5, the system commits an MCL violation for the entire period covered by the annual average.

(g) Public Notification Requirements for TTHM and HAA5. A public water system that violates the treatment technique requirements of this section must notify the executive director [public drinking water program] and the system's customers.

(1) A public water system that violates an MCL given in subsection (b)(1) or (2) of this section shall report to the executive director and the water system customers in accordance with the requirements of [public drinking water program within 30 days after receiving analytical results and notify the public as provided under] §290.122(b) of this title (relating to Public Notification).

(2) (No change.)

§290.114. Other Disinfection By-products (Chlorite and Bromate) [Other than TTHM and HAA5].

(a) Chlorite. All community and nontransient noncommunity public water systems that use chlorine dioxide must comply with the requirements of this subsection.

(1) - (2) (No change.)

(3) Analytical requirements for chlorite. Analytical procedures required by this section shall be performed in accordance with the requirements of §290.119 of this title (relating to Analytical Procedures).

(A) - (B) (No change.)

(C) Beginning January 1, 2002, the chlorite concentration of the water within the distribution system must be analyzed using ion chromatography at a facility certified by the executive director [TDH Bureau of Laboratories].

(4) Reporting requirements for chlorite. Public water systems that are subject to the provisions of this subsection must provide the executive director with the results of any test, measurement, or analysis required by this section [using chlorine dioxide shall properly complete and submit periodic report to demonstrate compliance with this subsection].

(A) Systems using chlorine dioxide must submit a Chlorine Dioxide Monthly Operating Report (commission Form 0690) by the tenth day of the month following the end of the reporting period. [within ten days after the end of each month. The report must be submitted to the Texas Natural Resource Conservation Commission, Water Permitting and Resource Management Division, P.O. Box 13087, MC 155, Austin, Texas 78711-3087.]

(B) Upon the request of the executive director, systems shall provide the executive director with a copy of the results of any chlorite test, measurement, or analysis required by §290.114(a)(2)(B) of this title within ten days following receipt of the results of such test, measurement, or analysis. [The results of all samples collected at points designated in the monitoring plan must be reported.]

(C) Reports and analytical results must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087.

(5) (No change.)

(6) Public notification requirements for chlorite. A public water system that violates the requirements of this subsection must notify the executive director [public drinking water program] and the system's customers.

(A) A public water system that violates the MCL for chlorite shall notify the executive director [public drinking water program] by the end of the next business day and the customers in accordance with the requirements of §290.122(b) of this title (relating to Public Notification).

(B) (No change.)

(b) Bromate. Community and nontransient, noncommunity public water systems that use ozone must comply with the requirements of this subsection beginning on January 1, 2002.

(1) - (3) (No change.)

(4) Reporting requirements for bromate. Upon the request of the executive director, the owner or operator of a public water system must provide the executive director with a copy of the results of any test, measurement, or analysis required by this subsection. The copies must be submitted within ten days of the request or within ten days of their receipt by the public water system, whichever is later. The copies must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087.

(5) [(4)] Compliance determination for bromate. Compliance with the requirements of this subsection shall be determined using the following criteria.

(A) A system that fails to monitor in accordance with this section commits a monitoring violation. Failure to monitor will be treated as a violation for the entire period covered by the annual average.

(B) A public water system that fails to report the results of the monitoring tests required by this subsection commits a reporting violation.

(C) A public water system violates the MCL for bromate if, at the end of any quarter, the running annual average of monthly averages, computed quarterly, exceeds the maximum contaminant level specified in paragraph (1) of this subsection.

(6) [(5)] Public notification requirements for bromate. A public water system that violates the requirements of this subsection must notify the water system's customers and the executive director [public drinking water program].

(A) A public water system that violates the MCL for bromate shall notify the customers in accordance with the requirements of §290.122(b) of this title (relating to Public Notification).

(B) A public water system which fails to conduct the monitoring required by this subsection must notify its customers of the violation in accordance with the requirements of §290.122(c) of this title.

§290.115. Transition Rule for Disinfection By-products (TTHM).

(a) - (b) (No change.)

(c) Sampling and analytical requirements for TTHM [total trihalomethanes]:

(1) (No change.)

(2) For all community water systems utilizing surface water sources in whole or in part, and for all water systems utilizing only groundwater sources that have not been determined to qualify for the reduced monitoring requirements of paragraph (4) of this subsection, analyses for total trihalomethanes shall be performed on at least four samples of water per quarter from each treatment plant used by the system. At least 25% of the samples shall be taken at locations within the distribution system reflecting the maximum residence time of the water in the system. The remaining 75% shall be taken at representative locations in the distribution system, taking into account number of persons served, different sources of water, and different treatment methods employed. The results of all analyses per quarter shall be arithmetically averaged and reported to the executive director [public drinking water program] within 30 days of the system's receipt of such results. All samples collected shall be used in computing the average, unless the analytical results are invalidated for technical reasons.

(3) Upon the written request of a community water system, the monitoring frequency required by paragraph (2) of this subsection may be reduced by the executive director [public drinking water program] to a minimum of one sample analyzed for TTHMs per quarter taken at a point in the distribution system reflecting the maximum residence time of the water in the system, upon a written determination by the executive director [public drinking water program] that the data from at least one year of monitoring in accordance with paragraph (2) of this subsection and local conditions demonstrate that total trihalomethane concentrations will be consistently below the maximum contaminant level.

(A) - (B) (No change.)

(4) Upon the written request to the executive director [public drinking water program], a community water system utilizing only groundwater sources may seek to have the monitoring frequency reduced to a minimum of one sample for maximum TTHM potential per year taken at a point in the distribution system reflecting maximum residence time of the water in the system. The system shall submit to the executive director [public drinking water program] the results of at least one sample analyzed for maximum TTHM potential taken at a point in the distribution system reflecting the maximum residence time of the water in the system. The system's monitoring frequency may only be reduced upon a written determination by the executive director [public drinking water program] that, based upon the data submitted by the system, the system has a maximum TTHM potential of less than 0.10 milligrams/liter and that, based upon an assessment of the local conditions of the system, the system is not likely to approach or exceed the maximum contaminant level for TTHM's. [The results of all analyses shall be reported to the public drinking water program within 30 days of the system's receipt of such results.] All samples collected shall be used for determining whether the system must comply with the monitoring requirements of paragraph (2) of this subsection, unless the analytical results are invalidated for technical reasons.

(A) - (C) (No change.)

(5) Compliance with the MCL of 0.10 mg/L [milligrams/liter] for TTHMs [total trihalomethanes] shall be determined based on a running annual average of quarterly samples collected

by the system as prescribed in paragraph (2) of this subsection. If the average of samples covering any 12-month period exceeds the maximum contaminant level, the public water system shall report to the executive director [public drinking water program] within 30 days and notify the public as required under §290.122(b) of this title (relating to Public Notification). Monitoring after public notification shall be at a frequency designated by the executive director [public drinking water program] and shall continue until a monitoring schedule as a condition of a variance, exemption, or enforcement action shall become effective.

(6) Before a community water system makes any significant modification to its existing treatment process for the purpose of achieving compliance with this subsection, the system must submit and obtain approval from the executive director [public drinking water program] of a detailed plan setting forth its proposed modifications and those safeguards that it will implement to ensure that the bacteriological quality of the drinking water served by such system will not be adversely affected by such modifications.

(7) All analyses for determining compliance with the provisions of this section shall be performed in accordance with §290.119 of this title (relating to Analytical Procedures) at a laboratory certified by the executive director [TDH Bureau of Laboratories].

(8) Upon the request of the executive director, the owner or operator of a public water system must provide the executive director with a copy of the results of any test, measurement, or analysis required by this subsection. The copies must be submitted within ten days of the request or

within ten days of their receipt by the public water system, whichever is later. The copies must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087.

§290.117. Regulation of Lead and Copper.

(a) General requirements.

(1) (No change.)

(2) Compliance - The water system is not in compliance if it fails to meet any reporting, monitoring, public education, or other requirement in this section relating to the regulation of lead and/or copper.

(A) All applicable water systems shall determine compliance based on monitoring and reporting requirements for lead and copper established in this section or contained in 40 Code of Federal Regulations (CFR) [CFR] §§141.85, 141.86, 141.87, 141.88, or 141.90.

(B) Failure to [satisfactorily] conduct or [satisfactorily] report any requirements of this section shall constitute a monitoring, reporting or treatment technique violation and shall be a violation of these standards.

(3) Action levels for lead and copper are 0.015 mg/L [mg/l] and 1.3 mg/L [mg/l] respectively. The action levels are exceeded if the concentration of lead and/or copper in more than 10% of the first draw tap water samples collected during any monitoring period is greater that 0.015 mg/L [mg/l] for lead or 1.3 mg/L [mg/l] for copper. If collecting only five samples, the average of the two highest samples shall be used to determine compliance with the action level.

(b) Sample Site Selection and Materials [Material] Survey.

(1) By the applicable date for commencement of tap sample monitoring, each system shall complete a materials survey of its distribution system to identify a pool of tap sampling sites that meet the requirements of this section. All first draw tap samples are to be collected from this pool of sites. Sampling sites may not include faucets that have point-of-use or entry point [point-of-entry] treatment devices. After completing sample site selection, the system will submit the Lead and Copper Sample Site Selection form to the executive director for approval.

(2) Information for conducting a materials survey and selecting sampling sites are provided to each system by the executive director [public drinking water program] before initial tap sampling is initiated [in accordance with the time schedule shown on Table Number 2, subsection (c)(8) of this section]. Procedural requirements set forth in 40 CFR §141.86 will be followed for sampling site selection activities except that reporting of tap sampling sites to the executive director [public drinking water program] shall be conducted using the materials survey and sampling site selection forms supplied by the executive director. Supplemental explanatory information [correspondence] from

the system will be considered as part of the sampling site selection document [materials survey document]. Systems must make a good faith effort to conduct a thorough and complete materials survey and submit a valid sample site selection form before initial tap sampling may be conducted.

(3) A system that does not have enough Tier 1, 2, or 3 sites, as set forth in 40 CFR §141.86, must use other representative sites to complete its sampling pool. A representative site is one that uses plumbing materials commonly found at other sites to which the system provides water.

(c) Tap sampling.

(1) A first draw tap sample means a one liter or one quart sample of tap water collected from a cold water, frequently used interior tap, after the water has been standing in the plumbing for at least six hours and is collected without first flushing the tap. The kitchen cold water faucet is the preferred sampling tap at residential sites. It is recommended that the water not be allowed to stand in the plumbing for more than 18 hours prior to a sample collection.

(2) A sample [Sample] collection may be conducted by either water system personnel or the residents. If the resident is allowed to collect samples for lead and copper monitoring, the water system must provide written instructions for sample collection procedures [and the system may not challenge, based on alleged errors in the sample collection process, the accuracy of the sampling results.]

(3) A water system shall collect each tap sample from the same sampling site from which it collected a previous sample. If this is not possible, the water system shall provide a written explanation to the executive director [public drinking water program shall be provided]. The water system must select an [An] alternate sampling site from the system's sampling pool [must be selected] which meets similar criteria and is within reasonable proximity to the original sampling site.

(4) (No change.)

(5) [Number of Tap Samples - Initial Monitoring -] The system [Systems] shall collect at least two sets [one set] of initial tap samples during [each of] two consecutive six-month monitoring periods, unless granted a monitoring waiver.

(6) - (7) (No change.)

(8) A new community or nontransient noncommunity water system begins the [The] first six-month [six month] initial monitoring period in the year following a new water system's assignment of a Public Water System identification number [begins on the dates listed in Table Number 2].

Figure: 30 TAC §290.117(c)(8) (No change.)

(d) Computing 90th Percentile Lead and Copper Levels - Determination of 90th percentile levels shall be obtained by ranking the results of lead and copper samples collected during a monitoring period in ascending order (lowest concentration equal sample Number 1; highest concentration equal sample Numbers 10, 20, 30, 40, 50, etc), up to the total number of samples collected. The number of samples collected during the monitoring period shall be multiplied by 0.9 and the concentration of lead and copper in the numbered sample yielded by this calculation is the 90th percentile sample contaminant level. The system is in compliance with the lead and/or copper action levels if the 90th percentile sample contaminant level is equal to or less than the action levels specified in subsection (a)(3) [subsection (a)(2)] of this section. For water systems serving fewer than 101 people, the 90th percentile level is computed by taking the average of the highest two sample results.

(e) Reduced tap monitoring.

(1) - (3) (No change.)

(4) Any system that the 90th percentile lead level is greater than 0.005 mg/L and/or the 90th percentile copper level is greater than 0.65 mg/L during either of the two initial six-month monitoring periods must conduct two annual rounds of reduced monitoring the two calendar years following the completion of initial tap sampling. [If the system exceeds an action level for lead or copper during any reduced monitoring period, it must follow public education requirements applicable to action level exceedances during initial monitoring found in subsection (g) of this section. It must also collect the remaining number of samples as required for initial monitoring within 60 days. The

results of all samples related to reduced monitoring will be used to determine action level exceedance. Should an exceedance of lead or copper action levels be verified, then procedures of this section applicable to action level exceedances during initial monitoring will be followed.]

(5) Any system that demonstrates during the two initial six-month monitoring periods that the 90th percentile lead level is less than or equal to 0.005 mg/L and the 90th percentile copper level is less than or equal to 0.65 mg/L shall have the required frequency of sampling reduced to once every three years and at the reduced number of sampling sites shown in subsection (c)(6) of this title, Table Number 1. [If after three annual periods of reduced monitoring the system continues to be in compliance with the lead and copper action levels, then the system will be notified to conduct reduced monitoring once every three years].

(f) Invalidation of lead or copper tap samples.

(1) A sample invalidated under this subsection does not count toward determining lead or copper 90th percentile levels or toward meeting the minimum number of tap sample requirements.

(2) The executive director may invalidate a lead or copper tap sample if one of the following conditions is met.

(A) The laboratory establishes that an analytical error has occurred or that an analytical method requirement has been violated.

(B) The executive director determines that the sample was taken from an inappropriate site.

(C) The sample was damaged in transit.

(D) The executive director determines that the sample was subject to tampering.

(3) The water system must provide written documentation to the executive director for samples the water system believes should be invalidated.

(4) The water system must collect replacement samples for any samples invalidated under this section. Any such replacement samples must be collected as soon as possible, but no later than ten days after receiving notification of sample invalidation from the executive director.

(g) Monitoring waivers for small water systems.

(1) Small water system monitoring waivers approved by the executive director prior to January 1, 2002, shall remain in effect subject to the provisions of paragraph (2)(E) of this subsection.

(2) Any water system serving a population of less than 501 people that meets the criteria of subparagraphs (A) and (B) of this paragraph may apply to the executive director to reduce the frequency of monitoring for lead and copper to once every nine years.

(A) The water system must demonstrate on the lead/copper sampling site selection form that its distribution system and the service lines and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials and/or copper-containing materials to demonstrate the risk from lead and/or copper exposure is negligible throughout the water system.

(B) The water system must have completed at least one six-month series of initial tap water monitoring for lead and copper and have demonstrated that its 90th percentile lead level does not exceed 0.005 mg/L and the 90th percentile copper level does not exceed 0.65 mg/L.

(C) The executive director shall provide the water system with a waiver application setting forth the basis and conditions of the waiver after meeting the requirements of subparagraphs (A) and (B) of this paragraph.

(D) The executive director shall not issue any “partial waivers” for lead and copper monitoring.

(E) If a water system with a waiver adds a new source of water, changes any water treatment or no longer meets the requirements of subparagraph (A) of this paragraph, the water system must notify the executive director in writing within 60 days of the change. The executive director has the authority to add or modify the monitoring waiver conditions, if modifications are necessary to address changes that have occurred since approving the original waiver application.

(h) [(f)] Monitoring requirements for water quality parameters (WQP's) and source water.

(1) Water quality parameters.

(A) All large water systems (serving populations greater than 50,000) are required to conduct water quality parameters (WQP) monitoring beginning with the initial period of first draw tap samples and continuing until corrosion control is optimized.

(B) All medium and small water systems (serving populations of 3,301 to 50,000 and less than 3,301, respectively) that exceed the lead or copper action level shall conduct WQP monitoring beginning in the first calendar quarter following the calendar quarter in which the commission officially notified the water system of its exceedance status and shall [end of the period in which the exceedance of the lead and/or copper action level took place and] continue monitoring and reporting as long as the water system exceeds the lead or copper action level.

(C) WQP monitoring shall be conducted quarterly for the following parameters: pH; alkalinity; calcium; conductivity; water temperature; orthophosphate (when an inhibitor containing a phosphate compound is used); and silica (when an inhibitor containing a silicate compound is used). Temperature and pH must be measured at the sampling site at the same time of sample collection.

(D) Large water systems must conduct WQP monitoring at all entry points and at the number of distribution sites specified in subsection (c)(8) of this title, Table Number 2 [3]. Small and medium water systems that are required to conduct WQP monitoring must monitor at all entry points [of entry] and at the required number of distribution sites as shown in subsection (c)(8) of this section, [the] Table Number 2 [3].

Figure: 30 TAC §290.117(h)(1)(D)

[Figure: 30 TAC §290.117(f)(1)(D)]

Table No. 2 [3]

SYSTEM SIZE (# of people served)	INITIAL WQP DISTRIBUTION SITES	REDUCED WQP DISTRIBUTION SITES	NO. OF SITES FOR WQP MONITORING
> 100,000	**25**	**10**	**25**
10,001 - 100,000	**10**	**7**	**10**
3,301 - 10,000	**3**	**3**	**3**

501 - 3,300	**2**	**2**	**2**
101 - 500	**1**	**1**	**1**
< 101	**1**	**1**	**1**

(E) WQP distribution sites (exclusive of entry points) may be sites normally used for bacteriological monitoring and samples need not be collected inside the home. These sites shall be representative of water quality throughout the distribution system.

(F) After corrosion control treatment is installed, water quality parameters shall be measured at the initial number of distribution sites as indicated in subsection (c)(8) of this section, Table Number 2 [3] quarterly and also at entry points biweekly (every two weeks).

(G) WQP monitoring after corrosion control treatment is installed shall be conducted for the following parameters: pH; alkalinity; orthophosphate (when an inhibitor containing a phosphate compound is used); silica (when an inhibitor containing a silicate compound is used); and calcium (when calcium carbonate stabilization is used as part of the treatment). These parameters must be measured at all entry points [of entry] and initial distribution sites.

(H) Any large water system that maintains the range of values for WQP's reflecting optimum corrosion control as approved by the executive director for one-year may collect quarterly distribution samples at the reduced number of distribution sites indicated in subsection (c)(8)

of this section, Table Number 2 [3]. WQP samples shall continue to be measured at entry points [of entry] on a biweekly basis and results submitted to the executive director [public drinking water program].

(I) Any large water system that reflects optimal corrosion control treatment during three consecutive years may reduce the frequency at which it collects distribution samples for applicable WQP's to annually.

(J) Any large water system that reflects optimal corrosion control treatment during three consecutive years of annual WQP distribution monitoring may reduce the frequency at which it collects the number of WQP distribution samples for applicable WQP's to once every three years. Additionally, the last two consecutive tap sample monitoring periods must have a 90th percentile lead value of less than or equal to 0.005 mg/L and a 90th percentile copper value of less than or equal to 0.65 mg/L. The water system must also have maintained the range of values for WQP's reflecting optimal corrosion control as specified in that system's state approved corrosion control study.

(K) Water quality parameter testing must be conducted at a laboratory that uses the methods described in 40 CFR §141.89, and it is the responsibility of the water system to collect, submit and report these values. If a water system fails to meet the WQP values or ranges specified by the executive director, it is out of compliance with this section. WQP values may be confirmed by the system in accordance with 40 CFR §141.82(g). The state requires that the values be reported, but is not responsible for supplying sample bottles and testing services to the water system.

(L) Any water system subject to the reduced monitoring frequency that fails to operate within the approved range of WQP values shall resume distribution sampling in accordance with the number and frequency requirements in subparagraph (F) of this paragraph.

(M) A water system conducting WQP monitoring may limit entry point sampling to each official entry point as designated in the database for SDWA compliance sampling. The water system must monitor WQP's at all entry points regardless of whether corrosion control treatment is required at all entry points or not. The water system must inform the executive director of the identity of treated and non-treated entry points and their seasonal use, if any, and demonstrate that the WQP's represent water quality and treatment conditions throughout the system.

(N) Any large water system subject to reduced monitoring frequency (which has completed installation of approved corrosion control treatment as proposed in the system's corrosion control study) that fails to operate at or above the minimum range of values the system proposed for more than nine days in a six-month period shall resume distribution WQP sampling in accordance with the number and frequency requirements in subsection (h) of this section. The system may resume distribution WQP sampling at the reduced number of sites as specified in subsection (h) of this section after completing two consecutive six-month periods of distribution WQP sampling at the original frequency and then may follow the subparagraphs (H) and (J) of this paragraph.

(O) Large water systems shall monitor applicable WQP's every calendar quarter beginning after installation of corrosion control treatment approved by the executive director.

Small and medium water systems shall monitor WQP's every calendar quarter while the system is in exceedance status. The executive director will issue a reporting waiver to small and medium systems for WQP's after the system completes two follow up rounds of tap sampling without exceeding either the lead or copper action level. The water system will continue to collect and record certain crucial parameters that will be available for inspection. If a small or medium water system exceeds the lead or copper action level during a reduced tap monitoring round (summer monitoring), the system shall conduct WQP monitoring until the exceedance status is resolved.

(P) The commission will not designate WQP ranges for any large water system that did not exceed 0.005 mg/L at the 90th percentile for lead during either initial tap sampling round. The commission will not designate WQP ranges for any small or medium water system that never exceeded the lead or copper action level at the 90th percentile during either initial tap sampling round or any reduced monitoring tap sampling round. Systems that must conduct WQP monitoring shall submit proposed WQP ranges for the executive director's approval.

(Q) Using WQP's proposed by the water system or its representatives, the commission will issue an approval letter if the corrosion control study and treatment proposed meet the requirements of this rule. Water systems will operate within the approved WQP ranges at all times and will conduct lead and copper tap sampling under the requirements in subsection (c) of this section and WQP reporting in this paragraph.

(2) Entry point water sampling.

(A) Entry point water sampling for lead and copper shall be conducted by systems that exceed the lead or copper action levels [in order] to determine the lead or copper content of source water. This requirement can be satisfied by normally scheduled inorganic chemical sampling in compliance with the monitoring under the SDWA. Entry point water samples shall be collected using [in accordance with the requirements of this section regarding] sample location, number of samples, and collection methods as specified in §290.106 of this title (relating to Inorganic Contaminants) [except that one sample shall be collected from each entry point to the distribution system (no compositing) within six months after notification of the exceedance of the lead and/or copper action level]. A large water system is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted according to the requirements in subsection (c) of this section and results of source water monitoring conducted according to requirements in §290.108 of this title (relating to Inorganic Chemical Monitoring and Analytical Requirements). The results must demonstrate for two consecutive six-month monitoring periods that lead at the 90th percentile is less than or equal to 0.005 mg/L. If acceptable entry point water data is not available for large systems, the water lead level at the entry point [water lead level] shall be considered [as] zero mg/L for purposes of determining whether a corrosion control study is required.

(B) The executive director shall complete an evaluation of all entry point water sample results, along with the corrosion control study, to determine if source water treatment is necessary. If source water treatment is deemed necessary by the executive director, the system must install it in accordance with the scheduling requirements specified in 40 CFR §141.83(a).

(C) Any system that installs entry point water treatment shall collect an additional round of source water samples as described in subparagraph (A) of this paragraph during two consecutive six-month periods within 36 months after source water treatment begins.

(D) The monitoring frequency for lead and copper in source water, after the executive director determines that source water treatment is not required, or after the executive director has specified the maximum permissible source water levels for lead and copper, shall be in accordance with inorganic chemical monitoring practices and procedures as stated in §290.106 of this title (relating to Inorganic Contaminants).

(E) Reduced source water monitoring procedures as specified in 40 CFR §141.88(e) for lead and copper will be followed by the executive director. [Source water samples will be submitted by the water system in addition to other inorganic chemical monitoring requirements of these standards.]

(F) All water systems shall notify the executive director in writing of any proposed change in treatment or the addition or deletion of a source of water. The executive director may require any such system to conduct additional monitoring or to take other action the executive director deems appropriate to ensure that such systems maintain minimal levels of corrosion in the distribution system.

(i) [(g)] Public education requirements [procedures].

(1) A water system that exceeds the lead action level at the 90th percentile tap sample [based on first draw tap water sampling] shall deliver to the public the public education materials [as] listed in 40 CFR §141.85(a), and according to [in accordance with] the requirements [stated] in paragraph (2) of this subsection shall provide copies of the public education materials to the executive director within ten days after the delivery of the materials to the public. [paragraphs (2) and (3) of this subsection.]

(2) A community water system serving 3,301 or more people shall [must], within 60 days of notification by the commission [executive director]:

(A) insert [Insert] notices in each customer's water utility bill or by separate mailing, if approved in writing by the executive director, that includes the information in 40 CFR §141.85(a), and print the following alert on the water bill itself, or on a bill insert, in large print: "SOME HOMES IN THIS COMMUNITY HAVE ELEVATED LEAD LEVELS IN THEIR DRINKING WATER. LEAD CAN POSE A SIGNIFICANT RISK TO YOUR HEALTH. PLEASE READ THE ENCLOSED NOTICE FOR FURTHER INFORMATION.";

(B) submit [Submit] the required information in 40 CFR §141.85(a) to the editorial departments of the major local daily or weekly newspaper circulated throughout the system;

(C) deliver [Deliver] pamphlets or brochures that contain the public education materials as specified in 40 CFR §141.85(a)(2) and (4) to city or county health departments, to public

schools or local school boards, Women, Infants and Children (WIC) or Head Start Programs when available, public and private hospitals or clinics, pediatricians, family planning clinics, and local welfare agencies, within their service area; [and]

(D) submit [Submit] the public service announcement in 40 CFR §141.85(b) to at least five radio or television stations broadcasting to the area served by the water system; [.]

(E) a [A] community water system serving 501 to 3,300 people may omit the task contained in subparagraph (D) of this paragraph; [must repeat the tasks contained in subparagraphs (A), (B), and (C) of this paragraph every 12 months and the tasks listed in subparagraph (D) of this paragraph every six months for as long as the system exceeds the action level.]

(F) a community water system serving 500 or fewer people may omit the tasks contained in subparagraphs (B) - (D) of this paragraph; [Certain requirements of subparagraphs (C) and (D) of this paragraph may be modified by the executive director if justified by local circumstances.]

(G) all community water systems must repeat the public education requirements at least once during each calendar year for as long as the system exceeds the lead action level; and

(H) if no lead service lines exist anywhere in the water system service area, all community water systems may delete information pertaining to lead service lines, and any additional

information presented by a water system in the public education material shall be consistent with the information in 40 CFR §141.85(a) and be written in easily understood language.

(3) A nontransient noncommunity water system must within 60 days of notification by the executive director deliver the public education materials in 40 CFR §141.85(a)(2) [§141.85(c)(4)] as follows:

(A) post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system;

(B) distribute informational pamphlets and/or [or] brochures on lead in drinking water to each person served by the water system. The commission may allow the water system to utilize electronic transmission in lieu of or combined with printed materials as long as it achieves at least the same coverage; [and]

(C) a water system may delete or modify language relating only to community water systems that is not relevant to its particular facility; and [A nontransient noncommunity water system must repeat the tasks contained in paragraph (3)(A) and (B) of this subsection at least once during each calendar year in which the system exceeds the lead action level.]

(D) a water system must repeat the tasks in subparagraphs (A) and (B) of this paragraph at least once during each calendar year for as long as the water system exceeds the lead action level.

(4) A water system may discontinue delivery of public education materials if the system has met the lead action level during the most recent six-month monitoring period. Such a system shall recommence public education in accordance with this section if it subsequently exceeds the lead action level during any monitoring period.

(5) A water system that fails to meet the lead action level as stated in subsection (a)(3) of this section shall make available to any customer who requests it, information as to how and where water samples may be submitted for lead and copper analysis.

(j) [(h)] Corrosion control.

(1) All applicable water systems shall install and operate optimal corrosion control treatment, which means the corrosion control treatment that minimizes lead and copper concentrations at users' taps while insuring that the treatment does not cause the system to violate any other drinking water standard. All large water systems that exceeded 0.005 mg/L lead at the 90th percentile during initial monitoring or any system that exceeded the lead or copper action level at the 90th percentile during any tap monitoring sampling round and that has installed corrosion control treatment with approved WQP ranges, must operate and maintain optimal corrosion control within those ranges.

Compliance periods for this paragraph are two six-month periods, January 1 to June 30, and July 1 to December 31. A water system is out of compliance with this subsection for a six-month period if the water system has WQP excursions for any approved range for more than nine consecutive days. An excursion occurs whenever the daily value for one or more WQPs's measured at a sampling location is below the minimum value or outside the range approved by the executive director. The executive director has the discretion to delete results of obvious sampling errors from this calculation. Daily values are calculated as follows:

(A) water systems that collect more than one WQP measurement in one day must record the daily value as an average of all WQP values collected during the day regardless of whether the measurements are collected through continuous monitoring, grab sampling, or a combination of both;

(B) on days when only one measurement for the WQP is collected at the sampling location, the daily value shall be the result of that measurement; and

(C) on days when no measurement is collected for the WQP at the sampling location, the daily value last calculated on the most recent day shall serve as the daily value.

(2) Large water systems (serving greater than 50,000 people) are required to conduct corrosion control studies unless they can demonstrate that corrosion control is already optimized to the satisfaction of the executive director. If required to conduct a corrosion control study, a large water

system must complete it by July 1, 1994, and the executive director shall designate optimal corrosion control treatment and parameters by January 1, 1995. The water system shall install corrosion control treatment by January 1, 1997. Large water systems that exceed lead and/or copper action levels must conduct a demonstration study as described in paragraph (4)(B) of this subsection. If a large water system exceeds either the lead or copper action level during a reduced tap sampling monitoring round, it will adhere to the schedule specified in the paragraph for medium systems, with time periods for completing each step being triggered by the date the executive director notifies the water system that it has exceeded an action level.

(3) Small and medium water systems (serving fewer than 3,301 or serving between 3,301 and 50,000 people, respectively) are deemed to have optimized corrosion control if the water system meets the lead and copper action levels during each of two consecutive six-month monitoring periods. These systems will be required to conduct a desk-top corrosion control study to optimize corrosion control if at anytime the 90th percentile action level for lead and/or copper is exceeded. The study must be conducted and submitted within 18 months after exceedance notification by the executive director for medium-sized water systems and within 24 months after exceedance notification for small water systems. If a small or medium water system exceeds either the lead or copper action level during a reduced tap sampling monitoring round, it will adhere to the schedule specified in the paragraph for small and medium systems, with time periods for completing each step being triggered by the date the executive director notifies the system that it has exceeded an action level.

(4) Performance for corrosion control studies.

(A) Any public water system performing a corrosion control study shall evaluate the effectiveness of each of the following treatments (or combinations of treatments) to identify the optimal control treatment:

(i) alkalinity and pH adjustments;

(ii) calcium hardness adjustment; and

(iii) addition of phosphate or silicate corrosion inhibitor.

(B) The water system shall conduct this evaluation using either pipe rig/loop tests, metal coupon tests, partial systems tests (demonstration study), or analyses based on treatments in documented analogous systems (desk-top study). Analogous system means a system of similar size, water chemistry, and distribution system configuration.

(C) The water system shall measure the parameters listed in subsection (h)(1)(C) [(f)(1)(C)] of this section.

(D) On the basis of the evaluation stated in paragraph (4)(A) and (B) of this subsection, the water system shall recommend to the executive director [public drinking water program], in writing, the treatment option that constitutes optimum corrosion control or treatment along with sufficient documentation as required by the executive director [state] to establish the validity of the

evaluation procedure. Operational WQP ranges shall be proposed to the executive director [state] where applicable.

(E) The executive director will, within six months after submittal of the corrosion control study by the water system, review the study and designate optimal corrosion control treatment and parameters.

(F) The water system shall install optimal corrosion control treatment within 24 months after the executive director designates optimal corrosion control treatment and notifies the water system.

(G) Large water systems that install corrosion control treatment shall conduct first-draw lead and copper tap sample monitoring as an initial monitoring during each of two consecutive six-month periods by January 1, 1998. Small and medium water systems shall complete the above stated monitoring within 36 months after the executive director designates optimal corrosion control treatment. Small and medium water systems are deemed to have optimized corrosion control if action levels for lead and copper are not exceeded in two rounds of subsequent tap sample monitoring. Large water systems are deemed to have optimized corrosion control if they have demonstrated through first-draw tap monitoring conducted after treatment installation and water quality parameter sampling conducted in compliance with standards set by the executive director for optimum corrosion control that they are operating within executive director-designated parameters.

(H) Any system that has installed corrosion control treatment and demonstrates optimal corrosion control and operates in compliance with the executive director-designated optimal water quality parameters, may conduct reduced tap sampling as described in subsection (e) of this section, when written permission is granted by the executive director after the executive director has evaluated all pertinent data. Systems that do not meet the action levels for lead and copper after installing corrosion control treatment must continue to operate in accordance with WQP requirements established by the executive director and follow procedures specified in subsection (e)(4) of this section.

(I) The executive director may modify, upon his own initiative or in response to a water system request or a request from interested parties, his designated corrosion control treatment or parameters. The request and executive director response pursuant to modification shall be in writing.

(5) Optimization of corrosion control.

(A) Any water system may be deemed by the executive director to have optimized corrosion control treatment if the system demonstrates, to the satisfaction of the executive director, that it has conducted activities equivalent to the corrosion control steps listed in paragraph (4) of this subsection.

(B) Any large water system is deemed to have optimized corrosion control if it

submits results of lead and copper tap water monitoring and entry point water monitoring in accordance with this section which demonstrates for two consecutive six-month monitoring periods that the 90th percentile tap sample lead level is less than 0.005 mg/L [mg/l].

(k) [(i)] Lead service line replacement. For the purposes of this subsection, the term "service line" refers to both the potable water service line and the potable water customer service line.

(1) Systems that fail to meet the lead action level during follow-up [in first-draw] tap sampling after installing corrosion control and/or source water treatment shall meet the requirements in 40 CFR §141.84 and begin to replace annually at least 7% of the lead service lines known to be present in its distribution systems. [(whichever occurs last) shall immediately begin to replace annually 7% of the lead service lines identified during its materials survey process unless otherwise instructed by the executive director.]

[(2) If the system is in violation for failure to install source water or corrosion control treatment, the executive director may require the system to commence lead service line replacement after the date by which the system was required to conduct follow-up monitoring as specified in subsection (h)(4)(G) of this section.]

(2) [(3)] The water system shall replace the entire service line (up to the building inlet) unless it demonstrates to the satisfaction of the executive director in writing that it controls less than the entire service line. The written statement must indicate that the water system has none of the following

forms of control over the service line: municipal ordinances; public service contracts or applicable legal authority; authority to set standards for construction; repair or maintenance; or ownership. In such a case, the water system shall replace that portion of the lead service line that it controls and notify the owner that it will also replace the building owner's portion of the line. The system is not required to bear the cost of replacing the building owner's portion of the line.

(3) At least 45 days prior to commencing replacement of a lead service line, the water system shall notify all the residents of the building served by that service line that they may experience a temporary increase of lead levels in their drinking water. The water system will also provide information on measures the residents can take to minimize their exposure to lead.

(4) Lead service line means a service line which is made all or in part of lead and connects the water main to the building inlet including any lead pigtail, gooseneck, or other fitting which is connected to such line.

(5) The system may cease replacing lead service lines whenever subsequent 90th percentile first-draw-tap sampling in two consecutive monitoring periods is less than the lead action level. Lead service line replacement shall immediately resume if first-draw-tap samples exceed the 90th percentile lead action/level.

(l) [(j)] Analytical and sample preservation methods.

(1) Analysis for lead and copper shall be conducted using methods stated in 40 CFR §141.89, in laboratories certified by the executive director [Texas Department of Health Bureau of Laboratories]. Analysis for pH, conductivity, calcium, alkalinity, or the phosphate, silica, and temperature may be conducted in any laboratory utilizing EPA methods prescribed in 40 CFR §141.89.

(2) The Practical Quantitation Limits (PQL) and the Method Detection Limits (MDL) shall be as stated in 40 CFR §141.89. The laboratory certified for the analysis of lead and copper tap samples must achieve the MDL of 0.001 mg/L for lead if composted entry point water samples are analyzed for lead.

(3) The executive director has the authority to allow the use of previously collected monitoring data if the data were collected in accordance with 40 CFR §141.89.

(4) All lead levels measured between the PQL and the MDL must be reported as measured, and all lead levels measured below the MDL must be reported as zero.

(5) First-draw-tap samples must be received in the laboratory within 14 days after the collection date [along with correctly completed laboratory submission forms supplied by the executive director].

[(6) Bottles supplied by the executive director or the certified laboratory must be used for collecting the tap samples.]

(m) [(k)] Reporting and recordkeeping requirements.

(1) Reporting requirements.

(A) Report all results of WQP [Water Quality Parameter (WQP)] analyses including the location/address of each distribution system sampling point. This report must include each WQP specified in subsection (h) [(f)] of this section, as well as all sample results from entry points to the distribution system. Water Quality Parameter Reports should be submitted to the executive director no later than ten days after the end of each calendar quarter.

(B) Where applicable, the first-draw-tap [first draw tap] monitoring shall be reported within ten days following the end of each monitoring period as specified by the executive director. (Analysis results from the approved [TDH] laboratory are normally provided simultaneously to the water system and the executive director.) The results of first-draw-tap sampling shall be reported to the water system by the approved laboratory if the system's billing account is not delinquent. The executive director shall provide the water system with official notification of the results and the water system's calculated 90th percentile as the data is made available from the approved laboratory. [The water system's report shall include an explanation as to why a sampling site was changed from the previous round of sampling, if applicable.]

(C) As part of the site selection form, each water system shall justify the selection of sites other than Tier 1 sampling sites as defined on the site selection form and, if lead

service lines are present, why the water system was not able to locate a sufficient number to make up at least 50% of its required number of sampling sites, should this condition arise.

(D) Where applicable, the water system must certify that source water treatment has been installed as recommended by the executive director and that installation was done in accordance with the specified time requirements.

(E) Where applicable, the water system must certify that lead service lines have been replaced in accordance with directives of the executive director and in accordance with time schedules specified in subsection (k) [(i)] of this section.

(F) Where applicable, the water system must provide copies of public education materials and certification that distribution of said materials is being conducted in accordance with subsection (i) [(g)] of this section.

(G) A water system must collect tap samples from the same sampling sites selected during the initial monitoring period for all subsequent sampling periods. If a water system changes a sampling site for any reason allowed in this rule, the water system must provide the executive director with a written explanation showing which sampling site will be abandoned and the sampling site that replaces the abandoned sampling site. The water system's report shall include an explanation as to why a sampling site was changed from the previous round of sampling, if applicable. If a water system discovers that a sample has been collected at an inappropriate sampling site, the water system

may request in writing that the sample be invalidated. The executive director may invalidate the sample and allow for recollection. If a water system has no sampling sites available that meet the first draw criteria specified in subsection (c) of this section they shall proceed in accordance with 40 CFR §141.90(a)(2). [When required by the executive director, the system must report any sampling data collected by the water system in addition to the items listed in subparagraphs (A) - (F) of this paragraph.]

(H) Corrosion control treatment data shall be reported as required by the executive director for water systems that:

(i) have demonstrated optimum corrosion control;

(ii) are required to specify optimum corrosion control treatment (as part of the corrosion control study);

(iii) install corrosion control treatment as designated by the executive director; and

(iv) are required to evaluate effectiveness of corrosion control treatments.

(2) Recordkeeping requirements. Records of all sampling site data, sample submission forms, analysis results, reports, surveys, letters, evaluations, schedules, executive director recommendations, requirements or determinations, and any other information deemed appropriate by the water system shall be retained by the water system for a minimum of 12 years. These records include, but are not limited to, the following items:

(A) tap water monitoring results including the location of each site and date of collection;

(B) certification of the volume and validity of first-draw-tap sample criteria via a copy of the laboratory analysis request form;

(C) where residents collected the sample, certification that the water system informed the resident of proper sampling procedures;

(D) the analytical results for lead and copper concentrations (provided to each water system by the executive director) at each tap sample site; and

(E) designation of any substitute site not used in previous monitoring periods.

§290.118. Secondary Constituent Levels.

(a) - (b) (No change.)

(c) Monitoring frequency for secondary constituents. All [Community and nontransient noncommunity] public water systems shall monitor for secondary constituents at the following frequency.

(1) Each groundwater source shall be sampled once every three years at the entry point [of entry] to the distribution system.

(2) Each surface water source shall be sampled annually at the entry point [of entry] to the distribution system.

(3) (No change.)

(d) - (g) (No change.)

§290.119. Analytical Procedures.

(a) Acceptable laboratories. Samples collected to determine compliance with the requirements of this subchapter shall be analyzed at certified or approved laboratories.

(1) Samples used to determine compliance with the maximum contaminant levels

[MCLs], and action level [levels] requirements of this subchapter must be analyzed by a laboratory certified by the executive director [Texas Department of Health Bureau of Laboratories]. These samples include:

(A) - (J) (No change.)

(2) - (3) (No change.)

(b) Acceptable analytical methods. Methods of analysis shall be as specified in 40 Code of Federal Regulations (CFR) or by any alternative analytical technique as specified by the executive director and approved by the Administrator under 40 CFR §141.27. Copies are available for review in the Water Supply Division, MC 155 [Water Permitting and Resource Management Division, MC-155], Texas Natural Resource Conservation Commission, P.O. Box 13087, Austin, Texas 78711-3087. The following National Primary Drinking Water Regulations set forth in Title 40 CFR are adopted by reference:

(1) - (7) (No change.)

(8) section 141.131(d) for alkalinity analyses, total organic carbon analyses, specific ultraviolet absorbance analyses, and pH analyses; and

(9) (No change.)

§290.121. Monitoring Plans.

(a) (No change.)

(b) Monitoring plan requirements. The monitoring plan shall identify all sampling locations, describe the sampling frequency, and specify the analytical procedures and laboratories that the public water system will use to comply with the monitoring requirements of this subchapter.

(1) Monitoring locations. The monitoring plan shall include information on the location of all required sampling points in the system. Required sampling locations for regulated chemicals are provided in §290.106 of this title (relating to Inorganic Contaminants), §290.107 of this title (relating to Organic Contaminants), §290.108 of this title (relating to Radiological Sampling and Analytical Requirements), §290.109 of this title (relating to Microbial Contaminants), §290.110 of this title (relating to Disinfectant Residuals), §290.111 of this title (relating to Turbidity), §290.112 of this title (relating to Total Organic Carbon (TOC)), §290.113 of this title (relating to Disinfection By-products (TTHM and HAA5), §290.114 of this title (relating to Disinfection By-products other than TTHM and HAA5), §290.115 of this title (relating to Transition Rule for Disinfection By-products), §290.117 of this title (relating to Regulation of Lead and Copper), and §290.118 of this title (relating to Secondary Constituent Levels).

(A) (No change.)

(B) Each entry point [of entry] to the distribution system shall be identified in the monitoring plan as follows:

(i) a written description of the physical location of each entry point [of entry] to the distribution system shall be provided; or

(ii) the location of each entry point [of entry] shall be indicated clearly on a distribution system or treatment plant schematic.

(C) - (D) (No change.)

(2) - (5) (No change.)

(c) Reporting requirements. All public water systems shall maintain a copy of the current monitoring plan at each treatment plant and at a central location. The water system must update the monitoring plan when the water system's sampling requirements or protocols change.

(1) Public water systems that treat surface water or groundwater under the direct influence of surface water and serve at least 10,000 people must submit a copy of the monitoring plan to the executive director [public drinking water program] by January 1, 2001.

(2) Public water systems that treat surface water or groundwater under the direct influence of surface water and serve fewer than 10,000 must submit a copy of the monitoring plan to the executive director [public drinking water program] by January 1, 2003.

(3) Public water systems that treat groundwater that is not under the direct influence of surface water or purchase treated water from a wholesaler must develop a monitoring plan by January 1, 2004, and submit a copy of the monitoring plan to the [public drinking water program upon the request of the] executive director upon request.

(4) All water systems must provide the executive director [public drinking water program] with any revisions to the plan upon [the] request [of the executive director].

(d) - (e) (No change.)

§290.122. Public Notification.

(a) Public notification requirements for acute violations. The owner or operator of a public water system must notify persons served by their system of any MCL or treatment technique violation that poses an acute threat to public health. Each notice required by this section must meet the requirements of subsection (d) of this section [provide a clear and readily understandable explanation of the violation, any potential adverse health effects, the population at risk, the steps that the public water

system is taking to correct such violation, the necessity for seeking alternative water supplies, if any, and any preventive measures the consumer should take until the violation is corrected].

(1) Violations that pose an acute threat to public health include:

(A) - (B) (No change.)

(C) A violation of the MCL for nitrate or nitrite as defined in §290.106(f)(2) [§290.106(b)] of this title (relating to Inorganic Contaminants);

(D) A violation of the acute MRDL for chlorine dioxide as defined in §290.110(f)(5)(A) or (B) [§290.110(f)(5)(B)] of this title (relating to Disinfectant Residuals); [and]

(E) Occurrence of a waterborne disease outbreak; and

(F) [(E)] Other violations deemed by the executive director to pose an acute risk to human health.

[(2) The public notice for an acute MCL and treatment technique violation shall include the contaminant-specific language contained in 40 CFR §141.32 and other pertinent information specified by the executive director.]

[(A) The owner or operator of a system with an acute microbiological or turbidity violation as described in paragraph (1)(A) and (B) of this subsection shall include a boil water notice issued in accordance with the requirements of §290.46(s) of this title (relating to Minimum Acceptable Operating Practices for Public Drinking Water Systems).]

[(B) Each notice shall be conspicuous and shall not contain unduly technical language, unduly small print, or similar items that frustrate the purpose of the notice.]

[(C) Each notice shall include the telephone number of the owner, operator, or designee of the public water system as a source of additional information concerning the notice.]

[(D) Where appropriate, the notice shall be multilingual.]

(2) [(3)] The initial acute public notice and boil water notice required by [paragraph (2)(A) of] this subsection shall be issued as soon as possible but in no case later than 24 hours after the violation is identified. [The initial public notice for other acute MCL or treatment technique violations shall be issued as soon as possible but in no case later than 72 hours after the violation is identified.] The initial public notice for an acute violation shall be issued in the following manner.

(A) The owner or operator of a water system with an acute microbiological or turbidity violation as described in paragraph (1)(A) or (B) of this subsection shall include a boil water

notice issued in accordance with the requirements of §290.46(s) of this title (relating to Minimum Acceptable Operating Practices for Public Drinking Water Systems).

(B) [(A)] The owner or operator of a community water system shall furnish a copy of the notice to the radio and television stations serving the area served by the public water system.

(C) [(B)] The owner or operator of a community water system shall publish the notice in a daily newspaper of general circulation in the area served by the system. If the area is not served by a daily newspaper of general circulation, notice shall instead be issued by hand delivery or by continuous posting in conspicuous places within the area served by the system.

(D) [(C)] The owner or operator of a noncommunity water system shall issue the notice violation by hand delivery or by continuously posting the notice in conspicuous places within the area served by the water system.

(3) [(4)] The owner or operator of a water system required to issue an initial notice for an acute MCL or treatment technique violation shall issue additional notices. The additional public notices for acute violations shall be issued in the following manner.

(A) Not later than 45 days after the violation, the owner or operator of a community water system shall notify persons served by the system using mail (by direct mail or with

the water bill) or hand delivery. The executive director may waive mail or hand delivery if it is determined that the violation was corrected within the 45-day period. The executive director must make the waiver in writing and within the 45-day period.

(B) The owner or operator of a community water system must issue a notice at least once every three months by mail delivery (by direct mail or with the water bill) or by hand delivery, for as long as the violation exists.

(C) If the owner or operator of a noncommunity water system issued the initial notice by continuous posting, posting must continue for as long as the violation exists. If the owner or operator of a noncommunity water system issued the initial notice by hand delivery, notice by hand delivery must be repeated at least every three months for as long as the violation exists.

(4) [(5)] The owner or operator of the public water system must issue a notice when the public water system has corrected the acute violation. This notice must be issued in the same manner as the original notice was issued.

(5) Copies of all notifications required under this subsection must be submitted to the executive director within ten days of its distribution.

(b) Public notification requirements for other MCL, MRDL, or treatment technique violations and for variance and exemption violations. The owner or operator of a public water system must notify

persons served by their system of any MCL, MRDL, or treatment technique violation other than those described in subsection (a)(1) of this section and of any violation involving a variance or exemption requirement. Each notice required by this section must meet the requirements of subsection (d) of this section [provide a clear and readily understandable explanation of the violation, any potential adverse health effects, the population at risk, the steps that the public water system is taking to correct such violation, the necessity for seeking alternative water supplies, if any, and any preventive measures the consumer should take until the violation is corrected].

(1) Violations that require notification under this subsection include: [The violation notice for an MCL or treatment technique violation shall include the contaminant-specific language contained in 40 CFR §141.32 and other pertinent information specified by the executive director.]

(A) any violation of an MCL, MRDL, or treatment technique not listed under subsection (a) of this section; [Each notice shall be conspicuous and shall not contain unduly technical language, unduly small print, or similar items that frustrate the purpose of the notice.]

(B) failure to comply with the requirements of any variance or exemption granted under §290.102(d) of this title (relating to General Applicability); or [Each notice shall include the telephone number of the owner, operator, or designee of the public water system as a source of additional information concerning the notice.]

(C) other violations deemed appropriate by the executive director that pose a non-acute risk to human health. [Where appropriate, the notice shall be multilingual.]

(2) The initial public notice for any violation identified in this subsection [an MCL or treatment technique violation that does not pose an immediate threat to public health] must be issued as soon as possible but in no case later than 30 [14] days after the violation is identified. The initial public notice shall be issued in the following manner.

(A) The owner or operator of a community water system shall publish the notice in a daily newspaper of general circulation in the area served by the system. If the area served by the public water system is not served by a daily newspaper of general circulation, the notice shall be published in a weekly newspaper of general circulation serving the area. If the area is not served by [a] either a daily or weekly newspaper of general circulation, notice shall instead be issued by hand delivery or by continuous posting in conspicuous places within the area served by the system.

(B) (No change.)

(3) - (4) (No change.)

(c) Public notification requirements for other violations, variances, exemptions. The owner or operator of a public water system which fails to perform monitoring required by these standards, fails to comply with a testing procedure established by this chapter, or is subject to a variance or exemption

granted under §290.102(b) of this title [(relating to General Applicability)] shall notify persons served by the system. Each notice required by this section must meet the requirements of subsection (d) of this section.

(1) Violations that require notification as described in this section include: [Each notice required by this section must provide a clear and readily understandable explanation of any violation variance, or exemption, any potential adverse health effects, the population at risk, the steps that the public water system is taking to correct such violation, the necessity for seeking alternative water supplies, if any, and any preventive measures the consumer should take until the violation is corrected.]

(A) exceedance of the SCL for chloride; [Each notice shall be conspicuous and shall not contain unduly technical language, unduly small print, or similar items that frustrate the purpose of the notice.]

(B) failure to perform monitoring or reporting required by this subchapter; [Each notice shall include the telephone number of the owner, operator, or designee of the public water system as a source of additional information concerning the notice.]

(C) failure to comply with the analytical requirements or testing procedures required by this subchapter; and [Where appropriate, the notice shall be multilingual.]

(D) operating under a variance or exemption granted under §290.102(b) of this title.

(2) (No change.)

(3) The owner or operator of a system required to issue an initial violation notice shall issue additional notices. The additional notices shall be issued in the following manner.

(A) The owner or operator of a community water system shall issue repeat notices at least once every 12 [three] months by mail delivery (by direct mail or with the water bill) or by hand delivery, for as long as the violation exists or variance or exemption remains in effect. Repeat public notice may be included as part of the Consumer Confidence Report.

(B) (No change.)

(4) (No change.)

(d) Each public notice must conform to the following general requirements.

(1) The notice must contain a clear and readily understandable explanation of the violation or situation that lead to the notification. The notice must not contain very small print, unduly technical language, or other items that frustrate the purpose of the notice.

(2) If the notice is required for a specific event, it must state when the event occurred.

(3) For notices required under subsection (a) or (b) of this subsection, the notice must describe potential adverse health effects.

(A) For MCL, MRDL, or treatment technique requirements, the notice must contain the mandatory federal contaminant-specific language contained in 40 CFR §141.32, in addition to any language required by the executive director.

(B) The notice must describe the population at risk, especially subpopulations particularly vulnerable if exposed to the given contaminant.

(4) The notice must state what actions the water system is taking to correct the violation or situation, and when the water system expects to return to compliance.

(5) The notice must state whether alternative drinking water sources should be used, and what other actions consumers should take, including when they should seek medical help, if known.

(6) Each notice must contain the telephone number at which consumers may contact the owner, operator, or designee of the public water system for additional information concerning the notice.

(7) Where appropriate, the notice must be multilingual.

(e) [(d)] Notice to new billing units. The owner or operator of a community water system must give a copy of the most recent public notice for any outstanding violation of any MCL [maximum contaminant level], or any treatment technique requirement, or any variance or exemption schedule to all new billing units or new hookups prior to or at the time service begins.

(f) [(e)] Proof of public notification. A copy of any public notice [Example copies of all notifications] required under this section [paragraph] must be submitted to the executive director within ten days of its distribution as proof of public notification. The copies must be mailed to the Texas Natural Resource Conservation Commission, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087.