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SOUTH CAROLINA STATE REGISTER

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GENERAL ASSEMBLY

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This issue contains notices, proposed regulations, emergency regulations, final form regulations, and other documents filed in the Office of the Legislative Council, pursuant to Article 1, Chapter 23, Title 1, Code of Laws of South Carolina, 1976.

SOUTH CAROLINA STATE REGISTER

An official state publication, the *South Carolina State Register* is a temporary update to South Carolina's official compilation of agency regulations--the *South Carolina Code of Regulations*. Changes in regulations, whether by adoption, amendment, repeal or emergency action must be published in the *State Register* pursuant to the provisions of the Administrative Procedures Act. The *State Register* also publishes the Governor's Executive Orders, notices or public hearings and meetings, and other documents issued by state agencies considered to be in the public interest. All documents published in the *State Register* are drafted by state agencies and are published as submitted. Publication of any material in the *State Register* is the official notice of such information.

STYLE AND FORMAT

Documents are arranged within each issue of the *State Register* according to the type of document filed:

Notices are documents considered by the agency to have general public interest.

Notices of Drafting Regulations give interested persons the opportunity to comment during the initial drafting period before regulations are submitted as proposed.

Proposed Regulations are those regulations pending permanent adoption by an agency.

Pending Regulations Submitted to the General Assembly are regulations adopted by the agency pending approval by the General Assembly.

Final Regulations have been permanently adopted by the agency and approved by the General Assembly.

Emergency Regulations have been adopted on an emergency basis by the agency.

Executive Orders are actions issued and taken by the Governor.

2008 PUBLICATION SCHEDULE

Documents will be accepted for filing on any normal business day from 8:30 A.M. until 5:00 P.M. All documents must be submitted in the format prescribed in the *Standards Manual for Drafting and Filing Regulations*.

To be included for publication in the next issue of the *State Register*, documents will be accepted no later than 5:00 P.M. on any closing date. The modification or withdrawal of documents filed for publication must be made by **5:00 P.M.** on the closing date for that issue.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Submission Deadline	1/11	2/8	3/14	4/11	5/9	6/13	7/11	8/8	9/12	10/10	11/14	12/12
Publishing Date	1/25	2/22	3/28	4/25	5/23	6/27	7/25	8/22	9/26	10/24	11/28	12/26

REPRODUCING OFFICIAL DOCUMENTS

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ADOPTION, AMENDMENT AND REPEAL OF REGULATIONS

To adopt, amend or repeal a regulation, an agency must publish in the *State Register* a Notice of Drafting; a Notice of the Proposed Regulation that contains an estimate of the proposed action's economic impact; and, a notice that gives the public an opportunity to comment on the proposal. If requested by twenty-five persons, a public hearing must be held at least thirty days after the date of publication of the notice in the *State Register*.

After the date of hearing, the regulation must be submitted to the General Assembly for approval. The General Assembly has one hundred twenty days to consider the regulation. If no legislation is introduced to disapprove or enacted to approve before the expiration of the one-hundred-twenty-day review period, the regulation is approved on the one hundred twentieth day and is effective upon publication in the *State Register*.

EMERGENCY REGULATIONS

An emergency regulation may be promulgated by an agency if the agency finds imminent peril to public health, safety or welfare. Emergency regulations are effective upon filing for a ninety-day period. If the original filing began and expired during the legislative interim, the regulation can be renewed once.

REGULATIONS PROMULGATED TO COMPLY WITH FEDERAL LAW

Regulations promulgated to comply with federal law are exempt from General Assembly review. Following the notice of proposed regulation and hearing, regulations are submitted to the *State Register* and are effective upon publication.

EFFECTIVE DATE OF REGULATIONS

Final Regulations take effect on the date of publication in the *State Register* unless otherwise noted within the text of the regulation.

Emergency Regulations take effect upon filing with the Legislative Council and remain effective for ninety days. If the original ninety-day period begins and expires during legislative interim, the regulation may be refiled for one additional ninety-day period.

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 South Carolina General Assembly Home Page: www.scstatehouse.net

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3116		SR32-2	Malpractice Insurance Claims	1/20/08	Department of Insurance
3117		SR32-2	Workers' Compensation Assigned Risk Rates	1/20/08	Department of Insurance
3109		SR32-2	Property Tax	1/29/08	Department of Revenue
3110		SR32-2	Restocking Fees	1/29/08	Department of Revenue
3122			Wildlife Management Area Regulations	4/13/08	Department of Natural Resources
3113			Solid Waste Management	5/05/08	Department of Health and Envir Control
3125			Driver Schools and Truck Driver Training Schools	5/07/08	Department of Public Safety
3112			Environmental Protection Fees	5/07/08	Department of Health and Envir Control
3114			Tanning Facilities	5/07/08	Department of Health and Envir Control
3126			Motor Carrier Regulations	5/07/08	Public Service Commission
3133			Weights and Measures	5/07/08	Department of Agriculture
3123	R200	SR32-3	Gasoline, Lubricating Oils and Other Petroleum Products	5/07/08	Department of Agriculture
3124			Eligible Telecommunications Carrier	5/07/08	Public Service Commission
3134			Standards for Licensing Nursing Homes	5/07/08	Department of Health and Envir Control
3128			Electric Systems and Gas Systems	5/07/08	Public Service Commission
3141			Wildlife Management Area Regulations	5/07/08	Department of Natural Resources
3143			Free Tuition for Residents Sixty Years of Age	5/07/08	Commission on Higher Education
3135			Chapter Revision (136-001 through 136-799)	5/07/08	LLR - Commissioners of Pilotage
3174			SC Procurement Regulations - Pre-Bid Conferences	5/07/08	Budget and Control Board
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3149			Environmental Electronic Reporting Requirements	5/07/08	Department of Health and Envir Control
3152			Underground Storage Tank Control Regulations	5/07/08	Department of Health and Envir Control
3138			Free Textbooks	5/08/08	State Board of Education
3151			South Carolina Birth Defects Program	5/08/08	Department of Health and Envir Control
3137			School-To-Work Transition Act	5/09/08	State Board of Education
3155			Water Pollution Control Permits	5/09/08	Department of Health and Envir Control
3154			Individual Sewage Treatment and Disposal Systems	5/09/08	Department of Health and Envir Control
3139			Ice	5/09/08	Department of Health and Envir Control
3181			Barrier Free Building Design	5/10/08	LLR - Building Codes Council
3182			Building Code Repeals	5/10/08	LLR - Building Codes Council
3183			Modular Building Construction Act	5/10/08	LLR - Building Codes Council
3184			Restructuring ATF Regulations - Pyrotechnic Safety	5/10/08	LLR - Board of Pyrotechnic Safety
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3168			SCDOT Secretary of Transportation Approval of Actions	5/13/08	Department of Transportation
3111	R212	SR32-4	Coastal Division Regulations	5/13/08	Department of Health and Envir Control
3129			Licensing Criteria	5/14/08	Commission on Higher Education
3170			Nonpublic Postsecondary Inst. Licensing - Bond Funds	5/14/08	Commission on Higher Education
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3179	R211	SR32-4	Data Reporting Requirements - S.C. Hospitals	5/16/08	Budget and Control Board
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3185			SC Need-based Grants Program	6/04/08	Commission on Higher Education
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3164			Communications Services	6/04/08	Department of Revenue
3195			Prequalification of Bidders	6/04/08	Department of Transportation
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3191			Advanced Placement	2/01/09	State Board of Education
3192			Requirements for Additional Areas of Certification	2/01/09	State Board of Education
3201			Mobile Dental Facilities and Portable Dental Operations	3/03/09	LLR - Board of Dentistry
3202			Requirements for Licensure as a Physical Therapist	3/03/09	LLR - Board of Physical Therapy Examiners
3196			S.C. National Guard College Assistance Program	3/23/09	Commission on Higher Education

2 REGULATIONS SUBMITTED TO GENERAL ASSEMBLY

Committee Requested Withdrawal:

3127 Chapter Revision
3166 SCDOT Chief Internal Auditor

LLR - Veterinary Medical Examiners
Department of Transportation

Permanently Withdrawn:

3118 Mobile Dental Facilities and Portable Dental Operations

LLR: Board of Dentistry

COMMITTEE LIST OF REGULATIONS SUBMITTED TO GENERAL ASSEMBLY 3

In order by General Assembly review expiration date
 The history, status, and full text of these regulations are available on the
 South Carolina General Assembly Home Page: www.scstatehouse.net

DOC No.	SUBJECT	HOUSE COMMITTEE	SENATE COMMITTEE
3119	Educational Requirements	Labor, Commerce and Industry	Labor, Commerce and Industry
3116	Malpractice Insurance Claims	Labor, Commerce and Industry	Banking and Insurance
3117	Workers' Compensation Assigned Risk Rates	Labor, Commerce and Industry	Banking and Insurance
3109	Property Tax	Ways and Means	Finance
3110	Restocking Fees	Ways and Means	Finance
3122	Wildlife Management Area Regulations	Agriculture and Natural Resources	Fish, Game and Forestry
3113	Solid Waste Management	Agriculture and Natural Resources	Medical Affairs
3125	Driver Schools and Truck Driver Training Schools	Education and Public Works	Judiciary
3112	Environmental Protection Fees	Agriculture and Natural Resources	Agriculture and Natural Resources
3114	Tanning Facilities	Medical, Military, Pub & Mun Affairs	Labor, Commerce and Industry
3126	Motor Carrier Regulations	Labor, Commerce and Industry	Judiciary
3133	Weights and Measures	Agriculture and Natural Resources	Agriculture and Natural Resources
3123	Gasoline, Lubricating Oils and Other Petroleum Products	Agriculture and Natural Resources	Agriculture and Natural Resources
3124	Eligible Telecommunications Carrier	Labor, Commerce and Industry	Judiciary Committee
3134	Standards for Licensing Nursing Homes	Medical, Military, Pub & Mun Affairs	Medical Affairs
3128	Electric Systems and Gas Systems	Labor, Commerce and Industry	Judiciary
3141	Wildlife Management Area Regulations	Agriculture and Natural Resources	Fish, Game and Forestry
3143	Free Tuition for Residents Sixty Years of Age	Education and Public Works	Education
3135	Chapter Revision (136-001 through 136-799)	Labor, Commerce and Industry	Transportation
3174	SC Procurement Regulations - Pre-Bid Conferences	Ways and Means	Finance
3175	SC Procurement Regulations	Ways and Means	Finance
3149	Environmental Electronic Reporting Requirements	Agriculture and Natural Resources	Medical Affairs
3152	Underground Storage Tank Control Regulations	Agriculture and Natural Resources	Medical Affairs
3138	Free Textbooks	Education and Public Works	Invitations
3151	South Carolina Birth Defects Program	Medical, Military, Pub & Mun Affairs	Medical Affairs
3137	School-To-Work Transition Act	Education and Public Works	Education
3155	Water Pollution Control Permits	Agriculture and Natural Resources	Medical Affairs
3154	Individual Sewage Treatment and Disposal Systems	Agriculture and Natural Resources	Medical Affairs
3139	Ice	Agriculture and Natural Resources	Medical Affairs
3181	Barrier Free Building Design	Labor, Commerce and Industry	Labor, Commerce and Industry
3182	Building Code Repeals	Labor, Commerce and Industry	Labor, Commerce and Industry
3183	Modular Building Construction Act	Labor, Commerce and Industry	Labor, Commerce and Industry
3184	Restructuring ATF Regulations - Pyrotechnic Safety	Labor, Commerce and Industry	Labor, Commerce and Industry
3150	Hazardous Waste Management	Agriculture and Natural Resources	Medical Affairs
3165	Transportation Project Prioritization	Education and Public Works	Transportation
3167	SCDOT Commission Approval of Actions	Education and Public Works	Transportation
3168	SCDOT Secretary of Transportation Approval of Actions	Education and Public Works	Transportation
3111	Coastal Division Regulations	Agriculture and Natural Resources	Agriculture and Natural Resources
3129	Licensing Criteria	Education and Public Works	Education
3170	Nonpublic Postsecondary Inst. Licensing - Bond Funds	Education and Public Works	Education
3161	Water Classifications and Standards	Agriculture and Natural Resources	Medical Affairs
3179	Data Reporting Requirements - S.C. Hospitals	Medical, Military, Pub & Mun Affairs	Medical Affairs
3160	Shellfish	Agriculture and Natural Resources	Fish, Game and Forestry
3162	Standards of Performance for Asbestos Projects	Agriculture and Natural Resources	Medical Affairs
3180	Actuarial Opinion and Memorandum Regulation	Labor, Commerce and Industry	Banking and Insurance
3178	Data Reporting Requirements - Ambulatory Data	Medical, Military, Pub & Mun Affairs	Medical Affairs
3172	SC Residency Program	Education and Public Works	Education
3173	SC HOPE Scholarship	Education and Public Works	Education
3185	SC Need-based Grants Program	Education and Public Works	Education
3158	Sales Tax	Ways and Means	Finance
3159	Accommodation	Ways and Means	Finance
3163	Sales Tax	Ways and Means	Finance
3164	Communications Services	Ways and Means	Finance
3195	Prequalification of Bidders	Ways and Means	Transportation
3193	Practice of Dietetics within the State of SC	Medical, Military, Pub & Mun Affairs	Labor, Commerce and Industry
3189	Food Tax	Ways and Means	Finance
3191	Advanced Placement	Education and Public Works	Education
3192	Requirements for Additional Areas of Certification	Education and Public Works	Education
3201	Mobile Dental Facilities and Portable Dental Operations	Medical, Military, Pub & Mun Affairs	Medical Affairs
3202	Requirements for Licensure as a Physical Therapist	Medical, Military, Pub & Mun Affairs	Medical Affairs
3196	S.C. National Guard College Assistance Program	Education and Public Works	Education

4 COMMITTEE LIST OF REGULATIONS SUBMITTED TO GENERAL ASSEMBLY

Committee Requested Withdrawal:

3127	Chapter Revision		Medical Affairs
3166	SCDOT Chief Internal Auditor	Education and Public Works	Transportation

Permanently Withdrawn:

3118	Mobile Dental Facilities and Portable Dental Operations	Medical, Military, Pub & Mun Affairs	Medical Affairs
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Executive Order No. 2008-05

WHEREAS, the Grand Jurors of Horry County indicted Irene Evans Armstrong, Mayor of the Town of Atlantic Beach, on March 20, 2008, for three counts of bribery at elections and two counts of misconduct in office; and

WHEREAS, South Carolina law recognizes that "an act in which fraud is an ingredient involves moral turpitude..." see *State v. Horton*, 248 S.E.2d 263 (1978) and the above-referenced indictment is for crimes that involve moral turpitude, see S.C. Attorney General Opinion No. 83-48; and

WHEREAS, Irene Evans Armstrong is an officer of a political subdivision of the State and Article VI, Section 8, of the South Carolina Constitution provides that "[a]ny officer of the State or its political subdivisions...who has been indicted by a grand jury for a crime involving moral turpitude...may be suspended by the Governor until he shall have been acquitted;" and

WHEREAS, a certified true copy of the indictment against Irene Evans Armstrong has been provided to me.

NOW, THEREFORE, pursuant to the authority vested in me by the Constitution and Statutes of the State of South Carolina, I hereby suspend Irene Evans Armstrong from the office of Mayor of Atlantic Beach until such time as she shall be formally acquitted or convicted.

This action in no manner addresses the question of the guilt or innocence of Irene Evans Armstrong and should not be construed as an expression of any opinion one way or another on such question.

This Order shall take effect immediately.

**GIVEN UNDER MY HAND AND THE GREAT
SEAL OF THE STATE OF SOUTH CAROLINA,
THIS 21st DAY OF MARCH, 2008.**

**MARK SANFORD
Governor**

6 NOTICES

DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

NOTICE

In accordance with Section 44-7-200(C), Code of Laws of South Carolina, the public is hereby notified that a Certificate of Need application has been accepted for filing and publication April 25, 2008, for the following project(s). After the application is deemed complete, affected persons will be notified that the review cycle has begun. For further information, please contact Mrs. Sarah "Sallie" C. Harrell, Division of Planning and Certification of Need, 2600 Bull St., Columbia, SC 29201 at (803) 545-4200.

Affecting Charleston County

Purchase and installation of a sixteen (16) slice Computed Tomography (CT) scanner for the establishment of outpatient imaging services by University Medical Associates (UMA) and the provision of outpatient chemotherapy infusion services by Medical University Hospital Authority (MUHA) at the Medical University of South Carolina (MUSC) Specialty Care – North
MUSC Specialty Care – North
North, South Carolina
\$7,233,053

Affecting Horry County

Acquisition of a da Vinci "S" Surgical System to be housed in the current surgical services department
Grand Strand Regional Medical Center
Myrtle Beach, South Carolina
Project Cost: \$2,278,184

Affecting Lancaster County

Conversion of eighteen (18) substance abuse beds to general acute care beds for a total of two hundred seventeen (217) acute care beds
Springs Memorial Hospital
Lancaster, South Carolina
Project Cost: \$35,500

Affecting Sumter County

Replacement of an existing single-slice Computed Tomography (CT) scanner with a four (4) slice CT scanner
Tuomey Healthcare System – Cancer Treatment Center
Sumter, South Carolina
Project Cost: \$826,080

In accordance with S.C. DHEC Regulation 61-15, the public and affected persons are hereby notified that the review cycle has begun for the following project(s) and a proposed decision will be made within 60 days beginning April 25, 2008. "Affected persons" have 30 days from the above date to submit comments or requests for a public hearing to Mr. Les W. Shelton, Division of Planning and Certification of Need, 2600 Bull Street, Columbia, S.C. 29201. For further information call (803) 545-4200.

Affecting Anderson County

Renovation for the addition of an invasive vascular laboratory for a total of two (2) vascular laboratories
AnMed Health Medical Center
Anderson, South Carolina
Project Cost: \$2,194,372

Affecting Charleston County

Upfit of shelled space for the purchase and installation of a sixteen (16) slice Computed Tomography (CT) scanner by Trident Medical Center to be located at 5401 Netherby Lane Dorchester Road, Suite 1201, North Charleston, South Carolina
Summerville Medical Center – CT Outpatient Imaging Center
North Charleston, South Carolina
Project Cost: \$897,211

Affecting Greenwood County

Construction for the relocation and expansion of the facility's existing dialysis unit to include the addition of four (4) new dialysis stations for a total of eight (8) dialysis stations to be located adjacent to the patient tower
Self Regional Healthcare
Greenwood, South Carolina
Project Cost: \$1,988,980

Affecting Marion County

Renovation of the emergency department (ED) and construction of a medical office building (MOB) that will house hospital-based physician practices and the Marion Regional Healthcare System Wellness and Rehabilitation Department
Marion Regional Healthcare System
Mullins, South Carolina
Project Cost: \$15,000,000

8 DRAFTING

DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL CHAPTER 61

Statutory Authority: 1976 Code Sections 48-1-10 et seq.

Notice of Drafting:

The Department is proposing to amend R.61-62, Air Pollution Control Regulations and Standards. The proposed amendments are to be made in conjunction with revisions previously proposed in the March 28, 2008, State Register. Interested persons are invited to present their views concerning these amendments in writing to Maeve S.R. Mason, Regulatory Development Section, Bureau of Air Quality, 2600 Bull Street, Columbia, SC 29201. To be considered, comments must be received by May 26, 2008, the close of the drafting comment period.

Synopsis:

On May 16, 2007, the United States Environmental Protection Agency (EPA) promulgated revisions to the General Provisions for National Emission Standards for Hazardous Air Pollutants to add a definition for “force majeure,” and to allow for extensions to the deadline imposed for source owners and operators to conduct an initial or subsequent performance test required by applicable regulations. The Department proposes to amend Regulation 61-62.61, to adopt this recent Federal amendment.

The Department also proposes to amend R. 61-62.1, Definitions and General Requirements, to incorporate amendments to the definition of Volatile Organic Compounds (VOCs) promulgated by the EPA on January 18, 2007; make corrections to R. 61-62.5, Standard No. 3, Waste Combustion and Reduction; R. 61-62.5, Standard No. 3.1, Hospital/Medical/Infectious Waste Incinerators (HMIWI); R.61-62.5, Standard No. 5 - Volatile Organic Compounds; R. 61-62.70, Title V Operating Permit Program; and to incorporate by reference amendments to the relevant subparts in R. 61-62.72, Acid Rain and R. 61-62.96, Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO₂) Budget Trading Program General Provisions, as part of revisions to the Federal Clean Air Interstate Rule (CAIR) promulgated during the period from January 1, 2007, through December 31, 2007. The Department may also propose typographical corrections and clarifications to R.61-62 as necessary.

Pursuant to S.C. Code Section, 1-23-120(G)(1) the proposed amendments in this Notice will not be more stringent than the current Federal requirements and thus do not require legislative review.

DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
CHAPTER 61

Statutory Authority: 1976 Code Sections 48-1-10 et seq.

Notice of Drafting:

The Department is proposing to amend R.61-62, Air Pollution Control Regulations and Standards and the State Implementation Plan (SIP). The proposed amendments are necessary to meet requirements of the United States Environmental Protection Agency (EPA). Interested persons are invited to present their views in writing to Anthony T. Lofton, Regulatory Development Section, Bureau of Air Quality, 2600 Bull Street, Columbia, SC 29201. To be considered, comments must be received by May 26, 2008, the close of the drafting comment period.

Synopsis:

On December 31, 2002, EPA published a final rule in the Federal Register entitled Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Baseline Emissions Determination, Actual-to-future-actual Methodology, Plantwide Applicability Limitations, Clean Units, Pollution Control Projects [67 FR 80186], which established clean units (CU) and expanded upon provisions pertaining to pollution control projects (PCP), which were initially promulgated on July 21, 1992 [57 FR 32314]. On June 24, 2005, the United States Court of Appeals for the District of Columbia Circuit (the Court) issued an opinion vacating those portions of the 2002 and 1992 rules that pertained to CU and PCP. The Court's vacatur of CU and PCP provisions meant that these provisions could no longer be used.

The EPA published in the June 13, 2007, Federal Register the final rule entitled Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Removal of Vacated Elements [72 FR 32526] to amend its regulations to eliminate the CU and PCP provisions included in its December 31, 2002 rulemaking. The June 13, 2007, final rule conforms the regulations to the decision by the Court, *New York v. EPA*, 413 F.3d 3 (D.C. Cir. 2005), vacating the CU and PCP provisions. The EPA stated that permitting authorities with approved SIPs containing any or all of the 2002 CU, 2002 PCP, or 1992 PCP provisions should remove those provisions as soon as feasible, which may be in conjunction with the next available SIP revision. The EPA stated that because of the Court decision, these provisions were unlawful and may not be applied even prior to their removal from the SIPs and that the deletion of CU and PCP provisions from NSR and PSD requirements will reduce the associated overall reporting and recordkeeping burden estimates. This final rule became effective on June 13, 2007.

On May 1, 2007, the EPA published a final rule in the Federal Register entitled Prevention of Significant Deterioration, Nonattainment New Source Review, and Title V: Treatment of Certain Ethanol Production Facilities Under the "Major Emitting Facility" Definition, which excluded facilities that produce ethanol by natural fermentation and are classified in North American Industry Classification System (NAICS) code 325193 or 312140 from the definition of "chemical process plants." This final rule became effective on July 2, 2007.

The Department proposes to amend Regulation 61-62, Air Pollution Control Regulations and Standards and the SIP by removing all references to pollution control projects and clean units from Regulation 61-62.5, Standard No. 7, Regulation 61-62.5, Standard No. 7.1, and the SIP. The Department also proposes to revise Regulation 61-62.5, Standard No.7 to change the definition of chemical process plants.

Pursuant to S.C. Code Section, 1-23-120(G)(1), the proposed amendments in this Notice will not be more stringent than the current Federal requirements and thus do not require legislative review.

10 DRAFTING

DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

CHAPTER 61

Statutory Authority: 1976 Code Sections 48-1-10 et seq.

Notice of Drafting:

The South Carolina Department of Health and Environmental Control (Department) proposes to amend specific sections of R.61-68, Water Classifications and Standards. Interested persons are invited to submit their views and recommendations in writing to Amy M. Bennett, Standards Coordinator, Bureau of Water, 2600 Bull Street, Columbia, South Carolina 29201, or by email at bennetam@dhec.sc.gov. To be considered, written comments must be received no later than 5:00 p.m. on May 26, 2008, the close of the drafting comment period.

Synopsis:

During the 2007 triennial review of R.61-68, the Department removed language that prohibited mixing zones in source water protection areas with a commitment to stakeholders to work out implementation issues concerning NPDES permitting in the near future. The Department now proposes to review, and where appropriate, clarify implementation details on National Pollutant Discharge Elimination System (NPDES) permitting in source water protection areas. The Department is also considering language to clarify that approval of variances pursuant to R. 61-68.E.7 and site-specific effluent limits pursuant to 61-68.E.14.c (7) are managed through the Department's NPDES permitting processes. Finally, the Department is considering clarification of the numeric nutrient criteria applicable to lakes of 40 acres or more.

Legislative review will be required.

DEPARTMENT OF INSURANCE

CHAPTER 69

Statutory Authority: 1976 Code Sections 38-3-110 and 38-9-180

Notice of Drafting:

The South Carolina Department of Insurance proposes to draft the Pre-need Insurance Minimum Standards for Determining Reserve Liabilities and Nonforfeiture Values Regulation. Interested persons may submit written comments to Rachel Chaplin, South Carolina Department of Insurance, PO Box 100105, Columbia, South Carolina 29201. To be considered, all comments must be received no later than 5:00 p.m., May 30, 2008.

Synopsis:

The Department of Insurance proposes to draft the Pre-need Insurance Minimum Standards for Determining Reserve Liabilities and Nonforfeiture Values Regulation. The regulation is based upon a model regulation adopted by the National Association of Insurance Commissioners. The regulation will establish, for preneed insurance products, minimum mortality standards for reserves and nonforfeiture values. The regulation will require the use of the 1980 Commissioners Standard Ordinary Life Valuation Mortality Table for use in determining the minimum standard of valuation of reserves and the minimum standard nonforfeiture values for preneed insurance products.

Legislative review of this proposal will be required.

Document No. 3213
DEPARTMENT OF INSURANCE
 CHAPTER 69

Statutory Authority: 1976 Code Sections 38-3-110, 38-13-80, 38-90-150 and 38-90-630

69-70. Annual Audited Financial Reporting Regulation

Preamble:

Pursuant to S.C. Code Ann. Section 38-13-80 (2002) the South Carolina Department of Insurance (“Department”) requires insurers to file an annual audited financial report. By March first of each year, every insurer shall file with the Department a statement showing the business standing and financial condition of the insurer on December thirty-first of the preceding year. The statement is to be prepared in accordance with the Annual Statement Instructions and the Accounting Practices and Procedures Manual adopted by the National Association of Insurance Commissioners (“NAIC”). Effective January 1, 2010, the instructions for completing the Annual Audited Financial Report will be removed from the annual statement instructions because regulators and interested parties have determined that requirements for the Annual Audited Financial Report should be adopted by law or regulation through the legislative process. The proposed regulation incorporates revisions made by the NAIC to its Annual Financial Reporting Regulation, which requires insurers and designated entities to comply with certain best practices related to auditor independence, corporate governance, and internal controls over financial reporting.

The proposed effective date of this regulation is January 1, 2010. These revisions need to be promulgated two years in advance, however, because it will require affected insurers and designated entities to include two new reports with the current annual audited financial report filings. It will also require a change in the rotation period of the qualified independent certified public accountant from the current seven-year rotation to a five-year rotation. Affected insurers and designated entities need time to review the new reporting requirements and to amend current agreements to allow for the five-year accountant rotation.

The regulation is based upon the NAIC model regulation and will become an accreditation standard January 1, 2010.

A Notice of Drafting for the proposed regulation was published in the South Carolina State Register on February 22, 2008.

Section-by-Section Discussion

Section 1. Sets forth the authority of the Director to promulgate the regulation.

Section 2. Sets forth the purpose and scope of the regulation.

Section 3. Sets forth terms and definitions contained within the regulation.

Section 4. Sets forth the general requirements related to filing and extensions for filing of annual audited financial reports and audit committee appointments.

Section 5. Sets forth the contents of annual audited financial report.

Section 6. Sets forth the requirements for designation of independent certified public accountant.

Section 7. Sets forth the qualifications of independent certified accountant.

Section 8. Sets forth the requirements for consolidated or combined audits.

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Section 9. Sets forth scope of audit and report of independent certified public accountant.

Section 10. Sets forth the requirements for notification of adverse financial condition.

Section 11. Sets forth the requirements for communication of internal control related matters noted in an audit.

Section 12. Sets forth the information to be contained in the accountant's letter of qualifications.

Section 13. Sets forth the definitions, availability and maintenance of independent certified public accountants workpapers.

Section 14. Sets forth the requirements for audit committee.

Section 15. Sets forth the conduct of insurer in connection with the preparation of required reports and documents.

Section 16. Sets forth the requirements for management's report of internal control over financial reporting.

Section 17. Sets forth the requirements for exemptions from filing the annual audited financial report.

Section 18. Sets forth the requirements for Canadian and British companies.

Section 19. Sets forth the effective dates.

Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to S.C. Code Ann. Section 1-23-110(b) of the 1976 Code, as amended, such hearing will be conducted at 10:00AM on Wednesday, June 25, 2008 at the Administrative Law Court, 2nd Floor hearing room, Edgar A. Brown Building, 1205 Pendleton Street Suite 224, Columbia, South Carolina 29201. Written comments and hearing requests may be directed to Rachel Chaplin, South Carolina Department of Insurance, P.O. Box 100105, Columbia, South Carolina 29202-3105, no later than 5:00PM Friday, May 30, 2008.

Preliminary Fiscal Impact Statement:

There will be no increased costs to the state or its political subdivisions.

Statement of Need and Reasonableness:

DESCRIPTION OF REGULATION:

Purpose: The purpose of this regulation is to improve the Department's surveillance of the financial condition of insurers by requiring an annual audit of financial statements reporting the financial position and the results of operations of insurers by independent certified public accountants. The audit will incorporate certain best practices related to auditor independence, corporate governance and internal control over financial reporting. It requires insurers with certain levels of premium writings to have a majority (50%) or a supermajority (75%) of its Audit Committee members to be independent members of its Board of Directors. It requires insurers with \$500 million or more in direct and assumed premiums annually to prepare management's assessment of internal controls over financial reporting.

Legal Authority: S.C. Code Ann. Sections 38-3-110, 38-13-80, 38-90-150 and 38-90-630.

Plan for Implementation: This regulation will take effect January 1, 2010. Legislative review is required.

DETERMINATION OF NEED AND REASONABLENESS OF THE AMENDMENTS TO THE REGULATION BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

The regulation is based upon the NAIC model regulation and will become an accreditation standard January 1, 2010.

DETERMINATION OF COSTS AND BENEFITS

There will be no additional costs to the state or its political subdivisions.

UNCERTAINTIES OF ESTIMATES:

None.

EFFECT ON ENVIRONMENT AND PUBLIC HEALTH:

This regulation does not have any effect on the environment or public health.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

There will be no detrimental effect on the environment or public health if the amendments to this regulation are not implemented.

Statement of Rationale:

The proposed regulation is based on a model regulation developed by the NAIC. The proposed regulation will be an NAIC accreditation standard effective January 1, 2010.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

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Document No. 3216
DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF STATE FIRE MARSHAL
CHAPTER 71
Statutory Authority: 1976 Code Sections 23-9-60 and 23-36-10 et seq.

71-8302. Explosives

Preamble:

The Office of State Fire Marshal is proposing to update, revising, and reformat SCRR 71-8302 regarding Explosives. The new SCRR 71-8302 complies with Federal Bureau of Alcohol Tobacco and Firearms requirements, uses a standardized format, simplify wording, remove obsolete language and clarify licensing and permitting requirements for the storage, handling, and use of explosives.

Section by Section Discussion:

The following is a section by section discussion of the amendments proposed by the Office of State Fire Marshal:

Regulation 71-8302 Explosives - The Office of State Fire Marshal proposes to delete the current regulations in their entirety and to replace with regulations based upon national consensus standards and modern administrative practices.

71-8302.1. This new section provides the purpose, intent, and applicability for the 71-8302 series of regulations.

71-8302.2. This new section refers the user to the adopted codes and standards in SCRR 71-8300.2.

71-8302.3. This new section allows the State Fire Marshal to adjust existing fees to cover the costs of administering the program as provided for in 40-1-50(D).

71-8302.4. This new section defines category of licenses and permits; the requirements for individual licensing, permitting of blasting operations, and permitting of storage magazines; and the responsibilities of the Office of State Fire Marshal for administering the program.

71-8302.5. Formerly Section 71-8302.10. Revises record the record keeping requirements for licensees and clarifies the Office of State Fire Marshal authority to request and review records.

71-8302.6.A.-G. Formerly Section 71-8302.11. Revised for compatibility with BATF regulations and clarify the licensee's responsibility to notify the Office of State Fire Marshal.

71-8302.6.H. Formerly Section 71-8300.18. Revised and clarifies warning signals.

71-8302.7. Formerly Section 71-8300.24. Moved without change.

71-8302.8. Formerly Section 71-8300.25. Minor rewording for clarity.

Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to Section 1-23-110(b) of the 1976 Code of Laws of South Carolina, as amended, such hearing will be conducted at the Administrative Law Court at 1:00 p.m. on Tuesday, June 10, 2008. Written comments may be directed to John Reich, State Fire Marshal, Division of Fire And Life Safety, Department of Labor, Licensing and Regulation, 141 Monticello Trail, Columbia, South Carolina 29203, no later than 5:00 p.m., Tuesday, May 27, 2008.

Preliminary Fiscal Impact Statement:

There will be no additional cost incurred by the State or any political subdivision.

Statement of Need and Reasonableness:

The Office of State Fire Marshal has determined that there is a need to update the regulation to remove awkward language, archaic references, and use a standardized format that will be used for all subarticles enforced by the State Fire Marshal's Office. The changes to the regulations will make the regulations easier to read and apply by the public. The regulations will also update adopted codes and standards to the current editions that reflect current and new technologies and eliminate potential conflicts with overlapping federal regulations (See 27 CFR Part 55).

DESCRIPTION OF REGULATION:

Purpose: To provide reasonable protection of the health, welfare, and safety of the public and explosive licensees from the hazards associated with the handling, use, transportation, and storage of explosives.

Legal Authority: Statutory Authority: 1976 Code Section 23-36-10, et seq.

Plan for Implementation: These regulations will take effect upon approval by the General Assembly and upon publication in the State Register. LLR will notify licensees of the regulations and post the regulations on the agency's Web site. The State Fire Marshal's Office will also notify our customers through our other written and oral communications.

DETERMINATION OF NEED AND REASONABLENESS BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

By updating these regulations, the licensing requirements are conformed to other licenses and permits issues by the Office of State Fire Marshal. This update also aligns these regulations with federal regulations governing the handling, use, transportation, and storage of explosives.

DETERMINATION OF COSTS AND BENEFITS:

There will be no additional cost incurred by the State or its political subdivisions.

UNCERTAINTIES OF ESTIMATES:

There are no uncertainties of estimates concerning these regulations.

EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH:

This regulation will have no effect on the environment. The public health of this State will be enhanced by conforming to current national code and standards.

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DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

These regulations will have no detrimental effect on the environment and public health of this State if the regulations are not implemented. These regulations do comply with current national standards and federal regulations.

Statement of Rationale:

The guidelines for Explosives are amended to conform to national guidelines and ensure public safety.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

Document No. 3214
DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF STATE FIRE MARSHAL
CHAPTER 71
Statutory Authority: 1976 Code Sections 23-9-60, 39-41-260, 40-82-70

71-8300. Fire Prevention and Life Safety

Preamble:

The Office of State Fire Marshal is proposing to delete 71-8300 Fire Prevention and Life Safety - Buildings (71-8300.1 through 71-8300.15) and replace it with Fire Prevention and Life Safety (71-8300.1 through 71-8300.4). The new SCRR 71-8300 will use a standardized format, simplify wording, update adopted codes and standards, and consolidate the common definitions and administrative items from the previous regulations.

Section by Section Discussion:

The following is a section by section discussion of the amendments proposed by the Office of State Fire Marshal:

Regulation 71-8300 Fire Prevention and Life Safety - Buildings - Delete in their entirety and replace with new regulations below.

71-8300 Fire Prevention and Life Safety.

71-8300.1.A.-D. This new section provides the purpose, intent, and applicability for the 71-8300 series of regulations.

71-8300.1.E. This new section clarifies the State Fire Marshal's authority to conduct investigations for violations of the regulations, the right of entry and ability to issue oaths and subpoenas.

71-8300.1.F. This new section explains the State Fire Marshal's scope of authority and ability to enforce the 71-8300 series of regulations.

71-8300.1.G. This new section reiterates the State Fire Marshal's responsibilities regarding unsafe buildings.

71-8300.1.H. This new section consolidates the common definitions previously found throughout the 71-8300 series of regulations.

71-8300.2. This new section consolidates all of the codes and standards previously adopted throughout the 71-8300 series of regulations and adopt several new standards addressing new technologies.

71-8300.3. Formerly Section 71-8300.12.

71-8300.4. Formerly Section 71-8300.7. This section updates wording in this previous section and requires the State Fire Marshal to publish list to assist designers with submission of plans to the office.

Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to Section 1-23-110(b) of the 1976 Code of Laws of South Carolina, as amended, such hearing will be conducted at the Administrative Law Court at 9:00 a.m. on Tuesday, June 10, 2008. Written comments may be directed to John Reich, State Fire Marshal, Division of Fire And Life Safety, Department of Labor, Licensing and Regulation, 141 Monticello Trail, Columbia, South Carolina 29203, no later than 5:00 p.m., Tuesday, May 27, 2008.

Preliminary Fiscal Impact Statement:

There will be no additional cost incurred by the State or any political subdivision.

Statement of Need and Reasonableness:

The Office of State Fire Marshal has determined that there is a need to update the regulation to remove awkward language, archaic references, and use a standardized format that will be used for all subarticles enforced by the State Fire Marshal's Office. The changes to the regulations will make the regulations easier to read and apply by the public. The regulations will also update adopted codes and standards to the current editions that reflect current and new technologies.

DESCRIPTION OF REGULATION:

Purpose: To amend the regulations in conformance with the International Codes and to remove archaic language and regulations.

Legal Authority: Statutory Authority: 1976 Code Section 23-9-60, 39-41-260, and 40-82-70

Plan for Implementation: These regulations will take effect upon approval by the General Assembly and upon publication in the State Register. LLR will notify licensees of the regulations and post the regulations on the agency's Web site. The State Fire Marshal's Office will also notify customers through other written and oral communications.

DETERMINATION OF NEED AND REASONABLENESS BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

These regulations, as amended, permit the use of new building construction technologies and provide consistent codes enforcement between the state and local jurisdictions.

DETERMINATION OF COSTS AND BENEFITS:

There will be no additional cost incurred by the State or its political subdivisions.

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UNCERTAINTIES OF ESTIMATES:

There are no uncertainties of estimates concerning these regulations.

EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH:

This regulation will have no effect on the environment. The public health of this State will be enhanced by conforming to the guidelines of the national standards.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

These regulations will have no detrimental effect on the environment and public health of this State if the regulations are not implemented in this State.

Statement of Rationale:

The guidelines for Fire Prevention and Life Safety in Buildings are amended to conform with national guidelines in order ensure public safety.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

Document No. 3220
DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF STATE FIRE MARSHAL
CHAPTER 71

Statutory Authority: 1976 Code Sections 23-9-60 and 24-9-20

71-8306. Fire Prevention and Life Safety in Local Detention Facilities

Preamble:

The Office of State Fire Marshal is proposing to delete 71-8306.1 Tents, Grandstands, and Air-Supported Structures and replace it with 71-8306 Fire Prevention and Life Safety in Local Detention Facilities. The new SCRR 71-8306 will use a standardized format, simplifies wording, removes obsolete language and requirements, and consolidates the requirements for new, existing, and renovated Local Detention facilities from the previous regulations 71-8308 through 71-8310.

Section by Section Discussion:

The following is a section by section discussion of the amendments proposed by the Office of State Fire Marshal:

Regulation 71-8306.1 Tents, Grandstands, and Air-Supported Structures - Delete in its entirety and replace with new text and title 71-8306 Fire Prevention and Life Safety in Local Detention Facilities.

71-8306.1. This new section provides the purpose, intent, and applicability for the 71-8306 series of regulations.

71-8306.2. This new section refers the user to the adopted codes and standards in SCRR 71-8300.

71-8306.3. Formerly Section 71-8308.14. and 71-8309.15. Revises for clarity by splitting and numbering reporting requirements.

71-8306.4. Formerly Section 71-8308.4-6. and 71-8309.4-6. Revises, updates, and consolidates requirements for fire protection systems in local detention facilities.

71-8306.5. Formerly Section 71-8308.12-13. and 71-8309.12-14. Revises, updates, and consolidates requirements for the fire prevention and life safety while operating local detention facilities.

Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to Section 1-23-110(b) of the 1976 Code of Laws of South Carolina, as amended, such hearing will be conducted at the Administrative Law Court at 11:00 a.m. on Wednesday, June 11, 2008. Written comments may be directed to John Reich, State Fire Marshal, Division of Fire And Life Safety, Department of Labor, Licensing and Regulation, 141 Monticello Trail, Columbia, South Carolina 29203, no later than 5:00 p.m., Wednesday, May 28, 2008.

Preliminary Fiscal Impact Statement:

There will be no additional cost incurred by the State or any political subdivision.

Statement of Need and Reasonableness:

The Office of State Fire Marshal has determined that there is a need to update the regulation to remove awkward language, archaic references, and use a standardized format for all subarticles enforced by the State Fire Marshal's Office. The changes to the regulations will make the regulations easier to read and apply by the public. The regulations will also update adopted codes and standards to the current editions that reflect current and new technologies.

DESCRIPTION OF REGULATION:

Purpose: To amend the regulations in conformance with the International Codes, to remove archaic language and regulations, and consolidate regulations for local detention facilities.

Legal Authority: Statutory Authority: 1976 Code Sections 23-9-60 and 24-9-20.

Plan for Implementation: These regulations will take effect upon approval by the General Assembly and upon publication in the State Register. LLR will notify licensees of the regulations and post the regulations on the agency's Web site. The State Fire Marshal's Office will also notify customers through other written and oral communications.

DETERMINATION OF NEED AND REASONABLENESS BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

These updated regulations permit the use of new building construction technologies and to provide consistent codes enforcement between the state and local jurisdictions.

DETERMINATION OF COSTS AND BENEFITS:

There will be no additional cost incurred by the State or its political subdivisions.

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UNCERTAINTIES OF ESTIMATES:

There are no uncertainties of estimates concerning these regulations.

EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH:

These regulations will have no effect on the environment. The public health of this State will be enhanced by conforming to the guidelines of the national standards.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

These regulations will have no detrimental effect on the environment and public health of this State if the regulations are not implemented in this State.

Statement of Rationale:

The guidelines for Fire Prevention and Life Safety for Special Occupancies are amended to conform with national guidelines in order to ensure public safety.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

Document No. 3215
DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF STATE FIRE MARSHAL
CHAPTER 71
Statutory Authority: 1976 Code Section 23-9-60

71-8301. Fire Prevention and Life Safety for Special Occupancies

Preamble:

The Office of State Fire Marshal is proposing to delete 71-8301 Use of Hazardous Substances (71-8301.1 through 71-8301.6) and replace it with 71-8301 Fire Prevention and Life Safety for Special Occupancies (71-8301.1 through 71-8301.3). The new SCRR 71-8301 will use a standardized format, simplify wording, remove obsolete language and requirements, and consolidate the requirements for existing daycares and all foster homes from the previous regulations.

Section by Section Discussion:

The following is a section by section discussion of the amendments proposed by the Office of State Fire Marshal:

Regulation 71-8301 Use of Hazardous Substances - Delete in its entirety and replace with new text and title 71-8301 Fire Prevention and Life Safety For Special Occupancies.

71-8301.1. This new section provides the purpose, intent, and applicability for the 71-8301 series of regulations.

71-8301.2. This new section refers the user to the adopted codes and standards in SCRR 71-8300.

71-8301.3. Formerly Section 71-8300.10(E). Amendments proposed in this section make it easier for existing daycares to continue to operate without being required to completely retrofit buildings.

71-8301.3.B. Formerly Section 71-8300.11(B). The fire safety and evacuation plans as well as emergency evacuation drills were updated to reflect the current code requirements.

71-8301.3.C. Formerly Section 71-8300.11(E)(6). The fire safety and evacuation plans as well as emergency evacuation drills were updated to reflect the current code requirements. The use of portable fuel fired heating devices was restricted in accordance with the current codes.

71-8301.3.D. Formerly Section 71-8300.11(E)(7). The fire safety and evacuation plans as well as emergency evacuation drills were updated to reflect the current code requirements. The use of portable fuel fired heating devices was restricted in accordance with the current codes.

71-8301.3.E. Formerly Section 71-8300.11(F). The installation of smoke detectors was revised to the currently adopted nationally recognized standard. The use of portable fuel fired heating devices was restricted in accordance with the current codes.

Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to Section 1-23-110(b) of the 1976 Code of Laws of South Carolina, as amended, such hearing will be conducted at the Administrative Law Court at 11:00 a.m. on Tuesday, June 10, 2008. Written comments may be directed to John Reich, State Fire Marshal, Division of Fire And Life Safety, Department of Labor, Licensing and Regulation, 141 Monticello Trail, Columbia, South Carolina 29203, no later than 5:00 p.m., Tuesday, May 27, 2008.

Preliminary Fiscal Impact Statement:

There will be no additional cost incurred by the State or any political subdivision.

Statement of Need and Reasonableness:

The Office of State Fire Marshal has determined that there is a need to update the regulation to remove awkward language, archaic references, and use a standardized format that will be used for all subarticles enforced by the State Fire Marshal's Office. The changes to the regulations will make the regulations easier to read and apply by the public. The regulations will also update adopted codes and standards to the current editions that reflect current and new technologies and integrate the fire codes with building codes to prevent unnecessary costs of compliance.

DESCRIPTION OF REGULATION:

Purpose: To amend the regulations in conformance with the International Codes and to remove archaic language and regulations.

Legal Authority: Statutory Authority: 1976 Code Section 23-9-60.

Plan for Implementation: These regulations will take effect upon approval by the General Assembly and upon publication in the State Register. LLR will notify licensees of the regulations and post the regulations on the agency's Website. The State Fire Marshal's Office will also notify customers through other written and oral communications.

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DETERMINATION OF NEED AND REASONABLENESS BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

These regulations, as amended, permit the use of new building construction technologies and provide consistent codes enforcement between the state and local jurisdictions.

DETERMINATION OF COSTS AND BENEFITS:

There will be no additional cost incurred by the State or its political subdivisions.

UNCERTAINTIES OF ESTIMATES:

There are no uncertainties of estimates concerning these regulations.

EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH:

This regulation will have no effect on the environment. The public health of this State will be enhanced by conforming to the guidelines of the national standards.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

These regulations will have no detrimental effect on the environment and public health of this State if the regulations are not implemented in this State.

Statement of Rationale:

The guidelines for Fire Prevention and Life Safety for Special Occupancies are amended to conform with national guidelines in order to ensure public safety.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page:
<http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

Document No. 3219
DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF STATE FIRE MARSHAL
 CHAPTER 71

Statutory Authority: 1976 Code Sections 23-9-10 et seq. and 23-35-10 et seq.

71-8305. Fireworks and Pyrotechnics

Preamble:

The Office of State Fire Marshal is proposing to update, revising, and reformat SCRR 71-8305 regarding Explosives. The new SCRR 71-8305 complies with Federal Bureau of Alcohol Tobacco and Firearms requirements, uses a standardized format, simplify wording, remove obsolete language and clarify licensing and permitting requirements for the storage, handling, and use of explosives.

The Office of State Fire Marshal is proposing to delete 71-8305 Transportation and Use of Pyrotechnics and replace it with 71-8305 Fireworks and Pyrotechnics. The new SCRR 71-8305 will use a standardized format; simplifies wording, removes obsolete language and requirements; clarify licensing and permitting requirements for the transportation, handling, and use of Fireworks and Pyrotechnics; and consolidates the requirements for all pyrotechnics from the previous regulations 71-8305 and 71-8312.

Section by Section Discussion:

The following is a section by section discussion of the revisions proposed by the Office of State Fire Marshal:

Regulation 71-8305 Fireworks and Pyrotechnics – Deleting the current regulations in their entirety and replacing with the new regulations below.

71-8305.1. This new section provides the purpose, intent, applicability, and key definitions for the 71-8305 series of regulations.

71-8305.2. This new section refers the user to the adopted codes and standards in SCRR 71-8300.2.

71-8305.3. This new section allows the State Fire Marshal to adjust existing fees to cover the costs of administering the program as provided for in 40-1-50(D).

71-8305.4. Formerly Sections 71-8305.3. and 71-8312.C. This section consolidates and revises the requirements for individual licensing, the categories of licenses and clarifies the responsibilities of Office of State Fire Marshal for issuing a license.

71-8305.5. Formerly Sections 71-8305.4. and 71-8312.D. This section consolidates and revises the requirements for permitting displays, the categories of permits, and clarifies the responsibilities of Office of State Fire Marshal for issuing a permit.

71-8305.6. Formerly Sections 71-8305.7. and 71-8312.F.-J. This section consolidates and revises the requirements for operating a fireworks or pyrotechnics display.

71-8305.7. Formerly Section 71-8305.8. Moved and adds text clarify proper uses of “Consumer Fireworks”.

71-8305.8. Formerly Section 71-8305.9. Moved and revised to comply with Federal regulations.

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Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to Section 1-23-110(b) of the 1976 Code of Laws of South Carolina, as amended, such hearing will be conducted at the Administrative Law Court at 2:00 p.m. on Wednesday, June 11, 2008. Written comments may be directed to John Reich, State Fire Marshal, Division of Fire And Life Safety, Department of Labor, Licensing and Regulation, 141 Monticello Trail, Columbia, South Carolina 29203, no later than 5:00 p.m., Wednesday, May 28, 2008.

Preliminary Fiscal Impact Statement:

There will be no additional cost incurred by the State or any political subdivision.

Statement of Need and Reasonableness:

The Office of State Fire Marshal has determined that there is a need to update the regulation to remove awkward language, archaic references, and use a standardized format that will be used for all subarticles enforced by the State Fire Marshal's Office. The changes to the regulations will make the regulations easier to read and apply by the public. The regulations will also update adopted codes and standards to the current editions that reflect current and new technologies.

DESCRIPTION OF REGULATION:

Purpose: To provide reasonable protection of the health, welfare, and safety of the public and licensees from the hazards associated with the handling, use, and transportation of pyrotechnics and fireworks.

Legal Authority: Statutory Authority: 1976 Code Sections 23-9-10 et seq. and 23-35-10 et seq.

Plan for Implementation: These regulations will take effect upon approval by the General Assembly and upon publication in the State Register. LLR will notify licensees of the regulations and post the regulations on the agency's Web site. The State Fire Marshal's Office will also notify customers through other written and oral communications.

DETERMINATION OF NEED AND REASONABLENESS BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

These updated regulations conform licensing requirements to other licenses and permits issued by the Office of State Fire Marshal. This update also aligns these regulations with federal regulations governing the handling, use, and transportation of Fireworks and Pyrotechnics.

DETERMINATION OF COSTS AND BENEFITS:

There will be no additional cost incurred by the State or its political subdivisions.

UNCERTAINTIES OF ESTIMATES:

There are no uncertainties of estimates concerning these regulations.

EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH:

These regulations will have no effect on the environment. The public health of this State will be enhanced by conforming to current national code and standards.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

These regulations will have no detrimental effect on the environment and public health of this State if the regulations are not implemented. These regulations do comply with current national standards and federal regulations.

Statement of Rationale:

The guidelines Fireworks and Pyrotechnics are amended to conform to national guidelines and ensure public safety.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

Document No. 3218
DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF STATE FIRE MARSHAL
CHAPTER 71
Statutory Authority: 1976 Code Section 40-82-70

71-8304. Liquefied Petroleum (LP) Gas

Preamble:

The Office of State Fire Marshal is proposing to delete and replace SCRR 71-8304 regarding the Liquefied Petroleum (LP) Gas Board. The new SCRR 71-8304 will use a standardized format, simplify wording, remove obsolete language and clarify licensing and permitting requirements for LP Gas operators.

Section by Section Discussion:

The following is a section by section discussion of the amendments proposed by the Office of State Fire Marshal:

Regulation 71-8304 Liquefied Petroleum Gas Board - Delete in its entirety and replace with new regulations below and deleted the word "Board" from the title.

71-8304.1. This new section provides the purpose, intent, definitions, and applicability for the 71-8304 series of regulations.

71-8304.2. This new section refers the user to the adopted codes and standards in SCRR 71-8300.2.

71-8304.3. This new section allows the State Fire Marshal to adjust existing fees to cover the costs of administering the program as provided for in 40-1-50(D).

71-8304.4. This new section defines the requirements for company licensing and permits for employees handling LP Gas and the responsibilities of the office of State Fire Marshal for administering the program.

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Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to Section 1-23-110(b) of the 1976 Code of Laws of South Carolina, as amended, such hearing will be conducted at the Administrative Law Court at 9:00 a.m. on Wednesday, June 11, 2008. Written comments may be directed to John Reich, State Fire Marshal, Division of Fire And Life Safety, Department of Labor, Licensing and Regulation, 141 Monticello Trail, Columbia, South Carolina 29203, no later than 5:00 p.m., Wednesday, May 28, 2008.

Preliminary Fiscal Impact Statement:

There will be no additional cost incurred by the State or any political subdivision.

Statement of Need and Reasonableness:

The Office of State Fire Marshal has determined that there is a need to update the regulation to remove awkward language, archaic references, and use a standardized format that will be used for all subarticles enforced by the State Fire Marshal's Office. The changes to the regulations will make the regulations easier to read and apply by the public. The regulations will also update adopted codes and standards to the current editions that reflect current and new technologies.

DESCRIPTION OF REGULATION:

Purpose: To provide reasonable protection of the health, welfare, and safety of the public and LP Gas operators from the hazards associated with the handling, use, transportation, and storage of Liquefied Petroleum Gas.

Legal Authority: Statutory Authority: 1976 Code Section 40-82-70.

Plan for Implementation: These regulations will take effect upon approval by the General Assembly and upon publication in the State Register. LLR will notify licensees of the regulations and post the regulations on the agency's Web site. The State Fire Marshal's Office will also notify customers through other written and oral communications.

DETERMINATION OF NEED AND REASONABLENESS BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

By updating these regulations the licensing requirements are conformed with Title 40 Chapter 1. This update also permits the use of new technologies in the LP Gas industry and provides consistent codes enforcement between the state and local jurisdictions.

DETERMINATION OF COSTS AND BENEFITS:

There will be no additional cost incurred by the State or its political subdivisions.

UNCERTAINTIES OF ESTIMATES:

There are no uncertainties of estimates concerning these regulations.

EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH:

This regulation will have no effect on the environment. The public health of this State will be enhanced by conforming to current national code and standards.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

These regulations will have no detrimental effect on the environment and public health of this State if the regulations are not implemented. These regulations do comply with current national standards.

Statement of Rationale:

The guidelines for Liquefied Petroleum Gas are amended to conform to national guidelines and ensure public safety.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

Document No. 3217
DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF STATE FIRE MARSHAL
CHAPTER 71
Statutory Authority: 1976 Code Sections 23-9-40 and 23-9-45

71-8303. Portable Fire Extinguishers and Fixed Fire Extinguishing Systems

Preamble:

The Office of State Fire Marshal is proposing to delete 71-8303 Service Stations and replace it with 71-8303 Portable Fire Extinguishers and Fixed Fire Extinguishing Systems. The new SCRR 71-8303 will use a standardized format, simplify wording, remove obsolete language and requirements, and provides for the use of new technologies.

Section by Section Discussion:

The following is a section by section discussion of the amendments proposed by the Office of State Fire Marshal:

Regulation 71-8303 Service Stations - Delete in its entirety and replace with new text and title 71-8303 Portable Fire Extinguishers and Fixed Fire Extinguishing Systems.

71-8303.1. This new section provides the purpose, intent, and applicability for the 71-8303 series of regulations.

71-8303.2. This new section refers the user to the adopted codes and standards in SCRR 71-8300.

71-8303.3. This new section allows the State Fire Marshal to adjust existing fees to cover the costs of administering the program as provided for in 40-1-50(D).

71-8303.4.A. Formerly Section 71-8307.12. The section was updated to include additional liability insurance; posting of licenses; and two year renewal cycle for licenses and permits instead of annual renewals.

71-8303.4.B. Formerly Sections 71-8307.9 and 71-8307.12. The section was revised to include picture identification and a waiting period for customers who fail an exam before retaking it again.

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71-8303.4.C. Formerly Sections 71-8307.4 and 71-8307.5. The section was revised to clarify requirements and make it easier to understand for the customer.

71-8303.4.D. Formerly Section 71-8300.11(F). The installation of smoke detectors was revised to the currently adopted nationally recognized standard. The use of portable fuel fired heating devices was restricted in accordance with the current codes.

71-8303.4.E. Formerly Sections 71-8307.4 and 71-8307.5. The section was revised to clarify requirements and make it easier to understand for the customer.

71-8303.4.F. Formerly Section 71-8307.4. The section was revised to clarify requirements and make it easier to understand for the customer.

71-8303.4.G. Formerly Section 71-8307.5(E). This section better clarifies the requirements from the previous section.

71-8303.4.H. Formerly Section 71-8307.5(F).

71-8303.5. Formerly Section 71-8307.12. The section was reworded to simplify the requirements and clarify the language for the customer.

71-8303.6. Formerly Section 71-8307.14. The section was reworded to clarify requirements and make it easier to understand for the customer.

71-8303.7. Formerly Section 71-8307.6. The section was revised to a DOT refresher every three years for those firms performing DOT inspections.

71-8303.8. Formerly Section 71-8307.8. The section was reworded to clarify requirements and make it easier to understand for the customer.

71-8303.9. Formerly Section 71-8307.10. The section was updated to clarify existing requirements, provide for the use of new technologies, and make it easier for the customer to use.

71-8303.10. Formerly Section 71-8307.13. The section was revised to clarify requirements and make it more customer friendly.

71-8303.11. Formerly Section 71-8307.13. The section was revised to clarify the legal requirements.

71-8303.12. Formerly Section 71-8307.13. The section was revised to clarify the legal requirements and make it easier to understand for the customer.

71-8303.13. Formerly Section 71-8307.13. The section was revised to clarify the legal requirements and make it easier to understand for the customer.

71-8303.14. Formerly Section 71-8307.13. The section was revised to clarify the legal requirements and make it easier to understand for the customer.

71-8303.15. Formerly Section 71-8307.15.

71-8303.16. Formerly Section 71-8307.16. The section was revised to clarify the requirements and make it easier to understand.

71-8303.17. Formerly Section 71-8307.17.

71-8303.18. Formerly Section 71-8307.18.

Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to Section 1-23-110(b) of the 1976 Code of Laws of South Carolina, as amended, such hearing will be conducted at the Administrative Law Court at 3:00 p.m. on Tuesday, June 10, 2008. Written comments may be directed to John Reich, State Fire Marshal, Division of Fire And Life Safety, Department of Labor, Licensing and Regulation, 141 Monticello Trail, Columbia, South Carolina 29203, no later than 5:00 p.m., Tuesday, May 27, 2008.

Preliminary Fiscal Impact Statement:

There will be no additional cost incurred by the State or any political subdivision.

Statement of Need and Reasonableness:

The Office of State Fire Marshal has determined that there is a need to update the regulation to remove awkward language, archaic references, and use a standardized format that will be used for all subarticles enforced by the State Fire Marshal's Office. The changes to the regulations will make the regulations easier to read and apply by the public. The regulations will also update adopted codes and standards to the current editions that reflect current and new technologies.

DESCRIPTION OF REGULATION:

Purpose: To amend the regulations in conformance with the International Codes and to remove archaic language and regulations.

Legal Authority: Statutory Authority: 1976 Code Sections 23-9-40(c) and 23-9-45.

Plan for Implementation: These regulations will take effect upon approval by the General Assembly and upon publication in the State Register. LLR will notify licensees of the regulations and post the regulations on the agency's Web site. The State Fire Marshal's Office will also notify customers through other written and oral communications.

DETERMINATION OF NEED AND REASONABLENESS BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

These regulations, as amended, permit the use of new building construction technologies and provide consistent codes enforcement between the state and local jurisdictions.

DETERMINATION OF COSTS AND BENEFITS:

There will be no additional cost incurred by the State or its political subdivisions.

UNCERTAINTIES OF ESTIMATES:

There are no uncertainties of estimates concerning these regulations.

EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH:

This regulation will have no effect on the environment. The public health of this State will be enhanced by conforming to the guidelines of the national standards.

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DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

These regulations will have no detrimental effect on the environment and public health of this State if the regulations are not implemented in this State.

Statement of Rationale:

The guidelines for Portable Fire Extinguishers and Fixed Fire Extinguishing Systems are amended to conform with national guidelines in order to ensure public safety.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

Document No. 3221
STATE LAW ENFORCEMENT DIVISION
CHAPTER 73
Statutory Authority: 1976 Code Section 16-8-330

73-500 through 73-560. Statewide Criminal Gang Database

Preamble:

The South Carolina Law Enforcement Division (SLED) proposes to create a new regulation, entitled 73-500, Statewide Criminal Gang Database. South Carolina Act No. 82, passed by the General Assembly in 2007, and codified in Section 16-8-330 of the South Carolina 1976 Code of Laws, requires SLED to develop and manage a statewide criminal gang database to facilitate the exchange of information between federal, state, county, and municipal law enforcement agencies, and to promulgate regulations regarding this database.

Discussion of Proposed New Regulation

SECTION CITATION:

SUMMARY OF SECTION:

Section 500.

This section was created to describe the background and scope of the new regulation.

Section 510.

This section was created to describe the responsibilities of the South Carolina Law Enforcement Division regarding this new regulation.

Section 520.

This section was created to describe the responsibilities of participating law enforcement agencies regarding this new regulation.

Section 530.

This section was created to describe the criteria for access to the Statewide Criminal Gang Database.

Section 540.

This section was created to describe the criteria for entry of information into the Statewide Criminal Gang Database.

Section 550. This section was created to describe the criteria for designation as an active member of a criminal gang.

Section 560. This section was created to describe the penalties for misuse of the statewide criminal gang database.

Notice of Public Hearing and Opportunity for Public Comment:

Should a hearing be requested pursuant to Section 1-23-110(A)(3) of the 1976 Code of Laws, as amended, such hearing will be conducted at the Administrative Law Court at 1:00 p.m. on May 28, 2008.

Interested persons are invited to submit written comments on the proposed amendments by writing to Captain Roger Owens, South Carolina Law Enforcement Division, Post Office Box 21398, Columbia, South Carolina, 29221-1398. Comments must be received no later than 4:00 p.m. on May 27, 2008. Comments received will be considered by staff in formulating the final proposed regulations.

Preliminary Fiscal Impact Statement:

A review of the Criminal Gang Prevention Act by SLED indicated a need for one (1.00) new position and support costs to train and maintain the Violent Gang and Terrorists Organization File and also manage the statewide criminal gang database. This represented a recurring cost to the General Fund of the State of approximately \$50,399. There was also a one-time cost of \$3,400 for furniture and office equipment for the new position. These funds were provided to SLED in the FY2007-08 Appropriation Bill.

Further review indicated the need for approximately \$395,500 to construct the Statewide Criminal Gang Database. Funding for this project was provided in 2007 by grant funds received from the United States Department of Homeland Security.

Statement of Need and Reasonableness:

DESCRIPTION OF REGULATION: 73-500. Statewide Criminal Gang Database

Purpose: The purpose of R.73-500 is to fulfill the requirements of South Carolina Act No. 82, passed by the General Assembly in 2007, and codified in Section 16-8-330 of the South Carolina 1976 Code of Laws regarding the Statewide Criminal Gang Database.

Legal Authority: The legal authority for R.73-500 is South Carolina Act No. 82, passed by the General Assembly in 2007, and codified in Section 16-8-330 of the South Carolina 1976 Code of Laws.

Plan for Implementation: The proposed regulation will take effect upon approval by the General Assembly and publication in the State Register.

DETERMINATION OF NEED AND REASONABLENESS OF THE PROPOSED REGULATION BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

R.73-500 is required by South Carolina Act No. 82, as passed by the General Assembly in 2007, and codified in Section 16-8-330 of the South Carolina 1976 Code of Laws.

DETERMINATION OF COSTS AND BENEFITS:

There are no anticipated new costs associated with the implementation of this regulation for the state or any political subdivisions. However, unforeseen minimal costs may be required by state or political subdivisions if current incident reporting requirements are modified.

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There will be a benefit to public safety efforts in South Carolina by the facilitation of information exchange between municipal, county, state, and federal law enforcement agencies.

UNCERTAINTIES OF ESTIMATES:

None.

EFFECT ON ENVIRONMENT AND PUBLIC HEALTH:

No effect on the environment is anticipated. Implementation will substantially increase the facilitation of information exchange between municipal, county, state, and federal law enforcement agencies, and will benefit public safety efforts in South Carolina.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

Not implementing this regulation will substantially reduce the facilitation of information exchange between municipal, county, state, and federal law enforcement agencies in South Carolina, and could substantially hinder the ability of these agencies to address criminal gang issues.

Statement of Rationale:

This regulation is promulgated in response to the requirements set forth by Act 82 passed by the S.C. General Assembly in 2007. It requires SLED to develop and manage a statewide criminal gang database to facilitate the exchange of information between municipal, county, state, and federal law enforcement agencies, and to promulgate regulations regarding this database.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

Document No. 3222
PUBLIC SERVICE COMMISSION
 CHAPTER 103
 Statutory Authority: 1976 Code Section 58-3-140

- 103-133(7). PC&N (Stretcher Vans)
- 103-514. Interruption of Service/Violation of Rules
- 103-714. Interruption of Service
- 103-830.1. Service Between Parties of Record
- 103-831. Computation of Time
- 103-859. Emergency Procedures

Preamble:

The Public Service Commission of South Carolina (Commission) proposes to create new regulations governing stretcher vans and electronic service of documents between parties of record. Further, the Commission seeks to amend its water and wastewater regulations governing interruptions of service to include references to Commission regulations and Department of Health and Environmental Control (DHEC) regulations that result in the issuance of a DHEC order, to make stylistic changes and to include water and wastewater utilities' advisories. Additionally, the Commission seeks to amend its regulations governing computation of time to exclude Petitions for Rehearing and Reconsideration and to add references to the Commission Staff in its Emergency Procedures regulation.

Section-by-Section Discussion

103-133(7). PC&N (Stretcher Vans). This is a new regulation defining stretcher vans and governing driver and assistant driver qualifications/requirements, vehicle requirements, and limitations and conditions of service.

103-514. Interruption of Service/Violation of Rules. This regulation is amended to cover wastewater utilities' violations of Commission and DHEC regulations; to make stylistic changes; and to require advisories to be filed with the Office of Regulatory Staff (ORS).

103-714. Interruption of Service. This regulation is amended to cover water utilities' violations of Commission and DHEC regulations; to make stylistic changes; and to require advisories to be filed with the Office of Regulatory Staff (ORS).

103-830.1. Service between Parties of Record. This is a new regulation providing for electronic service of documents between parties of record in a docket.

103-831. Computation of Time. This regulation is amended to state that it does not apply to Petitions for Rehearing or Reconsideration.

103-859. Emergency Procedures. This regulation is amended to add the Commission Staff.

Notice of Public Hearing and Opportunity for Public Comment:

Interested persons may submit written comments to the Public Service Commission, Docketing Department, 101 Executive Center Drive, Columbia, South Carolina 29210. Please reference Docket Number 2007-445-A. To be considered, comments must be received no later than 4:45 p.m. on May 30, 2008. Interested members of the public and the regulated community are invited to make oral or written comments on the proposed regulations at a public hearing to be conducted by the Public Service Commission on Wednesday, June 25, 2008, at 10:30 a.m. in the Commission's Hearing Room, 101 Executive Center Drive, Columbia, South Carolina 29210.

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Preliminary Fiscal Impact Statement:

There will be no increased costs to the State or its political subdivisions.

Statement of Need and Reasonableness:

This statement of need and reasonableness was determined pursuant to S.C. Code Ann. Section 1-23-115(C)(1) through (3) and (9) through (11).

DESCRIPTION OF REGULATIONS:

- 103-133(7). PC&N (Stretcher Vans).
- 103-514. Interruption of Service/Violation of Rules.
- 103-714. Interruption of Service.
- 103-830.1. Service between Parties of Record.
- 103-831. Computation of Time.
- 103-859. Emergency Procedures.

Purpose: The purpose of the proposed regulation governing stretcher vans is to govern non-emergency transportation provided to a person who cannot be transported in a taxi or wheelchair van due to convalescence or being non-ambulatory. The additional provisions of this regulation state driver qualifications/requirements, vehicle requirements and the limitations and conditions of service by stretcher vans. Next, the amendments of the regulations governing interruption of service by water and wastewater utilities will provide the Commission and the ORS with notice of violations of DHEC regulations which result in the issuance of a DHEC order. Further, the ORS will be provided notice of water and wastewater advisories affecting ten or more customers within twenty-four hours of issuance of the advisories. Next, the South Carolina Code governs the time period for filing Petitions for Reconsideration or Rehearing; the amended regulation clarifies that the Commission's regulation governing computation of time does not apply to Petitions for Rehearing or Reconsideration. Regarding the regulation governing emergency procedures, this regulation is being amended to include the Commission Staff and the ORS to allow either the Commission Staff or the ORS to request that a Commissioner issue an Order on behalf of the Commission restraining or enjoining a utility from disconnecting service or requiring the utility to maintain the status quo with its customer(s) until further Order of the Commission. Finally, the new regulation governing electronic service of documents between parties of record is created to provide parties of record another mode of service between each other.

Legal Authority: S.C. Code Ann. Section 58-3-140 (Supp. 2007)

Plan for Implementation: The proposed regulation will take effect upon approval by the General Assembly and publication in the State Register.

DETERMINATION OF NEED AND REASONABLENESS OF THE PROPOSED REGULATION BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

The addition of a regulation governing stretcher vans is necessary because the regulation defines a stretcher van and the scope of its operation. Further, the regulation will provide guidance to operators/owners of stretcher vans regarding driver and assistant driver qualifications, vehicle requirements, and limitations and conditions of service of stretcher vans. The benefits of a regulation governing the operation of stretcher vans include oversight of public welfare and safety. As a regulator of at least the rates and services of water and wastewater utilities in South Carolina, a benefit exists by the Commission being made aware of violations of DHEC regulations which result in the issuance of a DHEC order. Further, the ORS is to be notified of water and wastewater utilities' advisories affecting ten or more customers. The Commission's regulation governing computation of time is needed to clarify that it does not apply to Petitions for Rehearing or Reconsideration; these Petitions are governed by South Carolina statutes. The amendment to the emergency procedures

regulation is needed to allow the Commission Staff and the ORS to request that a commissioner issue an order instructing a utility not to disconnect a customer's service; this regulation should be amended to cover both agencies, as one benefit will include the expeditious processing of notice of disconnection or probable disconnection of a utility service. Finally, the parties in a docket can utilize another means of serving each other with Commission-related filings; the amendment to this regulation will be beneficial by adding another mode of service.

DETERMINATION OF COSTS AND BENEFITS:

Although costs related to creating Regulations 103-133(7), 103-514, 103-714, 103-831, 103-859, and 103-830.1 are minimal, the benefits include the promulgation of regulations that govern current unregulated services; provide the Commission and the ORS with additional information regarding jurisdictional utilities; provide clarification so that the regulations do not conflict with South Carolina statutes; allow the Commission Staff and the ORS to request that the Commission issue an Order prohibiting a utility from disconnecting service to a customer; and allow for electronic service between parties of record.

UNCERTAINTIES OF ESTIMATES:

None.

EFFECT ON ENVIRONMENT AND PUBLIC HEALTH:

None.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

The regulations will have no detrimental effect on the environment or public health if the regulation is not implemented.

Statement of Rationale:

The purpose of 26 S.C. Code Ann. Regs. 103-133(7), 103-514, 103-714, 103-831, 103-859, and 103-830.1 is to create a regulation that governs stretcher vans; to provide, inter alia, that the Commission and the ORS are to be notified of violations of DHEC regulations that result in the issuance of a DHEC order; to exclude Petitions for Rehearing and Reconsideration from the regulation governing computation of time, as these Petitions are governed by statutes; to allow the ORS and the Commission Staff to request the Commission to issue an order prohibiting the disconnection of service; and to allow for electronic service of pleadings between parties. There was no scientific or technical basis relied upon in the development of this regulation.

Text:

The full text of this regulation is available on the South Carolina General Assembly Home Page: <http://www.scstatehouse.net/regnsrch.htm>. Full text may also be obtained from the promulgating agency.

36 EMERGENCY REGULATIONS

Filed: March 31, 2008 3:00 pm

Document No. 3211
DEPARTMENT OF NATURAL RESOURCES
CHAPTER 123

Statutory Authority: 1976 Code Sections 50-1-200, 50-1-220, 50-11-105, 50-11-520, 50-11-530, 50-11-2200 and 50-11-2210

123-40. Wildlife Management Area Regulations

123-51. Turkey Hunting Rules and Seasons

Emergency Situation:

These emergency regulations amend and supersede South Carolina Department of Natural Resources Regulation Numbers 123-40 and 123-51. These regulations set open and closed seasons, bag limits and methods of taking wildlife; define special use restrictions related to hunting and methods for taking wildlife on Wildlife Management Areas. Because the turkey season begins on March 15 in some areas it is necessary to file these regulations as emergency.

Text:

HUNTING IN WILDLIFE MANAGEMENT AREAS

123-40. Wildlife Management Area Regulations.

1.1 The following regulations amend South Carolina Department of Natural Resources regulation Numbers 123-40 and 123-51.

1.2. The regulations governing hunting including prescribed schedules and seasons, methods of hunting and taking wildlife, and bag limits for Wildlife Management Areas are as follows:

VEHICLES

6.1 On all WMA lands, no hunter may shoot from a vehicle except that mobility impaired hunters may take game from any stationary motor driven land conveyance or trailer which is operated in compliance with these rules. For purposes of this regulation, mobility impaired means individuals who are permanently confined to a wheelchair, permanently require the use of two crutches, permanently require the use of a walker to walk, or persons with single or double leg amputations. Written confirmation of permanent impairment is required from a physician or qualifying agency.

SUBARTICLE 3 OTHER BIG GAME

123-51. Turkey Hunting Rules and Seasons

1. Total limit of 5 turkey statewide per person, 2 per day gobblers only, unless otherwise specified. Total statewide and county bag limits include turkeys harvested on Wildlife Management Areas (WMAs). Small unnamed WMAs in counties indicated are open for turkey hunting. Turkey seasons and limits on DNR-owned lands and Wildlife Management Area lands are as follows:

AREA	DATES	LIMIT	Other Restrictions
Webb-Palachucola WMA's	April 1 - May 1	2	All hunters must pick up and return data cards at kiosk and display hangtags on vehicles.
Woodbury WMA	April 1 - May 1	2	Wed. - Sat. Only
Hamilton Ridge WMA	April 1 - May 1	2	All hunters must pick up and return data cards at kiosk and display hangtags on vehicles.
Aiken Gopher Tortoise HP WMA	April 1 - May 1	2	Wed. Only.
Oak Lea WMA	April 1 - May 1	1	All hunters must pick up and return data cards at kiosk and display hangtags on vehicles.

Statement of Need and Reasonableness:

Periodically additional lands are made available to the public through the Wildlife Management Area Program. Since existing regulations only apply to specific wildlife management areas, new regulations must be filed to establish seasons, bag limits and methods of hunting and taking of wildlife on these new WMAs as well as expanding use opportunities on existing WMAs. Amendments are needed to allow additional opportunity. Because some hunts begin on March 15, it is necessary to file these regulations as emergency so they take effect immediately.

Fiscal Impact Statement:

This amendment of Regulation 123.51 will result in increased public hunting opportunities that should generate additional State revenue through license sales. In addition, the local economy should benefit from sales of hunting supplies, food and overnight accommodations. Sales taxes on these items will also directly benefit government.

38 FINAL REGULATIONS

Document No. 3179
BUDGET AND CONTROL BOARD
OFFICE OF RESEARCH AND STATISTICS
CHAPTER 19
Statutory Authority: 1976 Code Section 44-6-170

19-810. Medical Record Extract Information
19-820B(1). Penalties for Failure to Meet Requirements

Synopsis:

The State Budget and Control Board, Office of Research and Statistics has amended the regulations that provide for establishing procedures and standards for reporting health care data from South Carolina hospitals requiring a Certificate of Need. The amendments will update the standards by which South Carolina hospitals submit health care data, requiring a monthly submission of data as opposed to a quarterly submission.

Section 19-810. Medical Record Extract Information addresses the data elements to be reported using The Principles and Protocol for the Release of Health Care Data, the electronic submission of data to the Office of Research and Statistics, establishes completeness, accuracy and timeliness criteria for data reporting, and a procedure for changing health care submissions to the Office of Research and Statistics. The amendment requires that data submission by hospitals must be done on a monthly basis; all references to a quarter of the calendar year have been changed to a month of the calendar year.

Section 19-820B(1). Penalties for Failure to Meet Requirements establishes the process and penalties that may be assessed if a healthcare facility fails to meet the reporting requirements of these regulations. All references to a quarter of the calendar year have been changed to a month of the calendar year.

Instructions: Replace R.19-810 Medical Record Abstract Information and R.19-820B(1).

Replace in its entirety R.19-810 with the following amendment.

Text:

19-810. Medical Record Extract Information.

A. The data elements will be specified by the Data Oversight Council through Principles and Protocol for the Release of Health Care Data. The Principles and Protocol for the Release of Health Care Data shall allow for review and input by interested parties on the data elements to be reported taking into consideration all applicable federal, state laws and regulations. The Data Oversight Council will rely, to the extent possible, on data elements currently being reported among health care entities.

B. Patient records submitted shall be in accordance with, but not limited to the specifications, promulgated by the Secretary of the Department of Health and Human Services for the United States of America in accordance with the authority to designate health care codes and transactions under the Health Insurance Portability and Accountability Law of 1996, as well as under the specifications of the Director of the Centers for Medicare and Medicaid Services and as specified in the Medically Indigent Assistance Act for the State of South Carolina.

C. Records shall be submitted directly to the Office of Research and Statistics on magnetic media or via some other system made available by the Office of Research and Statistics in a format to be specified by the Office of Research and Statistics and provided to hospitals one hundred twenty days prior to implementation of that format.

D. One record for each inpatient discharged during the calendar month (including newborns) shall be submitted. Hospitals shall submit at least ninety percent of their monthly discharge records within forty-five days after the close of the month with exception made for conditions beyond the hospital's control. Hospitals shall submit one hundred percent of their discharge records within forty-five days after the close of the following month with exception made for conditions beyond the hospital's control.

E. Reporting of required items shall meet ninety-nine percent item completeness.

F. Completed items shall meet ninety-nine and five tenths percent accuracy as determined by edit specifications set by the Office of Research and Statistics.

G. Hospitals changing hardware/software or processors, which would necessitate a change in tape submission procedure, shall:

(1) Notify the Office of Research and Statistics in writing at least sixty days prior to change and submit a test tape meeting completeness and accuracy requirements within one hundred twenty days after the change is accomplished; and

(2) Make provisions for continued reporting of data during change/test period so that data submission complies with R.19-810C.

H. To insure complete reporting, each hospital shall submit monthly, in writing, to the Office of Research and Statistics within forty-five days of the close of the month, a report of the number of inpatients discharged during the month (including newborns) and the number of inpatient days corresponding to those discharges. The hospital shall report using a format specified by the Office of Research and Statistics and provided to hospitals thirty days prior to implementation of the format.

I. The hospital's designee shall have access to the hospital's data elements in section R.19-810A.

Replace R.19-820B(1) with the following amendment.

(1) First occurrence: the Office of Research and Statistics shall notify the hospital Chief Executive Officer by certified letter of failure to comply. The hospital Chief Executive Officer shall reply in writing as to the reasons for non-compliance and provide a summary of measures implemented to insure future compliance. Full compliance shall occur within two subsequent monthly submissions;

Fiscal Impact Statement:

The State Budget and Control Board, Office of Research and Statistics estimate that no additional costs will be incurred by the State of South Carolina or its political subdivisions.

Statement of Rationale:

Accuracy, completeness and timeliness of health care data are essential to ensure that submitted data reflect the care provided to patients. Requiring a monthly submission of health care data will improve the accuracy of data and shorten the time it takes the Office of Research and Statistics to finalize data. The more current the data is, the more useful it is to South Carolina's healthcare facilities and researchers.

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Resubmitted: February 4, 2008

Document No. 3111
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
CHAPTER 30

Statutory Authority: 1976 Code Sections 48-39-10 et seq.

30-1, 30-5, 30-6, 30-7, 30-8, 30-12, 30-14 and 30-15. Permitting in the Critical Areas of the Coastal Zone

Synopsis:

These regulatory changes will amend the Department's Coastal Division Regulations 30-1, 30-5, 30-6, 30-7, 30-8, 30-12, 30-14 and 30-15 related to permitting in the critical areas of the coastal zone. These changes will amend definitions, specify the Department's policies regarding construction of docks and piers, and correct technical errors in language and codification for the overall improvement of the regulations. The appeals procedure will also be revised to concur with S.C. Act 387 (2006). The changes will provide more clarification to the regulation, enabling Department staff to administer more effectively the regulatory program of the Coastal Division.

Discussion of Changes requested by the House Agriculture, Natural Resources, and Environmental Affairs Committee requested by letter dated January 29, 2008.

SECTION CITATION AND CHANGE

30-1.D(48)

Modify language regarding size of docks allowed when considering Special Geographic Circumstances

30-12.A(1)(n)

Modify language regarding rare geographic circumstances when navigable creeks can be bridged.

30-12.A(1)(o)

Delete entire subsection regarding floats resting on bottom.

30-12.A(1)(p)

Re-number subsection item to existing codification of 30-12.A(1)(o) for proper codification order and modify language to delete reference to local requirements.

30-12.A(1)(o)(i)

Modify language by deleting "community".

30-12.A(1)(o)(iii)

Add new subsection item describing the eligibility criteria for a community dock.

30-12.A(1)(p)(iii)

Re-number subsection item to 30-12.A(1)(o)(iv) for proper codification order and add language to clarify where criteria apply.

30-12.A(1)(q)

Renumber subsection item to existing codification of 30-12.A(1)(p) for proper codification order. No other changes.

30-12.A(1)(r)

Re-number subsection item to existing codification of 30-12.A(1)(q) for proper codification order. No other changes.

30-12.A(1)(s)

Re-number subsection item to its former codification of 30-12.A(1) (r) for proper codification order. No other changes.

30-12.A(2)(c)(vi)

Modify language to change size allowed and criteria considered for joint use docks.

Section-by-Section Discussion of Amendment of S.C. Department of Health and Environmental Control Coastal Regulations submitted originally to the General Assembly for review by the Department of Health and Environmental Control on January 8, 2008:

These revisions will (1) add definition for ‘boat storage structure’ and amend definition of ‘special geographic circumstances’, (2) modify criteria for the evaluation of permits for docks and piers (3) correct technical errors in language and codification, and (4) revise the Department’s appeal procedure to concur with S.C. Act 387 of 2006.

SECTION CITATION AND CHANGE:

30-1.D

Add definition, in proper alphanumeric order, for ‘boat storage structure’.

30-1.D(19)

Renumber section to (20) and correct section number referenced to 30-15.H.

30-1.D(47)

Renumber section to (48) and add language describing the additional square footage considered under ‘special geographic circumstances’.

30-5.A(1)

Change section number referenced within the subsection to R.30-15.H.

30-6

Rename section heading and modify language to concur with Act 387 (2006).

30-7

Delete to concur with Act 387 (2006) and reserve.

30-8.A(2)

Modify language to concur with Act 387 (2006).

30-8.F(4)

Modify language to concur with Act 387 (2006).

30-12.A(1)(a)

Add language limiting docks and piers to parcels and lots that are waterfront.

30-12.A(1)(n)

Modify by moving fourth sentence in paragraph to second sentence for clarity. Delete fifth sentence and move to new subsection item 30-12.A(1)(o) to avoid confusion.

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30-12.A(1)(o)

Replace sentence deleted from 30-12.A(1)(n) as a new subsection item.

30-12.A(1)(o)

Re-number subsection item to (p) for proper codification order.

30-12.A(1)(p)

Re-number subsection item to (q) for proper codification order.

30-12.A(1)(q)

Re-number subsection item to (r) for proper codification order.

30-12.A(1)(r)

Re-number subsection item to (s) for proper codification order.

30-12.A(2)(c)

Delete third and fourth sentences, add language clarifying that the subsection pertains to size and use of pierheads and floating docks based on creek widths, modify term to correct for consistency of language, and add 'catwalks' to exclusions for allowable dock square footage.

30-12.A(2)(c)(vi)

Add new subpart item describing the allowable square footage for joint use docks.

30-12.A(2)(c)(vi)

Re-number subpart to (vii) for proper codification order.

30-12.A(2)(c)(vii)

Re-number subpart to (viii) for proper codification order.

30-12.A(2)(c)(viii)

Re-number subpart to (ix) for proper codification order.

30-12.A(2)(c)(ix)

Re-number subpart to (x) for proper codification order, and replace terms describing types of boat storage structures.

30-12.A(2)(e)

Replace terms describing the types of boat storage structures allowed on docking facilities.

30-12.A(2)(e)(i)

Add language describing the number of boat storage structures allowed based on creek size.

30-12.A(2)(e)(iii)

Modify term to correct for consistency in language.

30-12.E(1)(a)

Change section number referenced within the subsection to R.30-12.E(3).

30-12.E(1)(h)

Change subsection numbers referenced within subsection to R.30-12.E(1)(f) and (g).

30-14.F(3)

Delete section to concur with Act 387 (2006).

30-15.G

Re-number sections for proper codification order, and change section numbers referenced.

Instructions: Amend Regulations 30-1, 30-5, 30-6, 30-7, 30-8, 30-12, 30-14 and 30-15 pursuant to each individual instruction provided below with the text of the amendments.

Text:

Amend R.30-1.D. Definitions by inserting the following definition in proper alphanumeric order and renumbering all following definitions:

(8) Boat Storage Structure – any structure associated with a dock that is used for the purpose of storing a boat out of the water and may include, but is not limited to, boatlifts, davits, and any other type of floating vessel platform. A boat storage structure is not a fixed pierhead, walkway, ramp, or gangway.

Amend R.30-1.D. Definitions by modifying the following definitions and renumbering for proper alphanumeric order:

(20) Emergency Orders - orders issued by an appointed official of a county or municipality or of the state acting to protect the public health and safety, upon written notification to the Department. However, with regard to the beach/dune critical area, only the use of sand bags, sand scraping, or renourishment, or a combination of them, in accordance with 30-15.H, is allowed pursuant to emergency orders.

(48) Special Geographic Circumstances - physical characteristics and land uses of surrounding uplands and waters may warrant additional consideration toward dock sizes. Special Geographic Circumstances identified by OCRM include: tidal ranges of greater than 6 feet; lots with greater than 500 feet of water frontage; and no potential access via dockage from the opposite side of the creek. At the discretion of Department staff, one or more of these circumstances may be applied to dock applications, which may allow up to an additional fifty percent (50%) to what is allowed in 30-12.A(2)(c).

Replace 30-5.A(1) to read:

(1) The accomplishment of emergency orders of an appointed official of a county or municipality or of the state acting to protect the public health and safety, upon written notification to the Department. However, with regard to the beach/dune critical area, only the use of sandbags, sand scraping, or renourishment, or a combination of them is allowed, in accordance with R.30-5.B and R.30-15.H.

Replace 30-6 to read:

30-6. Appeals of Permit Decisions.

A.A Department decision involving the issuance, denial, suspension, or revocation of a permit or certification may be appealed by an affected person with standing pursuant to applicable law, including S.C. Code Title 44, Chapter 1; Title 1, Chapter 23; and Title 48, Chapter 39.

B. Public Notice: At the same time as the Department sends the Agency Information Sheet to the Administrative Law Court, the Department shall notify in writing all interested persons that have submitted written comments. This notice shall, to the extent that the information is available, indicate the names of all parties including the agency, the petitioner(s) and the permittee(s); the initial action of the agency; and the nature and extent of the contested case.

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Delete 30-7 and reserve:

30-7. (Reserved).

Replace 30-8.A(2) to read:

(2) The permittee must respond in writing to the written allegations of the Department within 20 days of receipt of the Notice of Intent to Revoke. Failure to timely respond shall result in a Default Order being issued by the Department. In the event that the permittee agrees that there are grounds for revocation then the Department shall have the authority to issue an order revoking the permit, and take such other action as may be made legally authorized pursuant to the Act.

Replace 30-8.F(4) to read:

(4) Any persons to whom an order is issued may appeal it pursuant to applicable law, including S.C. Code Title 44, Chapter 1; Title 1, Chapter 23; and Title 48, Chapter 39.

Replace 30-12.A(1)(a), 30-12.A(1)(n) and 30-12.A(1)(o). Paragraph 30-12.A introductory and subsection items 30-12.A(1)(b), (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (m), (p), (q) and (r) remain the same.

30-12.A(1)(a) Docks and piers shall be limited to one structure per parcel or lot and in all instances, parcels or lots must be waterfront as defined by 30-1.D(53), shall not restrict the reasonable navigation or public use of State lands and waters;

30-12.A(1)(n) Docks must extend to the first navigable creek, within extensions of upland property lines or corridor lines, that has a defined channel as evidenced by a significant change in grade with the surrounding marsh; or having an established history of navigational access or use. Such creeks may only be bridged/crossed when there are rare geographic circumstances, such as very close proximity of a significantly larger creek within extensions of property or corridor lines, may warrant dock extension to a creek other than the first navigable creek. A creek with an established history of navigational use may also be considered as navigable. In exceptional cases, the Department may allow an open water channel to be bridged if current access is prohibited by other man made or natural restrictions or if site-specific conditions warrant such a crossing.

30-12.A(1)(o) This section applies to lots subdivided or resubdivided after May 23, 1993.

(i) To be eligible for a private or commercial dock, a lot must have:

(a) 75 feet of frontage at the marsh edge, and

(b) 75 feet between its extended property lines at the location in the waterbody of the proposed dock.

(ii) Joint use docks will be considered for adjacent waterfront properties each of which must have:

(a) 50 feet of frontage at the marsh edge, and

(b) 50 feet between its extended property lines at the location in the waterbody of the proposed dock.

(iii) To be eligible for a community dock, a lot must have:

(a) 50 feet of frontage at the marsh edge, and

(b) 50 feet between its extended property lines at the location in the waterbody of the proposed dock.

(iv) Lots less than 50 feet wide at the marsh edge are not eligible for a dock.

(p) No docks, pierheads or other associated structures will be permitted closer than 20 feet from extended property lines with the exception of joint use docks shared by two adjoining property owners. However, the Department may allow construction closer than 20 feet or over extended property lines where there is no material harm to the policies of the Act.

(q) If a dock is destroyed, the dock may be rebuilt to its previous configuration so long as reconstruction is completed within five years of the date of the event unless there are extenuating circumstances justifying more time.

(r) In the event that a dock owner intends to change the use of a dock from the permitted use or non-permitted grandfathered use, a new permit must be obtained prior to the change in use. The change in use is based on the types of docks distinguished by these regulations.

Replace 30-12.A(2)(c) to read:

(c) The Department sets forth the following standards for size and use of pierheads and floating docks based on creek widths. Total allowable dock square footage as used in this section includes the areas of any fixed pierheads, floating docks, the area of boat storage docks, additional areas covered by a roof, and areas bounded by an unroofed boatlift, davit or similar structure; and excludes walkways, catwalks, ramps, mooring buoys, and mooring piles. For purposes of determining creek width, if marsh vegetation does not exist, the Department will utilize other indicators of channel width such as changes in grade and the critical area boundary. Lots in subdivisions with approved DMPs as of May 24, 2002, are exempt from R.30-12.A(2)(c)(i) and (ii) as amended on May 24, 2002. R.30-12.A(2)(c)(i) and (ii) as amended on May 24, 2002, does not apply to lots of record that existed as of May 24, 2002, until the later of July 1, 2007, or the expiration of any permit issued prior to that date.

Replace 30-12.A(2)(c)(vi) through (x) only; items (i) through (v) stay the same:

(vi) The Department will allow additional square footage for joint use docks above and beyond the size allowed for individual docks, not to exceed 2 times that allowed in subsections R.30-12.A(2)(c)(i) through (v); contingent upon the sharing of the walkway and pierhead.

(vii) Grandfathered or previously permitted fixed and floating docks which are larger than allowed in R.30-12(A)(2)(c)(ii-v) may not be enlarged.

(viii) Enclosed boathouses are prohibited.

(ix) Boats moored at docks cannot restrict the reasonable navigation or public use of State lands and waters. Under no circumstance are live-aboards allowed at private docks. Commercial activities are prohibited at private docks unless they are water-dependent and approved by the Department. Illegal use of a private dock is grounds for permit revocation.

(x) Boat storage structures will not count against the total dock square footage as outlined in 30-12.A(2)(c)(ii-vi) if the size of the structure is 8 feet by 20 feet or less. The area of any larger structure greater than 160 square feet will count against the total allowable dock square footage.

Replace 30-12.A(2)(e) to read:

(e) Boat storage structures are allowed, provided the entire docking system is limited to the minimum structure size needed to accomplish the intended use. The following standards will be used in evaluating applications for boat storage structures:

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(i) Single family docking facilities will be limited to one boat storage structure per docking facility on creeks between 20 feet and 50 feet; and a maximum of two boat storage structures will be allowed on creeks wider than 50 feet.

(ii) Hull scraping, sandblasting, painting, paint removal, and major engine repair are prohibited on lifts and davits.

(iii) Boatlifts must be open sided with no enclosures. Catwalks are allowed to provide access on one side and shall be a maximum of 3 feet wide.

Replace 30-12.E(1)(a) to read:

(a) Each applicant for a marina must submit an Operations and Maintenance Manual with the permit application. This Operations and Maintenance Manual must be in accordance with 30-12(E)(3), and approved in writing by the Department staff. The requirements for the Operations and Maintenance Manual may be modified if deemed necessary by the Department.

Replace 30-12.E(1)(h) to read:

(h) Existing permitted and grandfathered marinas as of the effective date of these regulations may be maintained and rebuilt to their pre-existing size and configuration if damaged or destroyed. However, these marinas cannot expand beyond their current footprint if such expansion violates the requirements of 30-12.E(1)(f) and (g). Marinas that do not meet the frontage and offset requirements of 30-12.E(1)(f) and (g) may expand channelward provided all other applicable Department standards are met. Additionally, at such time as these marinas expand, even when remaining within their existing footprint, a permit will be required and applicable Department standards, including 30-12.E(2) and (3) relating to operation and maintenance, must be met.

Delete 30-14.F(3).

Replace 30-15.G to read:

G. Groins. Existing groins may be reconstructed, repaired, and maintained. New groins may only be allowed on beaches that have high erosion rates with erosion threatening existing development or public parks. In addition to these requirements, new groins may be constructed and existing groins may be reconstructed only in furtherance of an on-going beach renourishment effort which meets the criteria set forth in R.30-14.G, and in accordance with the following:

(1) The applicant shall institute a monitoring program for the life of the project to measure beach profiles along the groin area and adjacent and downdrift beach areas sufficient to determine erosion/accretion rates. For the first five years of the project, the monitoring program must include, but is not necessarily limited to:

- (a) establishment of new monuments;
- (b) determination of the annual volume and transport of sand; and
- (c) annual aerial photographs.

Subsequent monitoring requirements must be based on results from the first five-year report.

(2) Groins may only be permitted after thorough analysis demonstrates that the groin will not cause a detrimental effect on adjacent or downdrift areas. The applicant shall provide a financially binding commitment, such as a performance bond or letter of credit that is reasonably estimated to cover the cost of reconstructing or removing the groin and/or restoring the affected beach through renourishment pursuant to subsection 30-15.G(3).

(3) If the monitoring program established pursuant to subsection 30-15.G(1) shows an increased erosion rate along adjacent or downdrift beaches that is attributable to a groin, the department must require either that the groin be reconfigured so that the erosion rate on the affected beach does not exceed the pre-construction rate, that the groin be removed, and/or that the beach adversely affected by the groin be restored through renourishment.

(4) Adjacent and downdrift communities and municipalities must be notified by the department of all applications for a groin project.

(5) An adjacent or downdrift property owner that claims a groin has caused or is causing an adverse impact shall notify the department of such impact. The department shall render an initial determination within sixty (60) days of such notification. Final agency action shall be rendered within twelve months of notification. An aggrieved party may appeal the decision pursuant to the Administrative Procedures Act.

(6) In an area in which new groins have been permitted, or in an area in which existing groins have been reconstructed or repaired, access along the beach from one groin compartment to another must be maintained or improved. If access is impacted or eliminated, temporary access around or over the groin must be established immediately. Within thirty days of notification from the Department, a plan to provide permanent access around or over the groin must be submitted by the entity responsible for the groin construction. This permanent access plan must be implemented within ninety days of the Department approval.

(7) The applicant must have written approval from the local government which has jurisdiction in the area where the project is proposed.

Fiscal Impact Statement:

The Department estimates no additional cost will be incurred by the state or its political subdivisions as a result of the promulgation, approval, and implementation of these amendments; therefore, no additional state funding is being requested. Existing staff and resources have been utilized in preparation of these amendments and will further be utilized in the regulatory administration resulting from the amendments.

Statement of Need and Reasonableness:

The Statement of Need and Reasonableness was determined by staff analysis pursuant to S.C. Code Ann. Section 1-23-115(C)(1)-(3) and (9)-(11):

DESCRIPTION OF REGULATION:

Regulations 30-1, 30-5, 30-6, 30-7, 30-8, 30-12, 30-14 and 30-15, South Carolina Department of Health and Environmental Control Coastal Division Regulations

Purpose: The regulatory changes will amend the Department's Coastal Division Regulations 30-1, 30-5, 30-6, 30-7, 30-8, 30-12, 30-14 and 30-15 related to permitting in the critical areas of the coastal zone. These changes will amend definitions, specify the Department's policies regarding construction of docks and piers, and correct technical errors in language and codification for the overall improvement of the regulations. The appeals procedure will also be revised to concur with Act 387 (2006). The changes will provide more clarification to the regulation, enabling Department staff to administer more effectively the regulatory program of the Coastal Division.

Legal Authority: S.C. Code Ann. Section 48-39-10 *et seq.*, Coastal Tidelands and Wetlands Act, 1976

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Plan for Implementation: The amendments will make changes to and be incorporated into R. 30-1 through 30-18 upon approval of the General Assembly, and publication in the *State Register*. The amendments will be implemented, administered, and enforced by existing staff and resources.

DETERMINATION OF NEED AND REASONABLENESS OF THE REGULATION BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

These amendments are necessary to (1) implement S.C. Code Ann. Section 48-39-130, which addresses the permitting of activities in the critical area; (2) add clarity to existing regulations; and (3) enable Department staff to administer more effectively the regulatory program of the Coastal Division.

DETERMINATION OF COSTS AND BENEFITS:

- 1) Promulgation and administration of this amendment is estimated to have minimal economic impacts to the state. Benefits to the state will include improved management of coastal resources through increased clarity of the regulations.
- 2) Promulgation and administration of this amendment is estimated to have no significant economic impacts to entities regulated or result in cost increases to the general public. Those regulated may incur some additional costs in the preparation of information required for consideration of an application for docks and piers. Public benefits will be evident in improved management of coastal resources through increased clarity of the regulations. See Fiscal Impact Statement.

UNCERTAINTIES OF ESTIMATES:

Minimal.

EFFECT ON ENVIRONMENT AND PUBLIC HEALTH:

The amendments will refine the Department's ability to manage public usage of coastal resources, and will enable the Department to provide a more effective response to those seeking permit approval for activities in the critical area of the coastal zone.

DETRIMENTAL EFFECTS ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATIONS ARE NOT IMPLEMENTED:

Non-implementation of the regulations will hinder SCDHEC/OCRM's statutory directives to manage the state's coastal environment for its citizens.

Statement of Rationale:

These revisions provide technical corrections, clarity and specificity to the existing regulations that address permitting in the critical area of the coastal zone. The revisions are based on the experience and professional judgment of the Department's staff. Additionally, revisions to the appeals procedures are required by law pursuant to S.C. Act 387 (2006). The Department's technical changes and corrections in language provide for clarification of intent and better organization of the existing regulations.

Document No. 3200
DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
CHAPTER 61

Statutory Authority: 1976 Code Sections 44-55-10 et seq.

61-58. State Primary Drinking Water Regulations

Synopsis:

This amendment applies to all public water systems that use ground water except for systems that also use surface water or ground water under the direct influence of surface water. The regulation requires source water monitoring, treatment technique requirements, and new reporting requirements. Water systems must comply with these requirements beginning December 1, 2009. These revisions will amend the State Primary Drinking Water Regulations to comply with requirements of 40 CFR Parts 141 and 142. The final Ground Water Rule was published in the November 8, 2006 Federal Register.

To maintain consistency with federal regulations, the Department has also revised the State Primary Drinking Water Regulations to reinsert inadvertently-deleted language, to update outdated references, to delete requirements that no longer apply, and make other minor additions and revisions. These corrections are being made to conform R.61-58 to federally mandated regulations promulgated from the period June 29, 1989 to November 8, 2006 pursuant to 40 CFR 141.

These amendments were promulgated to comply with federal law and are exempt from legislative review. A fiscal impact statement or a preliminary assessment report are not applicable.

Section-by-Section Discussion of Revisions

SECTION	CHANGE
R.61-58.5.C(9)(h)	Revised to correct citation.
R.61-58.5.D(1)	Revised to correct citation.
R.61-58.5.G(2)(e)(ii)	Revised to correct citation.
R.61-58.5.G(4)(c)	Added to clarify sanitary survey requirements consistent with the federal regulations.
R.61-58.5.G(6)(c)	Revised to remove outdated language, correct citations, and add language consistent with the federal regulations.
R.61-58.5.G(6)(d)	Revised to remove outdated language, correct citations, and add language consistent with the federal regulations.
R.61-58.5.G(6)(e)	Added to include monitoring requirements for E. coli
R.61-58.5.I(3)(f)	Revised to correct citations.
R.61-58.5.I(4)(a)	Revised to correct citations.
R.61-58.5.O(2)(e)	Revised to correct citations.
R.61-58.5.O(2)(i)	Revised to correct citations.

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R.61-58.5.O(2)(l)	Revised to correct citations.
R.61-58.5.O(2)(m)	Revised to correct citations.
R.61-58.5.O(2)(r)	Revised to correct citations.
R.61-58.5.R(5)	Revised to correct citation.
R.61-58.5.BB	Revised to correct citation.
R.61-58.6.B(6)	Added for consistency with federal regulations.
R.61-58.6.E(1)(a)	Revised to correct citations.
R.61-58.6.E(1)(b)	Revised to correct citations.
R.61-58.6.E(1)(c)(iii)	Revised to correct citations.
R.61-58.6.E(2)(a)	Revised to correct citations. Added to establish a new category for a tier 1 public notice
R.61-58.6.E(3)(a)	Revised to correct citations. Added to establish a new category for a tier 2 public notice.
R.61-58.6.E(3)(c)(i)(B)	Revised to correct citations.
R.61-58.6.E(3)(c)(ii)(B)	Revised to correct citations.
R.61-58.6.E(4)(a)	Revised to correct citations.
R.61-58.6.E(5)(d)(i)	Revised to correct citations.
R.61-58.6.E(5)(d)(ii)	Revised to correct citations.
Appendix A to R.61-58.6	Revised to add ground water rule violations, source water sampling violations, and change numerous footnotes and citations for consistency with federal regulations.
Endnotes to Appendix A to R.61-58.6	Revised to correct citations.
Appendix B to R.61-58.6	Revised to add health effects language for fecal indicators under the ground water rule.
Appendix C to R.61-58.6	Revised to add an acronym for the ground water rule.
R.61-58.10.C(2)(e)	Revised to correct citations.
R.61-58.10.C(2)(f)	Removed a date and language that no longer applies.
R.61-58.10.F(1)	Revised to update analytical techniques, remove language that no longer applies, and correct citations.
R.61-58.10.F(2)(f)(i)	Revised to correct citation.

R.61-58.10.H	Revised introductory title to clarify section title consistent with federal regulations.
R.61-58.10.I	Revised introductory title to clarify section title consistent with federal regulations.
R.61-58.10.J	Revised introductory title to clarify section title consistent with federal regulations.
R.61-58.12.C(4)(d)(i)	Revised to correct citation.
R.61-58.12.C(4)(d)(v)(C)	Revised to correct citation.
R.61-58.12.C(9)(c)	Revised to correct citation.
R.61-58.12.C(11)(f)	Added to establish reporting criteria for significant deficiencies and fecal indicator positive source water sampling for systems that have to comply with the ground water rule.
Appendix D to R.61-58.12	Revised to add health effects language for fecal indicators under the ground water rule.
R.61-58.13	Revised introductory title to clarify section title consistent with federal regulations.
R.61-58.13.A	Revised incorrect language.
R.61-58.13.B(1)	Revised incorrect language.
R.61-58.13.B(4)	Revised to correct citations.
R.61-58.13.C(2)(b)	Revised to reinsert inadvertently deleted language covering chlorite.
R.61-58.13.C(2)(c)	Revised to reinsert inadvertently deleted language covering bromate.
R.61-58.13.C(2)(c)(i)	Revised to reinsert inadvertently deleted language covering bromate.
R.61-58.13.C(2)(c)(ii)	Revised to correct citation.
R.61-58.13.D(4)	Revised to correct citation.
R.61-58.13.E(4)(b)(v)	Revised to correct citations.
R.61-58.13.E(4)(b)(vi)	Revised to correct citations.
R.61-58.13.E(4)(b)(vii)	Revised to correct citations.
R.61-58.13.E(4)(b)(viii)	Revised to correct citations.
R.61-58.13.F(2)(d)(i)	Revised to correct citation.
R.61-58.13.F(3)(a)	Revised to correct citation.

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R.61-58.13.F(3)(b)(iii)	Revised to correct citation.
R.61-58.13.F(3)(b)(iv)	Revised to correct citation.
R.61-58.13.F(3)(d)	Deleted codification [R.61-58.13.F(3)(d)] and renumbered it to R.61-58.13.F(4) to form new section for consistency with federal regulations.
R.61-58.14.B(2)(a)(v)	Revised to correct citations.
R.61-58.14.B(2)(b)(v)	Revised to correct citations.
R.61-58.14.B(2)(c)(v)	Revised to correct citations.
R.61-58.14.B(2)(d)(v)	Revised to correct citations.
R.61-58.14.B(2)(e)(v)	Revised to correct citations.
R.61-58.14.F(2)	Revised to correct citations.
R.61-58.14.G(2)	Revised to correct table consistent with the federal regulations.
R.61-58.16	Added to establish requirements of the Ground Water Rule.

Instructions: Amend R.61-58 pursuant to each individual instruction provided below with the text of the amendments.

Text:

Replace R.61-58.5.C(9)(h) to read:

(h) The Department may decrease the quarterly monitoring requirement to the frequencies specified in paragraphs (9)(a) and (9)(c) of this section provided it has determined that the system is reliably and consistently below the maximum contaminant level. In no case can the Department make this determination unless a groundwater system takes a minimum of two quarterly samples and a surface water system takes a minimum of four quarterly samples.

Replace R.61-58.5.D(1) to read:

(1) The following are the maximum contaminant levels for organic chemicals. The MCLs specified in R.61-58.5(D)(2) below, apply to all public water systems. The maximum contaminant level for total trihalomethanes is pursuant to Section P below.

Replace R.61-58.5.G(2)(e)(ii) to read:

(ii) The Department may waive the requirement to collect five routine samples the next month the system provides water to the public if the Department has determined why the sample was total coliform-positive and establishes that the system has corrected the problem or will correct the problem before the end of the next month the system serves water to the public. In this case, the Department shall document this decision to waive the following month's additional monitoring requirement in writing, have it approved and signed by the supervisor of the Department official who recommends such a decision, and make this document available to the EPA and public. The written documentation shall describe the specific cause of the total coliform-positive sample and what action the system has taken and/or will take to correct this problem. The Department cannot waive the requirement to collect five routine samples the next month the system provides water to the public

solely on the grounds that all repeat samples are total coliform-negative. Under this paragraph, a system shall still take at least one routine sample before the end of the next month it serves water to the public and use it to determine compliance with the MCL for total coliforms in R.61-58.5.F, unless the Department has determined that the system has corrected the contamination problem before the system took the set of repeat samples required in paragraphs (2)(a) through (d) of this section, and all repeat samples were total coliform-negative.

Add R.61-58.5.G(4)(c) to read:

(c) Sanitary surveys conducted by the Department under the provisions of 40 CFR 142.16(o)(2) may be used to meet the sanitary survey requirements of R.61-58.5.G(4).

Replace R.61-58.5.G(6)(c) to read:

(c) Analytical methods used to comply with R.61-58.5.G shall be in accordance with EPA-approved methods listed in 40 CFR 141 (11-8-06 edition).

Replace R.61-58.5.G(6)(d) to read:

(d) Water systems must conduct fecal coliform analysis in accordance with the procedure outlined in 40 CFR 141.21(f)(5) (11-8-06 edition).

Add R.61-58.5.G(6)(e) to read:

(e) Water systems must conduct *Escherichia coli* analysis in accordance with the analytical methods outlined in 40 CFR 141.21(f)(6) (11-8-06 edition).

Replace R.61-58.5.I(3)(f) to read:

(f) Systems must monitor monthly at the sampling point(s) which exceed the maximum contaminant level in R.61-58.5.H(4)(a), beginning the month after the exceedance occurs. Systems must continue monthly monitoring until the system has established, by a rolling average of three (3) monthly samples, that the MCL is being met. Systems who establish that the MCL is being met must return to quarterly monitoring until they meet the requirements set forth in paragraphs (3)(a)(i) or (3)(b)(iv) of this section.

Replace R.61-58.5.I(4)(a) to read:

(a) The Department may require more frequent monitoring than specified R.61-58.5.I(1) or (2), or may require confirmation samples at its discretion. The results of the initial and confirmation samples will be averaged for use in compliance determinations.

Replace R.61-58.5.O(2)(e) to read:

(e) If the initial monitoring for contaminants listed in Section N(2)(a) through (h) and the monitoring for the contaminants listed in Section N(2)(i) through (u) as allowed in paragraph (2)(r) of this section, has been completed by December 31, 1992, and the system did not detect any contaminant listed in Section N(2) above, then each ground and surface water system shall take one (1) sample annually beginning with the initial compliance period.

Replace R.61-58.5.O(2)(i) to read:

(i) As a condition of the waiver a groundwater system must take one (1) sample at each sampling point 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 paragraph (2)(h) of this section. Based on

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this vulnerability assessment the Department must reconfirm that the system is non-vulnerable. If the Department does not make this reconfirmation within three (3) years of the initial determination, then the waiver is invalidated and the system is required to sample annually as specified in paragraph (e) of this section.

Replace R.61-58.5.O(2)(l) to read:

(l) Systems which violate the requirements of Section N(2) above, as determined by paragraph (2)(o) of this section must monitor quarterly. After a minimum of four (4) consecutive quarterly samples which shows the system is in compliance as specified in paragraph (2)(o) of this section, the system and the Department determines that the system is reliably and consistently below the maximum contaminant level, the system may monitor at the frequency and time specified in paragraph (4)(k)(iii) of this section.

Replace R.61-58.5.O(2)(m) to read:

(m) The Department may require a confirmation sample for positive or negative results. If a confirmation sample is required by the Department, the result must be averaged with the first sampling result and the average is used for the compliance determination as specified by paragraph (2)(o) of this section. The Department has the discretion to delete results of obvious sampling errors from this calculation.

Replace R.61-58.5.O(2)(r) to read:

(r) The Department may allow the use of monitoring data collected after January 1, 1988, for purposes of initial monitoring compliance. If the data are generally consistent with the other requirements in this section, the Department may use those data (i.e., a single sample rather than four quarterly samples) to satisfy the initial monitoring requirement of paragraph (2)(d) of this section. Systems which use grandfathered samples and did not detect any contaminant listed in Section N(2)(b) through (u) above shall begin monitoring annually in accordance with paragraph (2)(e) of this section beginning with the initial compliance period.

Replace R.61-58.5.R(5) to read:

(5) The public notice that shall be used by systems which exceed the secondary MCL for fluoride shall contain the specific language outlined in R.61-58.6.E(8), and no additional language except as necessary to complete the notice.

Replace R.61-58.5.BB to read:

BB. Approved Laboratories.

For the purpose of determining compliance with R.61-58.5.B through R.61-58.5.V, R.61-58.5.CC, R.61-58.10.F, R.61-58.11.D, and R.61-58.16.E, samples may be considered only if they have been analyzed by a laboratory approved by the Department, except that measurements for turbidity may be performed by a properly certified water treatment plant operator.

Add R.61-58.6.B(6) to read:

(6) The public water system shall submit to the Department, when requested, within the time stated in the request, copies of any records required to be maintained under R.61-58.6.D or copies of any documents then in existence which the Department or the EPA Administrator is entitled to inspect pursuant to the authority of section 1445 of the Safe Drinking Water Act or the equivalent provisions of State law.

Replace R.61-58.6.E(1)(a) to read:

(a) Who must give public notice? Each owner or operator of a public water system (community water systems, non-transient non-community water systems, and transient non community water systems) must give notice for all violations of State Primary Drinking Water Regulations (SPDWR) and for other situations, as listed in Table 1. The term "SPDWR violations" is used in this regulation to include violations of the maximum contaminant level (MCL), maximum residual disinfection level (MRDL), treatment technique (TT), monitoring requirements, and testing procedures in this regulation. Appendix A to this regulation identifies the tier assignment for each specific violation or situation requiring a public notice.

TABLE 1: VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A PUBLIC NOTICE

<p>(1) SPDWR violations:</p> <ul style="list-style-type: none"> (i) Failure to comply with an applicable maximum contaminant level(MCL) or maximum residual disinfectant level (MRDL). (ii) Failure to comply with a prescribed treatment technique (TT). (iii) Failure to perform water quality monitoring, as required by the drinking water regulations. (iv) Failure to comply with testing procedures as prescribed by a drinking water regulation. <p>(2) Variance and exemptions under R.61-58.9:</p> <ul style="list-style-type: none"> (i) Operation under a variance or an exemption. (ii) Failure to comply with the requirements of any schedule that has been set under a variance or exemption. <p>(3) Special public notices:</p> <ul style="list-style-type: none"> (i) Occurrence of a waterborne disease outbreak or other waterborne emergency. (ii) Exceedance of the nitrate MCL by non-community water systems (NCWS), where granted permission by the Department under R.61-58.5.B(3). (iii) Exceedance of the secondary maximum contaminant level (SMCL) for fluoride. (iv) Availability of unregulated contaminant monitoring data. (v) Other violations and situations determined by the Department to require a public notice under this regulation, not already listed in Appendix A to this regulation.

Replace R.61-58.6.E(1)(b) to read:

(b) What type of public notice is required for each violation or situation? Public notice requirements are divided into three (3) tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in Table 1 of this section are determined by the tier to which it is assigned. Table 2 of this section provides the definition of each tier. Appendix A to this regulation identifies the tier assignment for each specific violation or situation.

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TABLE 2: DEFINITION OF PUBLIC NOTICE TIERS

- (1) Tier 1 public notice -- required for SPDWR violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.
- (2) Tier 2 public notice -- required for all other SPDWR violations and situations with potential to have serious adverse effects on human health.
- (3) Tier 3 public notice -- required for all other SPDWR violations and situations not included in Tier 1 and Tier 2.

Replace R.61-58.6.E(1)(c)(iii) to read:

(iii) A copy of the notice must also be sent to the Department, in accordance with the requirements of R.61-58.6.B(5).

Replace R.61-58.6.E(2)(a) to read:

(a) Which violations or situations require a Tier 1 public notice? Table 1 of this section lists the violation categories and other situations requiring a Tier 1 public notice. Appendix A to this regulation identifies the tier assignment for each specific violation or situation.

TABLE 1: VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A TIER 1 PUBLIC NOTICE

- (1) Violation of the MCL for total coliforms when fecal coliform or E. coli are present in the water distribution system (as specified in R.61-58.5.F(2)), or when the water system fails to test for fecal coliforms or E. coli when any repeat sample tests positive for coliform (as specified in R.61-58.5.G(5));
- (2) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as defined in R.61-58.5.B, or when the water system fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in R.61-58.5.C(12)(b);
- (3) Exceedance of the nitrate MCL by non-community water systems, where permitted to exceed the MCL by the Department under R.61-58.5.B(3), as required under paragraph (9) of this section;
- (4) Violation of the MRDL for chlorine dioxide, as defined in R.61-58.5.Q(1), when one or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL, or when the water system does not take the required samples in the distribution system, as specified in R.61-58.13.D(3)(b)(i);
- (5) Violation of the turbidity MCL under R.61-58.10(C), (E), (H), or (I), where the Department determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation;

(6) Violation of the Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR) or Long Term 1 Enhanced Surface Water Treatment Rule (LT1EWSTR) treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit (as identified in Appendix A to this regulation), where the Department determines after consultation that a Tier 1 notice is required or where consultation does not take place within twenty-four (24) hours after the system learns of the violation;

(7) Occurrence of a waterborne disease outbreak, as defined in R.61-58(B)(174), or other waterborne emergency (such as a failure or significant interruption in key water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination);

(8) Detection of E. coli, enterococci, or coliphage in source water samples as specified in R.61-58.16.E(1) or R.61-58.16.E(2).

(9) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the Department either in its regulations or on a case-by-case basis.

Replace R.61-58.6.E(3)(a) to read:

(a) Which violations or situations require a Tier 2 public notice? Table 1 of this section lists the violation categories and other situations requiring a Tier 2 public notice. Appendix A to this regulation identifies the tier assignment for each specific violation or situation.

TABLE 1: VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A TIER 2 PUBLIC NOTICE

(1) All violations of the MCL, MRDL, and treatment technique requirements, except where a Tier 1 notice is required under paragraph (2)(a) of this section or where the Department determines that a Tier 1 notice is required;

(2) Violations of the monitoring and testing procedure requirements, where the Department determines that a Tier 2 rather than a Tier 3 public notice is required, taking into account potential health impacts and persistence of the violation;

(3) Failure to comply with the terms and conditions of any variance or exemption in place; and

(4) Failure to take corrective action or failure to maintain at least 4-log treatment of viruses (using inactivation, removal, or a Department approved combination of 4-log virus inactivation and removal) before or at the first customer under R.61-58.16.F(1).

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Replace R.61-58.6.E(3)(c)(i)(B) to read:

(B) Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by the notice required in R.61-58.6.E(3)(c)(i)(A). Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: Publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places served by the system or on the Internet; or delivery to community organizations.

Replace R.61-58.6.E(3)(c)(ii)(B) to read:

(B) Any other method reasonably calculated to reach other persons served by the system if they would not normally be reached by the notice required in R.61-58.6.E(3)(c)(ii)(A). Such persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include: Publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

Replace R.61-58.6.E(4)(a) to read:

(a) Which violations or situations require a Tier 3 public notice? Table 1 of this section lists the violation categories and other situations requiring a Tier 3 public notice. Appendix A to this regulation identifies the tier assignment for each specific violation or situation.

TABLE 1: VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A TIER 3 PUBLIC NOTICE

<p>(1) Monitoring violations under R.61-58.5, except where a Tier 1 notice is required under paragraph (2)(a) of this section or where the Department determines that a Tier 2 notice is required;</p> <p>(2) Failure to comply with a testing procedure established in R.61-58.5, except where a Tier 1 notice is required under paragraph (2)(a) of this section or where the Department determines that a Tier 2 notice is required;</p> <p>(3) Operation under a variance or an exemption granted under R.61-58.9;</p> <p>(4) Availability of unregulated contaminant monitoring results, as required under paragraph (7) of this section; and</p> <p>(5) Exceedance of the fluoride secondary maximum contaminant level (SMCL), as required under paragraph (8) of this section.</p>

Replace R.61-58.6.E(5)(d)(i) to read:

(i) Standard health effects language for MCL or MRDL violations, treatment technique violations, and violations of the condition of a variance or exemption. Public water systems must include in each public notice the health effects language specified in Appendix B to this regulation corresponding to each MCL, MRDL, and treatment technique violation listed in Appendix A to this regulation, and for each violation of a condition of a variance or exemption.

Replace R.61-58.6.E(5)(d)(ii) to read:

(ii) Standard language for monitoring and testing procedure violations. Public water systems must include the following language in their notice, including the language necessary to fill in the blanks, for all monitoring and testing procedure violations listed in Appendix A to this regulation:

"We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period], we "did not monitor or test" or "did not complete all monitoring or testing" for [contaminant(s)], and therefore cannot be sure of the quality of your drinking water during that time."

Replace R.61-58.10.C(2)(e) to read:

(e) The public water system shall comply with the maximum contaminant level (MCL) for total coliforms in R.61-58.5.F at least 11 months of the 12 previous months that the system served water to the public, on an ongoing basis, unless the Department determines that failure to meet this requirement was not caused by a deficiency in treatment of the source water.

Replace R.61-58.10.C(2)(f) to read:

(f) The public water system must comply with the requirements for trihalomethanes in R.61-58.13.

Replace R.61-58.10.F(1) to read:

(1) Analytical requirements.

Only the analytical method(s) specified in this paragraph, or otherwise approved by EPA, may be used to demonstrate compliance with the requirements of R.61-58.10.C, R.61-58.10.D, and R.61-58.10.E. Measurements for pH, temperature, turbidity and residual disinfectant concentrations shall be conducted by a party approved by the Department. Measurements for total coliforms, fecal coliforms, and HPC shall be conducted by a laboratory certified by the Department or EPA to do such analysis. Until laboratory certification criteria are developed for the analysis of HPC and fecal coliforms, any laboratory certified for total coliform analysis by EPA is deemed certified for HPC and fecal coliform analysis. All procedures shall be performed in accordance with EPA-approved methods outlined in 40 CFR 141 (11-8-06 edition).

Replace R.61-58.10.F(2)(f)(i) to read:

(i)The residual disinfectant concentration shall be measured at least at the same points in the distribution system and at the same time as total coliforms are sampled, as specified in R.61-58.5.G, except that the Department may allow a public water system which uses both a surface water source or a ground water source under the direct influence of surface water, and a ground water source, to take disinfectant residual samples at points other than the total coliform sampling points if the Department determines that such points are more representative of treated (disinfected) water quality within the distribution system. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in paragraph (1)(c) of this section, may be measured in lieu of residual disinfectant concentration.

Replace introductory title to R.61-58.10.H; subitems H(1) through H(6) remain unchanged:

H. Enhanced Filtration and Disinfection - Systems Serving 10,000 or More People (Interim Enhanced Surface Water Treatment Rule).

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Replace introductory title to R.61-58.10.I; subitems I(1) through I(8) remain unchanged:

I. Enhanced Filtration and Disinfection - Systems Serving Fewer Than 10,000 People (Long Term 1 Enhanced Surface Water Treatment Rule).

Replace introductory title to R.61-58.10.J; subitems J(1) through J(4) remain unchanged:

J. Recycle Provisions (Filter Backwash Recycling Rule).

Replace R.61-58.12.C(4)(d)(i) to read:

(i) The MCL for that contaminant expressed as a number equal to or greater than 1.0 (as provided in Appendix D to this regulation);

Replace R.61-58.12.C(4)(d)(v)(C) to read:

(C) When it is reported pursuant to R.61-58.10.E or R.61-58.10.H(4) or R.61-58.10.I(6): the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in R.61-58.10.E or R.61-58.10.H(4) or R.61-58.10.I(6) for the filtration technology being used. The report should include an explanation of the reasons for measuring turbidity.

Replace R.61-58.12.C(9)(c) to read:

(c) Lead and copper control requirements prescribed by R.61-58.11, Lead and Copper. For systems which fail to take one or more actions prescribed by R.61-58.11.B(2) [Corrosion Control Treatment Requirements], R.61-58.11.C [Applicability of Corrosion Control Treatment Steps to Small, Medium-Size and Large Water Systems], R.61-58.11(D) [Description of Corrosion Control Treatment Requirements], R.61-58.11.E [Source Water Treatment Requirements], R.61-58.11.F [Lead Service Line Replacement Requirements], the report shall include the applicable language of Appendix D to this regulation for lead, copper, or both;

Add R.61-58.12.C(11)(f) to read:

(f) Systems required to comply with R.61-58.16.

(i) Any ground water system that receives notice from the Department of a significant deficiency or notice from a laboratory of a fecal indicator positive ground water source sample that is not invalidated by the Department must inform its customers in the next report. The report must contain information on any significant deficiency that is uncorrected or any fecal indicator positive ground water source sample. The system must continue to inform the public annually until the Department determines that particular significant deficiency is corrected or the fecal contamination in the ground water source is addressed under R.61-58.16.F(1). Each report must include the following elements.

(A) The nature of the particular significant deficiency or the source of the fecal contamination (if the source is known) and the date the significant deficiency was identified by the Department or the dates of the fecal indicator-positive ground water source samples.

(B) If the fecal contamination in the ground water source has been addressed under R.61-58.16.F(1) and the date of such action.

(C) For each significant deficiency or fecal contamination in the ground water source that has not been addressed under R.61-58.16.F(1), the Department approved plan and schedule for correction, including any interim measures completed.

(D) If the system receives notice of a fecal indicator positive ground water source sample that is not invalidated by the Department, the potential health effects using the health effects language of Appendix D of R.61-58.12.

(ii) If directed by the Department, a system with significant deficiencies that have been corrected before the next report is issued must inform its customers of the significant deficiency, how the deficiency was corrected, and the date of correction.

Replace introductory title to R.61-58.13:

61-58.13 Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors (Stage 1 Disinfectants and Disinfection Byproducts Rule).

Replace R.61-58.13.A to read:

A. Applicability.

This regulation establishes criteria and requirements for the control of disinfectants, disinfection byproducts and disinfection byproduct precursors for community water systems (CWSs) and non-transient, non-community water systems (NTNCWSs) which add a chemical disinfectant to the water in any part of the drinking water treatment process. In addition, this regulation establishes criteria and requirements for the control of chlorine dioxide for non-community water systems (NCWSs) that use chlorine dioxide as a disinfectant or oxidant in any part of the drinking water treatment process.

Replace R.61-58.13.B(1) to read:

(1) The requirements of this regulation constitute national primary drinking water regulations. This regulation establishes criteria under which community water systems (CWSs) and non-transient, non-community water systems (NTNCWSs) which add a chemical disinfectant to the water in any part of the drinking water treatment process must modify their practices to meet MCLs and MRDLs in R.61-58.5.P and R.61-58.5.Q, respectively, and must meet the treatment technique requirements for disinfection byproduct precursors in Section F of this regulation.

In addition, this regulation establishes criteria under which transient non-community water systems (NCWSs) that use chlorine dioxide as a disinfectant or oxidant must modify their practices to meet the MRDL for chlorine dioxide in R.61-58.5.Q.

Replace R.61-58.13.B(4) to read:

(4) Control of Disinfectant Residuals - Notwithstanding the MRDLs in R.61-58.5.Q, systems may increase residual disinfectant levels in the distribution system of chlorine or chloramines (but not chlorine dioxide) to a level and for a time necessary to protect public health, to address specific microbiological contamination problems caused by circumstances such as, but not limited to, distribution line breaks, storm run-off events, source water contamination events, or cross-connection events.

Add R.61-58.13.C(2)(b) to read:

(b) Chlorite. Community and non-transient, non-community water systems using chlorine dioxide, for disinfection or oxidation, must conduct monitoring for chlorite.

(i) Routine Monitoring.

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(A) Daily monitoring. Systems must take daily samples at the entrance to the distribution system. For any daily sample that exceeds the chlorite MCL, the system must take additional samples in the distribution system the following day at the locations required by R.61-58.13.C(2)(b)(ii) in addition to the sample required at the entrance to the distribution system.

(B) Monthly monitoring. Systems must take a three-sample set each month in the distribution system. The system must take one sample at each of the following locations: near the first customer, at a location representative of average residence time, and at a location reflecting the maximum residence time in the distribution system. Any additional routine sampling must be conducted in the same manner (as three-sample sets, at the specified locations). The system may use the results of additional monitoring conducted under R.61-58.13.C(2)(b)(ii) to meet the requirement for this monitoring.

(ii) Additional monitoring. On each day following a routine sample monitoring result that exceeds the chlorite MCL at the entrance to the distribution system, the system is required to take three chlorite distribution system samples at the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the distribution system as possible (reflecting maximum residence time in the distribution system).

(iii) Reduced monitoring.

(A) Chlorite monitoring at the entrance to the distribution system required by R.61-58.13.C(2)(b)(i)(A) may not be reduced.

(B) Chlorite monitoring in the distribution system required by R.61-58.13.C(2)(b)(i)(B) may be reduced to one three-sample set per quarter after one year of monitoring where no individual chlorite sample taken in the distribution system under R.61-58.13.C(2)(b)(i)(B) has exceeded the chlorite MCL and the system has not been required to conduct monitoring under R.61-58.13.C(2)(b)(ii). The system may remain on the reduced monitoring schedule until either of the three individual chlorite samples taken quarterly in the distribution system under R.61-58.13.C(2)(b)(i)(B) exceeds the chlorite MCL or the system is required to conduct monitoring under R.61-58.13.C(2)(b)(ii), at which time, the system must revert to routine monitoring.

Revise R.61-58.13.C(2)(c), currently reserved, to read:

(c) Bromate

Revise R.61-58.13.C(2)(c)(i), currently reserved, to read:

(i) Routine monitoring. Community and non-transient, non-community systems using ozone, for disinfection or oxidation, must take one sample per month for each treatment plant in the system using ozone. Systems must take samples monthly at the entrance to the distribution system while the ozonation system is operating under normal conditions.

Replace R.61-58.13.C(2)(c)(ii) to read:

(ii) Reduced Monitoring

(A) Until March 31, 2009, Systems required to analyze for bromate may reduce monitoring from monthly to once per quarter, if the system demonstrates that the average source water bromide concentration is less than 0.05 mg/L based upon representative monthly bromide measurements for one year. The system may remain on reduced bromate monitoring until the running annual average source water bromide concentration, computed quarterly, is equal to or greater than 0.05 mg/L based upon representative monthly measurements. If the running annual average source water bromide concentration is greater than or equal to 0.05 mg/L, the system must resume routine monitoring required by R.61-58.13.C(2)(c)(i).

(B) Beginning April 1, 2009, systems may no longer use the provisions of R.61-58.C(2)(c)(ii)(A) to qualify for reduced monitoring. A system required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's running annual average bromate concentration is less than or equal to 0.0025 mg/L based on monthly bromate measurements under R.61-58.13.C(2)(c)(i) for the most recent four quarters, with samples analyzed using analytical methods identified in 40 CFR 141.132 (b)(3)(ii)(B) (1-04-06 edition). If a system has qualified for reduced bromate monitoring under R.61-58.13.C(2)(c)(ii)(A), that system may remain on reduced monitoring as long as the running annual average of quarterly bromate samples is less than or equal to 0.0025 mg/L based on samples analyzed using analytical methods identified in 40 CFR 141.132 (b)(3)(ii)(B) (1-04-06 edition). If the running annual average bromate concentration is greater than 0.0025 mg/L, the system must resume routine monitoring required by R.61-58.13.C(2)(c)(i).

Replace R.61-58.13.D(4) to read:

(4) Disinfection Byproduct Precursors - Compliance must be determined as specified by Section F(3) below. Systems may begin monitoring to determine whether Step 1 TOC removals can be met twelve (12) months prior to the compliance date for the system. This monitoring is not required and failure to monitor during this period is not a violation. However, any system that does not monitor during this period, and then determines in the first twelve (12) months after the compliance date that it is not able to meet the Step 1 requirements in Section F(2)(b) below and must therefore apply for alternate minimum TOC removal (Step 2) requirements, is not eligible for retroactive approval of alternate minimum TOC removal (Step 2) requirements as allowed pursuant to Section F(2)(c) below and is in violation. Systems may apply for alternate minimum TOC removal (Step 2) requirements any time after the compliance date. For systems required to meet Step 1 TOC removals, if the value calculated under Section F(3)(a)(iv) below, is less than 1.00, the system is in violation of the treatment technique requirements and must notify the public pursuant to R.61-58.6.E, in addition to reporting to the Department pursuant to R.61-58.13.E(4).

Replace R.61-58.13.E(4)(b)(v) to read:

(v) The running annual arithmetic average based on monthly averages (or quarterly samples) of source water SUVA for systems meeting the criterion in R.61-58.13.F(1)(a)(v) or of treated water SUVA for systems meeting the criterion in R.61-58.13.F(1)(a)(vi).

Replace R.61-58.13.E(4)(b)(vi) to read:

(vi) The running annual average of source water alkalinity for systems meeting the criterion in R.61-58.13.F(1)(a)(iii) and of treated water alkalinity for systems meeting the criterion in R.61-58.13.F(1)(b)(i).

Replace R.61-58.13.E(4)(b)(vii) to read:

(vii) The running annual average for both TTHM and HAA5 for systems meeting the criterion in R.61-58.13.F(1)(a)(iii) or (iv).

Replace R.61-58.13.E(4)(b)(viii) to read:

(viii) The running annual average of the amount of magnesium hardness removal (as CaCO₃, in mg/L) for systems meeting the criterion in R.61-58.13.F(1)(b)(ii).

Replace R.61-58.13.F(2)(d)(i) to read:

(i) Alternate enhanced coagulation level is defined as: Coagulation at a coagulant dose and pH as determined by the method described in paragraphs (2)(d)(i) through (v) of this section such that an incremental addition of 10 mg/L of alum (or equivalent amount of ferric salt) results in a TOC removal of greater than or equal to 0.3 mg/L. The percent removal of TOC at this point on the "TOC removal versus coagulant dose"

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curve is then defined as the minimum TOC removal required for the system. Once approved by the Department, this minimum requirement supersedes the minimum TOC removal required by the table in paragraph (2)(b) of this section. This requirement will be effective until such time as the Department approves a new value based on the results of a new bench- or pilot-scale test. Failure to achieve Department-set alternative minimum TOC removal levels is a violation of National Primary Drinking Water Regulations.

Replace introductory paragraph to R.61-58.13.F(3)(a); subitems (a)(i) through (a)(v) remain unchanged:

(a) Systems using surface water or a ground water under the influence of surface water other than those identified in paragraph (1)(a) or (1)(b) of this section must comply with requirements contained in R.61-58.13.F(2)(b) or (c). Systems must calculate compliance quarterly, beginning after the system has collected 12 months of data, by determining an annual average using the following method:

Replace R.61-58.13.F(3)(b)(iii) to read:

(iii) In any month that the system's source water SUVA, prior to any treatment and measured according to EPA approved methods specified in 40 CFR 141.131(d)(4), is less than or equal to 2.0 L/mg-m, the system may assign a monthly value of 1.0 (in lieu of the value calculated in paragraph (3)(a)(iii) of this section) when calculating compliance under the provisions of paragraph (3)(a) of this section.

Replace R.61-58.13.F(3)(b)(iv) to read:

(iv) In any month that the system's finished water SUVA, measured according to EPA approved methods specified in 40 CFR 141.131(d)(4) (11-8-2006 edition), is less than or equal to 2.0 L/mg-m, the system may assign a monthly value of 1.0 (in lieu of the value calculated in paragraph (3)(a)(iii) of this section) when calculating compliance under the provisions of paragraph (3)(a) of this section.

Renumber R.61-58.13.F(3)(d) to R.61-58.13.F(4) to read:

(4) Treatment Technique Requirements for DBP Precursors. The Administrator identifies the following as treatment techniques to control the level of disinfection byproduct precursors in drinking water treatment and distribution systems: For Systems using surface water or a ground water under the influence of surface water which utilize conventional treatment, enhanced coagulation or enhanced softening.

Replace R.61-58.14.B(2)(a)(v) to read:

(v) If, within 3 months after the date identified in R.61-58.14.(2)(a)(iii), the Department does not approve the submitted IDSE report or notify the system that it has not yet completed its review, the submitted report may be considered approved and the system must implement the IDSE recommended monitoring in accordance with R.61-58.15.

Replace R.61-58.14.B(2)(b)(v) to read:

(v) If, within 3 months after the date identified in R.61-58.14.B(2)(b)(iii), the Department does not approve the submitted IDSE report or notify the system that it has not yet completed its review, the submitted report may be considered approved and the system must implement the IDSE recommended monitoring in accordance with R.61-58.15.

Replace R.61-58.14.B(2)(c)(v) to read:

(v) If, within 9 months after the date identified in R.61-58.14.B(2)(c)(iii), the Department does not approve the submitted IDSE report or notify the system that it has not yet completed its review, the submitted report may be considered approved and the system must implement the IDSE recommended monitoring in accordance with R.61-58.15.

Replace R.61-58.14.B(2)(d)(v) to read:

(v) If, within 3 months after the date identified in R.61-58.14.B(2)(d)(iii), the Department does not approve the submitted IDSE report or notify the system that it has not yet completed its review, the submitted report may be considered approved and the system must implement the IDSE recommended monitoring in accordance with R.61-58.15.

Replace R.61-58.14.B(2)(e)(v) to read:

(v) If, within 3 months after the date identified in R.61-58.14.B(2)(e)(iii), the Department does not approve the submitted IDSE report or notify the system that it has not yet completed its review, the submitted report may be considered approved and the system must implement the IDSE recommended monitoring in accordance with R.61-58.15.

Replace R.61-58.14.F(2) to read:

(2) If a system has not taken TTHM and HAA5 samples under R.61-58.13 or if the Department notifies the system that they must comply with the part R.61-58.14, the system must conduct standard monitoring under R.61-58.14.C or a system specific study under R.61-58.14.D.

Replace R.61-58.14.G(2) to read:

(2) Systems must select the number of monitoring locations specified in the table in this paragraph (2). These recommended locations will be used as R.61-58.15 (Stage 2 Disinfection Byproducts Requirements) routine compliance monitoring locations, unless the Department requires different or additional locations. Monitoring locations should be distributed throughout the distribution system to the extent possible.

Source Water Type	Population size category	Monitoring frequency	Total monitoring locations per monitoring period	Highest TTHM monitoring locations	Highest HAA5 monitoring locations	Existing R.61-58.13 compliance monitoring locations
Subpart H	Less than 500	per year	2	1	1	-
Subpart H	500 – 3,300	per quarter	2	1	1	-
Subpart H	3,301 – 9,999	per quarter	2	1	1	-
Subpart H	10,000 – 49,999	per quarter	4	2	1	1
Subpart H	50,000 – 249,999	per quarter	8	3	3	2
Subpart H	250,000 – 999,999	per quarter	12	5	4	3
Subpart H	1,000,000 – 4,999,999	per quarter	16	6	6	4
Subpart H	5,000,000 or greater	per quarter	20	8	7	5

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Ground Water	Less than 500	per year	2	1	1	-
Ground Water	500 – 9,999	per year	2	1	1	-
Ground Water	10,000 – 99,999	per quarter	4	2	1	1
Ground Water	100,000 – 499,999	per quarter	6	3	2	1
Ground Water	500,000 or greater	per quarter	8	3	3	2

(a) All systems must monitor during the month of highest disinfection byproduct (DBP) concentrations.

(b) Systems on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for subpart H systems serving 500- 3,300. Systems on annual monitoring and subpart H systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. Only one location with a dual sample set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location, and month, if monitored annually.

Add new R.61-58.16 to read:

R.61-58.16 Ground Water Rule

A. Applicability.

This part R.61-58.16 applies to all public water systems that use ground water except that it does not apply to public water systems that combine all of their ground water with surface water or with ground water under the direct influence of surface water prior to treatment under 40 CFR 141, Subpart H. For the purposes of this part, “ground water system” is defined as any public water system meeting this applicability statement, including consecutive systems receiving finished ground water.

B. General Requirements.

The requirements of R.61-58.16 constitute national primary drinking water regulations. Systems subject to this part must comply with the following requirements:

(1) Sanitary survey information requirements for all ground water systems as described in R.61-58.16.D.

(2) Microbial source water monitoring requirements for ground water systems that do not treat all of their ground water to at least 99.99 percent (4-log) treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer as described in R.61-58.16.E.

(3) Treatment technique requirements, described in R.61-58.16.F, that apply to ground water systems that have fecally contaminated source waters, as determined by source water monitoring conducted under R.61-58.16.E, or that have significant deficiencies that are identified by the Department or that are identified by EPA under the Safe Drinking Water Act section 1445. A ground water system with fecally contaminated source water or with significant deficiencies subject to the treatment technique requirements of R.61-58.16.F must implement one or more of the following corrective action options: correct all significant deficiencies; provide an alternate source of water; eliminate the source of contamination; or provide treatment that reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer.

(4) Ground water systems that provide at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer are required to conduct compliance monitoring to demonstrate treatment effectiveness, as described in R.61-58.16.F(2).

(5) If requested by the Department, ground water systems must provide the Department with any existing information that will enable the Department to perform a hydrogeologic sensitivity assessment. For the purposes of this part R.61-58.16, "hydrogeologic sensitivity assessment" is a determination of whether ground water systems obtain water from hydrogeologically sensitive settings.

C. Compliance Date.

Ground water systems must comply, unless otherwise noted, with the requirements of R.61-58.16 beginning December 1, 2009.

D. Sanitary Surveys For Ground Water Systems.

(1) Ground water systems must provide the Department, at the Department's request, any existing information that will enable the Department to conduct a sanitary survey.

(2) For the purposes of R.61-58.16, a "sanitary survey," as conducted by the Department, includes but is not limited to, an onsite review of the water source(s) (identifying sources of contamination by using results of source water assessments or other relevant information where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.

(3) The sanitary survey must include an evaluation of the applicable components listed in paragraphs R.61-58.16.D(3)(a) through (h).

- (a) Source.
- (b) Treatment.
- (c) Distribution system.
- (d) Finished water storage.
- (e) Pumps, pump facilities, and controls.
- (f) Monitoring, reporting, and data verification.
- (g) System management and operation.
- (h) Operator compliance with Department requirements.

E. Ground Water Source Microbial Monitoring and Analytical Methods.

(1) Triggered source water monitoring.

(a) A ground water system must conduct triggered source water monitoring if the conditions identified in paragraphs (1)(a)(i) and (1)(a)(ii) of this section apply.

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(i) the system does not provide at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for each ground water source; and

(ii) The system is notified that a sample collected under R.61-58.5.G(1) is total coliform positive and the sample is not invalidated under R.61-58.5.G(3).

(b) Sampling Requirements. A ground water system must collect, within 24 hours of notification of the total coliform positive sample, at least one ground water source sample from each ground water source in use at the time the total coliform positive sample was collected under R.61-58.5.G(1) except as provided in R.61-58.16.E(1)(b)(ii).

(i) The Department may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the ground water source sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Department must specify how much time the system has to collect the sample.

(ii) If approved by the Department, systems with more than one ground water source may meet the requirements of R.61-58.16.E(1)(b) by sampling a representative ground water source or sources. If directed by the Department, systems must submit a triggered source water monitoring plan for Department approval that identifies one or more ground water sources that are representative of each monitoring site in the system's sample siting plan under R.61-58.5.G(1) and that the system intends to use for representative sampling under this paragraph.

(iii) A ground water system serving 1,000 people or fewer may use a repeat sample collected from a ground water source to meet both the requirements of R.61-58.5.G(2) and to satisfy the monitoring requirements of R.61-58.16.E(1)(b) for that ground water source only if the Department approves the use of E.coli as a fecal indicator for source water monitoring. If the repeat sample collected from the ground water source is E.coli positive, the system must comply with R.61-58.16.E(1)(c).

(c) Additional Requirements. If the Department does not require corrective action under R.61-58.16.F(1)(b) for a fecal indicator positive source water sample collected under R.61-58.16.E(1)(b) that is not invalidated under R.61-58.16.E(4), the system must collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator positive sample.

(d) Consecutive and wholesale systems.

(i) In addition to the other requirements of R.61-58.16.E(1), a consecutive ground water system that has a total coliform positive sample collected under R.61-58.5.G(1) must notify the wholesale system(s) within 24 hours of being notified of the total coliform positive sample.

(ii) In addition to the other requirements of R.61-58.16.E(1), a wholesale ground water system must comply with R.61-58.16.E(1)(d)(ii)(A) and R.61-58.16.E(1)(d)(ii)(B).

(A) A wholesale ground water system that receives notice from a consecutive system it serves that a sample collected under R.61-58.5.G(1) is total coliform positive must, within 24 hours of being notified, collect a sample from its ground water source(s) under R.61-58.16.E(1)(b) and analyze it for a fecal indicator under R.61-58.16.E(3).

(B) If the sample collected under R.61-58.16.E(1)(d)(ii)(A) is fecal indicator positive, the wholesale ground water system must notify all consecutive systems served by that ground water source of the fecal indicator positive sample within 24 hours of being notified of the monitoring result and must meet the requirements of R.61-58.16.E(1)(c).

(e) Exceptions to the triggered source water monitoring requirements. A ground water system is not required to comply with the source water monitoring requirements of R.61-58.16.E(1) if either one of the following conditions exists:

(i) The Department determines, and documents in writing, that the total coliform positive sample collected under R.61-58.5(G)(1) is caused by a distribution system deficiency; or

(ii) The total coliform positive sample collected under R.61-58.5(G)(1) is collected at a location that meets Department criteria for distribution system conditions that will cause total coliform positive samples.

(2) Assessment source water monitoring. If directed by the Department, ground water systems must conduct assessment source water monitoring that meets Department-determined requirements for such monitoring. A ground water system conducting assessment source water monitoring may use a triggered source water sample collected under R.61-58.16.E(1)(b) to meet the requirements of R.61-58.16.E(2). Department-determined assessment source water monitoring may include, but not be limited to the following:

(a) Collection of a total of 12 ground water source samples that represent each month the system provides ground water to the public.

(b) Collection of samples from each well unless the system obtains written Department approval to conduct monitoring at one or more wells within the ground water system that are representative of multiple wells used by that system and that draw water from the same hydrogeologic setting.

(c) Collection of a standard sample volume of at least 100 mL for fecal indicator analysis regardless of the fecal indicator or analytical method used.

(d) Analysis of all ground water source samples using one of the analytical methods listed in R.61-58.16.E(3) for the presence of *E. coli*, enterococci, or coliphage.

(e) Collection of ground water source samples at a location prior to any treatment of the ground water source unless the Department approves a sampling location after treatment.

(f) Collection of ground water source samples at the well itself unless the system's configuration does not allow for sampling at the well itself and the Department approves an alternate sampling location that is representative of the water quality of that well.

(3) Analytical methods.

(a) A ground water system subject to the source water monitoring requirements of R.61-58.16.E(1) must collect a standard sample volume of at least 100 ml for fecal indicator analysis regardless of the fecal indicator or analytical method used.

(b) A ground water system must analyze all ground water source samples collected under R.61-58.16.E(1) for *E. coli*, enterococci, or coliphage using EPA-approved methods listed in 40 CFR 141.402(c)(2) (Federal Register 11-8-2006 edition).

(4) Invalidation of a fecal indicator positive ground water source sample.

(a) A ground water system may obtain Department invalidation of a fecal indicator positive ground water source sample collected under R.61-58.16.E(1) only under the conditions specified as follows:

(i) The system provides the Department with written notice from the laboratory that improper sample analysis occurred.

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(ii) The Department determines and documents in writing that there is substantial evidence that a fecal indicator positive ground water source sample is not related to source water quality.

(b) If the Department invalidates a fecal indicator positive ground water source sample, the ground water system must collect another source water sample under R.61-58.16.E(1) within 24 hours of being notified by the Department of its invalidation decision and have it analyzed for the same fecal indicator using the analytical methods listed in 40 CFR 141.402(c)(2) (Federal Register 11-8-2006 edition). The Department may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Department will specify how much time the system has to collect the sample.

(5) Sampling location.

(a) Any ground water source sample required under R.61-58.16.E(1) must be collected at a location prior to any treatment of the groundwater source unless the Department approves a sampling location after treatment.

(b) If the system's configuration does not allow for sampling at the well itself, the system may collect a sample at a Department-approved location to meet the requirements under R.61-58.16.E(1) if the sample is representative of the water quality of that well.

(6) New sources. If directed by the Department, a ground water system that places a new ground water source into service after November 30, 2009, must conduct assessment source water monitoring under R.61-58.16.E(2). If directed by the Department, the system must begin monitoring before the ground water source is used to provide water to the public.

(7) Public notification. A ground water system with a ground water source sample collected under R.61-58.16.E(1) or (2) that is fecal indicator positive and that is not invalidated under R.61-58.16.E(4), including consecutive systems served by the ground water source, must conduct public notification under R.61-58.6.E(2).

(8) Monitoring violations. Failure to meet the requirements of R.61-58.16.E(1) through (6) is a monitoring violation and requires the ground water system to provide public notification under R.61-58.6.E(4).

F. Treatment Technique Requirements For Ground Water Systems.

(1) Ground water systems with significant deficiencies or source water fecal contamination.

(a) The treatment technique requirements of R.61-58.16.F must be met by ground water systems when a significant deficiency is identified or when a ground water source sample collected under R.61-58.16.E(1)(c) is fecal indicator positive.

(b) If directed by the Department, a ground water system with a ground water source sample collected under R.61-58.16.E(1)(b), R.61-58.16.E(1)(d), or R.61-58.16.E(2) that is fecal indicator positive must comply with the treatment technique requirements of R.61-58.16.F.

(c) When a significant deficiency is identified at a Subpart H public water system that uses both ground water and surface water or GWUDI, the system must comply with R.61-58.16.F except in cases where the Department determines that the significant deficiency is in a portion of the distribution system that is served solely by surface water or GWUDI.

(d) Unless the Department directs the ground water system to implement a specific corrective action, the ground water system must consult with the Department regarding the appropriate corrective action within 30 days of receiving written notice from the Department of a significant deficiency, written notice from a laboratory that a ground water source sample collected under R.61-58.16.E(1)(c) was found to be fecal indicator positive, or direction from the Department that a fecal indicator positive sample collected under R.61-58.16.E(1)(b), R.61-58.16.E(1)(d), or R.61-58.16.E(2) requires corrective action. For the purposes of R.61-58.16, significant deficiencies include, but are not limited to, defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the Department determines to be causing, or have the potential for causing, the introduction of contamination into the water delivered to consumers.

(e) Within 120 days, or earlier if directed by the Department, of receiving written notification from the Department of a significant deficiency, written notice from a laboratory that a ground water source sample collected under R.61-58.16.E(1)(c) was found to be fecal indicator positive, or direction from the Department that a fecal indicator positive sample collected under R.61-58.16.E(1)(b), R.61-58.16.E(1)(d), or R.61-58.16.E(2) requires corrective action, the ground water system must either:

(i) Have completed corrective action in accordance with applicable Department plan review processes or other Department guidance or direction, if any, including Department-specified interim measures; or

(ii) Be in compliance with a Department-approved corrective action plan and schedule subject to the following conditions:

(A) Any subsequent modifications to a Department-approved corrective action plan and schedule must also be approved by the Department.

(B) If the Department specifies interim measures for the protection of public health pending Department approval of the corrective action plan and schedule or pending completion of the corrective action plan, the system must comply with these interim measures as well as with any schedule specified by the Department.

(f) Corrective action alternatives. Ground water systems that meet the conditions of R.61-58.16.F(1)(a) or (b) must implement one or more of the following corrective action alternatives:

(i) Correct all significant deficiencies.

(ii) Provide an alternate source of water.

(iii) Eliminate the source of contamination.

(iv) Provide treatment that reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

(g) Special notice to the public of significant deficiencies or source water fecal contamination.

(i) In addition to the applicable public notification requirements of R.61-58.6.E(2), a community ground water system that receives notice from the Department of a significant deficiency or notification of a fecal indicator positive ground water source sample that is not invalidated by the Department must inform the public served by the water system under R.61-58.12.C(11)(f) of the fecal indicator positive source sample or of any significant deficiency that has not been corrected. The system must continue to inform the public

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annually until the significant deficiency is corrected or the fecal contamination in the ground water source is determined by the Department to be corrected under R.61-58.16.F(1)(e).

(ii) In addition to the applicable public notification requirements of R.61-58.6.E(2), a non-community ground water system that receives notice from the Department of a significant deficiency must inform the public served by the water system in a manner approved by the Department of any significant deficiency that has not been corrected within 12 months of being notified by the Department, or earlier if directed by the Department. The system must continue to inform the public annually until the significant deficiency is corrected. The information must include:

(A) The nature of the significant deficiency and the date the significant deficiency was identified by the Department.

(B) The Department-approved plan and schedule for correction of the significant deficiency, including interim measures, progress to date, and any interim measures completed.

(C) For systems with a large proportion of non-English speaking consumers, as determined by the Department, information in the appropriate language(s) regarding the importance of the notice or a telephone number or address where consumers may contact the system to obtain a translated copy of the notice or assistance in the appropriate language.

(iii) If directed by the Department, a non-community water system with significant deficiencies that have been corrected must inform its customers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction under R.61-58.16.F(1)(g)(ii).

(2) Compliance monitoring.

(a) Existing ground water sources. A ground water system that is not required to meet the source water monitoring requirements of R.61-58.16 because it provides at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for any ground water source before December 1, 2009, must notify the Department in writing that it provides at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the specified ground water source and begin compliance monitoring in accordance with R.61-58.16.F(2)(c) by December 1, 2009. Notification to the Department must include engineering, operational, or other information that the Department requests to evaluate the submission. If the system subsequently discontinues 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source, the system must conduct ground water source monitoring as required under R.61-58.16.E.

(b) New ground water sources. A ground water system that places a ground water source in service after November 30, 2009, that is not required to meet the source water monitoring requirements of R.61-58.16 because the system provides at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source must comply with all of the requirements of R.61-58.16.F(2)(b)(i) to (iii).

(i) The system must notify the Department in writing that it provides at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source. Notification to the Department must include engineering, operational, or other information that the Department requests to evaluate the submission.

(ii) The system must conduct compliance monitoring under R.61-58.16.F(2)(c) within 30 days of placing the source in service.

(iii) The system must conduct ground water source monitoring under R.61-58.16.E if the system subsequently discontinues 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

(c) Monitoring requirements. A ground water system subject to the requirements of R.61-58.16.F(1), R.61-58.16.F(2)(a), or R.61-58.16.F(2)(b) must monitor the effectiveness and reliability of treatment for that ground water source before or at the first customer as follows:

(i) Chemical disinfection.

(A) A ground water systems that serves greater than 3,300 people must continuously monitor the residual disinfectant concentration using analytical methods specified in 40 CFR 141.74(a)(2) at a location approved by the Department and must record the lowest residual disinfectant concentration each day that the water from the ground water source is served to the public. The ground water system must maintain the Department-determined residual disinfectant concentration every day the ground water system serves the water from the ground water source to the public. If there is a failure in the continuous monitoring equipment, the ground water system must conduct grab sampling every four hours until the continuous monitoring equipment is returned to service. The system must resume continuous residual disinfectant monitoring within 14 days.

(B) A ground water system that serves 3,300 or fewer people must monitor the residual disinfectant concentration using analytical methods specified in 40 CFR 141.74(a)(2) at a location approved by the Department and record the residual disinfection concentration each day that the water from the ground water source is served to the public. The ground water system must maintain the Department-determined residual disinfectant concentration every day the ground water system serves water from the ground water source to the public. The ground water system must take a daily grab sample during the hour of peak flow or at another time specified by the Department. If any daily grab sample measurement falls below the Department-determined residual disinfectant concentration, the ground water system must take follow up samples every four hours until the residual disinfectant concentration is restored to the Department-determined level. Alternatively, a ground water system that serves 3,300 or fewer people may monitor continuously and meet the requirements of R.61-58.16.F(2)(c)(i)(A).

(ii) Membrane filtration. A ground water system that uses membrane filtration to meet the requirements of R.61-58.16 must monitor the membrane filtration process in accordance with all Department-specified monitoring requirements and must operate the membrane filtration in accordance with all Department-specified compliance requirements. A ground water system that uses membrane filtration is in compliance with the requirement to achieve at least 4-log removal of viruses when the following conditions are met:

(A) The membrane has an absolute molecular weight cut-off or an alternate parameter that describes the exclusion characteristics of the membrane that can reliably achieve at least 4-log removal of viruses.

(B) The membrane process is operated in accordance with Department-specified compliance requirements.

(C) The integrity of the membrane is intact.

(iii) Alternative treatment. A ground water system that uses a Department-approved alternative treatment to meet the requirements of R.61-58.16 by providing at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer must:

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(A) Monitor the alternative treatment in accordance with all Department-specified monitoring requirements.

(B) Operate the alternative treatment in accordance with all compliance requirements that the Department determines to be necessary to achieve at least 4-log treatment of viruses.

(3) A ground water system may discontinue 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source if the Department determines and documents in writing that 4-log treatment of viruses is no longer necessary for that ground water source. A system that discontinues 4-log treatment of viruses is subject to the source water monitoring and analytical methods requirements of R.61-58.16.E.

(4) Failure to meet the monitoring requirements of R.61-58.16.F(2) is a monitoring violation and requires the ground water system to provide public notification under R.61-58.6.E(4).

G. Treatment Technique Violations For Ground Water Systems.

(1) A ground water system with a significant deficiency is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the Department) of receiving written notice from the Department of the significant deficiency, the system:

(a) Does not complete corrective action in accordance with any applicable Department plan review processes or other Department guidance and direction, including Department specified interim actions and measures; or

(b) Is not in compliance with a Department-approved corrective action plan and schedule.

(2) Unless the Department invalidates a fecal indicator positive ground water source sample under R.61-58.16.E(4), a ground water system is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the Department) of meeting the conditions of R.61-58.16.F(1)(a) or R.61-58.16.F(1)(b), the system:

(a) Does not complete corrective action in accordance with any applicable Department plan review processes or other Department guidance and direction, including Department-specified interim measures; or

(b) Is not in compliance with a Department-approved corrective action plan and schedule.

(3) A ground water system subject to the requirements of R.61-58.16.F(2)(c) that fails to maintain at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source is in violation of the treatment technique requirement if the failure is not corrected within four hours of determining the system is not maintaining at least 4-log treatment of viruses before or at the first customer.

(4) Ground water systems must give public notification under R.61-58.6.E(3) for the treatment technique violations specified in R.61-58.16.G(1), G(2), and G(3).

H. Reporting and Recordkeeping For Ground Water Systems.

(1) Reporting. In addition to the requirements of R.61-58.6.B, a ground water system regulated under R.61-58.16 must provide the following information to the Department:

(a) A ground water system conducting compliance monitoring under R.61-58.16.F(2) must notify the Department any time the system fails to meet any Department-specified requirements including, but not limited to, minimum residual disinfectant concentration, membrane operating criteria or membrane integrity, and alternative treatment operating criteria, if operation in accordance with the criteria or requirements is not restored within four hours. The ground water system must notify the Department as soon as possible, but in no case later than the end of the next business day.

(b) After completing any corrective action under R.61-58.16.F(1), a ground water system must notify the Department within 30 days of completion of the corrective action.

(c) If a ground water system subject to the requirements of R.61-58.16.E(1) does not conduct source water monitoring under R.61-58.16.E(1)(e)(ii), the system must provide documentation to the Department within 30 days of the total coliform positive sample that it met the Department criteria.

(2) Recordkeeping. In addition to the requirements of R.61-58.6.D, a ground water system regulated under R.61-58.16 must maintain the following information in its records:

(a) Documentation of corrective actions shall be kept for a period of not less than ten years.

(b) Documentation of notice to the public as required under R.61-58.16.F(1)(g) shall be kept for a period of not less than three years.

(c) Records of decisions under R.61-58.16.E(1)(e)(ii) and records of invalidation of fecal indicator positive ground water source samples under R.61-58.16.E(4) shall be kept for a period of not less than five years.

(d) For consecutive systems, documentation of notification to the wholesale system(s) of total coliform positive samples that are not invalidated under R.61-58.5.G(3) shall be kept for a period of not less than five years.

(e) For systems, including wholesale systems, that are required to perform compliance monitoring under R.61-58.16.F(2):

(i) Records of the Department-specified minimum disinfectant residual shall be kept for a period of not less than ten years.

(ii) Records of the lowest daily residual disinfectant concentration and records of the date and duration of any failure to maintain the Department-specified minimum residual disinfectant concentration for a period of more than four hours shall be kept for a period of not less than five years.

(iii) Records of Department-specified compliance requirements for membrane filtration and of parameters specified by the Department for Department-approved alternative treatment and records of the date and duration of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than four hours shall be kept for a period of not less than five years.

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Replace R.61-58 Appendix A to read:

APPENDIX A TO 61-58.6: VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE¹

CONTAMINANT	MCL/MRDL/TT/VIOLATIONS ²		MONITORING & TESTING PROCEDURE VIOLATIONS	
	TIER OF PUBLIC NOTICE REQUIRED	CITATION	TIER OF PUBLIC NOTICE REQUIRED	CITATION
I. Violations of the State Primary Drinking Water Regulations (SPDWR): ³				
A. Microbiological Contaminants				
1. Total coliform	2	61-58.5.F(1)	3	61-58.5.G(1) - (5)
2. Fecal coliform/E. coli	1	61-58.5.F(2)	⁴ 1, 3	61-58.5.G(5)
3. Turbidity MCL	2	61-58.10.E, H, & I	3	61-58.10.F
4. Turbidity MCL (average of 2 days samples greater than 5 NTU)	⁵ 2, 1	61-58.10.C, E, H & I	3	61-58.10.F
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	⁶ 2, 1	61-58.10.C(i)(b) 61-58.10.C(3)(b) 61-58.10.F(2)(b), 61-58.10.E(1)(b), 61-58.10.E(2)(b), 61-58.10.E(3)(b), 61-58.10.E(4), 61-58.10.H(4)(a)(ii), 61-58.10.H(4)(b), 61-58.10.I(6)(b)	3	61-58.10.F 61-58.10.F(3) 61-58.10.H 61-58.10(I)(7)(a) (i)-(iii) & (b)
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT).	2	61-58.10.B - E		61-58.10
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	⁷ 2	61-58.10.B - E 61-58.10.I(1)-(7)	3	61-58.10.H(3), (5) 61-58.10.I(4) & (5) 61-58.10.I(7)
8. Filter Backwash Recycling Rule violations	2	61-58.10.J(3)	3	61-58.10.J(2) & (4)

9. Long Term 1 Enhanced Surface Water Treatment Rule Violations.	2	61-58.10.I(1)-(7)	3	61-58.10.I(4) & (5) 61-58.10.I(7)
10. LT2ESWTR violations	2	61-58.10.K(11) – (21)	²² 2,3	61-58.10.K(2) – (6) & 61-58.10.K(9) – (10)
11. Ground Water Rule Violations	2	61-58.16.G	3	61-58.16.E(8) 61-58.16.F(4)

B. Inorganic Chemicals (IOCs)

1. Antimony	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
2. Arsenic	2	⁸ 61-58.5.B(2)	3	⁹ 61-58.5.C(7)
3. Asbestos (fibers >10µm)	2	61-58.5.B(2)	3	61-58.5.C(7), (8)
4. Barium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
5. Beryllium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
6. Cadmium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
7. Chromium (total)	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
8. Cyanide	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
9. Fluoride	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
10. Mercury (inorganic)	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
11. Nitrate	1	61-58.5.B(2)	¹⁰ 1, 3	61-58.5.C(7), (10) 61-58.5.C(12)
12. Nitrite	1	61-58.5.B(2)	¹⁰ 1, 3	61-58.5.C (7,) (10), 61-58.5.C(12)
13. Total Nitrate and Nitrite	1	61-58.5.B(2)	3	61-58.5.C(7)
14. Selenium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
15. Thallium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)

C. Lead and Copper Rule (Action Level for lead is 0.015 mg/L, for copper is 1.3 mg/L)

1. Lead and Copper Rule (TT)	2	61-58.11.B - G	3	61-58.11.H - K
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D. Synthetic Organic Chemicals (SOCs)

1. 2,4-D	2	61-58.5.D	3	61-58.5.E(7)
2. 2,4,5-TP (Silvex)	2	61-58.5.D	3	61-58.5.E(7)
3. Alachlor	2	61-58.5.D	3	61-58.5.E(7)
4. Atrazine	2	61-58.5.D	3	61-58.5.E(7)
5. Benzo(a)pyrene (PAHs)	2	61-58.5.D	3	61-58.5.E(7)

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6. Carbofuran	2	61-58.5.D	3	61-58.5.E(7)
7. Chlordane	2	61-58.5.D	3	61-58.5.E(7)
8. Dalapon	2	61-58.5.D	3	61-58.5.E(7)
9. Di (2-ethylhexyl) adipate	2	61-58.5.D	3	61-58.5.E(7)
10. Di (2-ethylhexyl) phthalate	2	61-58.5.D	3	61-58.5.E(7)
11. Dibromochloropropane	2	61-58.5.D	3	61-58.5.E(7)
12. Dinoseb	2	61-58.5.D	3	61-58.5.E(7)
13. Dioxin (2,3,7,8-TCDD)	2	61-58.5.D	3	61-58.5.E(7)
14. Diquat	2	61-58.5.D	3	61-58.5.E(7)
15. Endothall	2	61-58.5.D	3	61-58.5.E(7)
16. Endrin	2	61-58.5.D	3	61-58.5.E(7)
17. Ethylene dibromide	2	61-58.5.D	3	61-58.5.E(7)
18. Glyphosate	2	61-58.5.D	3	61-58.5.E(7)
19. Heptachlor	2	61-58.5.D	3	61-58.5.E(7)
20. Heptachlor epoxide	2	61-58.5.D	3	61-58.5.E(7)
21. Hexachlorobenzene	2	61-58.5.D	3	61-58.5.E(7)
22. Hexachlorocyclo-pentadiene	2	61-58.5.D	3	61-58.5.E(7)
23. Lindane	2	61-58.5.D	3	61-58.5.E(7)
24. Methoxychlor	2	61-58.5.D	3	61-58.5.E(7)
25. Oxamyl (Vydate)	2	61-58.5.D	3	61-58.5.E(7)
26. Pentachlorophenol	2	61-58.5.D	3	61-58.5.E(7)
27. Picloram	2	61-58.5.D	3	61-58.5.E(7)
28. Polychlorinated biphenyls (PCBs)	2	61-58.5.D	3	61-58.5.E(7)
29. Simazine	2	61-58.5.D	3	61-58.5.E(7)
30. Toxaphene	2	61-58.5.D	3	61-58.5.E(7)

E. Volatile Organic Chemicals (VOCs)

1. Benzene	2	61-58.5.N	3	61-58.5.O
2. Carbon tetrachloride	2	61-58.5.N	3	61-58.5.O
3. Chlorobenzene (monochlorobenzene)	2	61-58.5.N	3	61-58.5.O
4. o-Dichlorobenzene	2	61-58.5.N	3	61-58.5.O
5. p-Dichlorobenzene	2	61-58.5.N	3	61-58.5.O
6. 1,2-Dichloroethane	2	61-58.5.N	3	61-58.5.O
7. 1,1-Dichloroethylene	2	61-58.5.N	3	61-58.5.O
8. cis-1,2-Dichloroethylene	2	61-58.5.N	3	61-58.5.O
9. trans-1,2-Dichloroethylene	2	61-58.5.N	3	61-58.5.O
10. Dichloromethane	2	61-58.5.N	3	61-58.5.O

11. 1,2-Dichloropropane	2	61-58.5.N	3	61-58.5.O
12. Ethylbenzene	2	61-58.5.N	3	61-58.5.O
13. Styrene	2	61-58.5.N	3	61-58.5.O
14. Tetrachloroethylene	2	61-58.5.N	3	61-58.5.O
15. Toluene	2	61-58.5.N	3	61-58.5.O
16. 1,2,4-Trichlorobenzene	2	61-58.5.N	3	61-58.5.O
17. 1,1,1-Trichloroethane	2	61-58.5.N	3	61-58.5.O
18. 1,1,2-Trichloroethane	2	61-58.5.N	3	61-58.5.O
19. Trichloroethylene	2	61-58.5.N	3	61-58.5.O
20. Vinyl chloride	2	61-58.5.N	3	61-58.5.O
21. Xylenes (total)	2	61-58.5.N	3	61-58.5.O

F. Radioactive Contaminants

1. Beta/photon emitters	2	61-58.5.H(4)	3	61-58.5.K(1), 61-58.5.I.(3)
2. Alpha emitters	2	61-58.5.H(3)	3	61-58.5.K(1), 61-58.5.I(2)
3. Combined radium (226 & 228)	2	61-58.5.H(2)	3	61-58.5.K(1), 61-58.5.I2)
4. Uranium	¹¹ 2	61-58.5.H(5)	¹² 3	61-58.5.K(1), 61-58.5.I(2)

G. Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals. Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs).¹³

1. Total trihalomethanes (TTHMs)	2	¹⁴ 61-58.5.L, 61-58.5.P	3	¹⁴ 61-58.5.M 61-58.13.C(1), (2) 61-58.14, 61-58.15
2. Haloacetic Acids (HAA5)	2	61-58.5.P	3	61-58.13.C(1), (2) 61-58.14, 61-58.15
3. Bromate	2	61-58.5.P	3	61-58.13.C(1), (2)
4. Chlorite	2	61-58.5.P	3	61-58.13.C(1), (2)
5. Chlorine (MRDL)	2	61-58.5.Q	3	61-58.13.C(1), (3)
6. Chloramine (MRDL)	2	61-58.5.Q	3	61-58.13.C(1), (3)
7. Chlorine dioxide (MRDL) where any 2 consecutive daily samples at entrance to	2	61-58.5.Q, 61-58.13.D	2 ¹⁵ , 3	61-58.13.C(1), (3), 61-58.13.C(3)(b)

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distribution system only are above MRDL

8. Chlorine dioxide (MRDL), where sample(s) in distribution system the next day are also above MRDL	¹⁶ 1	61-58.5.Q, 61-58.13.D(3)	1	61-58.13.C(1), (3), 61-58.13.D(3)(b)
9. Control of DBP precursors--TOC (TT)	2	61-58.13.F(1), (2)	3	61-58.13.C(1), (4)
10. Bench marking and disinfection profiling.	N/A	N/A	3	61-58.10.G(3) 61-58.10.H(3) 61-58.10.I(4) & (5)
11. Development of monitoring plan	N/A	N/A	3	61-58.13.C(6)

H. Other Treatment Techniques

1. Acrylamide (TT)	2	61-58.5.AA	N/A	N/A
2. Epichlorohydrin (TT)	2	61-58.5.AA	N/A	N/A

II. Unregulated Contaminant Monitoring:¹⁷

A. Unregulated contaminants	N/A	N/A	3	61-58.5.T
B. Nickel	N/A	N/A	3	61-58.5.C(9), (17)

III. Public Notification for Variances and Exemptions:

A. Operation under a variance or exemption	3	¹⁸ 61-58.9	N/A	N/A
B. Violation of conditions of a variance or exemption	2	¹⁹ 61-58.9	N/A	N/A

IV. Other Situations Requiring Public Notification:

A. Fluoride secondary maximum contaminant level (SMCL) exceedance	3	61-58.5.R	N/A	N/A
B. Exceedance of nitrate MCL for non-community systems, as allowed by Department	1	61-58.5.B(3)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	61-58.5.T	N/A	N/A
D. Waterborne disease outbreak	1	61-58.B(156) 61-58.10.C(3)(b)(ii)	N/A	N/A
E. Other waterborne emergency ²⁰	1	N/A	N/A	N/A

F. Source water sample positive for Ground Water Rule fecal indicators: E. coli, enterococci, or coliphage	1	61-58.16.E(7)	N/A	N/A
G. Other situations as determined by the Department	² 1, 2, 3	N/A	N/A	N/A

Appendix A to R.61-58.6 - Endnotes

¹ Violations and other situations not listed in this table (e.g., failure to prepare Consumer Confidence Reports), do not require notice, unless otherwise determined by the Department. The Department may, at its option, also require a more stringent public notice tier (e.g., Tier 1 instead of Tier 2 or Tier 2 instead of Tier 3) for specific violations and situations listed in this Appendix, as authorized under R.61-58.6.E(2)(a) and (3)(a).

² MCL--Maximum contaminant level, MRDL--Maximum residual disinfectant level, TT--Treatment technique

³ The term Violations of State Primary Drinking Water Regulations (SPDWR) is used here to include violations of MCL, MRDL, treatment technique, monitoring, and testing procedure requirements.

⁴ Failure to test for fecal coliform or E. coli is a Tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are Tier 3.

⁵ Systems that violate the turbidity MCL of 5 NTU based on an average of measurements over two consecutive days must consult with the Department within 24 hours after learning of the violation. Based on this consultation, the Department may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the Department in the 24-hour period, the violation is automatically elevated to Tier 1.

⁶ Systems with treatment technique violations involving a single exceedance of a maximum turbidity limit under the Surface Water Treatment Rule (SWTR) Interim Enhanced Surface Water Treatment Rule (IESWTR), or the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) are required to consult with the Department within 24 hours after learning of the violation. Based on this consultation, the Department may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the Department in the 24-hour period, the violation is automatically elevated to Tier 1.

⁷ Most of the requirements of the Interim Enhanced Surface Water Treatment Rule, R.61-58.10.B - C become effective January 1, 2002 for surface water systems and ground water systems under the direct influence of surface water serving at least 10,000 persons. However, R.61-58.10.H(3) has some requirements that become effective as early as April 16, 1999. The Surface Water Treatment Rule remains in effect for systems serving at least 10,000 persons even after 2002; the Interim Enhanced Surface Water Treatment Rule adds additional requirements and does not in many cases supercede the SWTR.

⁸ The arsenic MCL citations are effective January 23, 2006. Until then the citations are R.61-58.5(B)(2).

⁹ The arsenic Tier 3 violations MCL citations are effective January 23, 2006. Until then, the citations are R.61-58.C(7).

¹⁰ Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate are Tier 3.

¹¹ The uranium MCL, Tier 2 violation citations are effective December 8, 2003 for all community water systems.

¹² The uranium Tier 3 violation citations are effective December 8, 2000 for all community water systems.

¹³ Community and non-transient non-community surface water systems and ground water systems under the direct influence of surface water serving 10,000 must comply with new DBP MCLs, disinfectant MRDLs, and related monitoring requirements beginning January 1, 2002. All other community and non-transient non-community systems must meet the MCLs and MRDLs beginning January 1, 2004. Transient non-community surface water systems and ground water systems under the direct influence of surface water serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. Transient non-community surface water systems and ground water systems under the

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direct influence of surface water serving fewer than 10,000 persons and using only ground water not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.

¹⁴ R.61-58.5.L, and R.61-58.13.C(1) – (2) apply until R.61-58.14 and R.61-58.15 take effect under the schedule in R.61-58.14.

¹⁵ Failure to monitor for chlorine dioxide at the entrance to the distribution system the day after exceeding the MRDL at the entrance to the distribution system is a Tier 2 violation.

¹⁶ If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and one or more samples taken in the distribution system the next day exceed the MRDL, Tier 1 notification is required. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers Tier 1 notification.

¹⁷ Some water systems must monitor for certain unregulated contaminants listed in R.61-58.5.T

¹⁸ This citation refers to the requirements of R.61-58.9 that "a schedule prescribed . . . for a public water system granted a variance [or exemption] shall require compliance by the system . . ."

¹⁹ In addition to R.61-58.9 specifies the items and schedule milestones that must be included in a variance for small systems.

²⁰ Other waterborne emergencies require a Tier 1 public notice under R.61-58.6.E(2)(a) for situations that do not meet the definition of a waterborne disease outbreak given in R.61-58.B(174) but that still have the potential to have serious adverse effects on health as a result of short-term exposure. These could include outbreaks not related to treatment deficiencies, as well as situations that have the potential to cause outbreaks, such as failures or significant interruption in water treatment processes, natural disasters that disrupt the water supply or distribution system, chemical spills, or unexpected loading of possible pathogens into the source water.

²¹ The Department may place other situations in any tier they believe appropriate, based on threat to public health.

²² Failure to collect three or more samples for Cryptosporidium analysis is a Tier 2 violation requiring special notice as specified in R.61-58.6.E(11). All other monitoring and testing procedure violations are Tier 3.

Replace R.61-58 Appendix B to read:

APPENDIX B TO R.61-58.6: STANDARD HEALTH EFFECTS LANGUAGE FOR PUBLIC NOTIFICATION

Contaminant	MCLG ¹ mg/L	MCL ² mg/L	Standard health effects language for public notification
State Primary Drinking Water Regulations (SPDWR):			
A. Microbiological Contaminants:			
1a. Total coliform	Zero	See footnote ³	Coliforms are bacteria that are naturally present in the and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
1b. Fecal coliform/E. coli	Zero	Zero	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants young children, some of the elderly, and people with severely compromised immune systems.
1c. Fecal Indicators (Ground Water Rule)			Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
i. E. coli	Zero	TT	
ii. enterococci	None	TT	
iii. coliphage	None	TT	
1d. Ground Water Rule TT violations	None	TT	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.
2a. Turbidity (MCL) ⁴	None	1 NTU ⁵ /5 NTU	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial microbial growth. Turbidity may indicate presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
2b. Turbidity (SWTR TT) ⁶	None	TT ⁷	Turbidity has no health effects. However, turbidity can interfere with

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2c. Turbidity (IESWTR TT) ⁸	None	TT	<p>disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.</p>
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B. Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) and Filter Backwash Recycling Rule (FBRR) violations:

3. <i>Giardia lamblia</i> (SWTR/IESWTR/LT1ESWTR)	Zero	TT ¹⁰	<p>Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.</p>
4. Viruses (SWTR/IESWTR/LT1ESWTR) 5. Heterotrophic plate count (HPC) bacteria ⁹ (SWTR/IESWTR/LT1ESWTR).			
6. <i>Legionella</i> (SWTR/IESWTR/LT1ESWTR).			
7. <i>Cryptosporidium</i> (IESWTR/FBRR/LT1ESWTR).			

C. Inorganic Chemicals (IOCs):

8. Antimony	0.006	0.006	<p>Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.</p>
9. Arsenic ¹¹	Zero	0.010	<p>Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.</p>
10. Asbestos (10 µm)	7 MFL ¹²	7 MFL	<p>Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.</p>

11. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
12. Beryllium	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
13. Cadmium	0.005	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
14. Chromium (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
15. Cyanide	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
16. Fluoride	4.0	4.0	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
17. Mercury (inorganic)	0.002	0.002	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
18. Nitrate	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
19. Nitrite	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
20. Total Nitrate and Nitrite	10	10	Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
21. Selenium	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

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22. Thallium	0.0005	0.002	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
D. Lead and Copper Rule:			
23. Lead	Zero	TT ¹³	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
24. Copper	1.3	TT ¹⁴	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
E. Synthetic Organic Chemicals (SOCs):			
25. 2,4-D	0.07	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with kidneys, liver, or adrenal glands.
26. 2,4,5-TP (Silvex)	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
27. Alachlor	Zero	0.002	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
28. Atrazine	0.003	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
29. Benzo(a)pyrene (PAHs)	Zero	0.0002	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
30. Carbofuran	0.04	0.04	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.

31. Chlordane	Zero	0.002	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
32. Dalapon	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could minor kidney changes.
33. Di (2-ethylhexyl) adipate	0.4	0.4	Some people who drink water containing di(2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement or possible reproductive difficulties.
34. Di (2-ethylhexyl) phthalate	Zero	0.006	Some people who drink water containing di(2-ethylhexyl) phthalate well in excess of the MCL many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
35. Dibromochloropropane (DBCP)	Zero	0.0002	Some people who drink water containing DBCP in of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
36. Dinoseb	0.007	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
37. Dioxin (2,3,7,8-TCDD).	Zero	3×10^{-8}	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
38. Diquat	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
39. Endothall	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
40. Endrin	0.002	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
41. Ethylene dibromide	Zero	0.00005	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
42. Glyphosate	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
43. Heptachlor	Zero	0.0004	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.

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44. Heptachlor epoxide	Zero	0.0002	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
45. Hexachlorobenzene	Zero	0.001	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
46. Hexachlorocyclo pentadiene	0.05	0.05	Some people who drink water containing Hexachlorocyclo-pentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
47. Lindane	0.0002	0.0002	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
48. Methoxychlor	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
49. Oxamyl (Vydate)	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
50. Pentachlorophenol	Zero	0.001	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
51. Picloram	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
52. Polychlorinated biphenyls (PCBs).	Zero	0.0005	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
53. Simazine	0.004	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
54. Toxaphene	Zero	0.003	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

F. Volatile Organic Chemicals (VOCs):

55. Benzene	Zero	0.005	Some people who drink water containing benzene in excess of the
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56. Carbon tetrachloride	Zero	0.005	MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer. Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
57. Chlorobenzene (monochlorobenzene)	0.1	0.1	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
58. o-Dichlorobenzene	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
59. p-Dichlorobenzene	0.075	0.075	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
60. 1,2-Dichloroethane	Zero	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
61. 1,1-Dichloroethylene	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
62. cis-1,2-Dichloroethylene	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
63. trans-1,2-Dichloroethylene	0.1	0.1	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
64. Dichloromethane	Zero	0.005	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
65. 1,2-Dichloropropane	Zero	0.005	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
66. Ethylbenzene	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
67. Styrene	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

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68. Tetrachloroethylene	Zero	0.005	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
69. Toluene	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
70. 1,2,4-Trichlorobenzene	0.07	0.07	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
71. 1,1,1-Trichloroethane	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
72. 1,1,2-Trichloroethane	0.003	0.005	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
73. Trichloroethylene	Zero	0.005	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
74. Vinyl chloride	Zero	0.002	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
75. Xylenes (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

G. Radioactive Contaminants:

76. Beta/photon emitters	Zero	4 mrem/yr ¹⁵	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
77. Alpha emitters	Zero	15 pCi/L ¹⁶	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
78. Combined radium (226 & 228)	Zero	5 pCi/L	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

79. Uranium ¹⁷	Zero	30µg/L	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
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H. Disinfection Byproducts (DBPs), Byproduct Precursors, and Disinfectant Residuals: Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs):¹⁸

80. Total trihalomethanes (TTHMs)	N/A	0.08017 ^{19, 20}	Some people who drink water containing trihalomethanes excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.
81. Haloacetic Acids (HAA)	N/A	0.060 ²¹	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
82. Bromate	Zero	0.010	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
83. Chlorite	0.08	1.0	Some infants and young children who drinking water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
84. Chlorine	4 (MRDLG) ²²	4.0 (MRDL) ²³	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
85. Chloramines	4 (MRDLG)	4.0 (MRDL)	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
86a. Chlorine dioxide, where any 2 consecutive daily samples taken at the entrance to the distribution system are above the MRDL.	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of a the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine ioxide in excess of the MRDL. Some people may experience anemia. <i>Add for public notification only:</i> The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only not within the distribution system which delivers water to

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86b. Chlorine dioxide, where one or more water distribution system are above the MRDL	0.8 (MRDLG)	0.8 (MRDL)	<p>consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers.</p> <p>Some infants and young children who drink containing chlorine dioxide in excess of the MRDL could experience nervous effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.</p> <p><i>Add for public notification only:</i> The chlorine dioxide violations reported today include exceedances of the EPA standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.</p>
87. Control of DBP precursors (DBP)	None	TT	<p>Total organic carbon (TOC) has no health effects However, total organic carbon provides a medium for the formation of disinfection by-products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.</p>

I. Other Treatment Techniques:

88. Acrylamide	Zero	TT	<p>Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.</p>
89. Epichlorohydrin	Zero	TT	<p>Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.</p>

Appendix B to R.61-58.6 - endnotes

- ¹. MCLG - Maximum contaminant level goal
- ². MCL - Maximum contaminant level

- ³ For water systems analyzing at least 40 samples per month, no more than 5.0 percent of the monthly samples may be positive for total coliforms. For systems analyzing fewer than 40 samples per month, no more than one sample per month may be positive for total coliforms.
- ⁴ There are various regulations that set turbidity standards for different types of systems, including the 1989 Surface Water Treatment Rule, the 1998 Interim Enhanced Surface Water Treatment Rule, and the 2002 Long Term 1 Enhanced Surface Water Treatment Rule. The MCL for the monthly turbidity average is 1 NTU; the MCL for the 2-day average is 5 NTU for systems that are required to filter but have not yet installed filtration.
- ⁵ NTU - Nephelometric turbidity unit
- ⁶ There are various regulations that set turbidity standards for different types of systems, including the 1989 Surface Water Treatment Rule (SWTR), the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR), and the 2001 Long Term 1 Enhanced Surface Water Treatment Rule. Systems subject to the Surface Water Treatment Rule (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered systems, 95 percent of samples each month must not exceed 0.5 NTU in systems using conventional or direct filtration and must not exceed 1 NTU in systems using slow sand or diatomaceous earth filtration or other filtration technologies approved by the Department.
- ⁷ TT - Treatment technique
- ⁸ There are various regulations that set turbidity standards for different types of systems, including the 1989 Surface Water Treatment Rule (SWTR), the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR), and the 2002 Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR). For systems subject to the IESWTR (systems serving at least 10,000 people, using surface water or ground water under the direct influence of surface water), that use conventional filtration or direct filtration, after January 1, 2002, the turbidity level of a system's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level of a system's combined filter effluent must not exceed 1 NTU at any time. Systems subject to the IESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the Department. For systems subject to the LT1ESWTR (systems serving fewer than 10,000 people, using surface water or ground water under the direct influence of surface water) that use conventional filtration or direct filtration, after January 1, 2005 the turbidity level of a system's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level of a system's combined filter effluent must not exceed 1 NTU at any time. Systems subject to the LT1ESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the Department.
- ⁹ The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful. HPC is simply an alternative method of determining disinfectant residual levels. The number of such bacteria is an indicator of whether there is enough disinfectant in the distribution system.
- ¹⁰ SWTR, IESWTR, and LT1ESWTR treatment technique violations that involve turbidity exceedances may use the health effects language for turbidity instead.
- ¹¹ These arsenic values are effective January 23, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.
- ¹² Millions fibers per liter.
- ¹³ Action Level = 0.015 mg/L
- ¹⁴ Action Level = 1.3 mg/L
- ¹⁵ Millirems per years
- ¹⁶ Picocuries per liter
- ¹⁷ The uranium MCL is effective December 8, 2003 for all community water systems.
- ¹⁸ Surface water systems and ground water systems under the direct influence of surface water are regulated under R.61-58.10. Community and non-transient non-community systems serving greater than, or equal to 10,000 must comply with R.61-58.13 DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs) beginning January 1, 2002. All other community and non-transient non-community systems must comply with R-61.58.13 DBP MCLs and MRDLs beginning January 1, 2004. Transient non-community surface water systems and ground water systems under the direct influence of surface water

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serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. All other transient non-community systems that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning on January 1, 2004.

^{19.} Community and non-transient non-community systems that must comply with R.61-58.14 TTHM and HAA5 MCLs of 0.080 mg/L and 0.060 mg/L, respectively (with compliance calculated as a locational running annual average) on the schedule in R.61-58.15.

^{20.} The MCL for total trihalomethanes is the sum of the concentrations of the individual trihalomethanes.

^{21.} The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.

^{22.} MRDLG--Maximum residual disinfectant level goal.

^{23.} MRDL--Maximum residual disinfectant level.

Replace R.61-58 Appendix C to read:

APPENDIX C TO R.61-58.6 - LIST OF ACRONYMS USED IN PUBLIC NOTIFICATION REGULATION

CCR Consumer Confidence Report
CWS Community Water System
DBP Disinfection Byproduct
EPA Environmental Protection Agency
FBR Filter Backwash Recycle Rule
GWR Ground Water Rule
HPC Heterotrophic Plate Count
IESWTR Interim Enhanced Surface Water Treatment Rule
IOC Inorganic Chemical
LCR Lead and Copper Rule
LT1ESWTR Long Term 1 Enhanced Surface Water Treatment Rule
MCL Maximum Contaminant Level
MCLG Maximum Contaminant Level Goal
MRDL Maximum Residual Disinfectant Level
MRDLG Maximum Residual Disinfectant Level Goal
NCWS Non-Community Water System
NPDWR National Primary Drinking Water Regulation
NTNCWS Non-Transient Non-Community Water System
NTU Nephelometric Turbidity Unit
OGWDW Office of Ground Water and Drinking Water
OW Office of Water
PN Public Notification
PWS Public Water System
SDWA Safe Drinking Water Act
SMCL Secondary Maximum Contaminant Level
SOC Synthetic Organic Chemical
SPDWR State Primary Drinking Water Regulations
SWTR Surface Water Treatment Rule
TCR Total Coliform Rule
TT Treatment Technique
TWS Transient Non-Community Water System
VOC Volatile Organic Chemical

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Replace R.61-58 Appendix D to read:

APPENDIX D TO R.61-58.12: CONSUMER CONFIDENCE REPORTS: REGULATED CONTAMINANTS

Contaminant (units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	MCLG	Major sources in drinking water	Health effects language
Microbiological contaminants:						
Total Coliform Bacteria	MCL: (systems that collect \geq 40 samples/month) 5% of monthly samples are positive; (systems that collect <40 samples/month) 1 positive monthly sample.		MCL: (systems that collect \geq 40 samples/month) 5% of monthly samples are positive; (systems that collect <40 samples/month) 1 positive monthly sample.	0	Naturally present in the environment	Coliforms are bacteria that are naturally present in the and are used as an indicator that other, potentially harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and E. coli	0		0	0	Human and animal fecal waste	Fecal coliforms and E. Coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely-compromised immune systems.
Fecal Indicators (enterococci or coliphage).	TT		TT	N/A	Human and animal fecal waste.	Fecal indicators are microbes whose presence indicates that

						<p>the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.</p>
Total organic carbon (ppm)	TT		TT	N/A	Naturally present	<p>Total organic carbon (TOC) has no health effects. However, total in the environment organic carbon provides a medium for the formation of disinfection by-products. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.</p>
Turbidity (NTU)	TT		TT	N/A	Soil runoff	<p>Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include</p>

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bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Radioactive contaminants:

Beta/photon emitters (mrem/yr)	4 mrem/yr	4	N/A	Decay of natural and man-made deposits.	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters (pCi/L)	15 pCi/L	15	N/A	Erosion of natural deposits.	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium (pCi/L)	5 pCi/L	5	N/A	Erosion of natural deposits.	Some people who drink water containing radium-226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (pCi/L)	30 µg/L	30	0	Erosion of natural deposits.	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk getting cancer and kidney toxicity.

Inorganic contaminants:

Antimony (ppb)	.006	1000	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	¹ 0.010	1000	¹ 10.	¹ 0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos (MFL)	7 MFL		7	7	Decay of asbestos cement water mains; production wastes; erosion of natural deposits.	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	2		2	2	Discharge of drilling; wastes; Discharge from metal refineries; Erosion of natural deposits.	Some people who drink water containing barium in of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	.004	1000	4	4	Discharge from metal refineries and coal-burning factories; Discharge from	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions

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Bromate (ppb)	.010	1000	10	0	electrical, aerospace, and defense industries By-product of drinking water chlorination.	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Cadmium (ppb)	.005	1000	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints.	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chloramines (ppm)	MRDL = 4		MRDL = 4	MRDLG = 4	Water additive used to control microbes.	Some people who use water containing chloramines well in excess of the MRDL could experience irritating to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

Chlorine (ppm)	MRDL = 4		MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorine dioxide (ppb)	MRDL = .8	1000	MRDL = 800	MRDLG = 800	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Chlorite (ppm)	1		1	0.8	By-product of drinking water chlorination.	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chromium (ppb)	.1	1000	100	100	Discharge from steel and pulp; mills; Erosion of Natural deposits.	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

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Copper (ppm)	AL=1.3		AL=1.3	1.3	Corrosion of household plumbing. Erosion of natural deposits.	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Cyanide (ppb)	2	1000	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride (ppm)	4		4	4	Erosion of natural deposits; Water additive which promotes strong teeth Discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Lead (ppb)	AL=.015	1000	AL=15	0	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Mercury [inorganic] (ppb)	.002	1000	2	2	Erosion of natural deposits; discharge from refineries and factories; Runoff from landfills; Runoff from cropland.	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage
Nitrate (ppm)	10		10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite (ppm)	1		1	1	Runoff from fertilizer use; Leaching from septic tanks sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

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Selenium (ppb)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation
Thallium (ppb)	.002	1000	2	0.5	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories.	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Synthetic organic contaminants including pesticides and herbicides:

2,4-D (ppb)	.07	1000	70	70	Runoff from herbicide used on row crops.	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [Silvex](ppb)	.05	1000	50	50	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.

Acrylamide	TT		TT	0	Added to water during sewage/wastewater treatment.	Some people who drink water containing high levels of acrylamide over a long period of time could have an increased problems with their nervous system or blood, and may have risk of getting cancer.
Alachlor (ppb)	.002	1000	2	0	Runoff from herbicide used on row crops.	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine (ppb)	.003	1000	3	3	Runoff from herbicide used on row crops.	Some people who drink water containing atrazine well in excess of the MCL over many years could experience on problems with their cardiovascular system or reproductive difficulties.
Benzo(a)pyrene [PAH] (nanograms/l).	.0002	1,000,000	200	0	Leaching from linings of water storage tanks distribution lines.	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran (ppb)	.04	1000	40	40	Leaching of soil fumigant used on rice and alfalfa.	Some people who drink carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.

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Chlordane (ppb)	.002	1000	2	0	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon (ppb)	.2	1000	200	200	Runoff from herbicide used on rights of way.	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
Di(2-ethylhexyl) adipate (ppb).	.4	1000	400	400	Discharge from chemical factories.	Some people who drink water containing di(2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement or possible reproductive difficulties.
Di(2-ethylhexyl) phthalate (ppb).	.006	1000	6	0	Discharge from rubber and chemical factories.	Some people who drink water containing di(2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane (ppt)	.0002	1,000,000	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.

Dinoseb (ppb)	.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables.	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Diquat (ppb)	.02	1000	20	20	Runoff from herbicide use.	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Dioxin [2,3,7,8-TCDD] (ppq).	.00000003	1,000,000,000	30	0	Emissions from waste incineration and other combustion; Discharge from chemical factories.	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Endothall (ppb)	.1	1000	100	100	Runoff from herbicide use.	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
Endrin (ppb)	.002	1000	2	2	Residue of banned insecticide.	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
Epichlorohydrin.	TT		TT	0	Discharge from industrial chemical factories; An impurity of some water treatment chemicals.	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

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Ethylene dibromide (ppt)	.00005	1,000,000	50	0	Discharge from petroleum refineries.	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate (ppb)	.7	1000	700	700	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	.0004	1,000,000	400	0	Residue of banned pesticide.	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
Heptachlor epoxide (ppt)	.0002	1,000,000	200	0	Breakdown of heptachlor.	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene (ppb)	.001	1000	1	0	Discharge from metal refineries and agricultural chemical factories.	Some people who drink water containing Hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects and may have an increased risk of getting cancer

Hexachlorocyclopentadiene (ppb)	.05	1000	50	50	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
Lindane (ppt)	.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens.	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock.	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties
Oxamyl [Vydate] (ppb)	.2	1000	200	200	Runoff/leaching from insecticide used on apples potatoes and tomatoes.	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs [Polychlorinated biphenyls] (ppt).	.0005	1,000,000	500	0	Runoff from landfills Discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.

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Pentachlorophenol (ppb)	.001	1000	1	0	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
Picloram (ppb)	.5	1000	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine (ppb)	.004	1000	4	4	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
Toxaphene (ppb)	.003	1000	3	0	Runoff/leaching from insecticide used on cotton and cattle.	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer

Volatile organic contaminants:

Benzene (ppb)	.005	1000	5	0	Discharge from factories; Leaching from gas storage tanks and landfills.	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
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Carbon tetrachloride (ppb)	.005	1000	5	0	Discharge from chemical plants and other industrial activities.	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with in their liver and may have an increased risk of getting cancer.
Chlorobenzene (ppb)	.1	1000	100	100	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
o-Dichlorobenzene (ppb)	.6	1000	600	600	Discharge from industrial chemical	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over liver, kidneys, or circulatory systems.
p-Dichlorobenzene (ppb)	.075	1000	75	75	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-Dichloroethane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories.	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer
1,1-Dichloroethylene (ppb)	.007	1000	7	7	Discharge from industrial chemical factories.	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

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cis-1,2-Dichloroethylene (ppb)	.07	1000	70	70	Discharge from industrial chemical factories.	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
trans-1,2-Dichloroethylene (ppb).	.1	1000	100	10	Discharge from industrial chemical factories.	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane (ppb)	.005	1000	5	0	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increase risk of getting cancer.
1,2-Dichloropropane (ppb)	.005	1000	5	0	Discharge from industrial chemical factories.	Some people who drink water containing 1,2-Dichloropropane excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene (ppb)	.7	1000	700	700	Discharge from petroleum refineries.	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Haloacetic Acids (HAA) (ppb).	.060	1000	60	N/A	By-product of drinking water disinfection.	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Styrene (ppb)	.1	1000	100	100	Discharge from rubber and plastic factories and leaching from landfills.	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys or circulatory system.
Tetrachloroethylene (ppb)	.005	1000	5	0	Discharge from factories and dry cleaners.	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
1,2,4-Trichlorobenzene (ppb)	.07	1000	70	70	Discharge from textile-finishing factories.	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-Trichloroethane (ppb)	.2	1000	200	200	Discharge from metal degreasing sites and other factories.	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience liver, problems with their nervous system, or circulatory system.
1,1,2-Trichloroethane (ppb).	.005	1000	5	3	Discharge from industrial chemical factories.	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver; kidneys, or immune systems.

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Trichloroethylene (ppb)	.005	1000	5	0	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
TTHMs [Total trihalomethanes] (ppb)	0.10/.080	1000	100/80	N/A	By-product of drinking water disinfection.	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Toluene (ppm)	1		1	1	Discharge from petroleum factories.	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
Vinyl Chloride (ppb)	.002	1000	2	0	Leaching from PVC piping; Discharge from from plastics factories.	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes (ppm)	10		10	10	Discharge from petroleum factories; Discharge from chemical factories.	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Key:

AL=Action Level

MCLG=Maximum Contaminant Level Goal

MRDL=Maximum Residual Disinfectant Level

MCL=Maximum Contaminant Level

MFL=million fibers per liter

MRDLG=Maximum Residual Disinfectant Level Goal

mrem/year=millirems per year (a measure of radiation absorbed by the body)

N/A=Not Applicable

pCi/l=picocuries per liter (a measure of radioactivity)

ppb=parts per billion, or micrograms per liter ($\mu\text{g/l}$)

ppq=parts per quadrillion, or picograms per liter

NTU=Nephelometric Turbidity Units (a measure of water clarity)

ppm=parts per million, or milligrams per liter (mg/L)

ppt=parts per trillion, or nanograms per liter

TT=Treatment Technique

Appendix D to R.61-58.12 - endnotes

¹ These arsenic values are effective January 23, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.

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Statement of Need and Reasonableness:

The Statement of Need and Reasonableness was determined by staff analysis pursuant to S.S. Code Section 1-23-115(C)(1)-(3) and (9)-(11):

DESCRIPTION OF REGULATION: Amendment of Regulation 61-58, State Primary Drinking Water Regulations

Purpose: The Department has adopted this amendment to R.61-58 in order to adopt federal regulations commonly referred to as the Ground Water Rule as well as make minor changes concerning Maximum Contaminant Levels, Public Notification, and Consumer Confidence Reports. This amendment will comply with Federal law and ensure consistency with the Safe Drinking Water Act and the National Primary Drinking Water Regulations and will enable the Department to retain primary enforcement responsibility for the public drinking water supervision program. This action is mandated by the 1996 amendments to the Federal Safe Drinking Water Act. The proposed regulations will comply with 40 CFR Parts 141 and 142. The final Ground Water Rule was published in the November 8, 2006 Federal Register.

Legal Authority: The State Primary Drinking Water Regulations are authorized by S.C. Code Ann. 44-55-10 et. seq., State Safe Drinking Water Act.

Plan for Implementation: These amendments would be incorporated within R.61-58 and will be implemented in the same manner in which the existing regulation is implemented.

DETERMINATION OF NEED AND REASONABLENESS OF THE REGULATION BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFITS:

The adoption of these regulations will allow the Department to continue being the primacy agency for the implementation of the Safe Drinking Water Act and the National Primary Drinking Water Regulations in the state. This action is mandated by the 1996 amendments to the Federal Safe Drinking Water Act. The proposed regulations will comply with 40 CFR Parts 141 and 142.

DETERMINATION OF COSTS AND BENEFITS:

The Ground Water Rule may result in increased costs to public water systems for improved treatment to reduce public exposure to fecal contamination of ground water systems. This rule will apply to all public water systems that use ground water except that it does not apply to public water systems that combine all of their ground water with surface water or systems that have ground water under the influence of surface water. These later system types are regulated under Subpart H of the National Primary Drinking Water Regulations. This regulation also establishes monitoring requirements for systems that may be more susceptible to fecal contamination. EPA has estimated that the total national annualized cost for implementing the Ground Water Rule is \$437.8 million. This estimate includes annualized treatment costs to utilities (\$50 million), start-up and initial capital costs to utilities (\$346 million), one-time implementation costs to utilities (\$17 million), and state costs (\$11.8 annualized, \$13 million one-time start up costs). According to national EPA estimates, the mean annual household costs for systems range from less than \$1 to over \$16 (systems serving fewer households generally have higher average annual household costs due to economies of scale). In addition, if a system has to take corrective action because of this rule, the household costs range from less than \$1 to over \$52. EPA estimates that 8,465 viral illnesses and 0.15 deaths will be avoided under this rule in children, the elderly, and the immunocompromised.

Costs incurred by public water systems or the state due to minor changes in Maximum Contaminant Levels, Public Notification, and Consumer Confidence Reports will be minimal.

UNCERTAINTIES OF ESTIMATES:

Considerable

EFFECT ON ENVIRONMENT AND PUBLIC HEALTH:

There will be no effect on the environment. The amendments will promote public health through improved drinking water quality.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

There will be no detrimental effect on the environment if the amendments are not implemented. However, there could be an adverse impact on public health if the amendments are not implemented.

Document No. 3161

DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

CHAPTER 61

Statutory Authority: 1976 Code Section 48-1-10 et seq.

61-68. Water Classifications and Standards

Synopsis:

The Department has amended R.61-68 to strengthen and improve the existing regulation and make appropriate revisions of the State's water quality standards in accordance with Section 303(c)(2)(B) of the Federal Clean Water Act (CWA). Section 303(c)(2)(B) requires that South Carolina's water quality standards be reviewed and revised, where necessary, at least every three years for the purposes of considering the Environmental Protection Agency's (EPA) most recently published numeric and narrative criteria and to comply with recent Federal regulatory revisions and recommendations. The Department has also included revisions that will improve the regulation. R.61-68 also includes revisions due to recodification of additional language from the proposed text changes so that every section, subsection, item, and subitem could be cited correctly. See also the Statement of Need and Reasonableness herein. The amendments will be submitted to the General Assembly for review.

Discussion of Revisions

(1) Adoption of federal toxics criteria to reflect the most current final published criteria according to Sections 304(a) and 307(a) of the Clean Water Act.

Section Citation and Explanation of Change

R.61-68 Appendix

The amendments to R.61-68 relating to human health and aquatic life criteria are reasonable because the stated criteria in the amendment are based on sound scientific principles and are required in order to comply with the goals of Section 101(a)(2) and 303(c) of the CWA for protection and maintenance of the uses of the waters of the State. These amendments incorporate scientific advances in areas of cancer and non cancer risk assessments and the EPA's 2000 methodology for deriving human health water quality criteria and supercede criteria for the fifteen affected pollutants and inclusion of newly published aquatic life ambient water quality criteria for two non-priority pollutants. A number of the Maximum Contaminant Levels (MCLs) associated with the Disinfection Byproducts Rule have been incorporated. Additionally, the minerals manganese and iron were removed from the non-priority pollutant table due to issues with background concentrations associated with these two parameters. Revisions include footnotes as well as Federal citations. Further, the arsenic criterion for human health will now

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reflect only the MCL due to issues with the federally-derived 307(a) criterion in concurrence with EPA. A footnote has also been added to allow the freshwater copper criteria to be calculated utilizing the procedures in document EPA-822-R-007, often referred to as the biotic ligand model. A sentence from 61-68.E.14 was moved to the heading of the appendix for clarity. The Appendix was also renumbered to reflect the additions.

(2) Revision of the assessment of the bacteriological indicator for protection of recreational uses and revisions to the enterococci standard and implementation.

Section Citation and Explanation of Change

R.61-68.E.14.c.9.

Removed language that was disapproved by the EPA during the last regulation review. Also added language to allow NPDES permits to implement the change to the enterococci standard to allow a 10% exceedence of the single sample maximum value.

R.61-68.E.14.d.6.

Added language to reflect the assessment methodology for 303(d) listing used by the Department, including methodology for when insufficient data exists to calculate a geometric mean.

R.61-68.G.11.f.

Added language to reflect the addition of 10% exceedence of the single sample maximum for enterococci.

R.61-68.G.12.f.

Added language to reflect the addition of 10% exceedence of the single sample maximum for enterococci.

R.61-68.G.13.f.

Added language to reflect the addition of 10% exceedence of the single sample maximum for enterococci.

(3) Inclusion of a definition of practical quantitation limit (PQL).

Section Citation and Explanation of Change

R.61-68.B.46.

Added a definition for practical quantitation limit and renumbered remaining definitions.

(4) Revisions to the regulatory language regarding NPDES permitting and protection of surface waters for drinking water purposes.

Section Citation and Explanation of Change

R.61-68.C.10.a.

Removed language that prohibited mixing zones in source water protection areas.

(5) Stylistic changes which may include corrections for: readability, grammar, punctuation, typography, codification, references, and language style.

Section Citation and Explanation of Change

R.61-68.D.4.a.

Changed number to 0.10 to comply with state law.

R.61-68.D.4.b.

Changed number to 0.10 to comply with state law.

R.61-68.E.14.

Moved language stating “the numeric criteria developed and published by EPA are hereby incorporated into this regulation”, to heading of Appendix for clarity.

R.61-68.E.14.c.10

Changed language for clarity.

R.61-68.E.17.d

Changed language for clarity.

R.61-68.G.10.h

Changed language for clarity.

(6) Revisions to the regulatory language regarding application of 0.10 rule and its relationship to critical conditions in permitting.

Section Citation and Explanation of Change

R.61-68.C.4.a.4

Added language to clarify the application of critical conditions as applied in permitting winter limits.

R.61-68.D.4.a

Added and struck language to clarify the application of the dissolved oxygen standard in naturally-low dissolved oxygen waters.

R.61-68.D.4.b

Added clarifying language citing the section of the Pollution Control Act to which this section is pursuant.

Instructions: Due to numerous amendments herein, replace R.61-68 in its entirety.

Text:

R.61-68. WATER CLASSIFICATIONS AND STANDARDS

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A. PURPOSE AND SCOPE.

1. These regulations, promulgated pursuant to authority in the S. C. Pollution Control Act, Section 48-1-10 et seq., 1976 Code of Laws, establish a system and rules for managing and protecting the quality of South Carolina's surface and ground water. They establish the State's official classified water uses for all waters of the State, establish general rules and specific numeric and narrative criteria for protecting classified and existing water uses, and establish procedures for classifying waters of the State. The water quality standards include the uses of the waters, the numeric and narrative criteria, and the antidegradation rules contained in this regulation.

a. The uses of the waters of the State are defined and described in Sections B, C, E, F, G, and H of this regulation.

b. Numeric criteria for aquatic life and human health are numeric values for specific parameters and pollutants or water quality levels which have been assigned for the protection of the existing and classified uses for each of the classifications in South Carolina and are listed in Section D, E, G, H, and the Appendix. Narrative criteria for aquatic life and human health are general goals and statements of attainable or attained conditions of biological integrity and water quality of the waterbody. These narrative criteria rely upon the use of standardized measures and data analyses to make qualitative determinations of the water quality and use attainment. The Department uses scientifically sound and, where applicable, EPA-approved methods in making these determinations. Narrative criteria are listed in Sections C, D, E, F, G, and H.

c. Antidegradation rules provide a minimum level of protection to all waters of the State and also include provisions and requirements necessary to determine when and if water quality degradation is allowed. Antidegradation rules are described in Section D of this regulation.

2. Waters which meet standards shall be maintained. Waters which do not meet standards shall be improved, wherever attainable, to achieve those standards. However, the Department cannot assure that classified waters shall at all times meet the numeric water quality standards for such uses.

3. Recognizing the technical and economic difficulty in restoring water quality, the Department shall emphasize a preventive approach in protecting waters of the State.
4. It is a goal of the Department to maintain and improve all surface waters to a level to provide for the survival and propagation of a balanced indigenous aquatic community of flora and fauna and to provide for recreation in and on the water. It is also a goal to provide, where appropriate and desirable, for drinking water after conventional treatment, shellfish harvesting, and industrial and agricultural uses.
5. It is a goal of the Department to maintain or restore ground water quality so it is suitable as a drinking water source without any treatment.

B. DEFINITIONS.

1. The definition of any word or phrase employed in this regulation shall be the same as given in the South Carolina Pollution Control Act, 48-1-10, et seq., S.C. Code of Laws, 1976, hereafter referred to as the Act. Words or phrases which are not defined in the Act are defined as follows:
2. 7Q10 means the annual minimum seven day average flow rate that occurs with an average frequency of once in ten years as published or verified by the U. S. Geological Survey (USGS) or an estimate extrapolated from published or verified USGS data.
3. Acute means a stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed in 96 hours or less typically is considered acute. When referring to aquatic toxicology or human health, an acute effect is not always measured in terms of lethality.
4. Acute-to-chronic ratio (ACR) means the ratio of the acute toxicity of an effluent or a toxicant to its chronic toxicity. It is used as a factor for estimating chronic toxicity on the basis of acute toxicity data, or for estimating acute toxicity on the basis of chronic toxicity data.
5. Agricultural means the use of water for stock watering, irrigation, and other farm purposes.
6. Annual average flow means the annual mean flow rate of a stream at a specific point as published or verified by the U. S. Geological Survey (USGS) or an estimated annual mean flow rate extrapolated from published or verified USGS data.
7. Aquaculture means a defined managed water area which uses discharges of pollutants into that designated area for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals.
8. Aquatic farm means the cultivation, production, or marketing of domestic aquatic organisms which are any fish, aquatic invertebrates, or aquatic plants that are spawned, produced, or marketed as a cultivated crop in the waters of the State.
9. Aquatic toxicity test mean laboratory experiments that measure the biological effect (e.g., growth, survival, and reproduction) of effluents or receiving waters on aquatic organisms.
10. Aquifer means a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of ground water to wells or springs.
11. Balanced indigenous aquatic community means a natural, diverse biotic community characterized by the capacity to sustain itself through cyclic seasonal changes, presence of necessary food chain species and by a lack of domination by pollutant tolerant species.
12. Best management practice (BMP) means a practice or combination of practices that are the most effective,

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practical ways of controlling or abating pollution from widespread or localized sources.

13. Bioaccumulation means the process by which a compound is taken up and retained by an aquatic organism, both from water and through food.

14. Bioavailability means a measure of the physiochemical access that a toxicant has to the biological processes of an organism. The less the bioavailability of a toxicant, the less its toxic effect on an organism.

15. Bioconcentration means the process by which a compound is absorbed from water through gills or epithelial tissues and is concentrated in the body.

16. Bioconcentration factor (BCF) means the ratio of a substance's concentration in tissue versus its concentration in water, in situations where the food chain is not exposed or represents equilibrium partitioning between water and organisms.

17. Biological assessment means an evaluation of the biological condition of a waterbody using biological surveys and other direct measurements of resident biota in surface waters and sediments.

18. Biological criteria, also known as biocriteria, mean narrative expressions or numeric values of the biological characteristics of aquatic communities based on appropriate reference conditions. Biological criteria serve as an index of aquatic community health.

19. Biological monitoring, also known as biomonitoring, means a description of the living organisms in water quality surveillance used to indicate compliance with water quality standards or permit effluent limits and to document water quality trends. Methods of biological monitoring may include, but are not limited to, toxicity testing such as ambient toxicity testing, whole effluent toxicity testing, and ambient assessment of the resident biological community.

20. Chlorophyll *a* means a photosynthetic pigment present in all types of green plants. It is used as a measure of algal biomass and is an indicator of nutrient enrichment.

21. Chronic means a stimulus that lingers or continues for a relatively long period of time, often one-tenth of the life span or more. Chronic should be considered a relative term depending on the life span of an organism. The measurement of a chronic effect can be reduced growth, reduced reproduction, etc., in addition to lethality.

22. Classified uses means those uses specified in Section G for surface waters and Section H for ground waters, whether or not those uses are being attained.

23. Concentrated aquatic animal production facility means a hatchery, fish farm, or other facility related to aquatic animal production which is not located in waters of the State and is subject to a National Pollutant Discharge Elimination System (NPDES) permit.

24. Conventional treatment as applying to potable water supplies means treatment including at least flocculation, sedimentation, filtration, and disinfection.

25. Criterion continuous concentration (CCC) means the highest instream concentration of a toxicant or an effluent to which the organisms can be exposed to protect against chronic (long-term) effects. EPA derives chronic criteria from longer term (often greater than 28 days) tests that measure survival, growth, reproduction, and in some cases bioconcentration.

26. Criterion maximum concentration (CMC) means the highest instream concentration of a toxicant or an effluent to which the organisms can be exposed for a brief period of time without causing an acute effect. EPA derives acute criteria from 48 to 96 hour tests of lethality or immobilization.

27. Daily average means the average of all samples taken during any 24 hour period.
28. Deleterious substances mean those substances which in sufficient concentrations or levels have a harmful effect on classified or existing water uses.
29. Ecoregions mean areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources and are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. The EPA has published a document that outlines the Level III ecoregions (please refer to U.S. Environmental Protection Agency, 1999. Level III ecoregions of the continental United States (revision of Omernik, 1987). Corvallis, Oregon, U.S. E.P.A.-National Health and Environmental Effects Research Laboratory, Map M-1.) The following are South Carolina Level III ecoregions: Blue Ridge Mountains, Piedmont, Southeastern Plains, and Middle Atlantic Coastal Plains.
30. Ephemeral streams mean streams that generally have defined natural watercourses that flow only in direct response to rainfall or snowmelt and in which discrete periods of flow persist no more than 29 consecutive days per event.
31. Existing uses means those uses actually being attained in or on the water, on or after November 28, 1975, regardless of the classified uses.
32. Fishing means the taking, harvesting, or catching of finfish or crustaceans for human consumption.
33. Full pool elevation means the maximum lake level attained before water releases over a fixed weir, spillway, or other discharge structure. In larger lakes and reservoirs, the full pool elevation is the maximum level established for management.
34. Groundwater means water below the land surface in a zone of saturation.
35. Hydrograph controlled release (HCRs) means the onsite storage or holding of treated wastewater or the use of an alternative discharge option contained in Section D.2.a. of this regulation, during specified critical streamflow conditions and then discharging the treated wastewater to the stream when streamflow is sufficient to assimilate the wastewater.
36. Intermittent streams means streams that generally have defined natural watercourses which do not flow year around, but flow beyond periods of rainfall or snowmelt.
37. Lake means any water of the State that is a freshwater pond, reservoir, impoundment, or similar body of water located wholly or partially within the State.
38. LC₅₀ means the concentration of a toxicant at which lethality occurs to 50 percent of the test organisms during a specified exposure time period.
39. Mixing zone means:
- a. For surface waters, an area where a discharge undergoes initial dilution and is extended to cover the secondary mixing in the ambient waterbody. A mixing zone is an allocated impact zone where water quality criteria can be exceeded as long as acutely toxic conditions are prevented (except as defined within a Zone of initial dilution) and public health and welfare are not endangered.
 - b. For ground waters, a hydrogeologically controlled three-dimensional flow path in the subsurface which constitutes the pathway for waste constituents to migrate from a source.
40. Natural conditions mean those water quality conditions unaffected by anthropogenic sources of pollution.

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41. No discharge zone (NDZ) means a waterbody (or a portion of a waterbody) so designated that no discharging Marine Sanitation Devices (MSDs) are allowed on vessels on waterbodies so designated. All vessels located on such designated waterbodies shall be equipped with MSDs which discharge to a holding tank which shall be pumped out at a designated pump-out location or shall discharge legally outside the boundary of the United States.
42. No observed effect concentration (NOEC) means the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation and determined using hypothesis testing.
43. Nutrients mean an element or chemical essential to life including, but not limited to, nitrogen and phosphorus.
44. Organoleptic effects mean those sensory effects associated with taste and smell.
45. Outstanding recreational or ecological resource waters means waters which are of exceptional recreational or ecological importance or of unusual value. Such waters may include, but are not limited to: waters in national or state parks or wildlife refuges; waters supporting threatened or endangered species; waters under the National Wild and Scenic Rivers Act or South Carolina Scenic Rivers Act; waters known to be significant nursery areas for commercially important species or known to contain significant commercial or public shellfish resources; or waters used for or having significant value for scientific research and study.
46. Practical Quantitation Limit (PQL) means a concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. It is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specific sample weights volumes, and processing steps have been followed.
47. Prohibited area means an area adjacent to point source discharges or other sources of potential contamination in shellfish growing waters where the gathering of clams, mussels, or oysters is prohibited to protect public health.
48. Primary contact recreation means any activity with the intended purpose of direct water contact by the human body to the point of complete submergence, including but not limited to swimming, water skiing, and skin diving.
49. Propagation means the continuance of species through reproduction and growth in the natural environment, as opposed to the maintenance of species by artificial culture and stocking.
50. Public water system means any public or privately owned waterworks system which provides drinking water for human consumption, except those serving a single private residence or dwelling.
51. Recharge area means an area where an underground source of drinking water is poorly confined, is under water table conditions, and has a downward component of flow from the water table into the underground source of drinking water.
52. Secondary contact recreation means any activity occurring on or near the water which does not have an intended purpose of direct water contact by the human body to the point of complete submergence, including but not limited to fishing, boating, canoeing, and wading.
53. Shellfish mean bivalve mollusks, specifically clams, mussels, or oysters.
54. Shellfish harvesting means taking of bivalve mollusks, specifically clams, mussels, or oysters, for direct marketing or human consumption.

55. Source for drinking water supply means any source of surface water which is used for domestic consumption, or used in connection with the processing of milk, beverages, food or for other purposes which required finished water meeting regulations [40 CFR Part 141 and 40 CFR Part 143] established pursuant to the Safe Drinking Water Act (Public Law 93-523, 95-190) applicable to public water systems.

56. Tidal conditions mean conditions determined by the Department as appropriate for tidally influenced waters of the State to be analogous to the 7Q10 or the annual average flow for flowing waters of the State.

57. Tidal saltwaters means those waters whose elevation is subject to changes due to oceanic tides and which have chloride ion content in excess of 250 milligrams per liter (mg/l) (salinity = 0.48 parts per thousand).

58. Toxic wastes means those wastes or combinations of wastes including disease-causing agents which, discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), physical deformations, or restrict or impair growth in such organisms or their offspring.

59. Underground source of drinking water (USDW) means an aquifer or its portion:

- a. Which supplies any public water system or individual residential well; or
- b. Which contains a sufficient quantity of ground water to supply a public water system or individual residential well; and,
 - (1) Currently supplies drinking water for human consumption; or
 - (2) Contains water with less than ten thousand milligrams per liter total dissolved solids.

60. Variance means a short-term exemption from meeting certain otherwise applicable water quality standards.

61. Water table means that level below the land surface at which all the voids are filled with water at a pressure equal to atmospheric.

62. Weekly average means the average of all samples taken during any consecutive seven day period.

63. Whole effluent toxicity (WET) means the aggregate toxic effect of an aqueous sample measured directly by an aquatic toxicity test.

64. Zone of initial dilution (ZID) means that minimal area of a mixing zone immediately surrounding the outfall where water quality criteria are not met, provided there is no acute toxicity to drifting organisms and public health and welfare are not endangered.

C. APPLICABILITY OF STANDARDS.

- 1. The water quality standards are applicable to both surface waters and ground waters.
- 2. Any exception specified in this regulation is to be applied exclusively to the situation for which it was incorporated and not as a general rule applicable to all situations or waters of the State.
- 3. Uses in all waters shall be protected, wherever attainable, regardless of flow.
- 4. Flow requirements, prohibitions, and exceptions.
 - a. Aquatic life numeric criteria.

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(1) The applicable critical flow conditions for aquatic life criteria shall be defined as 7Q10 or tidal conditions as determined by the Department. The numeric criteria of this regulation are not applicable to waters of the State when the flow rate is less than 7Q10 except as prescribed below.

(2) The Department shall consider conditions that are comparable to or more stringent than 7Q10 where appropriate to protect classified and existing uses, such as below dams and in tidal situations. Only those situations where the use of 7Q10 flows are determined to be impracticable, inappropriate, or insufficiently protective of aquatic life uses shall be considered as a situation in which the Department may consider other flow conditions.

(3) The Department shall use the applicable critical flow conditions for the protection and maintenance of aquatic life for, but not limited to, the following: permit issuance, wasteload allocations, load allocations, and mixing zones.

(4) NPDES Permit conditions shall be based on a critical condition analysis (e.g., critical flow, temperature or pH, or a combination of factors which would represent a critical conditions). Regarding ambient water temperature as a component of a critical condition analysis, the Department may consider less stringent limits during November through February based on a critical ambient water temperature during November through February.

b. Human health and organoleptic numeric criteria.

(1) The applicable critical flow conditions for human health shall be defined as annual average flow for carcinogens, 7Q10 (or 30Q5 if provided by the applicant) for noncarcinogens, or tidal conditions as determined by the Department. The applicable critical flow conditions for organoleptic criteria shall be defined as annual average flow or tidal conditions as determined by the Department. The numeric criteria of this regulation are not applicable to waters of the State when the flow rate is less than the annual average flow for carcinogens or 7Q10 (or 30Q5 if provided by the applicant) for noncarcinogens, except as prescribed below.

(2) The Department shall consider conditions that are comparable to or more stringent than annual average flow, 7Q10, or 30Q5 (if provided by the applicant) where appropriate to protect the classified and existing uses, such as below dams and in tidal situations. Only those situations where the use of annual average flow, or 7Q10, or 30Q5 (if provided by the applicant) are determined to be impracticable, inappropriate, or insufficiently protective of human health uses shall be considered as a situation in which the Department may consider other flow conditions.

(3) The Department shall use the applicable critical flow conditions for human health and organoleptic effects for, but not limited to, the following: permit issuance, wasteload allocations, load allocations, and mixing zones.

c. As described below, the Department may also consider conditions other than 7Q10 for use with an HCR.

(1) After a complete antidegradation review in compliance with Section D.2., an HCR for oxygen-demanding substances may be permitted by the Department for the following situations:

i. If other flow-related effluent conditions are allowed by federal effluent guidelines as specified in 40 CFR Parts 400-499 (Chapter I, Subchapter N) and when used the numeric criteria shall not be exceeded and all water quality standards are maintained and protected;

ii. For industrial discharges, after application of advanced wastewater treatment, as determined by the Department, for the type of wastewater discharged;

iii. For other discharges, after application of advanced wastewater treatment which will be defined, for this purpose, at or below the following permit effluent limitations of BOD₅ = 10 mg/l, NH₃-N = 1 mg/l, and DO = 6 mg/l.

(2) In cases where an HCR may be allowed, the permit effluent limitations for toxics will not be variable and will be based on the critical flow conditions (chemical-specific or WET).

(3) In cases where an HCR may be allowed, new or proposed expansions of existing permits shall require instream biological assessments and existing permits may require instream biological assessments.

5. Intermittent streams and ephemeral streams shall be considered waters of the State. The water quality standards of the class of the stream to which intermittent and ephemeral streams are tributary shall apply, disregarding any site-specific numeric criteria for the named waterbody. This does not preclude the development of site-specific numeric criteria for intermittent and ephemeral streams.

6. The standards of adjacent waters must be maintained in basins excavated from high ground and constructed solely for berthing vessels. The standards of the adjacent waters must also be maintained with regard to impacts from created marina basins.

7. The existing and classified uses of downstream waters shall be maintained and protected.

8. Where surface waters are not classified by name (unlisted) in R.61-69, Classified Waters, the water quality standards of the class of the stream to which they are tributary shall apply, disregarding any site specific numeric criteria for the named waterbody. In tidal areas where an unlisted tributary flows between two differently classified waterbodies, the more stringent numeric criteria of the classified waters apply to the unlisted tributary, disregarding any site-specific numeric criteria for those waterbodies. This does not preclude the development of site-specific numeric criteria for unlisted tributaries.

9. Because of natural conditions some surface and ground waters may have characteristics outside the standards established by this regulation. Such natural conditions do not constitute a violation of the water quality standards; however, degradation of existing water quality is prohibited unless consistent with Section D.4. of this regulation.

10. A mixing zone for surface waters may be allowed by the Department. All water quality standards of the classification of the surface waters, including affected downstream waters, are applicable unless a mixing zone, setting forth certain conditions, is granted by the Department. When the Department grants a mixing zone, the mixing zone shall not be an area of waste treatment nor shall it interfere with or impair the existing uses of the waterbody. The size of the mixing zone shall be minimized, as determined by the Department, and shall be based upon applicable critical flow conditions. Since mixing zones are allocated impact zones where human health and aquatic life numeric criteria can be exceeded, the Department shall restrict their use. The following prohibitions and restrictions are established in order to support these important uses of the waters of the State.

a. In order to protect human health, mixing zones are not allowed when: they would endanger public health and welfare, the mixing zone would adversely affect shellfish harvesting, or the mixing zone would be for bacteria (e.g. fecal coliform).

b. In order to protect aquatic life, mixing zones are not allowed when: a pollutant, excluding temperature or thermal, in a discharge would attract biota; the mixing zone would result in undesirable aquatic organisms or a dominance of nuisance species outside of the mixing zone; there is a reasonable expectation that a discharge would adversely affect a federally-listed endangered or threatened aquatic species, its habitat, or a proposed or designated critical habitat; the mixing zone would not allow safe passage of aquatic organisms when passage would otherwise be unobstructed; or the mixing zone would not allow for the protection and propagation of a balanced indigenous aquatic community in and on the water body.

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c. In order to protect both human health and aquatic life, mixing zones are not allowed when: a discharge would not be predicted to or does not produce adequate mixing at the point of discharge; or a discharge would be to a waterbody where multiple discharges interact if the combined mixing zone would impair the waterbody outside the mixing zone. The Department may prohibit or limit mixing zones in waters of the State that may be considered a significant estuarine nursery habitat for resident species.

d. The size of the mixing zone shall be kept to a minimum and may be determined on an individual project basis considering biological, chemical, engineering, hydrological, and physical factors.

11. Mixing zones for ground waters may be allowed by the Department. In order to ensure the maintenance and protection of the uses of the waters of the State and in compliance with Section D of this regulation, any mixing zone granted by the Department shall be determined on an individual basis by the Department as prescribed below.

a. The numeric standards for Class GB ground water, Section H.9., are applicable unless a mixing zone solely within the bounds of the property, setting forth certain conditions, is granted by the Department. Such a mixing zone shall be granted upon satisfactory demonstration to the Department that:

(1) Reasonable measures have been taken or binding commitments are made to minimize the addition of contaminants to ground water and/or control the migration of contaminants in ground water;

(2) The ground water in question is confined to a shallow geologic unit which has little or no potential of being an Underground Source of Drinking Water, and discharges or will discharge to surface waters without contravening the surface water standards set forth in this regulation;

(3) The contaminant(s) in question occurs within the bounds of the property, and there is minimum possibility for ground water withdrawals (present or future) to create drawdown such that contaminants would flow off-site; and

(4) The contaminants or combination of contaminants in question are not dangerously toxic, mobile, or persistent.

b. [Reserved].

12. Site-specific numeric criteria for surface waters may be established by the Department to replace the numeric criteria of Sections E, G, and the appendix of this regulation or to add new numeric criteria not contained in this regulation. Establishment of such numeric criteria shall be subject to public participation and administrative procedures for adopting regulations. In addition, such site-specific numeric criteria shall not apply to tributary or downstream waters unless specifically described in the water classification listing R.61-69, Classified Waters.

13. In classifying and adopting standards for the waters of the State, the Department considers:

a. The size, depth, surface area covered, volume, flow direction, rate of flow, stream gradient and temperature of the water;

b. The character of the district bordering such water and its suitability for the uses and with a view to conserving it and encouraging the most appropriate use of the lands bordering on such water for residential, agricultural, industrial, or recreational purposes;

c. The uses which have been made, are being made, may be made or are desired to be made of such waters for transportation, domestic, and industrial consumption, irrigation, swimming, fishing, fish culture, fire prevention, sewage disposal or other uses;

- d. The present quality of such waters; and
- e. Information, about the four items above, from government agencies, interested groups, and the public.

D. ANTIDegradation Rules.

1. Existing water uses and the level of water quality necessary to protect these existing uses shall be maintained and protected regardless of the water classification and consistent with the policies below.

a. A new activity or expansion of an existing activity shall not be allowed in Class ONRW, Class ORW, or Shellfish Harvesting Waters if it would exclude, through establishment of a prohibited area, an existing shellfish harvesting or culture use. A new activity or expansion of an existing activity which will result in a prohibited area may be allowed in Class SA or Class SB waters when determined to be appropriate by the Department and would not remove or impair an existing use.

b. Existing uses and water quality necessary to protect these uses are presently affected or may be affected by instream modifications or water withdrawals. The stream flows necessary to protect classified and existing uses and the water quality supporting these uses shall be maintained consistent with riparian rights to reasonable use of water.

c. Existing or classified ground water uses and the conditions necessary to protect those uses shall be maintained and protected.

2. Where surface water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife, and recreation in and on the water, that quality shall be maintained and protected unless the Department finds, after intergovernmental coordination and public participation, that allowing lower water quality is necessary to important economic or social development in the areas where the waters are located. In allowing such lower water quality, water quality adequate to fully protect existing and classified uses shall be maintained. The highest statutory and regulatory requirements for all new and existing point sources shall be achieved and all cost-effective and reasonable best management practices for nonpoint source control shall be achieved within the State's statutory authority and otherwise encouraged. In order to fulfill these goals, the Department shall consider (a) and (b) below when evaluating any proposed expansion or new discharge to waters of the State that will lower water quality to a measurable effect. This includes, but is not limited to, the new or increased loading of any pollutant or pollutant parameter in the effluent regardless of whether the discharge flow changes.

a. An alternatives analysis, conducted by the applicant, must demonstrate to the Department that none of the following applicable alternatives that would minimize or eliminate the lowering of water quality are economically and technologically reasonable:

- (1) Water recycle or reuse;
- (2) Use of other discharge locations;
- (3) Connection to other wastewater treatment facilities;
- (4) Use of land application;
- (5) Product or raw material substitution;
- (6) Any other treatment option or alternative.

b. After the alternatives analysis is completed, the Department shall evaluate whether a proposed discharge that will result in the lowering of water quality of a waterbody, and for which there are no economically or technologically reasonable alternatives, is necessary for important economic or social development. For this to be accomplished, several economic and social factors must be considered. If an evaluation of the economic and social factors reveals that affordable treatment options that, combined with any alternatives, would prevent the need for the lowering of water quality, the Department shall deny the request. Conformance of the proposed discharge with the applicable '208 Areawide Water Quality Management Plans may demonstrate importance to

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economic and social development as well as intergovernmental coordination and public participation. Activities requiring permits or certification by the Department shall provide for public participation through the Department's existing public notification processes. Economic and social factors to be considered may include the following:

- (1) Employment (increases, maintenance, or avoidance of reduction);
- (2) Increased industrial production;
- (3) Improved community tax base;
- (4) Improved housing; and/or
- (5) Correction of an environmental or public health problem.

3. The water quality of outstanding resource surface waters designated as Class ONRW or Class ORW shall be maintained and protected through application of the standards for these classifications as described in Section G.

4. Certain natural conditions may cause a depression of dissolved oxygen in surface waters while existing and classified uses are still maintained. The Department shall allow a dissolved oxygen depression in these naturally low dissolved oxygen waterbodies as prescribed below pursuant to the Act, Section 48-1-83, et seq., 1976 Code of Laws:

a. For purposes of section D of this regulation, the term "naturally low dissolved oxygen waterbody" is a waterbody that, between and including the months of March and October, has naturally low dissolved oxygen levels at some time and for which limits during those months shall be set based on a critical condition analysis. The term does not include the months of November through February unless low dissolved oxygen levels are known to exist during those months in the waterbody. For a naturally low dissolved oxygen waterbody, the quality of the surface waters shall not be cumulatively lowered more than 0.10 mg/l for dissolved oxygen from point sources and other activities; or

b. Where natural conditions alone create dissolved oxygen concentrations less than 110 percent of the applicable water quality standard established for that waterbody, the minimum acceptable concentration is 90 percent of the natural condition. Under these circumstances, an anthropogenic dissolved oxygen depression greater than 0.10 mg/l shall not be allowed unless it is demonstrated that resident aquatic species shall not be adversely affected pursuant to Section 48-1-83. The Department may modify permit conditions to require appropriate instream biological monitoring.

c. The dissolved oxygen concentrations shall not be cumulatively lowered more than the deficit described above utilizing a daily average unless it can be demonstrated that resident aquatic species shall not be adversely affected by an alternate averaging period.

E. GENERAL RULES AND STANDARDS APPLICABLE TO ALL WATERS.

1. The General Assembly of South Carolina in the Act has declared the following policy: "It is declared to be the public policy of the State to maintain reasonable standards of purity of the air and water resources of the State, consistent with the public health, safety and welfare of its citizens, maximum employment, the industrial development of the State, the propagation and protection of terrestrial and marine fauna and flora, and the protection of physical property and other resources. It is further declared that to secure these purposes and the enforcement of the provisions of this Act, the Department of Health and Environmental Control shall have authority to abate, control and prevent pollution."

2. The classes and standards described in Section G and H of this regulation implement the above State policy by protecting the waters of South Carolina. Consistent with the above policy, the Department adopts the following general standards in items 3-17 for all waters of South Carolina.

3. No waters of the State shall be used for the sole or principal purpose of transporting or treating wastes.

4. a. Any discharge into waters of the State must be permitted by the Department and receive a degree of treatment and/or control which shall produce an effluent which is consistent with the Act, the Clean Water Act (P.L. 92-500, 95-217, 97-117, 100-4), this regulation, and related regulations. No permit issued by the Department shall be interpreted as creating any vested right in any person. Additionally, any discharge into waters of the State containing sanitary wastes shall be effectively disinfected as necessary to meet the appropriate standards of this regulation. The Department may require best management practices (BMPs) for control of stormwater runoff as part of the requirements of an NPDES permit, a State construction permit, or a State 401 Water Quality Certification.

b. When not specifically covered by permit reporting requirements, any unauthorized discharge into waters of the State which may cause or contribute to an excursion of a water quality standard must be reported by the responsible party to the Department orally within 24 hours of becoming aware of such conditions. Further, written notification must be provided to the Department (Compliance Assurance Division, Bureau of Water) within five (5) days of becoming aware of such conditions and the written notice must include the following:

- (1) A description of the discharge and cause;
- (2) The duration of the discharge, including exact dates and times, and if not corrected, the time that the unauthorized discharge is expected to cease, and what steps are being taken to eliminate, minimize, and prevent recurrence of the discharge.

5. All ground waters and surface waters of the State shall at all times, regardless of flow, be free from:

a. Sewage, industrial waste, or other waste that will settle to form sludge deposits that are unsightly, putrescent, or odorous to such degree as to create a nuisance, or interfere with classified water uses or existing water uses;

b. Floating debris, oil, grease, scum, and other floating material attributable to sewage, industrial waste, or other waste in amounts sufficient to be unsightly to such a degree as to create a nuisance or interfere with classified water uses or existing water uses;

c. Sewage, industrial, or other waste which produce taste or odor or change the existing color or physical, chemical, or biological conditions in the receiving waters or aquifers to such a degree as to create a nuisance, or interfere with classified water uses (except classified uses within mixing zones as described in this regulation) or existing water uses; and,

d. High temperature, toxic, corrosive, or deleterious substances attributable to sewage, industrial waste, or other waste in concentrations or combinations which interfere with classified water uses (except classified uses within mixing zones as described in this regulation), existing water uses, or which are harmful to human, animal, plant or aquatic life.

6. Waters where classified uses are not being attained can be reclassified for protection of an attainable use and standards designated for that use where:

- a. Natural conditions prevent the attainment of the use; or
- b. Natural, ephemeral, intermittent, low flow conditions, or water levels prevent the attainment of the use; or
- c. Human caused conditions or sources prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
- d. Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in the attainment of the use; or

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e. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, preclude attainment of aquatic life protection uses; or

f. Controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

7. Before the Department may grant a variance for any water of the State, there must be a demonstration that one of the following factors for reclassifying uses has been satisfied:

a. Natural conditions prevent the attainment of the use; or

b. Natural, ephemeral, intermittent, low flow conditions, or water levels prevent the attainment of the use; or

c. Human caused conditions or sources prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

d. Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in the attainment of the use; or

e. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, preclude attainment of aquatic life protection uses; or

f. Controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act would result in adverse social and economic impact, disproportionate to the benefits to the public health, safety or welfare as a result of maintaining the standard.

8. If the demonstration necessary under Section E.7 above has been satisfied, the Department may then grant a variance provided the following apply:

a. The variance is granted to an individual discharger for a specific pollutant(s) or parameter(s) and does not otherwise modify water quality standards; and

b. The variance identifies and justifies the criterion that shall apply during the existence of the variance; and

c. The variance is established as close to the underlying criterion as is possible and upon expiration of the variance, the underlying criterion shall become the effective water quality standard for the waterbody; and

d. The variance is reviewed every three years, at a minimum, and extended only where the conditions for granting the variance still apply; and

e. The variance does not exempt the discharger from compliance with any applicable technology or other water quality-based permit effluent limitations; and

f. The variance does not affect permit effluent limitations for other dischargers.

9. Prior to removing any uses or granting a variance, notice and an opportunity for a public hearing shall be provided.

10. Discharge of fill into waters of the State is not allowed unless the activity is consistent with Department regulations and will result in enhancement of classified uses with no significant degradation to the aquatic ecosystem or water quality.

11. In order to protect and maintain lakes and other waters of the State, consideration needs to be given to the control of nutrients reaching the waters of the State. Therefore, the Department shall control nutrients as prescribed below.

a. Discharges of nutrients from all sources, including point and nonpoint, to waters of the State shall be prohibited or limited if the discharge would result in or if the waters experience growths of microscopic or macroscopic vegetation such that the water quality standards would be violated or the existing or classified uses of the waters would be impaired. Loading of nutrients shall be addressed on an individual basis as necessary to ensure compliance with the narrative and numeric criteria.

b. Numeric nutrient criteria for lakes are based on an ecoregional approach which takes into account the geographic location of the lakes within the State and are listed below. These numeric criteria are applicable to lakes of 40 acres or more. Lakes of less than 40 acres will continue to be protected by the narrative criteria.

(1) For the Blue Ridge Mountains ecoregion of the State, total phosphorus shall not exceed 0.02 mg/l, chlorophyll *a* shall not exceed 10 ug/l, and total nitrogen shall not exceed 0.35 mg/l.

(2) For the Piedmont and Southeastern Plains ecoregions of the State, total phosphorus shall not exceed 0.06 mg/l, chlorophyll *a* shall not exceed 40 ug/l, and total nitrogen shall not exceed 1.50 mg/l.

(3) For the Middle Atlantic Coastal Plains ecoregion of the State, total phosphorus shall not exceed 0.09 mg/l, chlorophyll *a* shall not exceed 40 ug/l, and total nitrogen shall not exceed 1.50 mg/l.

c. In evaluating the effects of nutrients upon the quality of lakes and other waters of the State, the Department may consider, but not be limited to, such factors as the hydrology and morphometry of the waterbody, the existing and projected trophic state, characteristics of the loadings, and other control mechanisms in order to protect the existing and classified uses of the waters.

d. The Department shall take appropriate action, to include, but not limited to: establishing numeric effluent limitations in permits, establishing Total Maximum Daily Loads, establishing waste load allocations, and establishing load allocations for nutrients to ensure that the lakes attain and maintain the above narrative and numeric criteria and other applicable water quality standards.

e. The criteria specific to lakes shall be applicable to all portions of the lake. For this purpose, the Department shall define the applicable area to be that area covered when measured at full pool elevation.

12.a. The water temperature of all Freshwaters which are free flowing shall not be increased more than 5°F (2.8°C) above natural temperature conditions and shall not exceed a maximum of 90°F (32.2°C) as a result of the discharge of heated liquids unless a different site-specific temperature standard as provided for in C.12. has been established, a mixing zone as provided in C.10. has been established, or a Section 316(a) determination under the Federal Clean Water Act has been completed.

b. The weekly average water temperature of all Shellfish Harvesting, Class SA and Class SB waters shall not exceed 4°F (2.2°C) above natural conditions during the fall, winter or spring, and shall not exceed 1.5°F (0.8°C) above natural conditions during the summer as a result of the discharge of heated liquids unless a different site-specific temperature standard as provided for in C.12. has been established, a mixing zone as provided for in C.10. has been established, or a Section 316(a) determination under the Federal Clean Water Act has been completed.

c. The weekly average water temperature of all Freshwaters which are lakes shall not be increased more than 5°F (2.8°C) above natural conditions and shall not exceed 90°F (32.2°C) as a result of the discharge of heated liquids unless a different site-specific temperature standard as provided for in C.12. has been established, a mixing

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zone as provided in C.10. has been established, or a Section 316(a) determination under the Federal Clean Water Act has been completed.

13. Numeric criteria based on organoleptic data (prevention of undesirable taste and odor) are adopted herein. Those substances and their criteria are listed in the appendix. For those substances which have aquatic life and/or human health numeric criteria and organoleptic numeric criteria, the most stringent of the three shall be used for derivation of permit effluent limitations.

14. Numeric criteria for the protection and maintenance of all classes of surface waters are adopted herein and are listed in Sections E, G, and the appendix. Footnotes that further describe the application of these numeric criteria are included in the appendix.

a. Application of numeric criteria to protect aquatic life.

(1) The stated CMC value shall be used as an acute toxicity number for calculating permit effluent limitations.

(2) The stated CCC value shall be used as a chronic toxicity number for calculating permit effluent limitations.

(3) If metals concentrations for numeric criteria are hardness-dependent, the CMC and CCC concentrations shall be based on 25 milligrams/liter (mg/l) hardness (as expressed as CaCO₃) if the ambient hardness is less than 25 mg/l. Concentrations of hardness less than 400 mg/l maybe based on the actual mixed stream hardness if it is greater than 25 mg/l and less than 400 mg/l and 400 mg/l if the ambient hardness is greater than 400 mg/l.

(4) If separate numeric criteria are given for fresh and salt waters, they shall be applied as appropriate. In transitional tidal and estuarine areas, the Department shall apply the more stringent of the criteria to protect the existing and classified uses of the waters of the State.

(5) The Department shall review new or revised EPA criteria for adoption by South Carolina when published in final form.

(6) If the State develops site-specific criteria for any substances for which EPA has developed national criteria, the site-specific criteria shall supersede the national criteria.

b. Application of numeric criteria to protect human health.

(1) If separate numeric criteria are given for organism consumption, water and organism consumption (W/O), and drinking water Maximum Contaminant Levels (MCLs), they shall be applied as appropriate. The most stringent of the criteria shall be applied to protect the existing and classified uses of the waters of the State.

(2) The Department shall review new or revised EPA criteria for adoption by South Carolina when published in final form by EPA.

(3) If the State develops site-specific criteria for any substances for which EPA has developed national criteria, the site-specific criteria shall supersede the national criteria.

(4) Adoption of EPA human health criteria does not preclude the Department from considering health effects of other pollutants or from considering new or revised EPA criteria when developing effluent permit conditions.

c. Application of criteria for the derivation of permit effluent limitations.

(1) Numeric criteria for substances listed in Sections E, G, and the appendix shall be used by the Department to derive NPDES permit effluent limitations at the applicable critical flow conditions as determined by the Department unless an exception is provided below.

(2) When the derived permit effluent limitation based on aquatic life numeric criteria is below the practical quantitation limit for a substance, the derived permit effluent limitation shall include an accompanying statement in the permit that the practical quantitation limit using approved analytical methods shall be considered as being in compliance with the limit. Appropriate biological monitoring requirements shall be incorporated into the permit to determine compliance with appropriate water quality standards. Additionally, if naturally occurring instream concentration for a substance is higher than the derived permit effluent limitation, the Department may establish permit effluent limitations at a level higher than the derived limit, but no higher than the natural background concentration. In such cases, the Department may require biological instream monitoring and/or WET testing.

(3) When the derived permit effluent limitation based on human health numeric criteria is below the practical quantitation limit for a substance, the derived permit effluent limitation shall include an accompanying statement in the permit that the practical quantitation limit using approved analytical methods shall be considered as being in compliance with the limit. Additionally, if naturally occurring instream concentration for a substance is higher than the derived permit effluent limitation, the Department may establish permit effluent limitations at a level higher than the derived limit, but no higher than the natural background concentration.

(4) NPDES permit effluent limitations for metals shall normally be expressed on the permits as total recoverable metals, but the Department may utilize a federally-approved methodology to predict the dissolved fraction, partitioning coefficient, or the bioavailable portion of metals in calculating these limits.

(5) Except as provided herein, where application of MCLs or W/O numeric criteria using annual average flow for carcinogens, 7Q10 (or 30Q5 if provided by the applicant) for noncarcinogens, or comparable tidal condition as determined by the Department results in permit effluent limitations more stringent than limitations derived from other applicable human health (organism consumption only), aquatic life, or organoleptic numeric values; MCLs or W/O shall be used in establishing permit effluent limitations for human health protection. The Department may, after Notice of Intent included in a notice of a proposed NPDES permit in accordance with Regulation 61-9.124.10, determine that drinking water MCLs or W/O shall not apply to discharges to those waterbodies where there is: no potential to affect an existing or proposed drinking water source and no state-approved source water protection area. For purposes of this section, a proposed drinking water source is one for which a complete permit application, including plans and specifications for the intake, is on file with the Department at the time of consideration of an NPDES permit application. for a discharge that will affect or has the potential to affect the drinking water source.

(6) Except as provided herein, where the Department may determine that an NPDES permitted discharge will not cause, have reasonable potential to cause, or contribute to an exceedence of the numeric criterion for turbidity under the following conditions:

i. The facility withdraws its surface intake water containing turbidity from the same body of water into which the discharge is made;

ii. The facility does not significantly concentrate or contribute additional turbidity to the discharged water;

iii. The facility does not alter the turbidity through chemical or physical means that would cause adverse water quality impacts to occur.

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(7) Site-specific permit effluent limitations and alternate criteria less stringent than those derived in accordance with the above requirements may be derived where it is demonstrated that such limits and criteria shall maintain the existing and classified uses, adequate opportunity for public participation in such derivation process has occurred, and the effluent shall not cause criteria for human health to be exceeded. Where a site-specific permit effluent limitation and alternate criterion has been derived, such derivation shall be subject to EPA review as appropriate. Also, at a minimum, opportunity for input in derivation of a site-specific permit effluent limitation and alternate criterion shall be provided via public notice in NPDES permit notices.

(8) In order to protect for the consumption use of shellfish, for SFH waters and other waters with approved shellfish harvesting uses, the stated value of 14/100 ml for fecal coliform shall be used as a monthly average number for calculating permit effluent limitations and the stated value of 43/100ml for fecal coliform shall be used as daily maximum number for calculating permit effluent limitations.

(9) In order to protect recreational uses for all waters of the State, the stated value of 200/100 ml for fecal coliform shall be used as a monthly average number for calculating permit effluent limitations and the stated value of 400/100ml for fecal coliform shall be used as daily maximum number for calculating permit effluent limitations. In order to protect recreational uses in Class SB saltwaters of the State, the stated value of 35/100 ml for enterococci shall be used as a monthly average number for permit effluent limitations and the stated value of 501/100 ml for enterococci shall be used as a daily maximum number for calculating permit effluent limitations. In order to protect recreational uses in all other saltwaters of the State, the stated value of 35/100 ml for enterococci shall be used as a monthly average number for permit effluent limitations and the stated value of 104/100 ml for enterococci shall be used as a daily maximum number for calculating permit effluent limitations.

(10) All effluent permit limitations which include WET will require that the WET tests be conducted using *Ceriodaphnia dubia* (*C. dubia*), except as stated. If the salinity of a discharge to a saline waterbody is high enough to be toxic to *C. dubia*, *Mysidopsis bahia* (*M. bahia*) will be used. If the hardness of a waterbody is low enough to be toxic to *C. dubia*, then *Daphnia ambigua* (*D. ambigua*) may be used. Low salinity discharges to saltwater may be tested using either *C. dubia* or *M. bahia* with salinity adjustment, as determined by the Department. The Department may consider an alternative species if it can be demonstrated that the proposed species meets the requirements of 40 CFR.136.4 and 5, as approved by EPA. EPA test methods (40 CFR Part 136) for acute and chronic toxicity testing with freshwater organisms or marine and estuarine organisms must be followed. The Department may consider an alternative method if it can be demonstrated that the proposed method meets the requirements of 40 CFR.136, and is approved by EPA.

d. Evaluation of ambient water quality.

(1) If the numeric criterion for toxic pollutants is lower than the analytical detection limit, the criterion is not considered violated if the ambient concentration is below the detection limit and the instream indigenous biological community is not adversely impacted.

(2) If the ambient concentration is higher than the numeric criterion for toxic pollutants, the criterion is not considered violated if biological monitoring has demonstrated that the instream indigenous biological community is not adversely impacted.

(3) In order to appropriately evaluate the ambient water quality for the bioavailability of the dissolved portion of hardness dependent metals, the Department may utilize a federally-approved methodology to predict the dissolved fraction or partitioning coefficient in determining compliance with water quality standards established in this regulation.

(4) The assessment of fecal coliform for purposes of evaluating the shellfish harvesting use for South Carolina's Shellfish Management Units is conducted in accordance with provisions of S.C. Regulation 61-47, Shellfish.

(5) The assessment of enterococci for purposes of issuing swimming advisories for ocean beaches for recreational use will be based on the single sample maximum of 104/100 ml.

(6) The assessment of enterococci for purposes of Section 303(d) listing determinations for coastal waters for recreational use will be based on the geometric mean with an allowable 10% exceedence, where sufficient data exists to calculate a geometric mean. In the absence of sufficient data to calculate a geometric mean, the assessment will be based on the single sample maximum with an allowable 10% exceedence.

15. The Department may require biological or other monitoring in NPDES permits to further ascertain any bioaccumulative effects of pollutants. Such monitoring may include analyses of fish and shellfish, macroinvertebrates, macrophytes, and/or sediments in order to assess the accumulation of pollutants in tissues or sediments that:

a. May cause or have the potential to cause adverse impacts to the balanced indigenous aquatic community; and

b. May cause or have the potential to cause adverse impacts to human health and/or terrestrial flora and fauna.

16. The Department may consider other scientifically-defensible published data which are appropriate for use in developing permit limits and evaluating water quality for constituents for which EPA has not developed national criteria or South Carolina has no standards.

a. The Department shall apply a sensitivity factor to aquatic toxicity data unless, in the Department's judgment, the data represent a minimum of three appropriately sensitive species representing three taxonomic groups (plant, macroinvertebrate, and fish).

(1) If only an acute toxicity effect concentration for a number of species for a particular pollutant is given as an LC₅₀, the lowest concentration should be divided by an acute-to-chronic ratio (ACR) of 10 and a sensitivity factor of 3.3, for an acceptable instream concentration in order to protect against chronic toxicity effects.

(2) If a chronic toxicity effect concentration for a number of species for a particular pollutant is given as a no observed effect concentration (NOEC), the lowest concentration should be divided by a sensitivity factor of 3.3 in order to protect against chronic toxicity to the most sensitive species.

b. The Department must notify the permittee that other such data were used in developing permit limits and provide justification for their use.

17. Tests or analytical methods to determine compliance or non-compliance with standards shall be made in accordance with methods and procedures approved by the Department and the EPA. In making any tests or applying analytical methods to determine compliance or non-compliance with water quality standards, representative samples shall be collected in accordance with methods and procedures approved by the Department and the EPA. Consideration of representative sample methods shall include the following:

a. Surface water and ground water samples shall be collected so as to permit a realistic appraisal of quality and actual or potential damage to existing or classified water uses. For ground waters, consideration shall be given to, but shall not be limited to, depth to water table, flow direction, and velocity. For surface waters, time of day, flow, surface area, and depth shall be considered.

b. Biological assessment methods may be employed in appropriate situations to determine abnormal nutrient enrichment, trophic condition, LC₅₀, concentration of toxic substances, acceptable instream concentrations, or acceptable effluent concentrations for maintenance of a balanced indigenous aquatic community.

c. Temporal distribution of samples in tidally influenced waters shall cover the full range of tidal conditions.

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d. Ambient toxicity tests used for screening purposes shall be conducted using *Ceriodaphnia dubia* (*C. dubia*), except as stated. If salinity of a waterbody is high enough to be toxic to *C. dubia*, *Mysidopsis bahia* (*M. bahia*) will be used. If the hardness of a waterbody is low enough to be toxic to *C. dubia*, then *Daphnia ambigua* (*D. ambigua*) may be used. The Department may consider an alternative species if it can be demonstrated that the proposed species meets the requirements of 40 CFR.136.4 and 5, as approved by EPA. EPA test methods (40 CFR Part 136) for acute and chronic toxicity testing with freshwater organisms or marine and estuarine organisms must be followed. The Department may consider an alternative method if it can be demonstrated that the proposed method meets the requirements of 40 CFR.136, and is approved by EPA.

F. NARRATIVE BIOLOGICAL CRITERIA.

1. Narrative biological criteria are contained in this regulation and are described throughout the sections where applicable. The following are general statements regarding these narrative biological criteria.

a. Narrative biological criteria in Section A.4. describe the goals of the Department to maintain and improve all surface waters to a level that provides for the survival and propagation of a balanced indigenous aquatic community of fauna and flora. These narrative criteria are determined by the Department based on the condition of the waters of the State by measurements of physical, chemical, and biological characteristics of the waters according to their classified uses.

b. Section C.10. describes narrative biological criteria relative to surface water mixing zones and specifies requirements necessary for the protection and propagation of a balanced indigenous aquatic community.

c. Narrative biological criteria shall be consistent with the objective of maintaining and improving all surface waters to a level that provides for the survival and propagation of a balanced indigenous aquatic community of fauna and flora attainable in waters of the State; and in all cases shall protect against degradation of the highest existing or classified uses or biological conditions in compliance with the Antidegradation Rules contained in this regulation. Section D.1.a. describes narrative biological criteria relative to activities in Outstanding National Resource Waters, Outstanding Resource Waters and Shellfish Harvesting Waters.

d. In order to determine the biological quality of the waters of the State, it is necessary that the biological component be assessed by comparison to a reference condition(s) based upon similar hydrologic and watershed characteristics that represent the optimum natural condition for that system. Such reference condition(s) or reaches of waterbodies shall be those observed to support the greatest variety and abundance of aquatic life in the region as is expected to be or would be with a minimal amount of disturbance from anthropogenic sources. Impacts from urbanization and agriculture should be minimal and natural vegetation should dominate the land cover. There should also be an appropriate diversity of substrate. Reference condition(s) shall be determined by consistent sampling and reliable measures of selected indicative communities of flora and fauna as established by the Department and may be used in conjunction with acceptable physical, chemical, and microbial water quality measurements and records judged to be appropriate for this purpose. Narrative biological criteria relative to activities in all waters are described in Section E.

e. In the Class Descriptions, Designations, and Specific Standards for Surface Waters Section, all water use classifications protect for a balanced indigenous aquatic community of fauna and flora. In addition, Trout Natural and Trout Put, Grow, and Take classifications protect for reproducing trout populations and stocked trout populations, respectively.

2. [Reserved].

G. CLASS DESCRIPTIONS, DESIGNATIONS, AND SPECIFIC STANDARDS FOR SURFACE WATERS.

1. All surface waters of the State, except as discussed in Section C., shall be identified within one of the classes described below. The Department may determine in accordance with Section 312 of the Clean Water Act that for some waterbodies (or portions of waterbodies), the designation of No Discharge Zone (NDZ) for Marine Sanitation Devices (MSDs) shall be enacted with application of the existing classified standards of the waterbody. Those waters classified by name shall be listed in Regulation 61-69 along with the NDZ designation, if applicable.
2. Where a surface water body is tributary to waters of a higher class, the quality of the water in the tributary shall be protected to maintain the standards of the higher classified receiving water.
3. For items not listed in each class, criteria published pursuant to Sections 304(a) and 307(a) of the Federal Clean Water Act or other documents shall be used as guides to determine conditions which protect water uses. Many of these criteria are listed in the appendix to this regulation. For consideration of natural conditions, refer to Sections: C.9., D.4., E.12., E.14.c.(2), E.14.c.(3), F.4.d., G.4., G.6., and G.9. For the following numeric criteria for turbidity (with the exception of Outstanding National Resource Waters, Outstanding Resource Waters, Trout waters, and Shellfish Harvesting Waters), compliance with these turbidity criteria may be considered to be met as long as the waterbody supports a balanced indigenous aquatic community when land management activities employ Best Management Practices (BMPs). For consideration, BMPs must be in full compliance with all specifications governing the proper design, installation, operation and maintenance of such BMPs and all applicable permit conditions and requirements must be met.
4. Outstanding National Resource Waters (ONRW) are freshwaters or saltwaters which constitute an outstanding national recreational or ecological resource.

Quality Standards for
Outstanding National Resource Waters

ITEMS	STANDARDS
a. Color, dissolved oxygen, fecal coliform, enterococci, pH, temperature, turbidity, or other parameters.	Water quality conditions shall be maintained and protected to the extent of the Department's statutory authority. Numeric and narrative criteria for Class ONRW shall be those applicable to the classification of the waterbody immediately prior to reclassification to Class ONRW, including consideration of natural conditions.

5. In order to maintain the existing quality of Class ONRW waters the following additional standards apply:

ITEMS	STANDARDS
a. Discharge from domestic, industrial, or agricultural waste treatment facilities; aquaculture; open water dredged spoil disposal.	None allowed.
b. Stormwater and other nonpoint source runoff, including that from agricultural uses, or permitted discharge from aquatic farms,	None allowed.

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concentrated aquatic animal production facilities, and uncontaminated groundwater from mining.

c. Dumping or disposal of garbage, cinders, ashes, oils, sludge, or other refuse.

None allowed.

d. Activities or discharges from waste treatment facilities in waters upstream or tributary to ONRW waters.

Allowed if there will be no measurable impact on the downstream ONRW consistent with Antidegradation Rules.

6. Outstanding Resource Waters (ORW) are freshwaters or saltwaters which constitute an outstanding recreational or ecological resource or those freshwaters suitable as a source for drinking water supply purposes with treatment levels specified by the Department.

Quality Standards for Outstanding Resource Waters

ITEMS

STANDARDS

a. Color, dissolved oxygen, fecal coliform, enterococci, pH, temperature, turbidity, or other parameters.

Water quality conditions shall be maintained and protected to the extent of the Department's statutory authority. Numeric and narrative criteria for Class ORW shall be those applicable to the classification of the waterbody immediately prior to reclassification to Class ORW, including consideration of natural conditions.

7. In order to maintain the existing quality of Class ORW waters the following additional standards apply:

ITEMS

STANDARDS

a. Discharge from domestic, industrial, or agricultural waste treatment facilities; aquaculture; open water dredged spoil disposal.

None allowed.

b. Stormwater and other nonpoint source runoff, including that from agricultural uses, or permitted discharge from aquatic farms, concentrated aquatic animal production facilities, and uncontaminated groundwater from mining.

Allowed if water quality necessary for existing and classified uses shall be maintained and protected consistent with Antidegradation Rules.

c. Dumping or disposal of

None allowed.

garbage, cinders, ashes, oils, sludge, or other refuse.

d. Activities or discharges from waste treatment facilities in waters upstream or tributary to ORW waters.

Allowed if water quality necessary for existing and classified uses shall be maintained and protected consistent with Antidegradation Rules.

8. Trout Waters. The State recognizes three types of trout waters: Natural; Put, Grow, and Take; and Put and Take.

a. Natural (TN) are freshwaters suitable for supporting reproducing trout populations and a cold water balanced indigenous aquatic community of fauna and flora. Also suitable for primary and secondary contact recreation and as a source for drinking water supply after conventional treatment in accordance with the requirements of the Department. Suitable for fishing and the survival and propagation of a balanced indigenous aquatic community of fauna and flora. Suitable also for industrial and agricultural uses.

b. Put, Grow, and Take (TPGT) are freshwaters suitable for supporting growth of stocked trout populations and a balanced indigenous aquatic community of fauna and flora. Also suitable for primary and secondary contact recreation and as a source for drinking water supply after conventional treatment in accordance with the requirements of the Department. Suitable for fishing and the survival and propagation of a balanced indigenous aquatic community of fauna and flora. Suitable also for industrial and agricultural uses.

c. Put and Take (TPT) are freshwaters suitable for primary and secondary contact recreation and as a source for drinking water supply after conventional treatment in accordance with the requirements of the Department. Suitable for fishing and the survival and propagation of a balanced indigenous aquatic community of fauna and flora. Suitable also for industrial and agricultural uses. The standards of Freshwaters classification protect these uses.

9. The standards below protect the uses of Natural and Put, Grow, and Take trout waters.

Quality Standards for Trout Waters

ITEMS	STANDARDS
a. Garbage, cinders, ashes, oils,	None allowed. sludge, or other refuse.
b. Treated wastes, toxic wastes, deleterious substances, colored or other wastes, except those given in a. above.	None alone or in combination with other substances or wastes in sufficient amounts to be injurious to reproducing trout populations in natural waters or stocked populations in put, grow, and take waters or in any manner adversely affecting the taste, color, odor, or sanitary condition thereof or impairing the waters for any other best usage as determined for the specific waters which are assigned to this class.

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- c. Toxic pollutants listed in the appendix. As prescribed in Section E. of this regulation.
- d. Stormwater and other nonpoint source runoff, including that from agricultural uses, or permitted discharge from aquatic farms, concentrated aquatic animal production facilities, and uncontaminated groundwater from mining. Allowed if water quality necessary for existing and classified uses shall be maintained and protected consistent with Antidegradation Rules.
- e. Dissolved oxygen. Not less than 6 mg/l.
- f. Fecal coliform. Not to exceed a geometric mean of 200/100 ml, based on five consecutive samples during any 30 day period; nor shall more than 10% of the total samples during any 30 day period exceed 400/100ml.
- g. pH. Between 6.0 and 8.0.
- h. Temperature. Not to vary from levels existing under natural conditions, unless determined that some other temperature shall protect the classified uses.
- i. Turbidity. Not to exceed 10 Nephelometric Turbidity Units (NTUs) or 10% above natural conditions, provided existing uses are maintained.

10. Freshwaters (FW) are freshwaters suitable for primary and secondary contact recreation and as a source for drinking water supply after conventional treatment in accordance with the requirements of the Department. Suitable for fishing and the survival and propagation of a balanced indigenous aquatic community of fauna and flora. Suitable also for industrial and agricultural uses.

Quality Standards for
Freshwaters

ITEMS	STANDARDS
a. Garbage, cinders, ashes, oils, sludge, or other refuse.	None allowed.
b. Treated wastes, toxic wastes, deleterious substances, colored or other wastes except those given in (a) above.	None alone or in combination with other substances or wastes in sufficient amounts to make the waters unsafe or unsuitable for primary contact recreation or to impair the waters for any other best usage as determined

	for the specific waters which are assigned to this class.
c. Toxic pollutants listed in the appendix.	As prescribed in Section E of this regulation.
d. Dissolved Oxygen.	Daily average not less than 5.0 mg/l with a low of 4.0 mg/l.
e. Fecal coliform.	Not to exceed a geometric mean of 200/100 ml, based on five consecutive samples during any 30 day period; nor shall more than 10% of the total samples during any 30 day period exceed 400/100ml.
f. pH.	Between 6.0 and 8.5.
g. Temperature.	As prescribed in E.12. of this regulation.
h. Turbidity Except for Lakes	Not to exceed 50 NTUs provided existing uses are maintained.
Lakes only	Not to exceed 25 NTUs provided existing uses are maintained.

11. Shellfish Harvesting Waters (SFH) are tidal saltwaters protected for shellfish harvesting and uses listed in Class SA and Class SB. Suitable for primary and secondary contact recreation, crabbing, and fishing. Also suitable for the survival and propagation of a balanced indigenous aquatic community of marine fauna and flora.

Quality Standards for
Shellfish Harvesting Waters

ITEMS	STANDARDS
a. Garbage, cinders, ashes, oils, sludge, or other refuse.	None allowed.
b. Treated wastes, toxic wastes, deleterious substances, colored or other wastes except those given in (a) above.	None alone or in combination with other substances or wastes in sufficient amounts to adversely affect the taste, color, odor, or sanitary condition of clams, mussels, or oysters for human consumption; or to impair the waters for any other best usage as determined for the specific waters which are assigned to this class.
c. Toxic pollutants listed in the appendix.	As prescribed in Section E of this regulation.

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- d. Dissolved oxygen. Daily average not less than 5.0 mg/l with a low of 4 mg/l.
- e. Fecal coliform. Not to exceed an MPN fecal coliform geometric mean of 14/100 ml; nor shall more than 10% of the samples exceed an MPN of 43/100 ml.
- f. Enterococci. Not to exceed a geometric mean of 35/100 ml based on at least four samples collected from a given sampling site over a 30 day period; nor shall more than 10 % of the samples exceed a single sample maximum of 104/100 ml during any 30 day period. Additionally for Beach monitoring and notification activities for CWA section 406 only, samples shall not exceed a single sample maximum of 104/100 ml/.
- g. pH. Shall not vary more than 3/10 of a pH unit above or below that of effluent-free waters in the same geological area having a similar total salinity, alkalinity and temperature, but not lower than 6.5 or above 8.5.
- h. Temperature. As prescribed in E.12. of this regulation.
- i. Turbidity Not to exceed 25 NTUs provided existing uses are maintained.
- j. The Department may designate prohibited areas where shellfish harvesting for market purposes or human consumption shall not be allowed, consistent with the Antidegradation Rule, Section D.1.a of this regulation.

12. Class SA are tidal saltwaters suitable for primary and secondary contact recreation, crabbing, and fishing, except harvesting of clams, mussels, or oysters for market purposes or human consumption and uses listed in Class SB. Also suitable for the survival and propagation of a balanced indigenous aquatic community of marine fauna and flora.

Quality Standards for
Class SA Waters

ITEMS	STANDARDS
a. Garbage, cinders, ashes, oils, sludge, or other refuse.	None allowed.
b. Treated wastes, toxic wastes, deleterious substances, colored or other wastes except those given in a. above.	None alone in combination with other substances or wastes in sufficient amounts to make the waters unsafe or unsuitable for

	primary contact recreation or to impair the waters for any other best usage as determined for the specific waters which are assigned to this class.
c. Toxic pollutants listed in the appendix.	As prescribed in Section E of this regulation.
d. Dissolved Oxygen.	Daily average not less than 5.0 mg/l with a low of 4.0 mg/l.
e. Fecal coliform.	Not to exceed a geometric mean of 200/100 ml, based on five consecutive samples during any 30 day period; nor shall more than 10% of the total samples during any 30 day period exceed 400/100 ml.
f. Enterococci.	Not to exceed a geometric mean of 35/100 ml based on at least four samples collected from a given sampling site over a 30 day period; nor shall more than 10 % of the samples exceed a single sample maximum of 104/100 ml during any 30 day period. Additionally for Beach monitoring and notification activities for CWA section 406 only, samples shall not exceed a single sample maximum of 104/100 ml/.
g. pH.	Shall not vary more than one-half of a pH unit above or below that of effluent-free waters in the same geological area having a similar total salinity, alkalinity and temperature, but not lower than 6.5 or above 8.5.
h. Temperature.	As prescribed in E.12. of this regulation.
i. Turbidity	Not to exceed 25 NTUs provided existing uses are maintained.

13. Class SB are tidal saltwaters suitable for primary and secondary contact recreation, crabbing, and fishing, except harvesting of clams, mussels, or oysters for market purposes or human consumption. Also suitable for the survival and propagation of a balanced indigenous aquatic community of marine fauna and flora.

Quality Standards for
Class SB Waters

ITEMS	STANDARDS
a. Garbage, cinders, ashes, oils, sludge, or other refuse.	None allowed.
b. Treated wastes, toxic wastes, deleterious substances, colored or	None alone or in combination with other substances or wastes in

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other wastes except those given in a. above.	sufficient amounts to be harmful to the survival of marine fauna and flora or the culture or propagation thereof; to adversely affect the taste, color, odor, or sanitary condition of fish for human consumption; to make the waters unsafe or unsuitable for primary contact recreation; or to impair the waters for any other best usage as determined for the specific waters which are assigned to this class.
c. Toxic pollutants listed in the appendix.	As prescribed in Section E of this regulation.
d. Dissolved oxygen.	Not less than 4.0 mg/l.
e. Fecal coliform.	Not to exceed a geometric mean of 200/100 ml based on five consecutive samples during any 30 day period; nor shall more than 10% of the total samples examined during any 30 day period exceed 400/100 ml.
f. Enterococci.	Not to exceed a geometric mean of 35/100 ml based on at least four samples collected from a given sampling site over a 30 day period; nor shall more than 10 % of the samples exceed a single sample maximum of 501/100 ml during any 30 day period. Additionally for Beach monitoring and notification activities for CWA section 406 only, samples shall not exceed a single sample maximum of 501/100 ml/.
g. pH.	Shall not vary more than one-half of a pH unit above or below that of effluent-free waters in the same geological area having a similar 6.5 or above 8.5.
h. Temperature.	As prescribed in E.12. of this regulation.
i. Turbidity	Not to exceed 25 NTUs provided existing uses are maintained.

H. CLASS DESCRIPTIONS AND SPECIFIC STANDARDS FOR GROUND WATERS.

1. All ground waters of the State, except within mixing zones, shall be identified within one of the classes described below.

2. It is the policy of the Department to maintain the quality of ground water consistent with the highest potential uses. Most South Carolina ground water is presently suitable for drinking water without treatment and the State relies heavily upon ground water for drinking water. For this reason, all South Carolina ground water is classified Class GB effective on June 28, 1985.

3. The Department recognizes that Class GB may not be suitable for some ground water. Class GA is established for exceptionally valuable ground water and Class GC is established for ground water with little potential as an underground source of drinking water.

4. In keeping with this policy the Department declares that effective June 28, 1985, all ground waters of the State shall be protected to a quality consistent with the use associated with the classes described herein. Further, the Department may require the owner or operator of a contaminated site to restore the ground water quality to a level that maintains and supports the existing and classified uses (except classified uses within mixing zones, as described in this regulation). For purposes of this section, the term operator means any person in control of, or having responsibility for, the operation of on-site activities or property and owner means a person or a previous person who has assumed legal ownership of a property through the provisions of a contract of sale or other legally binding transfer of ownership. The term owner also means any person who owned, operated, or otherwise controlled activities at such site before the title or control of which was conveyed to a unit of State or local government due to bankruptcy, foreclosure, tax delinquency, abandonment, or similar means. However, nothing in this section shall be construed to supersede specific statutory or regulatory provision that relieves owners or operators of certain contaminated sites from liability for restoration of groundwater, including, without limitation, S.C. Code '44-2-80 (b) and (c). The term does not include a unit of State or local government which acquired ownership or control involuntarily through bankruptcy, tax delinquency, abandonment, or other circumstances in which the government involuntarily acquires title by virtue of its function as sovereign. The exclusion provided under this paragraph shall not apply to any State or local government which has caused or contributed to the release or threatened release of a contaminant from the site, and such a State or local government shall be subject to these provisions in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity.

5. A ground water monitoring program approved by the Department may be required for any existing or proposed disposal system or other activities to determine the ground water quality affected by such systems or activities. Such monitoring program may be required through the Department's permitting and certification programs.

6. Those ground waters which are classified Class GA or Class GC after petition and proper administrative procedures other than Class GB shall be described by location and listed in Regulation 61-69.

7. Class GA are those ground waters that are highly vulnerable to contamination because of the hydrological characteristics of the areas under which they occur and that are also characterized by either of the following two factors:

a. Irreplaceable, in that no reasonable alternative source of drinking water is available to substantial populations; or

b. Ecologically vital, in that the ground water provides the base flow for a particularly sensitive ecological system that, if polluted, would destroy a unique habitat.

8. The standards below protect these ground waters:

Quality Standards for
Class GA Ground Waters

ITEMS	STANDARDS
a. Treated wastes, toxic wastes, deleterious substances, or constituents thereof.	None allowed.

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9. Class GB. All ground waters of the State, unless classified otherwise, which meet the definition of underground sources of drinking water (USDW) as defined in Section B.

Quality Standards for Class GB Ground Waters

ITEMS	STANDARDS
a. Inorganic chemicals.	Maximum contaminant levels as set forth in R.61-58, State Primary Drinking Water Regulations.
b. Organic chemicals.	Maximum contaminant levels as set forth in R.61-58, State Primary Drinking Water Regulations.
c. Man-made radionuclides, priority pollutant volatile organic compounds, pesticides, herbicides, polychlorinated biphenyls, any other synthetic organic compounds not specified above, treated wastes, thermal wastes, deleterious substances, colored wastes or other wastes or constituents thereof.	Not to exceed concentrations or amounts such as to interfere with use, actual or intended, as determined by the Department.

10. Class GC are those ground waters not considered potential sources of drinking water and of limited beneficial use, i.e., ground waters that exceed a concentration of 10,000 mg/l total dissolved solids or are otherwise contaminated beyond levels that allow cleanup using methods reasonably employed in public water system treatment. These ground waters also must not migrate to Class GA or Class GB ground waters or have a discharge to surface water that could cause degradation.

Quality Standards for Class GC Ground Waters

ITEMS	STANDARDS
a. Treated wastes, toxic wastes, deleterious substances, or other constituents thereof.	None which interfere with any existing use of an underground source of drinking water.

I. SEVERABILITY.

Should any section, paragraph, or other part of this regulation be declared invalid for any reason, the remainder shall not be affected.

Fiscal Impact Statement:

No costs to the State or significant cost to its political subdivisions as a whole should be incurred by these amendments. See Statement of Need and Reasonableness below.

Statement of Need and Reasonableness:

The statement of need and reasonableness was determined by staff analysis pursuant to S.C. Code Section 1-23-115(C)(1)-(3) and (9)-(11):

DESCRIPTION OF REGULATION: Amendment of Regulation 61-68, Water Classifications and Standards.

Purpose: Amendment of R.61-68 will clarify, strengthen, and improve the overall quality of the existing regulation and make appropriate revisions of the State's water quality standards in accordance with Section 303(c)(2)(B) of the Federal Clean Water Act (CWA).

Legal Authority: S.C. Code Sections 48-1-10 et seq., implementing the CWA.

Plan for Implementation: The amendments will be incorporated within R.61-68 upon approval of the General Assembly and publication in the State Register. The amendments will be implemented in the same manner in which the present regulation is implemented.

DETERMINATION OF NEED AND REASONABLENESS OF THE AMENDED REGULATION BASED ON ALL FACTORS HEREIN AND EXPECTED BENEFIT:

This amendment is required to comply with Federal requirements of Section 303(c)(2)(B) of the CWA.

The adoption of federal toxics criteria to reflect the most current final published criteria according to Sections 304(a) and 307(a) of the CWA.

The amendments to R.61-68 relating to human health and aquatic life criteria are based on sound scientific principles and are required in order to comply with the goals of Section 101(a)(2) and 303(c) of the CWA for the protection and maintenance of the uses of the waters of the State. These amendments incorporate scientific advances in areas of cancer and non-cancer risk assessments published in EPA's latest methodology for deriving human health water quality criteria and supercede criteria for fifteen priority pollutants. The Department has also included some Maximum Contaminant Levels (MCLs) associated with the Disinfection Byproducts Rule. The Department will adopt two newly published EPA aquatic life water quality criteria for non-priority pollutants and, additionally, the Department will remove two minerals, manganese and iron, as non-priority pollutants due to issues with background concentrations associated with these two parameters. A foot note has also been added to allow the freshwater copper criteria to be calculated utilizing the procedures in document EPA-822-R-007, often referred to as the biotic ligand model.

Revision of the assessment of the bacteriological indicator for protection of recreational uses and revisions to the enterococci standard and implementation.

The amendments reflect the assessment methodology for recreational water currently used by the Department and approved by the EPA. Additionally, the assessment of enterococci bacteria in NPDES permits will be updated to incorporate an allowable 10% exceedence of the single sample maximum. This makes the standard consistent with the fecal coliform bacteriological indicator.

Inclusion of a definition of practical quantitation limit (PQL).

South Carolina's current water quality standards do not include a definition of PQL. The Department utilizes the term PQL as it relates to water quality standards and NPDES permitting and believes that providing the definition as currently interpreted would be a beneficial and necessary inclusion for our state's water quality standards.

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Revision of the arsenic criteria.

The amendments to R.61-68 relating to human health and aquatic life criteria are reasonable because the Department reviewed the underlying scientific basis for human health protection related to the arsenic criteria and found that due to uncertainties identified in the current risk assessment and the need for additional data, the EPA has decided to reevaluate the existing recommend human health criteria for arsenic. The Department will use the current Maximum Contaminant Level (MCL) value of 10 µg/L as in interim value for the protection of human health. This criterion revision is consistent with the WQS Handbook and EPA's recommended interim approach while the criterion for arsenic is being reevaluated.

Revisions to the regulatory language regarding NPDES permitting and protection of surface waters for drinking water purposes.

The amendments of R. 61-68 relating to protection of surface waters for drinking water purposes are reasonable because the Department reviewed the current language and found it overly restrictive and burdensome to the regulated community. The Department has struck the language that prohibits mixing zones in source water protection so that the NPDES permitting program may have the discretion to make appropriate mixing zone and source water protection decisions during the permitting process without contradicting language in the standards.

Revisions to the regulatory language regarding application of the 0.10 rule and its relationship to critical conditions in permitting.

The amendments to R.61-68 relating to application of the 0.10 rule and its relationship to critical conditions in permitting are reasonable because the Department reviewed the current language and found it overly restrictive and burdensome to the regulated community. The Department struck the language that prohibits mixing zones in source water protection so that the NPDES permitting program may have the discretion to make appropriate mixing zone and source water protection decisions during the permitting process without contradicting language in the standards.

DETERMINATION OF COSTS AND BENEFITS:

Existing staff and resources will be utilized to implement this amendment to the regulation. No additional cost will be incurred by the State if the revisions are implemented and therefore, no additional State funding is being requested.

In reviewing the potential for significant economic impact of the amendments, the Department specifically evaluated situations in which costs would most likely be incurred by the regulated community. These estimates addressed the specific revisions by issue after determining those of greatest potential impact. The Department found that the overall impact to the State's political subdivisions or the regulated community as a whole was not likely to be significant in that the existing narrative standards would have incurred similar cost or the fact that the design standards required under the amendment will be substantially consistent with the current guidelines and review guidelines utilized by the Department. Further, much of the amendment, for which an estimated cost may be incurred by the regulated community at the time of permit issuance, are essential and necessary to protect and maintain the existing uses supported by the water quality standards and are, therefore, beyond the scope of cost analysis in that they provide the minimum level of protection for aquatic life and human health as required by the CWA.

UNCERTAINTIES OF ESTIMATES:

Minimal to moderate.

EFFECT ON ENVIRONMENT AND PUBLIC HEALTH:

Implementation of this amendment will not compromise the protection of the environment or the health and safety of the citizenry of the State. The amendment will promote and protect aquatic life and human health by the regulation of pollutants into waters of the State.

DETRIMENTAL EFFECT ON THE ENVIRONMENT AND PUBLIC HEALTH IF THE REGULATION IS NOT IMPLEMENTED:

Failure by the Department to incorporate appropriately protective water quality standards in the regulation that are the basis for issuance of National Pollutant Discharge Elimination System (NPDES) permits, stormwater permits, wasteload and load allocations, groundwater remediation plans, and multiple other program areas will lead to contamination of the waters of the State with detrimental effects on the health of flora and fauna in the State as well as the citizens of South Carolina.

Statement of Rationale:

The statement of rationale was determined by staff analysis pursuant to S.C. Code Section 1-23-110(A)(3)(h).

The adoption of federal toxics criteria to reflect the most current final published criteria according to Sections 304(a) and 307(a) of the CWA contained in the amendments of R.61-68 are requirements of the CWA and are necessary for compliance with EPA's recommendations for the triennial review of the water quality standards to ensure consistency with the CWA. The remaining issues are Department initiated and are necessary and essential to the water quality standards program in South Carolina and to the quality of the regulation itself. The amendments to the enterococci water quality standard will ensure that water quality uses are maintained while allowing for a 10 % exceedence of the single sample maximum value. The amendments to the enterococci recreational assessment methodology reflect the methodology currently used by the Department. The amendments to the source water protection language will ensure that the language in the standards does not contradict decisions made during the NPDES permitting process. The amendments to the application of the 0.10 rule and its relationship to assessing critical conditions and in applying the dissolved oxygen standard in naturally-low dissolved oxygen waters (i.e., the application of the 0.1 rule).

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APPENDIX: WATER QUALITY NUMERIC CRITERIA FOR THE PROTECTION OF AQUATIC LIFE AND HUMAN HEALTH

This appendix contains three charts (priority pollutants, nonpriority pollutants, and organoleptic effects) of numeric criteria for the protection of human health and aquatic life. The appendix also contains three attachments which address hardness conversions and application of ammonia criteria. Footnotes specific to each chart follow the chart. General footnotes pertaining to all are at the end of the charts prior to the attachments. The numeric criteria developed and published by EPA are hereby incorporated into this regulation. Please refer to the text of the regulation for other general information and specifications in applying these numeric criteria.

PRIORITY TOXIC POLLUTANTS

Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:				
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)		
1	Antimony	7440360				5.6 B, ee	640 B, ee	6 ee	65FR66443 SDWA	
2	Arsenic	7440382	340 A, D, K	150 A, D, K	69 A, D, Y	36 A, D, Y		10 C	65FR31682 57FR60848 SDWA	
3	Beryllium	7440417				J, ee	J, ee	4 ee	65FR31682 SDWA	
4	Cadmium	7440439	0.53 D, E, K	0.10 D, E, K	43 D, Y	9.3 D, Y	J, ee	J, ee	5 ee	65FR31682 SDWA
5a	Chromium III	16065831	580 D, E, K	28 D, E, K			J, ee	J, ee	100 Total ee	EPA820/B-96-001 65FR31682 SDWA
5b	Chromium VI	18540299	16 D, K	11 D, K	1,100 D, Y	50 D, Y	J, ee	J, ee	100 Total ee	65FR31682 SDWA
6	Copper	7440508	3.8 D, E, K, Z, ll	2.9 D, E, K, Z, ll	5.8 D, Z, Y, cc	3.7 D, Z, Y, cc	1,300 T, ee		65FR31682	
7	Lead	7439921	14 D, E, Y	0.54 D, E, Y	220 D, Y	8.5 D, Y			65FR31682	

Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:				
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)		
8	Mercury	7439976	1.6 D, K, dd	0.91 D, K, dd	2.1 D, bb, dd	1.1 D, bb, dd	0.050 B, ee	0.051 B, ee	2 ee	65FR31682 SDWA
9	Nickel	7440020	150 D, E, K	16 D, E, K	75 D, Y	8.3 D, Y	610 B, ee	4, 600 B, ee		65FR31682
10	Selenium	7782492	L, Q, S	5.0 S	290 D, aa	71 D, aa	170 Z, ee	4,200 ee	50 ee	65FR31682 65FR66443 SDWA
11	Silver	7440224	0.37 D, E, G		2.3 D, G					65FR31682
12	Thallium	7440280					0.24	0.47	2 ee	68FR75510 SDWA
13	Zinc	7440666	37 D, E, K	37 D, E, K	95 D, Y	86 D, Y	7,400 T, ee	26,000 T, ee		65FR31682 65FR66443
14	Cyanide	57125	22 K, P	5.2 K, P	1 P, Y	1 P, Y	140 ee, jj	140 ee, jj	200 ee	EPA820/B-96-001 57FR60848 68FR75510 SDWA
15	Asbestos	1332214							7 million fibers/L I, ee	57FR60848
16	2, 3, 7, 8-TCDD (Dioxin)	1746016						0.046 ppq O, C	30ppq O, C	State Standard SDWA
17	Acrolein	107028					190 ee	290 ee		65FR66443
18	Acrylonitrile	107131					0.051 B, C	0.25 B, C		65FR66443
19	Benzene	71432					2.2 B, C	51 B, C	5 C	IRIS 01/19/00 65FR66443 SDWA

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Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/ Source
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:			
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)	
20	Bromate	15541454						10 C	SDWA
21	Bromoform	75252				4.3 B, C	140 B, C	80 Total THMs C	65FR66443 SDWA
22	Bromoacetic acid	79083						60 Total HAA5 C,mm	SDWA
23	Carbon Tetrachloride	56235				0.23 B, C	1.6 B, C	5 C	65FR66443 SDWA
24	Chlorite	67481						100	SDWA
25	Chlorobenzene	108907				130 T, ee	1,600 T, ee	100 T, ee	68FR75510 SDWA
26	Chlorodibromomethane	124481				0.40 B, C	13 B, C	80 Total THMs C	65FR66443 SDWA
27	Chloroform	67663				5.7 B, C, hh	470 B, C, hh	80 Total THMs C	62FR42160 SDWA
28	Dibromoacetic acid	631641						60 Total HAA5 C, mm	SDWA
29	Dichloroacetic acid	79436						60 Total HAA5 C,mm	SDWA
30	Dichlorobromomethane	75274				0.55 B, C	17 B, C	80 Total THMs C	65FR66443 SDWA
31	1, 2-Dichloroethane	107062				0.38 B, C	37 B, C	5 C	65FR66443 SDWA
32	1, 1-Dichloroethylene	75354				330 ee	7,100 ee	7 C	68FR75510 SDWA

Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/ Source
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:			
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)	
33	1, 2-Dichloropropane	78875				0.50 B, C	15 B, C	5 C	65FR66443 SDWA
34	1, 3-Dichloropropene	542756				0.34 ee	21 ee		68FR75510
35	Ethylbenzene	100414				530 ee	2,100 ee	700 ee	68FR75510 SDWA
36	Methyl Bromide	74839				47 B, ee	1,500 B, ee		65FR66443
37	Methylene Chloride	75092				4.6 B, C	590 B, C	5 C	65FR66443 SDWA
38	Monochloroacetic acid	79118						60 Total HAA5 C,mm	SDWA
39	1, 1, 2-Tetrachloroethane	79345				0.17 B, C	4.0 B, C		65FR66443
40	Tetrachloroethylene	127184				0.69 C	3.3 C	5 C	65FR66443 SDWA
41	Toluene	108883				1,300 ee	15,000 ee	1000 ee	68FR75510 SDWA
42	1,2-Trans-Dichloroethylene	156605				140 ee	10,000 ee	100 ee	68FR75510 SDWA
43	Trichloroacetic acid	79039						60 Total HAA5 C,mm	SDWA
44	1, 1, 1-Trichloroethane	71556				J, ee	J, ee	200 ee	65FR31682 SDWA
45	1, 1, 2-Trichloroethane	79005				0.59 B, C	16 B, C	5 C	65FR66443 SDWA

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Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:				
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)		
46	Trichloroethylene	79016				2.5 C	30 C	5 C	65FR66443 SDWA	
47	Vinyl Chloride	75014				0.025 kk	2.4 kk	2 C	68FR75510 SDWA	
48	2-Chlorophenol	95578				81 B, T, ee	150 B, T, ee		65FR66443	
49	2, 4-Dichlorophenol	120832				77 B, T, ee	290 B, T, ee		65FR66443	
50	2, 4-Dimethylphenol	105679				380 B, T, ee	850 B, T, ee		65FR66443	
51	<u>2-Methyl-4,6-Dinitrophenol</u>	534521				13 ee	280 ee		65FR66443	
52	2, 4-Dinitrophenol	51285				69 B, ee	5,300 B, ee		65FR66443	
53	Pentachlorophenol	87865	19 F, K	15 F, K	13 Y	7.9 Y	0.27 B, C	3.0 B, C, H	1 C	65FR31682 65FR66443 SDWA
54	Phenol	108952				21,000 B, T, ee	1,700,000 B, H, T, ee		65FR66443	
55	2, 4, 6-Trichlorophenol	88062				1.4 B, C, T	2.4 B, C		65FR66443	
56	Acenaphthene	83329				670 B, T, ee	990 B, T, ee		65FR66443	
57	Anthracene	120127				8,300 B, ee	40,000 B, ee		65FR66443	
58	Benzidine	92875				0.000086 B, C	0.00020 B, C		65FR66443	

Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:				
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)		
59	Benzo (a) Anthracene	56553				0.0038 B, C	0.018 B, C		65FR66443	
60	Benzo (a) Pyrene	50328				0.0038 B, C	0.018 B, C	0.2 C	65FR66443 SDWA	
61	Benzo (b) Fluoranthene	205992				0.0038 B, C	0.018 B, C		65FR66443	
62	Benzo (k) Fluoranthene	207089				0.0038 B, C	0.018 B, C		65FR66443	
63	Bis 2-Chloroethyl Ether	111444				0.030 B, C	0.53 B, C		65FR66443	
64	Bis 2-Chloroisopropyl Ether	108601				1,400 B, ee	65,000 B, ee		65FR66443	
65	Bis2-Ethylhexyl Phthalate (DEHP)	117817	V	V	V	V	1.2 B, C	2.2 B, C	6 C	65FR66443 SDWA
66	Butylbenzene Phthalate	85687	ii	ii	ii	ii	1,500 B, ee	1,900 B, ee	65FR66443	
67	2-Chloronaphthalene	91587				1,000 B, ee	1,600 B, ee		65FR66443	
68	Chrysene	218019				0.0038 B, C	0.018 B, C		65FR66443	
69	Dibenzo (a, h) Anthracene	53703				0.0038 B, C	0.018 B, C		65FR66443	
70	1, 2-Dichlorobenzene	95501				420 ee	1,300 ee	600 ee	68FR75510 SDWA	
71	1, 3-Dichlorobenzene	541731				320 ee	960 ee		65FR66443	
72	1, 4-Dichlorobenzene	106467				63 ee	190 ee	75 ee	68FR75510 SDWA	

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Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/ Source
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:			
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)	
73	3, 3'-Dichlorobenzidine	91941				0.021 B, C	0.028 B, C		65FR66443
74	Diethyl Phthalate	84662	ii	ii	ii	ii	17,000 B, ee	44,000 B, ee	65FR66443
75	Dimethyl Phthalate	13113	ii	ii	ii	ii	270,000 B, ee	1,100,000 B, ee	64FR66443
76	Di-n-butyl Phthalate	84742	ii	ii	ii	ii	2,000 B, ee	4,500 B, ee	65FR66443
77	2, 4-Dinitrotoluene	121142					0.11 C	3.4 C	65FR66443
78	1, 2-Diphenylhydrazine	122667					0.036 B, C	0.20 B, C	65FR66443
79	Fluoranthene	206440					130 B, ee	140 B, ee	65FR66443
80	Fluorene	86737					1,100 B, ee	5,300 B, ee	65FR66443
81	Hexachlorobenzene	118741					0.00028 B, C	0.00029 B, C	1 C 65FR66443 SDWA
82	Hexachlorobutadiene	87683					0.44 B, C	18 B, C	65FR66443
83	Hexachlorocyclo-pentadiene	77474					40 T, ee	1100 T, ee	50 ee 68FR75510 SDWA
84	Hexachloroethane	67721					1.4 B, C	3.3 B, C	65FR66443
85	Indeno 1, 2, 3 – (cd) Pyrene	193395					0.0038 B, C	0.018 B, C	65FR66443

Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:				
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)		
86	Isophorone	78591				35 B, C	960 B, C		65FR66443	
87	Nitrobenzene	98953				17 B, ee	690 B, H, T, ee		65FR66443	
88	N-Nitrosodimethylamine	62759				0.00069 B, C	3.0 B, C		65FR66443	
89	N-Nitrosodi-n-Propylamine	621647				0.0050 B, C	0.51 B, C		65FR66443	
90	N-Nitrosodiphenylamine	86306				3.3 B, C	6.0 B, C		65FR66443	
91	Pyrene	129000				830 B, ee	4,000 B, ee		65FR66443	
92	1, 2, 4-Trichlorobenzene	120821				35 ee	70 ee	70 ee	68FR75510 SDWA	
93	Aldrin	309002	3.0 G, X		1.3 G, X	0.000049 B, C	0.000050 B, C		65FR31682 65FR66443	
94	alpha-BHC	319846				0.0026 B, C	0.0049 B, C		65FR66443	
95	beta-BHC	319857				0.0091 B, C	0.017 B, C		65FR66443	
96	gamma-BHC (Lindane)	58899	0.95 K		0.16 G	0.98 ee	1.8 ee	0.2 C	65FR31682 68FR75510 SDWA	
97	Chlordane	57749	2.4 G	0.0043 G, X	0.09 G	0.004 G, X	0.00080 B, C	0.00081 B, C	2 C	65FR31682 65FR66443SDWA
98	4, 4'-DDT	50293	1.1 G, gg	0.001 G, X, gg	0.13 G, gg	0.001 G, X, gg	0.00022 B, C	0.00022 B, C	65FR31682 65FR66443	
99	4, 4'-DDE	72559				0.00022 B, C	0.00022 B, C		65FR66443	

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Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/ Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:				
						Water & Organism (µg/L)	Organism Only (µg/L)	MCL (µg/L)		
100	4, 4'-DDD	72548				0.00031 B, C	0.00031 B, C		65FR66443	
101	Dieldrin	60571	0.24 K	0.056 K, N	0.71 G	0.0019 G, X	0.000052 B, C	0.000054 B, C	65FR31682 65FR66443	
102	alpha-Endosulfan	959988	0.22 G, W	0.056 G, W	0.034 G, W	0.0087 G, W	62 B, ee	89 B, ee	65FR31682 65FR66443	
103	beta-Endosulfan	33213659	0.22 G, W	0.056 G, W	0.034 G, W	0.0087 G, W	62 B, ee	89 B, ee	65FR31682 65FR66443	
104	Endosulfan Sulfate	1031078					62 B, ee	89 B, ee	65FR31682 65FR66443	
105	Endrin	72208	0.086 K	0.036 K, N	0.037 G	0.0023 G, X	0.059 ee	0.060 ee	2 ee	68FR75510 SDWA
106	Endrin Aldehyde	7421934					0.29 B, ee	0.30 B, H, ee	65FR66443	
107	Heptachlor	76448	0.52 G	0.0038 G, X	0.053 G	0.0036 G, X	0.000079 B, C	0.000079 B, C	0.4 C	65FR31682 65FR66443 SDWA
108	Heptachlor Epoxide	1024573	0.52 G, U	0.0038 G, U, X	0.053 G, U	0.0036 G, U, X	0.000039 B, C	0.000039B, C	0.2 C	65FR31682 65FR66443 SDWA
109	Polychlorinated Biphenyls PCBs	--		0.014 M, X		0.03 M, X	0.000064 B, C, M	0.000064 B, C, M	0.5 C	65FR31682 65FR66443 SDWA
110	Toxaphene	8001352	0.73	0.0002 X	0.21	0.0002 X	0.00028 B, C	0.00028 B, C	3 C	65FR31682 65FR66443 SDWA

Footnotes:

- A This water quality criterion was derived from data for arsenic (III), but is applied here to total arsenic, which might imply that arsenic (III) and arsenic (V) are equally toxic to aquatic life and that their toxicities are additive. In the arsenic criteria document (EPA 440/5-84-033, January 1985), Species Mean Acute Values are given for both arsenic (III) and arsenic (V) for five species and the ratios of the SMAVs for each species range from 0.6 to 1.7. Chronic values are available for both arsenic (III) and arsenic (V) for one species; for the fathead minnow, the chronic value for arsenic (V) is 0.29 times the chronic value for arsenic (III). No data are known to be available concerning whether the toxicities of the forms of arsenic to aquatic organisms are additive.
- B This criterion has been revised to reflect The Environmental Protection Agency's $q1^*$ or RfD, as contained in the Integrated Risk Information System (IRIS) as of May 17, 2002. The fish tissue bioconcentration factor (BCF) from the 1980 Ambient Water Quality Criteria document was retained in each case.
- C This criterion is based on carcinogenicity of 10^{-6} risk. As prescribed in Section E of this regulation, application of this criterion for permit effluent limitations requires the use annual average flow or comparable tidal condition as determined by the Department.
- D Freshwater and saltwater criteria for metals are expressed in terms of total recoverable metals. As allowed in Section E of this regulation, these criteria may be expressed as dissolved metal for the purposes of deriving permit effluent limitations. The dissolved metal water quality criteria value may be calculated by using these 304(a) aquatic life criteria expressed in terms of total recoverable metal, and multiplying it by a conversion factor (CF). The term "Conversion Factor" (CF) represents the conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. (Conversion Factors for saltwater CCCs are not currently available. Conversion factors derived for saltwater CMCs have been used for both saltwater CMCs and CCCs). See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria", October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water, available from the Water Resource center, USEPA, 401 M St., SW, mail code RC4100, Washington, DC 20460; and 40CFR§131.36(b)(1). Conversion Factors can be found in Attachment 1 – Conversion Factors for Dissolved Metals.
- E The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. The value given here corresponds to a hardness of 25 mg/L as expressed as $CaCO_3$. Criteria values for other hardness may be calculated from the following: $CMC (dissolved) = \exp\{m_A [\ln(hardness)] + b_A\}$ (CF), or $CCC (dissolved) = \exp\{m_C [\ln(hardness)] + b_C\}$ (CF) and the parameters specified in Attachment 2 – Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent. As noted in footnote D above, the values in this appendix are expressed as total recoverable, the criterion may be calculated from the following: $CMC (total) = \exp\{m_A [\ln(hardness)] + b_A\}$, or $CCC (total) = \exp\{m_C [\ln(hardness)] + b_C\}$.
- F Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows: $CMC = \exp(1.005(pH)-4.869)$; $CCC = \exp(1.005(pH)-5.134)$. Values displayed in table correspond to a pH of 7.8.
- G This criterion is based on 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80-038), Endosulfan (EPA 440/5-80-046), Endrin (EPA 440/5-80-047), Heptachlor (440/5-80-052), Hexachlorocyclohexane (EPA 440/5-80-054), Silver (EPA 440/5-80-071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a "CMC" derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.
- H No criterion for protection of human health from consumption of aquatic organisms excluding water was presented in the 1980 criteria document or in the 1986 *Quality Criteria for Water*. Nevertheless, sufficient information was presented in the 1980 document to allow the calculation of a criterion, even though the results of such a calculation were not shown in the document.
- I This criterion for asbestos is the Maximum Contaminant Level (MCL) developed under the Safe Drinking Water Act (SDWA) and the National Primary Drinking Water Regulation (NPDWR).
- J EPA has not calculated a 304(a) human health criterion for this contaminant. The criterion is the Maximum Contaminant Level developed under the Safe Drinking Water Act (SDWA) and the National Primary Drinking Water Regulation (NPDWR).
- K This criterion is based on a 304(a) aquatic life criterion that was issued in the 1995 *Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water*, (EPA-820-B-96-001, September 1996). This value was derived using the GLI Guidelines (60FR15393-15399, March 23, 1995; 40CFR132 Appendix A); the difference between the 1985 Guidelines and the GLI Guidelines are explained on page iv of the 1995 Updates. None of the decisions concerning the derivation of this criterion were affected by any considerations that are specific to the Great Lakes.
- L The $CMC = 1/[(f1/CMC1) + (f2/CMC2)]$ where $f1$ and $f2$ are the fractions of total selenium that are treated as selenite and selenate, respectively, and CMC1 and CMC2 are 185.9 $\mu g/l$ and 12.82 $\mu g/l$, respectively.
- M This criterion applies to total PCBs, (e.g., the sum of all congener or all isomer or homolog or Aroclor analyses.)
- N The derivation of the CCC for this pollutant did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels.
- O This state criterion is also based on a total fish consumption rate of 0.0175 kg/day.
- P This water quality criterion is expressed as μg free cyanide (as CN)/L.
- Q This value was announced (61FR58444-58449, November 14, 1996) as a proposed GLI 303 I aquatic life criterion
- S This water quality criterion for selenium is expressed in terms of total recoverable metal in the water column. It is scientifically acceptable to use the conversion factor (0.996 – CMC or 0.922 – CCC) that was used in the GLI to convert this to a value that is expressed in terms of dissolved metal.
- T The organoleptic effect criterion is more stringent than the value for priority toxic pollutants.
- U This value was derived from data for heptachlor and the criteria document provides insufficient data to estimate the relative toxicities of heptachlor and heptachlor epoxide.
- V There is a full set of aquatic life toxicity data that show that DEHP is not toxic to aquatic organisms at or below its solubility limit.
- W This value was derived from data for endosulfan and is most appropriately applied to the sum of alpha-endosulfan and beta-endosulfan.
- X This criterion is based on a 304(a) aquatic life criterion issued in 1980 or 1986, and was issued in one of the following documents: Aldrin/Dieldrin (EPA440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80-038), Endrin (EPA 440/5-80-047), Heptachlor (EPA 440/5-80-052), Polychlorinated Biphenyls (EPA 440/5-80-068), Toxaphene (EPA 440/5-86-006). This CCC is based on the Final Residue value procedure in the 1985 Guidelines. Since the publication of the Great Lakes Aquatic Life Criteria Guidelines in 1995 (60FR15393-15399, March 23, 1995), the EPA no longer uses the Final Residue value procedure for deriving CCCs for new or revised 304(a) aquatic life criteria.
- Y This water quality criterion is based on a 304(a) aquatic life criterion that was derived using the 1985 Guidelines (*Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses*, PB85-227049, January 1985) and was issued in one of the following criteria documents: Arsenic (EPA 440/5-84-033), Cadmium (EPA 440/5-84-032), Chromium (EPA 440/5-84-029),

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- Copper (EPA 440/5-84-031), Cyanide (EPA 440/5-84-028), Lead (EPA 440/5-84-027), Nickel (EPA 440/5-86-004), Pentachlorophenol (EPA 440/5-86-009), Toxaphene, (EPA 440/5-86-006), Zinc (EPA 440/5-87-003).
- Z When the concentration of dissolved organic carbon is elevated, copper is substantially less toxic and use of Water-Effect Ratios might be appropriate.
- aa The selenium criteria document (EPA 440/5-87-006, September 1987) provides that if selenium is as toxic to saltwater fishes in the field as it is to freshwater fishes in the field, the status of the fish community should be monitored whenever the concentration of selenium exceeds 5.0 μ g/L in salt water because the saltwater CCC does not take into account uptake via the food chain.
- bb This water quality criterion was derived on page 43 of the mercury criteria document (EPA 440/5-84-026, January 1985). The saltwater CCC of 0.025 μ g/L given on page 23 of the criteria document is based on the Final Residue value procedure in the 1985 Guidelines. Since the publication of the Great Lakes Aquatic Life criteria Guidelines in 1995 (60FR15393-15399, March 23, 1995), the EPA no longer uses the Final Residue value procedure for deriving CCCs for new or revised 304(a) aquatic life criteria.
- cc This water quality criterion was derived in *Ambient Water Quality Criteria Saltwater Copper Addendum* (Draft, April 14, 1995) and was promulgated in the Interim Final National Toxics Rule (60FR22228-22237, May 4, 1995).
- dd This water quality criterion was derived from data for inorganic mercury (II), but is applied here to total mercury. If a substantial portion of the mercury in the water column is methylmercury, this criterion will probably be under protective. In addition, even though inorganic mercury is converted to methylmercury and methylmercury bioaccumulates to a great extent, this criterion does not account for uptake via the food chain because sufficient data were not available when the criterion was derived.
- ee This criterion is a noncarcinogen. As prescribed in Section E of this regulation, application of this criterion for determining permit effluent limitations requires the use of 7Q10 or comparable tidal condition as determined by the Department.
- gg This criterion applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).
- hh Although a new RfD is available in IRIS, the surface water criteria will not be revised until the National Primary Drinking Water Regulations: Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) is completed, since public comment on the relative source contribution (RSC) for chloroform is anticipated.
- ii Although EPA has not published a completed criteria document for phthalate, it is EPA's understanding that sufficient data exist to allow calculation of aquatic life criteria.
- jj This recommended water quality criterion is expressed as total cyanide, even though the IRIS RfD the EPA used to derive the criterion is based on free cyanide. The multiple forms of cyanide that are present in ambient water have significant differences in toxicity due to their abilities to liberate the CN-moiety. Some complex cyanides require even more extreme conditions than refluxing with sulfuric acid to liberate the CN-moiety. Thus, these complex cyanides are expected to have little or no 'bioavailability' to humans. If a substantial fraction of the cyanide present in a water body is present in a complexed form (e.g., $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3$), this criterion may be overly conservative.
- kk This recommended water quality criterion was derived using the cancer slope factor of 1.4 (Linear multi-stage model (LMS) exposure from birth).
- ll Freshwater copper criteria may be calculated utilizing the procedures identified in EPA-822-R-07-001.
- mm HAA5 means five haloacetic acids (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, bromoacetic acid and dibromoacetic acid).

NON PRIORITY POLLUTANTS

Non Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:		MCL (µg/L)		
						Water & Organism (µg/L)	Organism Only (µg/L)			
1	Alachlor							2 M	SDWA	
2	Ammonia	7664417	CRITERIA ARE pH AND TEMPERATURE DEPENDENT - SEE DOCUMENT FOR DETAILS C							EPA822-R99-014 EPA440/5-88-004
3	Aesthetic Qualities		NARRATIVE STATEMENT AND NUMERIC CRITERIA – SEE TEXT							Gold Book
4	Atrazine							3 M	SDWA	
5	Bacteria		FOR PRIMARY CONTACT RECREATION AND SHELLFISH USES – SEE TEXT							Gold Book
6	Barium	7440393				1,000 A, L		2,000 L	Gold Book	
7	Carbofuran	1563662						40 L	SDWA	
8	Chlorine	7782505	19	11	13	7.5		G	Gold Book SDWA	
9	Chlorophenoxy Herbicide 2, 4, 5, -TP	93721					10 A, L	50 L	Gold Book SDWA	
10	Chlorophenoxy Herbicide 2, 4-D	94757					100 A, L	70 L	Gold Book SDWA	
11	Chlorophyll <i>a</i>		NARRATIVE STATEMENT AND NUMERIC CRITERIA – SEE TEXT							State Standard
12	Chloropyrifos	2921882	0.083 F	0.041 F	0.011 F	0.0056 F			Gold Book	
13	Color		NARRATIVE STATEMENT – SEE TEXT							State Standard

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Non Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/Source
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:		MCL (µg/L)	
						Water & Organism (µg/L)	Organism Only (µg/L)		
14	Dalapon	75990						200 L	SDWA
15	Demeton	8065483		0.1 E		0.1 E			Gold Book
16	1, 2-Dibromo-3-chloropropane (DBCP)	96128						0.2 M	SDWA
17	Di(2-ethylhexyl) adipate	103231						400 L	SDWA
18	Dinoseb	88857						7 L	SDWA
19	Dinitrophenols	25550587				69 L	5,300 L		65FR66443
20	Nonylphenol	1044051	28	6.6	7.0	1.7			71FR9337
21	Diquat	85007						20 L	SDWA
22	Endothall	145733						100 L	SDWA
23	Ether, Bis Chloromethyl	542881				0.00010 D, M	0.00029 D, M		65FR66443
24	Cis-1, 2-dichloroethylene	156592						70 L	SDWA
25	Ethylene dibromide							0.05 M	SDWA
26	Fluoride	7681494						4000 L	SDWA
27	Glyphosate	1071836						700 L	SDWA

Non Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:		MCL (µg/L)		
						Water & Organism (µg/L)	Organism Only (µg/L)			
28	Guthion	86500	0.01 E		0.01 E				Gold Book	
29	Hexachlorocyclo-hexane-Technical	319868				0.0123 L	0.0414 L		Gold Book	
30	Malathion	121755	0.1 E		0.1 E				Gold Book	
31	Methoxychlor	72435	0.03 E		0.03 E	100 A, L		40 L	Gold Book SDWA	
32	Mirex	2385855	0.001 E		0.001 E				Gold Book	
33	Nitrates	14797558				10,000 L		10,000 L	SDWA Gold Book	
34	Nitrites	14797650						1,000 L	SDWA	
35	Nitrogen, Total		NARRATIVE STATEMENT AND NUMERIC CRITERIA - SEE TEXT							State Standard
36	Nitrosamines					0.0008 L	1.24 L		Gold Book	
37	Nitrosodibutylamine, N	924163				0.0063 A, M	0.22 A, M		65FR66443	
38	Nitrosodiethylamine, N	55185				0.0008 A, M	1.24 A, M		Gold Book	
39	Nitrosopyrrolidine, N	930552				0.016 M	34 M		65FR66443	

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Non Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/Source	
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:		MCL (µg/L)		
						Water & Organism (µg/L)	Organism Only (µg/L)			
40	Oil and Grease			NARRATIVE STATEMENT – SEE TEXT						Gold Book
41	Oxamyl	23135220							200 L	SDWA
42	Oxygen, Dissolved	7782447	WARMWATER, COLDWATER, AND EXCEPTIONS FOR NATURAL CONDITIONS - SEE TEXT K							Gold Book State Standard
43	Diazinon	333415	0.17	0.17	0.82	0.82				71FR9336
44	Parathion	56382	0.065 H	0.013 H						Gold Book
45	Pentachlorobenzene	608935					1.4 E	1.5 E		65FR66443
46	PH		SEE TEXT I							Gold Book State Standard
47	Phosphorus, Total		NARRATIVE STATEMENT AND NUMERIC CRITERIA - SEE TEXT							State Standard
48	Picloram	1918021							500 L	SDWA
49	Salinity		NARRATIVE STATEMENT - SEE TEXT							Gold Book
50	Simazine	122349							4 L	SDWA
51	Solids Suspended and Turbidity		NARRATIVE STATEMENT AND NUMERIC CRITERIA - SEE TEXT							Gold Book State Standard
52	Styrene	100425							100 L	SDWA
53	Sulfide-Hydrogen Sulfide	7783064		2.0 E		2.0 E				Gold Book

Non Priority Pollutant	CAS Number	Freshwater Aquatic Life		Saltwater Aquatic Life		Human Health			FR Cite/Source
		CMC (µg/L)	CCC (µg/L)	CMC (µg/L)	CCC (µg/L)	For Consumption of:		MCL (µg/L)	
						Water & Organism (µg/L)	Organism Only (µg/L)		
54	Tainting Substances	NARRATIVE STATEMENT - SEE TEXT							Gold Book
55	Temperature	SPECIES DEPENDENT CRITERIA - SEE TEXT J							Red Book
56	1, 2, 4, 5-Tetrachlorobenzene	95943				0.97 D	1.1 D		65FR66443
57	Tributyltin (TBT)	688733	0.46	0.063	0.37	0.010			EPA 822-F-00-008
58	2, 4, 5-Trichlorophenol	95954				1,800 B, D	3,600 B, D		65FR66443
59	Xylenes, Total							10,000 L	SDWA
60	Uranium							30	SDWA
61	Beta particles and photon emitters							4 Millirems/yr	SDWA
62	Gross alpha particle activity							15 picocuries per liter (pCi/l)	SDWA
63	Radium 226 and Radium 228 (combined)							5 pCi/l	SDWA

Footnotes:

- A This human health criterion is the same as originally published in the Red Book which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value is now published in the Gold Book.
- B The organoleptic effect criterion is more stringent than the value presented in the non priority pollutants table.
- C According to the procedures described in the *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses*, except possibly where a very sensitive species is important at a site, freshwater aquatic life should be protected if both conditions specified in Attachment 3 - Calculation of Freshwater Ammonia Criterion are satisfied.

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- D This criterion has been revised to reflect The Environmental Protection Agency's q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of April 8, 1998. The fish tissue bioconcentration factor (BCF) used to derive the original criterion was retained in each case.
- E The derivation of this value is presented in the Red Book (EPA 440/9-76-023, July, 1976).
- F This value is based on a 304(a) aquatic life criterion that was derived using the 1985 Guidelines (*Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses*, PB85-227049, January 1985) and was issued in the following criteria document: Chloropyrifos (EPA 440/5-86-005).
- G A more stringent Maximum Residual Disinfection Level (MRDL) has been issued by EPA under the Safe Drinking Water Act. Refer to S.C. Regulation 61-58, *State Primary Drinking Water Regulations*.
- H This value is based on a 304(a) aquatic life criterion that was issued in the *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water* (EPA-820-B-96-001). This value was derived using the GLI Guidelines (60FR15393-15399, March 23, 1995; 40CFR132 Appendix A); the differences between the 1985 Guidelines and the GLI Guidelines are explained on page iv of the 1995 Updates. No decision concerning this criterion was affected by any considerations that are specific to the Great Lakes.
- I South Carolina has established some site-specific standards for pH. These site-specific standards are listed in S.C. Regulation 61-69, *Classified Waters*.
- J U.S. EPA, 1976, Quality Criteria for Water 1976.
- K South Carolina has established numeric criteria in Section G for waters of the State based on the protection of warmwater and coldwater species. For the exception to be used for waters of the State that do not meet the numeric criteria established for the waterbody due to natural conditions, South Carolina has specified the allowable deficit in Section D.4. and used the following document as a source. U.S. EPA, 1986, *Ambient Water Quality Criteria for Dissolved Oxygen*, EPA 440/5-86-003, National Technical Information Service, Springfield, VA. South Carolina has established some site-specific standards for DO. These site-specific standards are listed in S.C. Regulation 61-69, *Classified Waters*.
- L This criterion is a noncarcinogen. As prescribed in Section E of this regulation, application of this criterion for determining permit effluent limitations requires the use of 7Q10 or comparable tidal condition as determined by the Department
- M This criterion is based on an added carcinogenicity risk. As prescribed in Section E of this regulation, application of this criterion for permit effluent limitations requires the use annual average flow or comparable tidal condition as determined by the Department.

ORGANOLEPTIC EFFECTS

Pollutant		CAS Number	Organoleptic Effect Criteria (µg/L)	FR Cite/Source
1	Acenaphthene	83329	20	Gold Book
2	Chlorobenzene	108907	20	Gold Book
3	3-Chlorophenol		0.1	Gold Book
4	4-Chlorophenol	106489	0.1	Gold Book
5	2, 3-Dichlorophenol		0.04	Gold Book
6	2, 5-Dichlorophenol		0.5	Gold Book
7	2, 6-Dichlorophenol		0.2	Gold Book
8	3, 4-Dichlorophenol		0.3	Gold Book
9	2, 4, 5-Trichlorophenol	95954	1	Gold Book
10	2, 4, 6-Trichlorophenol	88062	2	Gold Book
11	2, 3, 4, 6-Tetrachlorophenol		1	Gold Book
12	2-Methyl-4-Chlorophenol		1,800	Gold Book
13	3-Methyl-4-Chlorophenol	59507	3,000	Gold Book
14	3-Methyl-6-Chlorophenol		20	Gold Book
15	2-Chlorophenol	95578	0.1	Gold Book
16	Copper	7440508	1,000	Gold Book
17	2, 4-Dichlorophenol	120832	0.3	Gold Book
18	2, 4-Dimethylphenol	105679	400	Gold Book
19	Hexachlorocyclopentadiene	77474	1	Gold Book
20	Nitrobenzene	98953	30	Gold Book
21	Pentachlorophenol	87865	30	Gold Book

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Pollutant		CAS Number	Organoleptic Effect Criteria (µg/L)	FR Cite/Source
22	Phenol	108952	300	Gold Book
23	Zinc	7440666	5,000	45FR79341

Footnote:

These criteria are based on organoleptic (taste and odor) effects. Because of variations in chemical nomenclature systems, this listing of pollutants does not duplicate the listing in Appendix A of 40 CFR Part 423. Also listed are the Chemical Abstracts Service (CAS) registry numbers, which provide a unique identification for each chemical.

WATER QUALITY CRITERIA ADDITIONAL NOTES

1. Criteria Maximum Concentration and Criterion Continuous Concentration

The Criteria Maximum Concentration (CMC) is an estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The Criterion Continuous Concentration (CCC) is an estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed indefinitely without resulting in an unacceptable effect. The CMC and CCC are just two of the six parts of a aquatic life criterion; the other four parts are the acute averaging period, chronic averaging period, acute frequency of allowed exceedence, and chronic frequency of allowed exceedence.

2. Criteria for Priority Pollutants, Non Priority Pollutants and Organoleptic Effects

This appendix lists all priority toxic pollutants and some nonpriority toxic pollutants, and both human health effect and organoleptic effect criteria issued pursuant to CWA §304(a), the SDWA, and the NPDWR. Blank spaces indicate that EPA has no CWA §304(a) criteria recommendations. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in Appendix A of 40CFR Part 423.

3. Human Health Risk

The human health criteria for the priority and non priority pollutants are based on carcinogenicity of 10^{-6} risk.

4. Water Quality Criteria published pursuant to Section 304(a) or Section 303(c) of the CWA

Many of the values in the appendix were published in the California Toxics Rule. Although such values were published pursuant to Section 303(c) of the CWA, they represent the EPA's most recent calculation of water quality criteria.

5. Calculation of Dissolved Metals Criteria

The 304(a) criteria for metals are shown as total recoverable metals. As allowed in Section E of this regulation, these criteria may be expressed as dissolved metals. Dissolved metals criteria may be calculated in one of two ways (please refer to Attachments). For freshwater metals criteria that are hardness-dependent, the dissolved metal criteria may be calculated using a hardness of 25 mg/l as expressed as CaCO₃. Saltwater and freshwater metals' criteria that are not hardness-dependent are calculated by multiplying the total recoverable criteria before rounding by the appropriate conversion factors. The final metals' criteria in the table are rounded to two significant figures. Information regarding the calculation of hardness dependent conversion factors are included in the footnotes.

6. Chemical Abstract Services Number

The Chemical Abstract Services number (CAS) for each pollutant is provided (where available).

7. Gold Book Reference

The Gold Book reference listed in the appendix refers to the May 1, 1986 EPA publication EPA 440/5-86-001.

8. Federal Register Reference

The FR listed in the appendix refers to the appropriate *Federal Register* listing, and source refers to the origin of the value. Many of the numeric values contained in this appendix have been modified, revised, or altered and therefore, the source as listed may not be the same as it appears in this table. Also, South Carolina may have selected to use a different value or may have promulgated a different value in its previous iterations of this regulation, so differences from these sources should be expected.

9. Maximum Contaminant Levels

The appendix includes Maximum Contaminant Levels (MCLs) developed under the Safe Drinking Water Act (SDWA) and the National Primary Drinking Water Regulation (NPDWR).

10. Organoleptic Effects

The appendix contains 304(a) criteria for pollutants with toxicity-based criteria as well as non-toxicity based criteria. The basis for the non-toxicity based criteria are organoleptic effects (e.g., taste and odor) which would make water and edible aquatic life unpalatable but not toxic to humans. The table includes criteria for organoleptic effects for 23 pollutants. Pollutants with organoleptic effect criteria more stringent than the criteria based on toxicity (e.g., included in both the priority and non-priority pollutant tables) are footnoted as such.

11. Category Criteria

In the 1980 criteria documents, certain water quality criteria were published for categories of pollutants rather than for individual pollutants within that category. Subsequently, in a series of separate actions, the EPA derived criteria for specific pollutants within a category. Therefore, in this appendix South Carolina is replacing criteria representing categories with individual pollutant criteria (e.g., 1, 3-dichlorobenzene, 1, 4-dichlorobenzene and 1, 2-dichlorobenzene).

12. Specific Chemical Calculations**A. Selenium****(1) Human Health**

In the 1980 Selenium document, a criterion for the protection of human health from consumption of water and organisms was calculated based on a BCF of 6.0 l/kg and a maximum water-related contribution of 35 Φ g Se/day. Subsequently, the EPA Office of Health and Environmental Assessment issued an errata notice (February 23, 1982), revising the BCF for selenium to 4.8 L/kg. In 1988, EPA issued an addendum (ECAO-CIN-668) revising the human health criteria for selenium. Later in the final National Toxic Rule (NTR, 57 FR 60848), EPA withdrew previously published selenium human health criteria, pending EPA review of new epidemiological data.

This appendix includes human health criteria for selenium, calculated using a BCF of 4.8 L/kg along with the current IRIS RfD of 0.005 mg/kg/day. South Carolina included these water quality criteria in the appendix because the data necessary for calculating a criteria in accordance with EPA's 1980 human health methodology are available.

(2) Aquatic Life

This appendix contains aquatic life criteria for selenium that are the same as those published in the CTR. In the CTR, EPA proposed an acute criterion for selenium based on the criterion proposed for selenium in the Water Quality Guidance for the Great Lakes System (61FR584440). The GLI and CTR proposals take into account data showing that selenium's two prevalent oxidation state in water, selenite and selenate, present differing potentials for aquatic toxicity, as well as new data indication that various forms of selenium are additive. The new approach produces a different selenium acute criterion concentration, or CMC, depending upon the relative proportions of selenite, selenate, and other forms of selenium that are present. EPA is currently undertaking a reassessment of selenium, and expects the 304(a) criterion for selenium will be revised based on the final reassessment (63FR26186). However, until such time as revised water quality criteria for selenium are published by the EPA, the water quality criteria in this appendix are EPA's current 304(a) criteria.

B. Chromium (III)

The aquatic life water quality criteria for chromium (III) included in the appendix are based on the values presented in the document titled: *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water*.

C. PCBs

In this appendix, South Carolina is publishing aquatic life and human health criteria based on total PCBs rather than individual arochlors.

Attachment 1 - Conversion Factors for Dissolved Metals

Metal	Conversion Factor freshwater CMC	Conversion Factor freshwater CCC	Conversion Factor saltwater CMC	Conversion Factor saltwater CCC
Arsenic	1.000	1.000	1.000	1.000
Cadmium	$1.136672 - [(\ln \text{hardness})(0.041838)]$	$1.101672 - [(\ln \text{hardness})(0.041838)]$	0.994	0.994
Chromium III	0.316	0.860	--	--
Chromium VI	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	$1.46203 - [(\ln \text{hardness})(0.145712)]$	$1.46203 - [(\ln \text{hardness})(0.145712)]$	0.951	0.951
Mercury	0.85	0.85	0.85	0.85
Nickel	0.998	0.997	0.990	0.990
Selenium	--	--	0.998	0.998
Silver	0.85	--	0.85	--
Zinc	0.978	0.986	0.946	0.946

Attachment 2 - Parameters for Calculating Freshwater Dissolved Metals Criteria That Are Hardness-Dependent

Chemical	m _A	b _A	m _C	b _C	Freshwater Conversion Factors (CF)	
					Acute	Chronic
Cadmium	1.0166	-3.924	0.7409	-4.719	1.136672-[ln (hardness)(0.041838)]	1.101672-[ln (hardness)(0.041838)]
Chromium III	0.8190	3.7256	0.8190	0.6848	0.316	0.860
Copper	0.9422	-1.700	0.8545	-1.702	0.960	0.960
Lead	1.273	-1.460	1.273	-4.705	1.46203-[ln (hardness)(0.145712)]	1.46203-[ln (hardness)(0.145712)]
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.52	--	--	0.85	--
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

Hardness-dependent metals criteria may be calculated from the following:

CMC (total) = exp{m_A [ln(hardness)]+ b_A}, or CCC (total) = exp{m_C [ln (hardness)]+ b_C}

CMC (dissolved) = exp{m_A [ln(hardness)]+ b_A} (CF), or CCC (dissolved) = exp{m_C [ln (hardness)]+ b_C} (CF).

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Attachment 3 - Calculation of Freshwater Ammonia Criterion

1. The one-hour average concentration of total ammonia nitrogen (in mg N/L) does not exceed, more than once every three years on the average, the CMC calculated using the following equation:

$$CMC = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

In situations where salmonids are absent, the CMC may be calculated using the following equation:

$$CMC = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

2. The thirty-day average concentration of total ammonia nitrogen (in mg N/L) does not exceed, more than once every three years on the average, the CCC calculated using the following equations:

When fish early life stages (ELS) are present:

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) \times \min(2.85, 1.45 \times 10^{0.028 \times (25-T)})$$

When fish early life stages are absent:

$$CCC = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}} \right) \times 1.45 \times 10^{0.028 \times (25-\max(T,7))}$$

and the highest four-day average within the 30-day period does not exceed 2.5 times the CCC.

In the absence of information substantiating that ELS are absent, the ELS present equation will be used.

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DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF OCCUPATIONAL SAFETY AND HEALTH
CHAPTER 71

Statutory Authority: 1976 Code Section 41-15-210
Article I, Subarticle 6 and Subarticle 7
Occupational Safety and Health Standards

The South Carolina Department of Labor, Licensing and Regulation, Division of Labor, Office of Occupational Safety and Health, hereby promulgates the following changes to South Carolina Regulations:

In Subarticle 6 (General Industry and Marine Terminals):

Minimum standard for Payment for protective equipment shall be 1910.132, 1917.96, and 1918.106 as amended in FEDERAL REGISTER, Volume 72, Number 220, pages 64341-64430, dated November 15, 2007.

In Subarticle 7 (Construction):

Minimum standard for Payment for protective equipment shall be 1926.95 as amended in FEDERAL REGISTER, Volume 72, Number 220, pages 64341-64430, dated November 15, 2007.

Copies of these final regulation changes can be obtained or reviewed at the South Carolina Department of Labor, Licensing and Regulation during normal business hours by contacting the OSHA Standards Office at (803) 896-7682.