

**Initial Statement of Reasons
Long Term 1 and 2 Enhanced Surface Water Treatment Rules
Title 22, California Code of Regulations**

All suppliers of domestic water to the public are subject to regulations adopted by the U.S. Environmental Protection Agency (EPA) under the Safe Drinking Water Act of 1974, as amended (42 U.S.C. § 300f et seq.) as well as by the California Department of Public Health (Department) under the California Safe Drinking Water Act (Health & Saf. Code, div. 104, pt. 12, ch. 4, § 116270 et seq). California has been granted primary enforcement responsibility (“primacy”) by U.S. EPA for public water systems (PWS) in California. California has no authority to enforce federal regulations, but only state regulations. Federal law and regulations require that California, in order to receive and maintain primacy, promulgate regulations that are no less stringent than the federal regulations. Pursuant to Health and Safety Code sections 116350, 116375, 131052, and 131200, the Department has authority to adopt the subject regulations.

On December 16, 1998, the U.S. EPA promulgated the Interim Enhanced Surface Water Treatment Rule (IESWTR) (63 Fed. Reg. 69478; amended Jan. 16, 2001, 66 Fed. Reg. 3770), as required by the Safe Drinking Water Act Amendments of 1996 (SDWAA). The federal IESWTR builds on the federal Surface Water Treatment Rule (SWTR) by providing increased public protection against microbial pathogens, specifically the protozoan *Cryptosporidium*. The federal IESWTR applies to PWS using surface water or groundwater under the direct influence of surface water (GWUDI) and serving 10,000 or more persons.

On January 12, 2008, the Department’s regulations concerning the IESWTR (DPH-01-020) became effective. The state IESWTR contains the federal IESWTR requirements, changes to the federal IESWTR requirements, and changes to existing state SWTR regulations. Changes to the federal IESWTR requirements that were made in the state IESWTR are not extended to the smaller systems in the current proposed rulemaking, except that smaller systems using conventional or direct filtration treatment and using a continuous monitoring program on the combined filter effluent (CFE) for turbidity would (1) comply with comparable state IESWTR CFE turbidity performance standards and (2) be allowed to use an alternative reporting method (i.e., percentile reporting).

On January 14, 2002, the U.S. EPA promulgated the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) (67 Fed. Reg. 1812; amended June 29, 2004, 69 Fed. Reg. 38850), as required by the SDWAA. The federal LT1ESWTR is a counterpart to the federal IESWTR and applies to PWS using surface water or GWUDI and serving fewer than 10,000 persons. The current proposed rulemaking will adopt the federal LT1ESWTR requirements and reorganize existing state regulations to improve readability and facilitate compliance efforts.

On January 5, 2006, the U.S. EPA promulgated the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) (71 Fed. Reg. 654; amended Feb. 6, 2006, 71 Fed. Reg. 6136), as required by the SDWAA. The LT2ESWTR improves public health protection through control of microbial contaminants by focusing on systems with

elevated *Cryptosporidium* risk and by preventing significant increases in microbial risk that might otherwise occur when systems implement the federal Stage 2 Disinfectants and Disinfection Byproducts Rule (S2DDBPR). The Department will be adopting the federal S2DDBPR under a separate rulemaking (DPH-09-004). The federal LT2ESWTR applies to PWS using surface water or GWUDI.

The federal LT2ESWTR builds on the federal IESWTR and federal LT1ESWTR by requiring (1) source water monitoring for *Cryptosporidium*, (2) additional *Cryptosporidium* treatment technique provisions for certain filtered systems based on source water *Cryptosporidium* concentrations, (3) inactivation of *Cryptosporidium* for all unfiltered systems, (4) disinfection profiling and benchmarking to ensure continued levels of microbial protection while PWS take the necessary steps to comply with the federal S2DDBR, and (5) covering uncovered finished water storage facilities or treating the discharge from the storage facility. The current proposed rulemaking will incorporate by reference the federal LT2ESWTR requirements.

On June 29, 2009, the U.S. EPA promulgated Minor Correction to Stage 2 Disinfectants and Disinfection Byproducts Rule and Changes in References to Analytical Methods (74 Fed. Reg. 30953). U.S. EPA made a minor correction to the federal S2DDBPR and minor, unrelated, editorial changes in references to analytical methods in regulations. The current proposed rulemaking will incorporate by reference the changes in references to analytical methods that relate to surface water treatment under title 22, chapter 17. The Department will be adopting the minor correction to the federal S2DDBPR and changes in reference to analytical methods that relate to title 22, chapter 15.5 under a separate rulemaking (DPH-09-004).

In 2003, California Assembly Bill 1757 was chaptered, which repealed the Permit Reform Act (PRA) of 1981, which consisted of sections 15374 – 15378 of the Government Code. The PRA of 1981 required the Department to adopt regulations that include procedures for considering and issuing permits, most notably including (1) setting of time from receipt of permit application to notification by the Department that the application was complete, (2) setting of time from completion of an application for the Department to make a decision on the permit, and (3) listing of minimum, median, and maximum processing times for permits. With the PRA requirements no longer in place, the current proposed rulemaking will repeal regulations adopted in conformance with the PRA of 1981.

Safe Drinking Water State Revolving Fund Law establishes the Safe Drinking Water State Revolving Fund (SDWSRF) and appropriates money in the fund to the Department to finance the design and construction of projects for PWS that will enable the PWS to meet drinking water standards. In 2011, California Assembly Bill 983 (AB 983) was chaptered, which authorized the Department to take specified actions to improve access to financial assistance for small community water systems and not-for-profit nontransient noncommunity water systems serving severely disadvantaged communities, as defined. In addition and also in 2011, California Assembly Bill 1292 (AB 1292) was chaptered, which authorized the Department to utilize revenue bonds to

leverage the fund. For consistency with the legislative actions and to provide further clarification, the Department proposes the following revisions to title 22:

Chapter 12, Article 2

- Amend section 63011 to clarify that water rate studies and environmental review (and documentation) can be funded; to clarify that all engineering costs, not just preliminary costs, can be funded; provide that funds must be for purposes consistent with law; to eliminate the prohibition against the funding of detailed design costs; to allow limited construction associated with pilot testing or test hole or test well activities, since such tests are appropriately included in a planning project; to extend the maximum time allowed for planning to 36 months, which will provide the funding recipient with increased time, when appropriate, to complete more complex planning activities such as final engineering plans and specifications or pilot testing of proposed treatment options; and to delineate the procurement procedures an applicant for a grant for planning funding must follow when contracting for architectural, landscape architectural, professional engineering, environmental, land surveying, and project management services. Such procurement criteria would minimize the likelihood of poor quality services being contracted, which may result in the water system having to expend funds to remedy subsequent deficiencies from poor services.
- Amend section 63012 to allow interest-bearing SDWSRF loans up to the full cost of a project. Historically, the cap on loan funding has proven to be an unnecessary limitation; and with AB 1292, the Department has authority to secure revenue bonds with the SDWSRF loan repayment stream in order to leverage the repayment stream to generate state funds required to match the federal SDWSRF annual capitalization grant. Interest-bearing loans are necessary to ensure the long-term viability of the SDWSRF including the ability to support the sale of revenue bonds.

Chapter 12, Article 3

- Amend section 63020 for clarity and for consistency with AB 983, which added a definition of “severely disadvantaged community” to section 116760.20 of the Health and Safety Code and provided that community and noncommunity nontransient water systems, which are owned by a public agency or a not-for-profit water company and that serve severely disadvantage communities, are eligible for a grant of up to 100% of the project cost if certain conditions are met.
- Amend section 63021 to clarify that funding is awarded to a public water system, rather than a community; and for consistency with AB 983, allow eligible public water systems whose service area is a severely disadvantaged community to be eligible for a grant of up to 100% of the total project cost. The changes to section 63021 allow such eligible systems to receive grant funding of up to 100 percent of a project cost without an affordability review. However, because federal SDWSRF law requires a SDWSRF funding recipient have the technical, managerial and financial (TMF) capacity to operate and maintain (O&M) the water system and the funded project for the long-term (i.e. 20 years), water systems receiving grant funds without being subject to an affordability

review/analysis, are required to complete a study of its water rates and increase water rates as necessary to assure proper O&M for a period of at least 20 years, the useful life of a construction project. The cost of a rate study is an eligible planning project cost. The study and any indicated increase in water rates must be completed before execution of a funding agreement for a construction project. A consolidation project is one that restructures two or more public water systems into one restructured water system serving the combined service areas; therefore, for consolidation projects, the rate study and rate increase requirements apply only to that restructured water system.

Chapter 12, Article 6

- Amend section 63052 to delineate the procurement procedures an applicant for a grant for construction funding must follow when contracting for architectural, landscape architectural, professional engineering, environmental, land surveying, and construction project management services. Such procurement criteria would minimize the likelihood of poor quality services being contracted, which may result in the water system having to expend funds to remedy subsequent deficiencies from poor services.

California currently requires PWS to filter and disinfect surface water and GWUDI (Cal. Code Regs., tit. 22, div. 4, ch. 17, § 64650 et seq.).

Pursuant to federal primacy requirements and sections 116350, 116375, 131052, and 131200 of the Health and Safety Code, the Department proposes the noted changes to title 22 in the following pages. A state-to-federal crosswalk table is provided to identify state requirements that correspond to federal requirements and explain differences from federal requirements. The Department also proposes a number of nonsubstantive changes, which are not described in detail due to their minor nature. The nonsubstantive changes will correct grammar, punctuation, spelling, and use of plurals and units of expression; redesignate subsections; subdivide existing subsections into more than one subsection; update reference to subsections, paragraphs, and tables; and delete reference to repealed article and sections.

Chapter 17, Article 1

- Amend section 64650 (General Requirements) to establish a treatment technique requirement for *Cryptosporidium* in conformance with the federal LT1ESWTR by eliminating the population restriction; incorporate by reference the federal LT2ESWTR (excluding definitions, which are being adopted individually and excluding two-stage lime softening requirements, as there are no such facilities in California), correction to the federal LT2ESWTR, and changes in references to analytical methods that relate to chapter 17; for clarity, replace certain sections and phrases referenced in the federal LT2ESWTR with the corresponding sections and chapter from the state Public Notification, state SWTR, and state S2DDBPR; conform to the repeal of the PRA of 1981; and delete obsolete language.
- Adopt sections 64651.12 (Bag Filters), 64651.13 (Bank Filtration), 64651.15 (Cartridge Filters), 64651.48 (Flowing Stream), 64651.52 (Lake/Reservoir),

64651.54 (Membrane Filtration), 64651.61 (Plant Intake), and 64651.62 (Presedimentation) to add necessary definitions per federal requirements.

- Amend section 64651.88 (Uncovered Finished Water Storage Facility) to conform to the federal LT2ESWTR definition.

Chapter 17, Article 2

- Amend Article 2 (Treatment Technique Requirements, Watershed Protection Requirements, and Performance Standards) to provide a title that is more descriptive and appropriate for the article.
- Amend section 64652 (Treatment Technique Requirements and Compliance Options) to provide a title that is more descriptive and appropriate for the section; clarify between what two points the reduction of *Giardia lamblia* and viruses is to occur; incorporate the requirements of article 3.5, section 64657, to improve readability and facilitate compliance efforts; establish treatment technique requirements in conformance with the federal LT1ESWTR by eliminating the population restriction contained in article 3.5, section 64657(a); clarify that uncovered finished water storage facility requirements, a recycled water provision, and disinfection profiling and benchmarking are treatment technique requirements; clarify where federal LT2ESWTR treatment technique requirements are incorporated by reference in chapter 17; and delete obsolete language.
- Amend section 64652.5 (Criteria for Avoiding Filtration) to incorporate the requirements of article 3.5, section 64657.10, to improve readability and facilitate compliance efforts; establish filtration avoidance criteria in conformance with the federal LT1ESWTR by eliminating the population restriction; and to clarify that the filtration avoidance requirements of the federal SWTR are incorporated by reference for (1) disinfection inactivation treatment and (2) source water quality and disinfection information reporting.
- Amend section 64653 (Filtration) to incorporate the requirements of article 3.5, section 64657.30, and reorganize existing state regulations to improve readability and facilitate compliance efforts; establish filtration requirements in conformance with the federal LT1ESWTR; for a system using conventional or direct filtration treatment, serving fewer than 10,000 persons, and using a continuous monitoring program on the CFE for turbidity, establish filtration requirements that are comparable to the state IESWTR CFE turbidity performance standards (use of the phrase “shall not exceed 1 NTU” would inadvertently hold a smaller system using continuous monitoring to a more stringent performance standard than intended); clarify where the CFE turbidity performance standard applies for a treatment plant with one filter; and clarify how turbidity performance standards for an alternative filtration technology are established.

Chapter 17, Article 3

- Adopt section 64654.8 (Source, Raw, Settled, and Recycled Filter Backwash Water Monitoring) to clarify where federal LT2ESWTR source monitoring requirements are incorporated by reference in chapter 17; reorganize existing state regulations to improve readability and facilitate compliance efforts

(requirements previously located in section 64655 are moved to section 64654.8); and require turbidity monitoring of the raw water supply pursuant to the operation plan – the intent is to address all sources that make-up the raw water supply, while providing PWS with needed flexibility for individual situations due to (1) complexity in the number of sources, periodic changes (e.g., seasonal operation, water allocations, or operational issues), and conveyance facilities used (e.g., comingling of one or more sources prior to delivery to the surface water treatment plant) and (2) availability of grab and continuous turbidity monitoring equipment.

- Amend section 64655 (Filtration Monitoring) to provide a title that is more descriptive and appropriate for the section; incorporate the requirements of article 3.5, section 64657.40, and reorganize existing state regulations to improve readability and facilitate compliance efforts; establish filtered water turbidity monitoring requirements in conformance with the federal LT1ESWTR; and clarify frequency of recording for monitoring conducted pursuant to table 64655, footnote (a).
- Amend section 64656 (Disinfection Monitoring) to provide a title that is more descriptive and appropriate for the section; and to regulate the supplier and not the Department in subsection (d).
- Adopt section 64656.5 (Disinfection Profiling and Benchmarking) to incorporate the requirements of article 3.5, section 64657.20, and reorganize existing state regulations to improve readability and facilitate compliance efforts; establish disinfection profiling and benchmarking requirements in conformance with the federal LT1ESWTR and federal LT2ESWTR; and, for a system conducting disinfection profiling and benchmarking under subsection (b), establish a disinfection profile retention requirement consistent with existing state regulation – profile retention is not addressed in the federal LT1ESWTR.

Chapter 17, Article 3.5

To improve readability and facilitate compliance efforts:

- Repeal section 64657 (General Requirements); requirements are reorganized to section 64652.
- Repeal section 64657.10 (Criteria for Avoiding Filtration); requirements are reorganized to section 64652.5.
- Repeal section 64657.20 (Disinfection Profiling and Benchmarking); requirements are reorganized to article 2, section 64656.5.
- Repeal section 64657.30 (Filtration); requirements are reorganized to section 64653.
- Repeal section 64657.40 (Filtration Sampling); requirements are reorganized to section 64655.
- Repeal section 64657.50 (Supplemental Reporting and Recordkeeping); requirements are reorganized to sections 64660, 64664, and 64664.2.

Chapter 17, Article 5

- Amend section 64660 (Operating Criteria) to establish a *Cryptosporidium* removal requirement for a system serving fewer than 10,000 persons by

eliminating the population restriction contained in subsection (b)(5)(C) – the Department considers filters that are operating at more than two times the rates specified in sections 64660(b)(1) through (b)(3) to be alternative filtration technologies, and as such, must meet the requirements shown as amendments to section 64653(e); incorporate some of the requirements of article 3.5, section 64657.50, and reorganize existing state regulations to improve readability and facilitate compliance efforts; and establish filtration requirements in conformance with the federal LT1ESWTR.

- Amend section 64662 (Records) to establish recordkeeping requirements in conformance with the federal LT1ESWTR; and to clarify where federal LT2ESWTR recordkeeping requirements are incorporated by reference in chapter 17.

Chapter 17, Article 6

- Amend section 64663 (Department Notification) to reorganize existing state regulations to improve readability and facilitate compliance efforts; and establish Department notification requirements (1) in conformance with the federal LT1ESWTR and (2) for a system using conventional or direct filtration treatment, serving fewer than 10,000 persons, and using a continuous monitoring program on the CFE for turbidity, which is not addressed in the federal LT1ESWTR.
- Amend section 64664 (Monthly Report) to incorporate some of the requirements of article 3.5, section 64657.50, and reorganize existing state regulations to improve readability and facilitate compliance efforts; establish monthly reporting requirements in conformance with the federal LT1ESWTR and consistent with existing state regulations; establish additional monthly reporting requirements consistent with existing state regulations for: (1) table 64664-A (2)(D) and table 64664-B (2)(B) – time, to differentiate between multiple exceedances that may occur on the same day and (2) table 64664-A (2)(A) – total number of turbidity measurements, to calculate compliance with the 95th percentile turbidity performance standard; for clarity, add the multiplication symbol “x” to the formula in subsection (c)(2)(F); and clarify where federal LT2ESWTR monthly reporting requirements are incorporated by reference in chapter 17.
- Adopt section 64664.2 (Supplemental Reports) to incorporate remaining requirements of article 3.5, section 64657.50, and reorganize existing state regulations to improve readability and facilitate compliance efforts; establish supplemental reporting requirements in conformance with the federal LT1ESWTR; and clarify where federal LT2ESWTR reporting requirements are incorporated by reference in chapter 17.

Chapter 17, Article 7

- Adopt section 64665.5 (Additional Requirements) to clarify where federal LT2ESWTR sanitary survey requirements are incorporated by reference in chapter 17.

Chapter 17, Article 8

- Amend section 64666 (Customer Notification) to clarify where federal LT2ESWTR public notification and special notice requirements are incorporated by reference in chapter 17.

Net Effect

The net effect is that:

- Filtered PWS using an approved surface water source and serving fewer than 10,000 persons would be required to:
 - provide at least 99 percent removal of *Cryptosporidium*.
 - If using conventional or direct filtration treatment:
 - comply with more stringent combined filtered effluent turbidity performance standards.
 - comply with individual filter effluent turbidity monitoring and calibration requirements, performance triggers, and follow-up actions.
- PWS using an approved surface water source, using conventional or direct filtration treatment, and serving fewer than 10,000 persons would be:
 - if using a continuous monitoring program on the CFE for turbidity:
 - required to comply with comparable state IESWTR CFE turbidity performance standards.
 - required to calibrate turbidimeters according to the procedure specified by the manufacturer.
 - allowed to use an alternative reporting method (i.e., percentile reporting).
 - required to report the time of occurrence for any turbidity measurement that exceeds 1.0 NTU.
- Unfiltered PWS using an approved surface water source and serving fewer than 10,000 persons would be required to update their watershed control programs to minimize the potential for contamination by *Cryptosporidium* oocysts.
- PWS using an approved surface water source, serving fewer than 10,000 persons, and that began construction of a finished water reservoir on or after March 15, 2002, would be required to cover the reservoir.
- Community and nontransient noncommunity water systems using an approved surface water source and serving fewer than 10,000 persons would be required to:
 - conduct disinfection profiling and benchmarking.
 - consult with the Department for a significant change in disinfection practices via the amended permit process.
- PWS using an approved surface water source that did not conduct optional Total Trihalomethanes (TTHM) and Haloacetic Acids (Five) (HAA5) compliance monitoring under 40 CFR part 141.172 because they served fewer than 10,000 persons when such monitoring was required, but more than 10,000 persons prior to January 1, 2005, would be required to:
 - consult with the Department to establish a disinfection benchmark.
 - consult with the Department for a significant change in disinfection practices via the amended permit process.

- retain the disinfection profile.
- PWS using an approved surface water source, serving fewer than 10,000 persons, and seeking approval for filtration rates greater than twice those specified in sections 64660(b)(1) – (b)(3) would be required to demonstrate that the filters can provide 99 percent *Cryptosporidium* removal.
- PWS using an approved source, diatomaceous earth filtration or slow sand filtration, and continuous turbidity monitoring would be required to calibrate turbidimeters according to the procedure specified by the manufacturer.
- PWS using an approved surface water would be required to:
 - conduct source water monitoring for *Cryptosporidium*, *E. coli*, and turbidity, as applicable.
 - for filtered systems, may need to provide additional *Cryptosporidium* treatment based on their bin classification using treatment options from the microbial toolbox (the variety of treatment and control options, collectively termed the “microbial toolbox” by U.S. EPA).
 - for unfiltered systems, provide additional *Cryptosporidium* treatment using treatment options from the inactivation toolbox.
 - conduct disinfection profiling and benchmarking.
 - for systems with an uncovered finished water storage facility, cover the storage facility or treat the discharge from the storage facility.
 - respond to significant deficiencies identified in sanitary survey reports.
 - conduct public notification and issue special notice for violations.
 - submit monthly and supplemental reports and maintain records.
- PWS using an approved surface water source would be required to submit monthly and supplemental reports and maintain records.
- PWS using an approved source and diatomaceous earth filtration, slow sand filtration, or an alternative filtration technology would be required to:
 - report the total number of turbidity measurements for the month.
 - report the time of occurrence for any turbidity measurement that exceeds the performance standard for the treatment technology.
- PWS would be allowed to use U.S. EPA approved alternative test methods for analysis of chapter 17 contaminants.
- The Department would no longer be required to regulate its activities when considering an application for filtration avoidance.

None of the proposed amendments would affect California’s primacy status because the net effect of these amendments is that the state’s regulation would be at least as stringent as the federal regulation.

The following table summarizes the proposed amendments with respect to the federal citation references:

- 1989 FR are to 40 Code of Federal Regulations, part 141 (54 Fed. Reg. 27486 (June 29, 1989)), “Filtration, Disinfection; Turbidity, *Giardia lamblia*, Viruses, *Legionella*, and Heterotrophic Bacteria.”

- 1998 FR are to 40 Code of Federal Regulations, part 141 (63 Fed. Reg. 69478 (December 16, 1998)), “Interim Enhanced Surface Water Treatment Rule.”
- 2001 FR are to 40 Code of Federal Regulations, part 141 (66 Fed. Reg. 3770 (January 16, 2001)), “Revisions to the Interim Enhanced Surface Water Treatment Rule (IESWTR), the Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1DBPR), and Revisions to State Primacy Requirements To Implement the Safe Drinking Water Act (SDWA) Amendments.”
- 2002 FR are to 40 Code of Federal Regulations, part 141 (67 Fed. Reg. 1812 (January 14, 2002)), “Long Term 1 Enhanced Surface Water Treatment Rule.”
- 2004 FR are to 40 Code of Federal Regulations part 141 (69 Fed. Reg. 38850 (June 29, 2004)), “Minor Corrections and Clarifications to Drinking Water Regulations.”
- 2006 FR are to 40 Code of Federal Regulations, part 141 (71 Fed. Reg. 654 (January 5, 2006)), “Long Term 2 Enhanced Surface Water Treatment Rule.”
- 2/2006 FR are to 40 Code of Federal Regulations, part 141 (71 Fed. Reg. 6136 (February 6, 2006)), “Long Term 2 Enhanced Surface Water Treatment Rule, Correction.”
- 2009 FR are to 40 Code of Federal Regulations, part 141 (74 Fed. Reg. 30953 (June 29, 2009)), “Minor Correction to Stage 2 Disinfectants and Disinfection Byproducts Rule and Changes in References to Analytical Methods.”

State Citation	Federal Citation	Differences
64650(a)	2002 FR; 141.70(e) & 141.500	
64650(b)	None	
64650(c)	None	
64650(d)	None	
64650(e)	None	
64650(f)	2006 FR; 141.211, Appendix A to Subpart Q (Public Notification), 141.700, 141.701, 141.702, 141.703, 141.704, 141.705, 141.706, 141.707, 141.708, 141.709, 141.710, 141.711, 141.712, 141.713, 141.714, 141.715 (except subsection (b)(4)), 141.716, 141.717 (except subsection (b)), 141.718, 141.719, 141.720, 141.721 (except subsection (f)(4)), 141.722, and 141.723 2/2006 FR; 141.719 2009 FR; 141.74 & 141.704	
64650(f)(1) & (f)(1)(A) – (f)(1)(M)	2006 FR; 141.211, Appendix A to Subpart Q (Public Notification), 141.700, 141.701, 141.702, 141.703, 141.704, 141.705, 141.706, 141.707, 141.708, 141.709, 141.710,	For clarity via (f)(1)(A) – (f)(1)(M), replaced certain sections and phrases referenced in the federal LT2ESWTR with the corresponding sections

State Citation	Federal Citation	Differences
	141.711, 141.712, 141.713, 141.714, 141.715 (except subsection (b)(4)), 141.716, 141.717 (except subsection (b)), 141.718, 141.719, 141.720, 141.721 (except subsection (f)(4)), 141.722, and 141.723	and chapter from the state Public Notification, state SWTR, and state S2DDBPR.
64650(f)(2)	2/2006 FR; 141.719	
64650(f)(3)	2009 FR; 141.74 & 141.704	
64651.12	2006 FR; 141.2	
64651.13	2006 FR; 141.2	
64651.15	2006 FR; 141.2	
64651.48	2006 FR; 141.2	
64651.52	2006 FR; 141.2	For consistency with existing spelling in Chapter 17, "man made" is spelled "man-made."
64651.54	2006 FR; 141.2	
64651.61	2006 FR; 141.2	
64651.62	2006 FR; 141.2	
64651.88	2006 FR; 141.2	
Article 2 (article heading)	None	
64652 (section heading)	None	
64652(a)	2002 FR; 141.500(a)	
64652(a)(1)	None	
64652(a)(2)	None	
64652(a)(3)	2002 FR; 141.500(a)	
64652(b)	None	
64652(c)	2002 FR; 141.500(a) & 141.503(b), (e), & (f)	
64652(d)	2002 FR; 141.503(a), 141.510, & 141.511	Omitted last sentence in 141.511 as the sentence is redundant. Note – Date of "March 15, 2002" is per federal requirement.
64652(e)	None	
64652(f)	2002 FR; 141.500(b)	
64652(g)	None	
64652(h)	None	
64652.5(a)	2002 FR; 141.503(b) & 141.520	
64652.5(b)(2)	None	
64652.5(c)(1)	None	

State Citation	Federal Citation	Differences
64652.5(d)	1989 FR; 141.75(a)(1)	
64652.5(e)	2002 FR; 141.521 & 141.522	
64652.5(e)(2)	2002 FR; 141.521(a)	
64652.5(e)(3)	2002 FR; 141.521(b)	
64652.5(e)(4)	None	
64652.5(k)(1)	1989 FR; 141.72(a)(1), 141.74(b)(3) and (4), &141.75(a)(2)	
64652.5(k)(1)(A) – (B)	None	
64652.5(k)(2)(B)	None	
64652.5(k)(3)	None	
64653(a)	None	
64653(a)(3)	None	
64653(a)(4)	None	
64653(b)	2002 FR; 141.500(a) & 141.503(e) & (f)	
64653(c)	2002 FR; 141.73(a)(4), 141.503(e), & 141.550	
64653(c), Table 64653, (1)(A) – (D)	None	
64653(c), Table 64653, (2)(A)	2002 FR; 141.551(a) & (a)(1)	
64653(c), Table 64653, (2)(B)	2002 FR; 141.551(b)	
64653(c), Table 64653, (2)(B)1.	2002 FR; 141.551(b) & (b)(1)	
64653(c), Table 64653, (2)(B)2.	None	
64653(c), Table 64653, (2)(C)	2002 FR; 141.551(b)	
64653(c), Table 64653, (2)(C)1.	None	
64653(c), Table 64653, (2)(C)2.	2002 FR; 141.551(b) & (b)(1)	
64653(c), Table 64653, (3)(A) – (D)	None	
64653(c), Table 64653, (4)(A) – (B)	None	
64653(c), Table 64653, Footnote (a)	None	
64653(d)	None	
64653(e)	None	
64653(e)(1)	2002 FR; 141.73(d) & 141.552	Consistent with the Department's existing language, alternative filtration technologies must demonstrate a minimum of 99% <i>Giardia lamblia</i> cyst removal and 90% virus removal. The balance needed to achieve the required 99.9% <i>Giardia lamblia</i> cysts and 99.99% virus

State Citation	Federal Citation	Differences
		reductions per section 64652(a) must be obtained through disinfection. The Department sets turbidity performance requirements based on alternative filtration technology demonstration studies pursuant to section 64653(h).
64653(e)(2)	2002 FR; 141.551(a)(2) & (b)(2) 2004 FR; 141.551(a)(2) & (b)(2)	Referenced turbidity performance standard limits consistent with existing regulations.
64653(f)	None	
64653(g)	None	
64654.8	None	
64655 (section heading)	None	
64655(a)	2002 FR; 141.73(a)(4) & 141.503(e) & (f)	
64655(a), Table 64655, (1)(A) – (B)	None	
64655(a), Table 64655, (2)(A)	2002 FR; 141.560 & 141.560(c)	
64655(a), Table 64655, (2)(B)	None	
64655(a), Table 64655, (3)	None	
64655(a), Table 64655, Footnote (a)	None	
64655(a), Table 64655, Footnote (b)	None	
64655(a), Table 64655, Footnote (c)	2002 FR; 141.562	
64655(a), Table 64655, Footnote (d)	None	

State Citation	Federal Citation	Differences
64655(b)	2002 FR; 141.560(b)	<p>Extended provision to PWS (1) using conventional or direct filtration treatment and serving 10,000 or fewer people and conducting continuous monitoring in lieu of grab sampling on the CFE for turbidity and (2) using diatomaceous earth filtration or slow sand filtration and conducting continuous monitoring in lieu of grab sampling for turbidity.</p> <p>Proper calibration of continuous turbidity monitoring equipment is necessary to ensure accurate turbidity measurements.</p> <p>Under existing regulations, calibration procedures are described in the Operations Plan (section 64661).</p> <p>Extending the provision clarifies that, for Items (1) and (2), the calibration procedures must be done in accordance with the procedure specified by the manufacturer.</p>
64655(c)	2002 FR; 141.561	
64655(c)(1)	None	
64655(c)(2)	2002 FR; 141.561	
64656 (section heading)	None	
64656(a)	None	
64656(d)	None	
64656(f)	None	
64656(g)	None	
64656.5(a)	2002 FR; 141.503(c) & 141.530 – 141.535 2004 FR; 141.530, 141.531, 141.534, & 141.534(a)(2)	
64656.5(a)(1)	2002 FR; 141.536	

State Citation	Federal Citation	Differences
64656.5(a)(2)	2002 FR; 141.503(d), 141.540, 141.541, & 141.542	Consistent with existing regulations, consultation with the Department for a significant change in disinfection practice is handled via the amended permit process.
64656.5(a)(2)(A)	2002 FR; 141.542(a) & 141.570(d)(1)	
64656.5(a)(2)(B)	2002 FR; 141.542(b) & 141.570(d)(1)	
64656.5(a)(2)(C)	2002 FR; 141.540 – 141.544, 141.542(b), & 141.570(d)(1)	
64656.5(a)(2)(D)	2002 FR; 141.542(c) & 141.570(d)(1)	
64656.5(b)	2002 FR; 141.170(d) 2004 FR; 141.170(d)	Note – Date of “January 1, 2005” is per federal requirement.
64656.5(b)(1)	2002 FR; 141.170(d)	
64656.5(b)(2)	2002 FR; 141.170(d)	Consistent with existing regulations, consultation with the Department for a significant change in disinfection practice is handled via the amended permit process.
64656.5(b)(2)(A)	2002 FR; 141.170(d)	Consistent with existing regulations, consultation with the Department for a significant change in disinfection practice is handled via the amended permit process.
64656.5(b)(2)(B)	2002 FR; 141.170(d)	Consistent with existing regulations, consultation with the Department for a significant change in disinfection practice is handled via the amended permit process.
64656.5(b)(3)	None	
64656.5(c)	None	
64660(b)(1) – (b)(5)	None	
64660(b)(5)(A)	None	
64660(b)(5)(B)	None	
64660(b)(6)	None	
64660(b)(7)	2002 FR; 141.503(f) & 141.563	

State Citation	Federal Citation	Differences
64660(b)(7), Table 64660, (A)1. – 2.	None	
64660(b)(7), Table 64660, (B)	None	
64660(b)(7), Table 64660, (C)	None	
64660(b)(7), Table 64660, (D)	None	
64660(b)(7), Table 64660, (E)	None	
64660(b)(7), Table 64660, (F)1.	None	
64660(b)(7), Table 64660, (F)2.	2002 FR; 141.563(b)	
64660(b)(7), Table 64660, (F)3.	2002 FR; 141.563(b)	
64660(b)(7), Table 64660, (G)1.	None	
64660(b)(7), Table 64660, (G)2.	None	
64660(b)(7), Table 64660, (G)3.	2002 FR; 141.563(c)	
64660(b)(7), Table 64660, Footnote (a)	2002 FR; 141.563(a) – (c)	
64660(b)(8)	None	
64660(b)(9)	None	
64660(c)(1)	None	
64662(a)	None	
64662(a)(1)	None	
64662(a)(2)	None	
64662(a)(3)	None	
64662(c)	2002 FR; 141.503(g) & 141.571(b) & (c)	
64662(d)	None	
64663	None	
64663(a)	None	
64663(a), Table 64663, (1)	None	
64663(a), Table 64663, (2)(A) – (C)	None	
64663(a), Table 64663, (3)(A)	None	
64663(a), Table 64663, (3)(A)1.	2002 FR; 141.202(a)(6)	
64663(a), Table 64663, (3)(A)2.	None	
64663(a), Table 64663, (3)(B)	None	
64663(a), Table 64663, (3)(B)1.	None	
64663(a), Table 64663, (3)(B)2.	2002 FR; 141.202(a)(6)	
64663(a), Table 64663, (4)	None	
64663(a), Table 64663, (5)	None	
64663(b)	None	
64663(c)	None	
64663(d)	None	
64663(e)	None	
64664(a)	None	

State Citation	Federal Citation	Differences
64664(b)	2002 FR; 141.503(g) & 141.570	
64664(b), Table 64664-A, (1)(A) – (B)	None	
64664(b), Table 64664-A, (2)(A)	2002 FR; 141.570(a)(1)	
64664(b), Table 64664-A, (2)(B)	None	
64664(b), Table 64664-A, (2)(C)	2002 FR; 141.570(a)(2)	
64664(b), Table 64664-A, (2)(D)	2002 FR; 141.570(a)(3)	Consistent with existing regulations, added “time” to differentiate between multiple exceedances that may occur on the same day.
64664(b), Table 64664-A, (2)(E)	None	
64664(b), Table 64664-A, Footnote (a)	None	
64664(b), Table 64664-A, Footnote (b)	None	
64664(b), Table 64664-A, Footnote (c)	None	
64664(b), Table 64664-B, (1)(A) – (D)	None	
64664(b), Table 64664-B, (2)(A)	2002 FR; 141.570(b)(1)	
64664(b), Table 64664-B, (2)(B)	2002 FR; 141.563(a) & 141.570(b)(2) 2004 FR; 141.570(b)(2)	Consistent with existing regulations, added “time” to differentiate between multiple exceedances that may occur on the same day.
64664(b), Table 64664-B, (2)(C)	2002 FR; 141.570(b)(3)	
64664(b), Table 64664-B, (2)(D)	2002 FR; 141.570(b)(4)	
64664(c)	None	
64664(c)(1)	None	
64664(c)(2)(A) – (F)	None	
64664(c)(3)	None	
64664(d) – (d)(4)	None	
64664(e)	None	
64664(g)	None	
64664.2(a)	2002 FR; 141.570	
64664.2(a), Table 64664.2, (1)(A)	None	
64664.2(a), Table 64664.2, (1)(B)	None	
64664.2(a), Table 64664.2, (2)	2002 FR; 141.503(f) & (g), 141.563(c), & 141.570(b)(5)	
64664.2(b)	None	
64665.5	None	
64666(a)	None	
64666(d)	None	
64666(g)	None	

Documents Incorporated by Reference

The following documents are incorporated by reference in the regulations as it would be too cumbersome, unduly expensive, or impractical to publish these documents into regulation.

- 1) 40 Code of Federal Regulations, parts 141.72(a)(1), 141.74(b)(3) and (4), and 141.75(a)(1) (54 Fed. Reg. 27486 (June 29, 1989)), "Filtration, Disinfection; Turbidity, Giardia lamblia, Viruses, Legionella, and Heterotrophic Bacteria."
- 2) 40 Code of Federal Regulations, parts 141.172(b) and (c) (63 Fed. Reg. 69478 (December 16, 1998)), "Interim Enhanced Surface Water Treatment Rule."
- 3) 40 Code of Federal Regulations, part 141.172(b) (66 Fed. Reg. 3770 (January 16, 2001)), "Revisions to the Interim Enhanced Surface Water Treatment Rule (IESWTR), the Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1DBPR), and Revisions to State Primacy Requirements To Implement the Safe Drinking Water Act (SDWA) Amendments."
- 4) 40 Code of Federal Regulations, parts 141.530 through 141.535 and 141.540 through 141.544 (67 Fed. Reg. 1812 (January 14, 2002)), "Long Term 1 Enhanced Surface Water Treatment Rule."
- 5) 40 Code of Federal Regulations, parts 141.530, 141.531, and 141.534 (69 Fed. Reg. 38850 (June 29, 2004)), "Minor Corrections and Clarifications to Drinking Water Regulations."
- 6) 40 Code of Federal Regulations, parts 141.211, Appendix A to Subpart Q (Public Notification), 141.700, 141.701, 141.702, 141.703, 141.704, 141.705, 141.706, 141.707, 141.708, 141.709, 141.710, 141.711, 141.712, 141.713, 141.714, 141.715 (except subsection (b)(4)), 141.716, 141.717 (except subsection (b)), 141.718, 141.719, 141.720, 141.721 (except subsection (f)(4)), 141.722, and 141.723, except that certain sections and phrases referenced in the federal LT2ESWTR are replaced with the corresponding sections and chapter from the state Public Notification, state SWTR, and state S2DDBPR as proposed in section 64650(f)(1) through (f)(12) (71 Fed. Reg. 654 (January 5, 2006)), "Long Term 2 Enhanced Surface Water Treatment Rule."
- 7) 40 Code of Federal Regulations, part 141.719 (71 Fed. Reg. 6136 (February 6, 2006)), "Long Term 2 Enhanced Surface Water Treatment Rule, Correction."
- 8) 40 Code of Federal Regulations, parts 141.74 and 141.704 (74 Fed. Reg. 30953 (June 29, 2009)), "Minor Correction to Stage 2 Disinfectants and Disinfection Byproducts Rule and Changes in References to Analytical Methods."

Note: All Federal Register references may also be viewed, at no cost, through the following internet addresses: <http://www.gpoaccess.gov/fr/index.html> and www.gpo.gov/fdsys.

Statements of Determination

Alternatives Considered

The Department has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the adopted regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

Local Mandate Determination

The Department has determined that the proposed regulations would not impose a mandate on local agencies or school districts that require state reimbursement because the proposed regulation implements a federal mandate for which the regulated community must comply, regardless of the adoption of this regulation, or imposes no significant quantifiable costs. As a result, local agencies or school districts should not incur costs resulting from the adoption of this regulation.

Local agencies/school districts currently incur costs in their operation of PWS. These costs are not the result of a “new program or higher level of service” within the meaning of Article XIII B, Section 6 of the California Constitution because they apply generally to all individuals and entities that operate PWS in California and do not impose unique requirements on local governments. Therefore, no state reimbursement of these costs is required.

Local regulatory agencies also may incur additional costs for their responsibility to enforce federal regulations related to small PWS (fewer than 200 service connections) that they regulate. However, local agencies are authorized to assess fees to pay reasonable expenses incurred in enforcing statutes and regulations related to small PWS (Health and Saf. Code, § 101325). Therefore, no reimbursement of any incidental costs to local agencies in enforcing this regulation would be required (Gov. Code, § 17556(d)).

Business Impact

The Department is promulgating regulations substantially identical to federally mandated regulations. There are no significant differences related to fiscal impact between the proposed LT1ESWTR and LT2ESWTR regulations and the federal LT1ESWTR and LT2ESWTR regulations. Regardless of whether California adopts a regulation that parallels the federal LT1ESWTR and LT2ESWTR regulations, applicable PWS are required to comply with the federal LT1ESWTR and LT2ESWTR and will incur the associated costs. The adoption of the LT1ESWTR and LT2ESWTR portions of this regulation merely provide California’s regulatory agencies with the authority to enforce the regulation, which would otherwise be enforced by the U.S. EPA. Additionally, the portions of the proposed regulation unrelated to the federal LT1ESWTR and LT2ESWTR have no fiscal impact on the regulated community.

Economic Impact Assessment

The Department has made an initial determination that the proposed regulations would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. The Department has determined that the proposed regulations would not significantly affect the following:

1. The creation or elimination of jobs within the State of California. The requirements summarized above should not have any affect in this area in that there would not be any significant change in water system or regulatory personnel needed for compliance with the new requirements.
2. The creation of new businesses or the elimination of existing businesses within the State of California. The nature of the water industry is such that the adoption of this proposed regulation would not result in the creation or elimination of water systems. The impact of the proposed regulations would be insignificant.
3. The expansion of businesses currently doing business within the State of California. Since water system size is basically a function of the number of service connections (consumers) served, the proposed regulations should not have any effect on expansion.
4. The benefits of the regulations to the health and welfare of California residents, worker safety, and the state's environment. The Department has made a determination that the proposed regulations would improve the protection of the public's health and welfare through the control of microbial contaminants and their associated risks in the public's drinking water supply, with no adverse impacts to worker safety or California's environment.

Effect on Small Business

The Department has determined that the proposed regulations would not affect small business because Government Code chapter 3.5, article 2, section 11342.610 excludes drinking water utilities from the definition of small business.

Reporting Requirements

The Department has determined that the proposed regulations require reports from businesses, and it is necessary for the health, safety, or welfare of the people of California that the proposed regulations apply to businesses.

Documents Relied Upon

- 1) Federal Register, Vol. 54, No. 124, 27486 – 27541, June 29, 1989, "Filtration, Disinfection; Turbidity, Giardia lamblia, Viruses, Legionella, and Heterotrophic Bacteria" 40 CFR Parts 141 and 142.

- 2) Federal Register, Vol. 63, No. 241, 69478 – 69521, December 16, 1998, “Interim Enhanced Surface Water Treatment Rule” 40 CFR Parts 9, 141, and 142.
- 3) Federal Register, Vol. 66, No. 10, 3770 – 3780, January 16, 2001, “Revisions to the Interim Enhanced Surface Water Treatment Rule (IESWTR), the Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1DBPR), and Revisions to State Primacy Requirements To Implement the Safe Drinking Water Act (SDWA)” 40 CFR Parts 9, 141, and 142.
- 4) Federal Register, Vol. 67, No. 9, 1812 – 1844, January 14, 2002, “Long Term 1 Enhanced Surface Water Treatment Rule” 40 CFR Parts 9, 141, and 142.
- 5) Federal Register, Vol. 69, No. 124, 38850 – 38857, June 29, 2004, “Minor Corrections and Clarifications to Drinking Water Regulations” 40 CFR Parts 141 and 142.
- 6) Federal Register, Vol. 71, No. 3, 654 – 786, January 5, 2006, “Long Term 2 Enhanced Surface Water Treatment Rule” 40 CFR Parts 9, 141, and 142.
- 7) Federal Register, Vol. 71, No. 24, 6136, February 6, 2006, “Long Term 2 Enhanced Surface Water Treatment Rule, Correction” 40 CFR Parts 9, 141, and 142.
- 8) Federal Register, Vol. 74, No. 123, 30953 – 30959, June 29, 2009, “Minor Correction to Stage 2 Disinfectants and Disinfection Byproducts Rule and Changes in References to Analytical Methods” 40 CFR Parts 141 and 143.