DEPARTMENT OF

ENVIRONMENTAL CONSERVATION

18 AAC 80

Drinking Water

Amended as of December 26, 2014

Bill Walker
Governor

Larry Hartig
Commissioner

IMPORTANT NOTE TO READER

THE REGULATIONS REPRODUCED HERE HAVE BEEN PROVIDED BY THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION AS A PUBLIC COURTESY. WHILE EVERY EFFORT HAS BEEN MADE TO ASSURE THE ACCURACY OF THE REPRODUCED VERSION, THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION CANNOT GUARANTEE ITS ABSOLUTE ACCURACY. PAPER COPIES OF THE REGULATIONS AS ORIGINALLY FILED BY THE LIEUTENANT GOVERNOR ARE AVAILABLE FROM THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.

THE REGULATIONS HAVE AN EFFECTIVE DATE OF DECEMBER 26, 2014, ARE IN REGISTER 212, AND WILL APPEAR IN OFFICIAL PUBLISHED FORM IN THE JANUARY 2015 SUPPLEMENT TO THE ALASKA ADMINISTRATIVE CODE.

Chapter 80. Drinking Water.

Article

Editor's note: The regulations in 18 AAC 80, effective October 1, 1999 and distributed in Register 151, constitute a comprehensive reorganization and revision of material formerly set out in this chapter, which was repealed simultaneously with the adoption of these regulations. The history line at the end of each section does not reflect the history of the replaced provisions before October 1, 1999. Some section numbers in this revision were used for previous regulations, but current sections are not necessarily related to previous sections with the same section number.

Additionally, the regulations in 18 AAC 80, effective June 14, 1991 and set out in Register 118, constituted a comprehensive reorganization and revision of the regulations set out in this chapter. The regulations effective on that date replaced former 18 AAC 80, which was repealed simultaneously with the adoption of those regulations. Some section numbers in the revision of June 14, 1991 may have been used for regulations existing before that date, but current sections are not necessarily related to previous sections with the same section number.

Earlier versions of 18 AAC 80 may be reviewed at the Office of the Lieutenant Governor, and may be found at the following registers: Register 64, 12/31/77; Register 67, 8/13/78; Register 83, 9/1/82, Register 110, 4/8/89; Register 118, 6/14/91; Register 125, 3/18/93; Register 130, 5/18/94; Register 132, 11/10/94.

Article 1. General Drinking Water Requirements.

Section

18 AAC 80.005. Purpose and applicability. (a) The purpose of this chapter is to protect public health and safety by establishing

(1) standards for the design, construction, maintenance, and operation of a public water system; and

(2) contaminant monitoring requirements for drinking water provided by a public water system.

(b) The requirements of this chapter apply to the owner or operator of a

(1) public water system; and

(2) laboratory required to be certified under 18 AAC 80.1100 - 18 AAC 80.1110. (Eff. 10/1/99, Register 151)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.007. Certified operator requirements. The following public water systems must be actively supervised as described in 18 AAC 74.010 and 18 AAC 74.410 by operators who are certified in accordance with AS 46.30 and 18 AAC 74:

(1) all community water systems and non-transient non-community water systems;

(2) a transient non-community water system that uses a surface water or GWUDISW source; and

(3) a transient non-community water system that uses only a groundwater source and meets the criteria set out in 18 AAC 74.006(7). (Eff. 9/28/2001, Register 159; am 4/24/2009, Register 190; am 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.010. Requirements adopted by reference and other reference materials. (a) The following federal requirements are adopted by reference:

(1) 21 C.F.R. Part 110 (current good manufacturing practice in manufacturing, packing, or holding human food), revised as of July 1, 2009;

(2) 21 C.F.R. Part 129 (processing and bottling of bottled drinking water), revised as of July 1, 2009;

(3) 21 C.F.R. 165.110 (bottled water), revised as of July 1, 2009;

(4) 40 C.F.R. Part 136, Appendix B (definition and procedure for the determination of the method detection limit, Revision 1.11), revised as of July 1, 2009;

(5) the following provisions from 40 C.F.R. 141.1 - 141.6 (Subpart A - general), revised as of July 1, 2009:

(A) the definitions of "Act," "action level," "bag filters," "bank filtration," "cartridge filters," "comprehensive performance evaluation (CPE)," "combined distribution system," "consecutive system," "corrosion inhibitor," "disinfection profile," "dose equivalent," "dual sample sets," "effective corrosion inhibitor residual," "enhanced coagulation," "enhanced softening," "filter profile," "finished water," "first draw sample," "flowing stream," "GAC10," "GAC20," "ground water under the direct influence of surface water (GWUDI)," "haloacetic acids (five) (HAA5)," "halogen," "initial compliance period," "lake/reservoir," "large water system," "lead service line," "*Legionella*," "locational running annual average," "man-made beta particle and photon emitters," "medium-size water system," "membrane filtration," "optimal corrosion control treatment," "picocurie," "plant intake," "point of disinfectant application," "presedimentation," "rem," "service line sample," "single family structure," "small water system," "standard sample," "Subpart H systems," "supplier of water," "SUVA," "system with a single service connection," "total organic carbon (TOC)," "total trihalomethanes (TTHM)," "trihalomethane (THM)," "two-stage lime softening," "uncovered finished water storage facility," and "wholesale system," as set out in 40 C.F.R. 141.2 (definitions);

(B) 40 C.F.R. 141.4(a) (variances and exemptions);

(C) 40 C.F.R. 141.3 (coverage), except that 40 C.F.R. 141.3 does not apply to a Class C public water system;

(6) the following provisions from 40 C.F.R. 141.21 – 141.29 (Subpart C - monitoring and analytical requirements), revised as of July 29, 2009:

(A) 40 C.F.R. 141.21 (coliform sampling);

(B) 40 C.F.R. 141.22(b) (turbidity sampling and analytical requirements);

(C) 40 C.F.R. 141.23 (inorganic chemical sampling and analytical requirements);

(D) 40 C.F.R. 141.24 (organic chemicals, sampling and analytical requirements);

(E) 40 C.F.R. 141.25 (analytical methods for radioactivity);

(F) 40 C.F.R. 141.26 (monitoring frequency and compliance requirements for radionuclides in community water systems);

(G) 40 C.F.R. 141.27 (alternative analytical techniques);

(H) 40 C.F.R. 141.28 (certified laboratories);

(I) 40 C.F.R. 141.29 (monitoring of consecutive public water systems);

(7) the following provisions from 40 C.F.R. 141.31 - 141.35 (Subpart D - reporting and recordkeeping), revised as of July 1, 2009:

(A) 40 C.F.R. 141.31(d) and (e) (reporting requirements);

(B) 40 C.F.R. 141.33 (record maintenance);

(C) 40 C.F.R. 141.35 (reporting for unregulated contaminant monitoring results), except that the term "you" means the owner or operator;

(8) the following provisions from 40 C.F.R. 141.40 - 141.43 (Subpart E - special regulations, including monitoring regulations and prohibition on lead use), revised as of July 1, 2009:

(A) 40 C.F.R. 141.40 (monitoring requirements for unregulated contaminants), except that the term "you" means the owner or operator;

(B) 40 C.F.R. 141.41 (special monitoring for sodium);

(C) 40 C.F.R. 141.42 (special monitoring for corrosivity characteristics);

(9) the following provisions from 40 C.F.R. 141.50 - 141.55 (Subpart F - maximum contaminant level goals and maximum residual disinfectant level goals), revised as of July 1, 2009:

(A) 40 C.F.R. 141.51(b) (maximum contaminant level goals for inorganic contaminants);

(B) 40 C.F.R. 141.55 (maximum contaminant level goals for radionuclides);

(10) the following provisions from 40 C.F.R. 141.60 - 141.66 (Subpart G - national primary drinking water regulations: maximum contaminant levels and maximum residual disinfectant levels), revised as of July 1, 2009:

(A) 40 C.F.R. 141.61 (maximum contaminant levels for organic contaminants);

(B) 40 C.F.R. 141.62 (maximum contaminant levels for inorganic contaminants);

(C) 40 C.F.R. 141.63 (maximum contaminant levels (MCLs) for microbiological contaminants);

(D) 40 C.F.R. 141.64 (maximum contaminant levels for disinfection byproducts);

(E) 40 C.F.R. 141.65 (maximum residual disinfectant levels);

(F) 40 C.F.R. 141.66 (maximum contaminant levels for radionuclides);

(11) the following provisions from 40 C.F.R. 141.70 – 141.76 (Subpart H - filtration and disinfection), revised as of July 29, 2009:

(A) 40 C.F.R. 141.70 (general requirements);

(B) 40 C.F.R. 141.71 (criteria for avoiding filtration);

(C) 40 C.F.R. 141.72 (disinfection);

(D) 40 C.F.R. 141.73 (filtration), except that in 40 C.F.R. 141.73(a)(4), the phrase "January 1, 2005" is revised to read "August 19, 2006";

(E) 40 C.F.R. 141.74 (analytical and monitoring requirements), except that in 40 C.F. R. 141.74(b)(3), the phrase "must be determined based on the $CT_{99.9}$ values in tables 1.1 - 1.6, 2.1, and 3.1 of this section, as appropriate" is revised to read "may be determined based either on the $CT_{99.9}$ values in tables 1.1 - 1.6, 2.1, and 3.1 of this section, as appropriate, or on the formula for calculating CT values set out in 18 AAC 80.655(b)";

(F) 40 C.F.R. 141.75 (reporting and recordkeeping requirements);

(G) 40 C.F.R. 141.76 (recycle provisions);

(12) the following provisions from 40 C.F.R. 141.80 - 141.91 (Subpart I - control of lead and copper), revised as of July 1, 2009:

(A) 40 C.F.R. 141.80 (general requirements);

(B) 40 C.F.R. 141.81 (applicability of corrosion control treatment steps to small, medium-size and large water systems);

(C) 40 C.F.R. 141.82 (description of corrosion control treatment requirements);

(D) 40 C.F.R. 141.83 (source water treatment requirements);

(E) 40 C.F.R. 141.84 (lead service line replacement requirements);

(F) 40 C.F.R. 141.85 (public education and supplemental monitoring requirements);

(G) 40 C.F.R. 141.86 (monitoring requirements for lead and copper in tap water);

(H) 40 C.F.R. 141.87 (monitoring requirements for water quality parameters);

(I) 40 C.F.R. 141.88 (monitoring requirements for lead and copper in source water);

(J) 40 C.F.R. 141.89 (analytical methods);

(K) 40 C.F.R. 141.90 (reporting requirements);

(L) 40 C.F.R. 141.91 (recordkeeping requirements);

(13) the following provisions from 40 C.F.R. 141.130 - 141.135 (Subpart L - disinfectant residuals, disinfection byproducts, and disinfection byproduct precursors), revised as of July 29, 2009:

(A) 40 C.F.R. 141.130 (general requirements);

(B) 40 C.F.R. 141.131 (analytical requirements);

(C) 40 C.F.R. 141.132 (monitoring requirements);

(D) 40 C.F.R. 141.133 (compliance requirements);

(E) 40 C.F.R. 141.134 (reporting and recordkeeping requirements);

(F) 40 C.F.R. 141.135 (treatment technique for control of disinfection byproduct (DBP) precursors);

(14) the following provisions from 40 C.F.R. 141.151 - 141.155 (Subpart O - consumer confidence reports), revised as of July 1, 2009:

(A) 40 C.F.R. 141.151 (purpose and applicability of this subpart);

(B) 40 C.F.R. 141.152(b) - (d) (effective dates);

(C) 40 C.F.R. 141.153 (content of the reports);

(D) 40 C.F.R. 141.154 (required additional health information);

(E) 40 C.F.R. 141.155 (report delivery and recordkeeping);

(F) Appendix A to 40 C.F.R. Part 141, Subpart O (regulated contaminants);

(15) the following provisions from 40 C.F.R. 141.170 - 141.175 (Subpart P – enhanced filtration and disinfection - systems serving 10,000 or more people), revised as of July 1, 2009:

(A) 40 C.F.R. 141.170 (general requirements);

(B) 40 C.F.R. 141.171 (criteria for avoiding filtration);

(C) 40 C.F.R. 141.172 (disinfection profiling and benchmarking);

(D) 40 C.F.R. 141.173 (filtration);

(E) 40 C.F.R. 141.174 (filtration sampling requirements);

(F) 40 C.F.R. 141.175 (reporting and recordkeeping requirements);

(16) the following provisions from 40 C.F.R. 141.201 - 141.211 (Subpart Q - public notification of drinking water violations), revised as of July 1, 2009:

(A) 40 C.F.R. 141.201 (general public notification requirements);

(B) 40 C.F.R. 141.202 (Tier 1 public notice - form, manner, and frequency of notice);

(C) 40 C.F.R. 141.203 (Tier 2 public notice - form, manner, and frequency of notice);

(D) 40 C.F.R. 141.204 (Tier 3 public notice - form, manner, and frequency of notice);

(E) 40 C.F.R. 141.205 (content of the public notice);

(F) 40 C.F.R. 141.206 (notice to new billing units or new customers);

(G) 40 C.F.R. 141.207 (special notice of the availability of unregulated contaminant monitoring results);

(H) 40 C.F.R. 141.208 (special notice for exceedance of the SMCL for fluoride);

(I) 40 C.F.R. 141.210 (notice by primacy agency on behalf of the public water system);

(J) 40 C.F.R.141.211 (special notice for repeated failure to conduct monitoring of the source water for *Cryptosporidium* and for failure to determine bin classification of mean *Cryptosporidium* level);

(K) Appendix A to 40 C.F.R. Part 141, Subpart Q (NPDWR violations and other situations requiring public notice);

(L) Appendix B to 40 C.F.R. Part 141, Subpart Q (standard health effects language for public notification);

(M) Appendix C to 40 C.F.R. Part 141, Subpart Q (list of acronyms used in public notification regulation);

(17) the following provisions from 40 C.F.R. 141.500 - 141.571 (Subpart T - enhanced filtration and disinfection - systems serving fewer than 10,000 people), revised as of July 1, 2009, except that the term "you" means the owner or operator:

(A) 40 C.F.R. 141.500 (general requirements);

(B) 40 C.F.R. 141.501 (Who is subject to the requirements of Subpart T?);

(C) 40 C.F.R. 141.502 (When must my system comply with these requirements?), except that the phrase "January 1, 2005" is revised to read "August 19, 2006";

(D) 40 C.F.R. 141.503 (What does Subpart T require?);

(E) 40 C.F.R. 141.510 (Is my system subject to the new finished water reservoir requirements?);

(F) 40 C.F.R. 141.511 (What is required of new finished water reservoirs?);

(G) 40 C.F.R. 141.520 (Is my system subject to the updated watershed control requirements?);

(H) 40 C.F.R. 141.521 (What updated watershed control requirements must my unfiltered system implement to continue to avoid filtration?);

(I) 40 C.F.R. 141.522 (How does the state determine whether my system's watershed control requirements are adequate?);

(J) 40 C.F.R. 141.530 (What is a disinfection profile and who must develop one?);

(K) 40 C.F.R. 141.531 (What criteria must a state use to determine that a profile is unnecessary?);

(L) 40 C.F.R. 141.532 (How does my system develop a disinfection profile and when must it begin?);

(M) 40 C.F.R. 141.533 (What data must my system collect to calculate a disinfection profile?);

(N) 40 C.F.R. 141.534 (How does my system use this data to calculate an inactivation ratio?);

(O) 40 C.F.R. 141.535 (What if my system uses chloramines, ozone, or chlorine dioxide for primary disinfection?);

(P) 40 C.F.R. 141.536 (My system has developed an inactivation ratio; what must we do now?);

(Q) 40 C.F.R. 141.540 (Who has to develop a disinfection benchmark?);

(R) 40 C.F.R. 141.541 (What are significant changes to disinfection practice?);

(S) 40 C.F.R. 141.542 (What must my system do if we are considering a significant change to disinfection practices?);

(T) 40 C.F.R. 141.543 (How is the disinfection benchmark calculated?);

(U) 40 C.F.R. 141.544 (What if my system uses chloramines, ozone, or chlorine dioxide for primary disinfection?);

(V) 40 C.F.R. 141.550 (Is my system required to meet Subpart T combined filter effluent turbidity limits?);

(W) 40 C.F.R. 141.551 (What strengthened combined filter effluent turbidity limits must my system meet?);

(X) 40 C.F.R. 141.552 (My system consists of "alternative filtration" and is required to conduct a demonstration - what is required of my system and how does the state establish my turbidity limits?);

(Y) 40 C.F.R. 141.553 (My system practices lime softening - is there any special provision regarding my combined filter effluent?);

(Z) 40 C.F.R. 141.560 (Is my system subject to individual filter turbidity requirements?);

(AA) 40 C.F.R. 141.561 (What happens if my system's turbidity monitoring equipment fails?);

(BB) 40 C.F.R. 141.562 (My system only has two or fewer filters - is there any special provision regarding individual filter turbidity monitoring?);

(CC) 40 C.F.R. 141.563 (What follow-up action is my system required to take based on continuous turbidity monitoring?);

(DD) 40 C.F.R. 141.564 (My system practices lime softening - is there any special provision regarding my individual filter turbidity monitoring?);

(EE) 40 C.F.R. 141.570 (What does Subpart T require that my system report to the state?);

(FF) 40 C.F.R. 141.571 (What records does Subpart T require my system to keep?);

(18) the following provisions from 40 C.F.R.141.600 - 141.605 (Subpart U - initial distribution system evaluations), revised as of July 29, 2009, except that the term "you" means the owner or operator:

(A) 40 C.F.R. 141.600 (general requirements);

(B) 40 C.F.R. 141.601 (standard monitoring);

(C) 40 C.F.R. 141.602 (system specific studies);

(D) 40 C.F.R. 141.603 (40/30 certification);

(E) 40 C.F.R. 141.604 (very small system waivers);

(F) 40 C.F.R. 141.605 (Subpart V compliance monitoring location recommendations);

(19) the following provisions from 40 C.F.R.141.620 - 141.629 (Subpart V - Stage 2 disinfection byproducts requirements), revised as of July 29, 2009, except that the term "you" means the owner or operator:

(A) 40 C.F.R. 141.620 (general requirements);

(B) 40 C.F.R. 141.621 (routine monitoring);

(C) 40 C.F.R. 141.622 (Subpart V monitoring plan);

(D) 40 C.F.R. 141.623 (reduced monitoring);

(E) 40 C.F.R. 141.624 (additional requirements for consecutive systems);

(F) 40 C.F.R. 141.625 (conditions requiring increased monitoring);

(G) 40 C.F.R. 141.626 (operational evaluation levels);

(H) 40 C.F.R. 141.627 (requirements for remaining on reduced TTHM and HAA5 monitoring based on Subpart L results);

(I) 40 C.F.R. 141.628 (requirements for remaining on increased TTHM and HAA5 monitoring based on Subpart L results);

(J) 40 C.F.R. 141.629 (reporting and recordkeeping requirements);

(20) the following provisions from 40 C.F.R. 141.700 - 141.723 (Subpart W - enhanced treatment for *Cryptosporidium*), revised as of July 29, 2009:

(A) 40 C.F.R. 141.700 (general requirements);

(B) 40 C.F.R. 141.701 (source water monitoring);

(C) 40 C.F.R. 141.702 (sampling schedules);

(D) 40 C.F.R. 141.703 (sampling locations);

(E) 40 C.F.R. 141.704 (analytical methods);

(F) 40 C.F.R. 141.705 (approved laboratories);

(G) 40 C.F.R. 141.706 (reporting source water monitoring results);

(H) 40 C.F.R. 141.707 (grandfathering previously collected data);

(I) 40 C.F.R. 141.708 (requirements when making a significant change in disinfection practice);

(J) 40 C.F.R. 141.709 (developing the disinfection profile and benchmark);

(K) 40 C.F.R. 141.710 (bin classification for filtered systems);

(L) 40 C.F.R. 141.711 (filtered system additional *Cryptosporidium* treatment requirements);

(M) 40 C.F.R. 141.712 (unfiltered system *Cryptosporidium* treatment requirements);

(N) 40 C.F.R. 141.713 (schedule for compliance with *Cryptosporidium* treatment requirements);

(O) 40 C.F.R. 141.714 (requirements for uncovered finished water storage facilities);

(P) 40 C.F.R. 141.715 (microbial toolbox options for meeting *Cryptosporidium* treatment requirements);

(Q) 40 C.F.R. 141.716 (source toolbox components);

(R) 40 C.F.R. 141.717 (pre-filtration treatment toolbox components);

(S) 40 C.F.R. 141.718 (treatment performance toolbox components);

(T) 40 C.F.R. 141.719 (additional filtration toolbox components);

(U) 40 C.F.R. 141.720 (inactivation toolbox components);

(V) 40 C.F.R. 141.721 (reporting requirements);

(W) 40 C.F.R. 141.722 (recordkeeping requirements);

(X) 40 C.F.R. 141.723 (requirements to respond to significant deficiencies identified in sanitary surveys performed by EPA);

(21) the following provisions from 40 C.F.R. 142.20 - 142.24 (Subpart C - review of state-issued variances and exemptions), revised as of July 1, 2009:

(A) 40 C.F.R. 142.20 (state-issued variances and exemptions under Section 1415(a) and Section 1416 of the Act);

(B) 40 C.F.R. 142.21 (state consideration of a variance or exemption request);

(22) the following provisions from 40 C.F.R. 142.40 - 142.46 (Subpart E - variances issued by the administrator under Section 1415(a) of the Act), revised as of July 1, 2009, except that the term "administrator" means "department":

(A) 40 C.F.R. 142.40 (requirements for a variance);

(B) 40 C.F.R. 142.41 (variance request);

(C) 40 C.F.R. 142.42 (consideration of a variance request);

(D) 40 C.F.R. 142.43 (disposition of a variance request);

(E) 40 C.F.R. 142.44 (public hearings on variances and schedules);

(F) 40 C.F.R. 142.45 (action after hearing);

(G) 40 C.F.R. 142.46 (alternative treatment techniques);

(23) the following provisions from 40 C.F.R. 142.50 - 142.57 (Subpart F - exemptions issued by the administrator), revised as of July 1, 2009, except that the term "administrator" means "department":

(A) 40 C.F.R. 142.50 (requirements for an exemption);

(B) 40 C.F.R. 142.51 (exemption request);

(C) 40 C.F.R. 142.52 (consideration of an exemption request);

(D) 40 C.F.R. 142.53 (disposition of an exemption request);

(E) 40 C.F.R. 142.54 (public hearings on exemption schedules);

(F) 40 C.F.R. 142.55 (final schedule);

(G) 40 C.F.R. 142.56 (extension of date for compliance);

(H) 40 C.F.R. 142.57 (bottled water, point-of-use, and point-of-entry devices);

(24) the following provisions from 40 C.F.R. 142.60 - 142.65 (Subpart G - identification of best technology, treatment techniques or other means generally available), revised as of July 1, 2009:

(A) 40 C.F.R. 142.60 (variances from the maximum contaminant level for total trihalomethanes);

(B) 40 C.F.R. 142.61 (variances from the maximum contaminant level for fluoride);

(C) 40 C.F.R. 142.62 (variances and exemptions from the maximum contaminant levels for organic and inorganic chemicals);

(D) 40 C.F.R. 142.65 (variances and exemptions from the maximum contaminant levels for radionuclides);

(25) the following provisions from 40 C.F.R. 142.301 - 142.313 (Subpart K - variances for small system), revised as of July 1, 2009, except that the term "administrator" means "department":

(A) 40 C.F.R. 142.301 (What is a small system variance?); however, the last sentence of 40 C.F.R. 142.301 is not adopted;

(B) 40 C.F.R. 142.302(a) (Who can issue a small system variance?);

(C) 40 C.F.R. 142.303 (Which size public water systems can receive a small system variance?);

(D) 40 C.F.R. 142.304 (For which of the regulatory requirements is a small system variance available?);

(E) 40 C.F.R. 142.305 (When can a small system variance be granted by a state?);

(F) 40 C.F.R. 142.306 (What are the responsibilities of the public water system, state and the administrator in ensuring that sufficient information is available and for evaluation of a small system variance application?);

(G) 40 C.F.R. 142.307 (What terms and conditions must be included in a small system variance?);

(H) 40 C.F.R. 142.308 (What public notice is required before a state or the administrator proposes to issue a small system variance?); however, in 40 C.F.R. 142.308(b), the phrase "the State equivalent to the Federal Register or" is not adopted;

(I) 40 C.F.R. 142.309 (What are the public meeting requirements associated with the proposal of a small system variance?);

(J) 40 C.F.R. 142.310(a) (How can a person served by the public water system obtain EPA review of a state proposed small system variance?);

(26) 40 C.F.R. 143.3 (national secondary drinking water regulations - secondary maximum contaminant levels), revised as of July 1, 2009;

(27) 40 C.F.R. 143.4 (national secondary drinking water regulations - monitoring), revised as of July 29, 2009;

(28) the following provisions from 40 C.F.R. 141.400 – 141.405 (Subpart S – groundwater rule), revised as of July 1, 2009:

(A) 40 C.F.R. 141.400 (general requirements and applicability);

(B) 40 C.F.R. 141.401 (sanitary surveys for ground water systems);

(C) 40 C.F.R. 141.402 (ground water source microbial monitoring and analytical methods);

(D) 40 C.F.R. 141.403 (treatment technique requirements for ground water systems);

(E) 40 C.F.R. 141.404 (treatment technique violations for ground water systems);

(F) 40 C.F.R. 141.405 (reporting and recordkeeping for ground water systems).

(b) The following publications are adopted by reference:

(1) ANSI/AWWA Standard A100-06, *Water Wells*, and Appendix H to ANSI/AWWA Standard A100-06 (Decommissioning of Test Holes, Partially Completed Wells, and Abandoned Completed Wells), in effect as of August 1, 2006, American Water Works Association; appendices to ANSI/AWWA Standard A100-06 other than Appendix H are not adopted;

(2) ANSI/AWWA Standard C510-07, *Double Check Valve Backflow Prevention Assembly*, in effect as of October 1, 2008, American Water Works Association;

(3) ANSI/AWWA Standard C511-07, *Reduced-Pressure Principle Backflow Prevention Assembly*, in effect as of October 1, 2008, American Water Works Association;

(4) ANSI/AWWA Standard C600-10, *Installation of Ductile-Iron Water Mains and Their Appurtenances*, in effect as of November 1, 2010, American Water Works Association;

(5) American Society for Testing and Materials (ASTM) International Method D1293-12, *Standard Test Methods for pH of Water*, revised as of January 1, 2012, American Society for Testing and Materials International;

(6) *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, EPA 815-R-05-004, 5th edition, January 2005, United States Environmental Protection Agency, except that Section 14.4 (Procedures for Revocation) on page III-8 is not adopted; and *Supplement 1 to the Fifth Edition of the Manual for the Certification of Laboratories Analyzing Drinking Water*, EPA 815-F-08-006, June 2008, United States Environmental Protection Agency;

(7) *Methods for Chemical Analysis of Water and Wastes*, Methods 150.1 and 150.2, EPA 600/4-79-020, March 1983, United States Environmental Protection Agency;

(8) *NSF Listings: Drinking Water Treatment Chemicals and System Components – Health Effects*, revised as of April 20, 2005, NSF International;

(9) *NSF/ANSI Standard 60: Drinking Water Treatment Chemicals – Health Effects*, revised as of August 22, 2012, NSF International;

(10) *NSF/ANSI Standard 61: Drinking Water System Components – Health Effects*, revised as of July 8, 2012, NSF International; and *NSF/ANSI Standard 61: Drinking Water System Components- Health Effects, Addendum*, published March 26, 2013, NSF International;

(11) *Standard Methods for the Examination of Water and Wastewater*, American Public Health Association, American Water Works Association, and Water Environment Federation, 22nd edition 2012, American Public Health Association;

(12) repealed 4/24/2009;

(13) *Guidance Manual for Conducting Sanitary Surveys of Public Water Systems; Surface Water and Ground Water Under the Direct Influence (GWUDI)*, Chapter 3, EPA 815-R-99-016, April 1999, United States Environmental Protection Agency;

(14) *NSF/ANSI Standard 53: Drinking Water Treatment Units – Health Effects*, revised as of December 5, 2012, NSF International;

(15) ANSI/AWWA Standard C654-13, *Disinfection of Wells*, in effect as of July 1, 2013, American Water Works Association;

(16) *Sanitary Survey Guidance Manual for Ground Water Systems*, Chapter 4, EPA 815-R-08-015, October 2008, United States Environmental Protection Agency;

(17) *NSF/ANSI Standard 372: Drinking Water System Components – Lead Content*, published July 31, 2011, NSF International.

(c) The department will use the requirements of the state plumbing code, as developed under AS 18.60.705, in evaluating plans submitted for approval under this chapter.

(d) As guidance for meeting the requirements of this chapter, the use of the recommended principles, practices, designs, and design criteria, set out in the following reference materials, is encouraged by the department:

(1) the department's *Alaska Water Treatment Guidance Manual*, March 29, 1994, also available through West Virginia University, Drinking Water Clearinghouse;

(2) AWWA standards in effect as of April 2004;

(3) *Basics of a Corrosion Control Study*, Michelle M. Frey, Black & Veatch;

(4) *Cold Regions Utility Monograph*, 1996, Canadian Society for Civil Engineers;

(5) *Community Water Systems Source Book*, Joseph S. Ameen, 5th edition 1984, Technical Proceedings;

(6) *Consensus Method for Determining Groundwater Under the Direct Influence of Surface Water Using Microscopic Particulate Analysis (MPA)*, Jay Vasconcelos and Stephanie Harris, EPA 910/9-92-029, United States Environmental Protection Agency;

(7) *General Public Notification Handbook for Public Drinking Water Suppliers*, EPA 507/9-89-002, September 1989, United States Environmental Protection Agency;

(8) *Glossary - Water and Wastewater Control Engineering*, Joint Editorial Board, American Public Health Association, American Society of Civil Engineers, American Water Works Association, and Water Pollution Control Federation; 3rd edition 1981, Water Pollution Control Federation;

(9) *Groundwater and Wells*, Fletcher G. Driscoll, 1986, Mower House;

(10) *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources,* March 1991, United States Environmental Protection Agency;

(11) *Lead and Copper Rule Guidance Manual, Corrosion Control Treatment*, EPA B-92-002, United States Environmental Protection Agency, also available from West Virginia University, Drinking Water Clearinghouse;

(12) *Recommended Standards for Water Works*, Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, April 2003 edition, Health Research Inc., Health Education Services Division;

(13) *State Alternative Technology Approval Protocol*, 1996, Association of State Drinking Water Administrators;

(14) *Treatment Process Selection for Particle Removal*, 1997, American Water Works Association;

(15) *Water Quality and Treatment*, 4th edition 1990, American Water Works Association;

(16) *Water Treatment Plant Design*, American Society of Civil Engineers & American Water Works Association, 1998, McGraw-Hill, Inc.;

(17) *Water Treatment: Principles and Design*, James M. Montgomery Consulting Engineers, 1985, John Wiley & Sons. (Eff. 10/1/99, Register 151; am 8/23/2000, Register 155; am 3/25/2001, Register 157; am 9/28/2001, Register 159; am 1/11/2004, Register 169; am 5/2/2004, Register 170; am 8/26/2004, Register 171; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190; am 11/20/2009, Register 192; am 7/25/2010, Register 195; am 11/11/2010, Register 196; am 5/20/2011, Register 198; am 12/13/2014, Register 212)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Editor's note: The documents listed in 18 AAC 80.010 are available for viewing at any department office that conducts plan reviews under 18 AAC 80, and copies of the reference listed at 18 AAC 80.010(d)(1) may be obtained from those offices. The documents listed in 18 AAC 80.010 may be purchased directly from the publishers at the following addresses:

American Public Health Association, 800 I Street NW, Washington, DC 20001; telephone (202) 777-2742; fax (202) 777-2534; Internet address www.apha.org;

American Society for Testing and Materials (ASTM) International Customer Service, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959; telephone (610) 832-9585; fax (610) 832-9555; Internet address www.astm.org;

American Water Works Association, 6666 W. Quincy Ave., Denver, CO 80235; telephone (800) 926-7337 or (303) 794-7711; fax (303) 347-0804; Internet address www.awwa.org;

Association of State Drinking Water Administrators, 1401 Wilson Blvd., Suite 1225, Arlington, VA 22209; telephone (703) 812-9505; fax (703) 812-9506; e-mail address info@asdwa.org; Internet address www.asdwa.org;

Black & Veatch, P.O. Box 8405, 8400 Ward Pkwy., Kansas City, MO 64114; telephone (913) 458-2000; fax (913) 458-2934;

Canadian Society for Civil Engineers, 2050 Mansfield St., Montreal, PQ H3A 1Z2, Canada; telephone (514) 842-5653;

Health Research Inc., Health Education Services Division, P.O. Box 7126, Albany, NY 12224; telephone (518) 439-7286; Internet address www.hes.org;

John Wiley & Sons, 1 Wiley Dr., Somerset, NJ 08875;

McGraw-Hill Book Co., 148 Princeton-Hightstown Rd., Hightstown, NJ 08520-1450; telephone (800) 262-4729;

Mower House, 508 10th Street N.E., Austin, MN 55912; telephone (800) 397-6110;

NSF International, P.O. Box 130140, Ann Arbor, MI 48113-0140; telephone (800) 673-6275 or (734) 769-8010; fax (734) 769-0109; Internet address www.nsf.org;

Technical Proceedings, P.O. Box 5041, High Point, NC 27262;

United States Environmental Protection Agency, National Service Center for Environmental Publications (NSCEP), P.O. Box 42419, Cincinnati, OH 45242-2419; telephone (800) 490-9198; fax (513) 489-8695;

Water Pollution Control Federation, 601 Wythe St., Alexandria, VA 22314-1994;

West Virginia University, Drinking Water Clearinghouse, P.O. Box 6064, Morgantown, WV 26506-6064; telephone (800) 624-8301.

18 AAC 80.015. Well protection, source water protection, and well decommissioning. (a) A person may not

(1) cause pollution or contamination to enter a public water system; or

(2) create or maintain a condition that has a significant potential to cause or allow the pollution or contamination of a public water system.

(b) The owner, operator, or individual who installs or is responsible for maintaining a public water system shall ensure that the following minimum requirements for the installation and maintenance of a water well serving a public water system are met:

(1) the casing on a cased well must

(A) have a sanitary seal; and

(B) terminate at least one foot above ground level or at least one foot above the level of the well house floor, whichever offers the most protection from contamination;

(2) a cased well must be grouted with a watertight cement grout, sealing clay, bentonite, or an equivalent material as follows:

(A) at least 10 feet of continuous grouting within the first 20 feet below the ground surface; or

(B) an alternate method of grouting, if the department determines that the alternate method

(i) serves the interest of public health; and

(ii) achieves protection equivalent to that provided under (A) of this paragraph;

(3) a well must be adequately protected against flooding;

(4) well pits are prohibited; however, the department will allow an existing well pit to remain if

(A) the department determines that doing so serves the interest of public health; and

(B) a registered engineer demonstrates that the pit is adequately protected from flooding;

(5) for at least 10 feet in all directions around the well, the surface must be sloped or contoured to drain away from the well; if the department determines that the potential exists for a well to become contaminated by surface water, the department will require an impervious surface extending at least two feet laterally in all directions from the well;

(6) before use, a newly constructed or reworked well must be flushed of sediment and disinfected as specified in ANSI/AWWA Standard C654-03, *Disinfection of Wells*, adopted by reference in 18 AAC 80.010(b);

(7) a drain pipe from a well house must not be connected to a sewer system; and

(8) organic drilling fluid may be used on a public water well only if the fluid is approved for that use by the NSF International through a listing in *NSF Listings: Drinking*

Water Treatment Chemicals and System Components – Health Effects, adopted by reference in 18 AAC 80.010(b).

(c) In order for the department to assess the vulnerability of each drinking water source in a public water system to significant existing and potential sources of man-made contaminants, and for the department to establish protection areas for public water systems, the owner of a community water system or non-transient non-community water system shall

(1) assist the department in delineating a protection area for each source of drinking water by providing, upon request and to the extent available,

(A) a copy of the driller's log for each well serving a community water system or non-transient non-community water system;

(B) maps and other information such as latitude and longitude to establish the location of each drinking water source for the public water system; and

(C) information that can be used to estimate the rate of production of each drinking water source for the public water system during the highest demand season or period expected to recur annually during the next five years;

(2) assist the department in preparing a preliminary inventory of significant existing and potential sources of man-made contaminants within each drinking water protection area by providing, upon request and to the extent possible,

(A) photographs of each wellhead, spring, or surface water intake from the four cardinal directions; and

(B) photographs of the area surrounding each wellhead, spring, or surface water intake in the four cardinal directions and the four intermediate directions;

(3) within three months after receiving the preliminary contaminant source inventory from the department, assist the department in completing the inventory for each drinking water protection area by conducting a visual survey of the drinking water protection area and a search of local public records, to verify contaminant assessments and add to the inventory; and

(4) assist the department in updating protection areas, contaminant inventories, and vulnerability assessments for each source of public drinking water every five years after the initial assessment, or more frequently if requested by the department.

(d) A person who owns or is responsible for a well, hole, or excavation into a water supply source or potential water supply source for a public water system shall use a method described in (b) of this section to seal, protect, or fill

(1) a well that is abandoned or not in use;

(2) a hole drilled, augered, or jetted for the purpose of subsurface exploration or sampling;

(3) a cathodic protection well; or

(4) another form of excavation that might contaminate a public water system.

(e) A person who decommissions a public water supply well, an observation well associated with testing a public water system supply well, a private water well, or a monitoring well shall use

(1) a method that conforms to ANSI/AWWA Standard A100-97, *Water Wells*, and Appendix H to ANSI/AWWA Standard A100-97 (Decommissioning of Test Holes, Partially Completed Wells, and Abandoned Completed Wells), adopted by reference in 18 AAC 80.010(b); or

(2) an alternate method that has been presented to and approved by the department as protective of public health; the department will, as the department considers necessary to serve the interest of public health, require that an alternative plan submitted under this paragraph be signed and sealed by a registered engineer. (Eff. 10/1/99, Register 151; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Editor's note: In addition to the requirements in (b) of this section, requirements of the Department of Natural Resources at 11 AAC 93 might apply.

Information about how to review or obtain the materials referred to in 18 AAC 80.015 is in the editor’s note to 18 AAC 80.010.

18 AAC 80.020. Minimum separation distances. (a) A person may not construct, install, maintain, or operate a public water system unless the minimum separation distances in Table A, in this subsection, are maintained between a potential source of contamination and a drinking water source for the public water system.

TABLE A. Minimum Separation Distances[a] Between Drinking Water Sources and Potential Sources of Contamination
Measured horizontally in feet

	Type of Drinking Water System	
Potential Sources of Contamination	**Community Water Systems, Non-transient Non-Community Water Systems, and Transient Non-Community Water Systems**	**Class C Public Water Systems**
Wastewater treatment works,[b] wastewater disposal system,[b] pit privy,[b] sewer manhole, lift station, cleanout	200	150
Community sewer line, holding tank,[b] other potential sources of contamination[c]	200	100
Private sewer line, petroleum lines and storage tanks,[d] drinking water treatment waste[e]	100	75

Notes to Table A:

[a] These minimum distances will be expanded, or additional monitoring will be required under 18 AAC 80.020(b) and (e)(2).

[b] Distance to a drinking water source is measured from the nearest edge of the drinking water source to the nearest edge of the potential source of contamination.

[c] Other potential sources of contamination include sanitary landfills, domestic animal and agricultural waste, and industrial discharge lines.

[d] The minimum separation distances for petroleum storage tanks do not apply to tanks that contain propane, or to above-ground storage tanks or drums that, in the aggregate, have a storage capacity of less than 500 gallons of petroleum products, and that store only petroleum products necessary for the operation and maintenance of pumps, power generation systems, or heating systems associated with a potable water source.

[e] Drinking water treatment wastes include the backwash water from filters and water softeners, and the reject water from reverse osmosis units.

(b) The department will require a greater separation distance than that required by Table A in (a) of this section if the department determines that additional distance is necessary to protect surface water, groundwater, or a drinking water source. The department will make this decision after considering soil classifications, groundwater conditions, surface topography, geology, past experience, or other factors relevant to protection of surface water, groundwater, or drinking water.

(c) A request for a waiver under (d) of this section must include the fee required under 18 AAC 80.1910(a)(11) and a report for each waiver that is sought, including multiple waivers for a single project. The report required under this subsection must

(1) be sealed by a registered engineer; a report for a Class C public water system does not have to be sealed by a registered engineer if the department determines that

(A) the site of the proposed Class C public water system is remote from a community with access to professional engineering services, and that the resulting cost of bringing a registered engineer to the site would be overly burdensome; and

(B) public health and public and private water systems are adequately protected without this requirement;

(2) justify the lesser distance and explain how the lesser distance does not threaten public health;

(3) describe soil classifications, groundwater conditions, surface topography, geology, and other environmental conditions that would assist the department in establishing a lesser separation distance; and

(4) include a set of plans consisting of

(A) record drawings if the department determines them necessary to evaluate the request;

(B) an accurate description, including the location, of potential sources of contamination and existing or potential drinking water sources in the area;

(C) the details of the system design that

(i) address the physical and environmental conditions listed in (3) of this subsection;

(ii) will prevent contamination of the drinking water sources identified in (B) of this paragraph at the lesser distance; and

(D) other information the department determines to be necessary to assess the effect of a lesser distance upon the public water system.

(d) Upon receiving a request that conforms with (c) of this section, the department will approve a waiver of the separation distance required by Table A in (a) of this section if the department finds, after review of the report submitted under (c) of this section, that a lesser separation distance does not threaten public health, and protects existing or potential drinking water sources. As necessary to protect public health and existing or potential drinking water sources, the department will require changes to system design as a condition of approval, including increased depth of grout and changes to the pipe material, pipe bedding, joints, and pipe strength.

(e) If the department approves a lesser separation distance under this section, the owner or operator shall

(1) ensure that the system

(A) continues to meet the primary MCLs set by 18 AAC 80.300(b); and

(B) meets the secondary MCLs set by 18 AAC 80.300(c), if required under 18 AAC 80.300(d); and

(2) perform additional monitoring as the department determines necessary to ensure adequate public health protection.

(f) A person may not install a water line

(1) directly above or below a septic tank or soil absorption system at any distance;

(2) within 10 horizontal feet of a septic tank or soil absorption system; or

(3) directly above or below at any distance, or within 10 horizontal feet of a sewer line, unless

(A) the required location or separation distance cannot be met because of the site configuration, the system design, or the presence of other obstacles that have regulated separation distance requirements;

(B) the sewer line is designed and constructed in a manner equivalent to the requirements for a potable water pipe, and

(i) is pressure tested to ensure watertightness; or

(ii) is enclosed in a carrier pipe of similar strength and rating as the actual pipe, or of a strength and rating approved by the department as protective of public health, public water systems, and the environment;

(C) the water line is in a separate trench from the sewer line; and

(D) at locations where sewer and water lines must cross,

(i) the water line is installed above the sewer line to the maximum length possible until existing appurtenances, elevations, or depth-of-cover requirements prohibit such installation;

(ii) the sewer line uses a Type 4 or Type 5 bedding described in ANSI/AWWA Standard C600-05, *Installation of Ductile–Iron Water Mains and Their Appurtenances*, adopted by reference in 18 AAC 80.010(b), to protect the integrity of the sewer line in places where the elevation of a water line is below a sewer line;

(iii) the water line joints are at least nine feet from the sewer line joints; and

(iv) the water line is at least 18 vertical inches from a sewer line.

(g) Upon determining that a waiver will not threaten the public health, the public water system, or the environment, the department will waive the requirements of (f) this section after payment of the fee required by 18 AAC 80.1910(a)(11)

(1) for a utilidor, if the water line is above the sewer line, and

(A) for an above-ground utilidor, the utilidor will not flood if pipe failure occurs; or

(B) for an underground utilidor, the utilidor is drained to a low point within the utilidor and has an automatic pumping and alarm system; or

(2) on a case-by-case basis, if design plans, reports, or drawings supporting a request for a lesser vertical and horizontal separation distance between water and sewer lines, or for other configurations are sealed by a registered engineer. (Eff. 10/1/99, Register 151; am 8/19/2006, Register 179; am 7/25/2010, Register 195; am 11/11/2010, Register 196)

Authority: AS 44.46.020 AS 46.03.050 AS 46.03.720
AS 46.03.020 AS 46.03.710

Editor's note: Information about how to review or obtain the reference materials referred to in this section is in the editor's note to 18 AAC 80.010.

18 AAC 80.025. Cross-connections prohibition and backflow protection. (a) A person may not construct, install, or use a cross-connection in a public water system, or allow a water system that contains a cross-connection to connect to a public water system.

(b) If the department determines that a facility has the potential to contaminate a public water system through backflow, the owner of the public water system shall install, maintain, and test on the water service line to and at other locations in that facility, a backflow prevention device that conforms to ANSI/AWWA Standards C510-97, *Double Check Valve Backflow Prevention Assembly*, or C511-97, *Reduced-Pressure Principle Backflow Prevention Assembly*, adopted by reference in 18 AAC 80.010(b). The owner of the public water system may delegate

the installation, maintenance, and testing of the backflow prevention device to the operator of the facility that poses the risk. This delegation does not relieve the owner of the public water system of the responsibility to install, maintain, and test the backflow prevention device. (Eff. 10/1/99, Register 151; am 8/19/2006, Register 179; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Editor's note: Information about how to review or obtain reference materials referred to in this section is in the editor's note to 18 AAC 80.010.

18 AAC 80.030. Chemical additives and materials. (a) Direct additives for water treatment may be used on a public water system only if they are certified for that application in *NSF/ANSI Standard 60: Drinking Water Chemicals – Health Effects*, adopted by reference in 18 AAC 80.010(b).

(b) Only the following material may be used in contact with drinking water in a public water system:

(1) material that is certified for the particular drink water contact application under

(A) NSF/ANSI Standard 53: *Drinking Water Treatment Units – Health Effects*, adopted by reference in 18 AAC 80.010(b);

(B) NSF/ANSI Standard 61: *Drinking Water System Components – Health Effects*, including the *Addendum to NSF/ANSI Standard 61*, both adopted by reference in 18 AAC 80.010(b);

(C) *NSF/ANSI Standard 372: Drinking Water System Components – Lead Content*, adopted by reference in 18 AAC 80.010(b);

(2) material that, for the particular drinking water contact application, has a certification by NSF International (NSF) or Underwriters Laboratories, Inc (UL);

(3) material that the department approves for the particular drinking water contact application on a case-by-case basis, based on the department's determination that the public health will be adequately protected, and if

(A) material with a certification by NSF or UL is

(i) unavailable;

(ii) not certified for the particular application; or

(iii) not appropriate for the particular application because of climactic or other unique conditions at the point of application; and

(B) the person seeking approval of alternate material submits documentation on the suitability of the material for contact with drinking water in the particular application; if this documentation includes the weighted average lead content of a pipe, pipe fitting, plumbing fitting, or fixture, the weighted average lead content must be calculated using the formula set out in 18 AAC 80.500(c)(2). (Eff. 10/1/99, Register 151, am 1/11/2006, Register 177; am 11/9/2006, Register 180; am 12/13/2014, Register 212; am 12/26/2014, Register 212)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Editor's note: Information about how to review or obtain the standards referred to in this section is in the editor's note to 18 AAC 80.010.

18 AAC 80.035. Disinfection of water from a source other than surface water, GWUDISW, or groundwater. (a) This section applies to a public water system that

(1) is a water hauler;

(2) is a seawater system; or

(3) has any other source of water that is not classified as surface water, GWUDISW, or groundwater.

(b) The department will require the owner of a public water system to install and maintain continuous disinfection if the department determines that continuous disinfection is necessary to protect public health and

(1) the department is aware of a sanitary defect;

(2) the system is in violation of the MCL for total coliform bacteria set by 40 C.F.R. 141.63(a) – (b), adopted by reference in 18 AAC 80.010(a); or

(3) the department determines that a significant potential exists for violation of the MCL for total coliform bacteria set by 40 C.F.R. 141.63(a) – (b), adopted by reference in 18 AAC 80.010(a).

(c) The operator of a public water system for which disinfection is required under (b) of this section shall

(1) monitor the system daily to maintain a residual disinfectant concentration of not less than 0.2 mg/l in the water entering the distribution system; if the residual disinfectant concentration in a system using grab sampling instead of continuous monitoring falls below 0.2 mg/l, the operator shall take a grab sample at least every four hours until the concentration is raised to 0.2 mg/l or higher;

(2) maintain a detectable residual disinfectant concentration in the distribution system, as follows:

(A) the concentration must be measured at the same frequency and locations required for total coliforms in 18 AAC 80.400 – 18 AAC 80.425 ;

(B) the concentration may not be undetectable in more than five percent of the samples each month for two consecutive months during which the system serves water to the public;

(C) the heterotrophic plate count (HPC) may be measured as described in 18 AAC 80.1103(6) instead of residual disinfectant concentration; water in the distribution system with a heterotrophic bacteria density less than or equal to 500 per ml is considered a detectable residual for purposes of determining compliance with this paragraph; and

(3) report the monitoring results required by this section to the department within 10 days after the last day of each month during which the system serves water to the public, subject to the report certification requirements of 18 AAC 80.1900. (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 11/9/2006, Register 180; am 4/24/2009, Register 190; am 7/25/2010. Register 195; am 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.045. Treatment techniques for acrylamide and epichlorohydrin. (a) If acrylamide or epichlorohydrin, either separately or in combination, is used in a public water system, the owner shall annually certify to the department in writing that the amount of acrylamide and epichlorohydrin at the dose and monomer level does not exceed the following percentages:

(1) for acrylamide, 0.05 percent dosed at 1 ppm or equivalent;

(2) for epichlorohydrin, 0.01 percent dosed at 20 ppm or equivalent.

(b) The certification required under (a) of this section must

(1) be provided to the department by January 15 of each year to cover the prior calendar year;

(2) include evidence that the product complies with 18 AAC 80.030;

(3) include calculations, using manufacturer's data, to document the applied dose; and

(4) include a copy of the manufacturer's list of ingredients. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.050. Deficiencies and corrective actions. (a) Without requiring a corrective action plan, the department may require corrective action

(1) as provided under another provision of this chapter; or

(2) to prevent or remedy a deficiency that does not directly or indirectly cause, or have the potential to cause, a risk to public health.

(b) The department will require corrective action if

(1) another provision of this chapter provides that the department will require corrective action but not necessarily a corrective action plan; or

(2) the department determines that corrective action, but not necessarily a corrective action plan, is required to prevent or remedy a risk to public health, regardless of whether the direct, indirect, or potential cause of that risk is a deficiency.

(c) The department will require a corrective action plan if

(1) another provision of this chapter provides that the department will require a corrective action plan; or

(2) the department determines that a corrective action plan is required to prevent or remedy a risk to public health, regardless of whether the direct, indirect, or potential cause of that risk is a deficiency.

(d) If the department requires corrective action under (a), (b), or (c) of this section, the deficiency, or the direct, indirect, or potential cause of a risk to public health, will be considered to be adequately addressed only when corrective action has been approved by the department or completed in accordance with a corrective action plan approved by the department. (Eff. 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.055. Public water system emergency preparedness requirements. (a) The owner of a community water system serving 1,000 or more individuals or a non-transient non-community water system serving 1,000 or more individuals shall

(1) complete a security vulnerability assessment;

(2) prepare a written emergency response plan; and

(3) review and update the emergency response plan every two years.

(b) The owner of a community water system serving fewer than 1,000 individuals, a non-transient non-community water system serving fewer than 1,000 individuals, or a transient non-community water system serving 1,000 or more individuals shall

(1) prepare a written emergency priority measures plan; and

(2) review and update the emergency priority measures plan every two years.

(c) A security vulnerability assessment by a public water system subject to (a) of this section must

(1) consist of an evaluation of the vulnerability of the system to an emergency, the specific risks to be assessed must be based on

(A) the system's location, climate exposure, age, size, design and construction, staff and operation; and

(B) external factors such as local history, services, transportation, communication, and activities; and

(2) consider potential risks to

(A) pipes and constructed conveyances;

(B) physical barriers;

(C) water collection, pretreatment, treatment, storage, and distribution facilities, including fire hydrants;

(D) electronic, computer, and other automated systems;

(E) use, storage, and handling of all chemicals;

(F) operation and maintenance of the system; and

(G) the resiliency and ability of the system to ensure continuity of operations if an emergency causes a disruption.

(d) An emergency response plan for a public water system subject to (a) of this section must

(1) be based on the risks identified in a vulnerability assessment as described in (c) of this section;

(2) describe the system's immediate response to emergencies, its plans to return to regular service as soon as possible after an emergency, and how drinking water from an alternate water supply will be made available to a system's customers during an emergency;

(3) include a record of system-specific information critical to safe operation of the system; this information must be stored in a form that will remain accessible in the event of power loss;

(4) set out provisions for loss or inoperability of equipment, including

(A) identification of critical system components;

(B) an inventory of equipment needs and availability in an emergency, including

(i) the location of existing emergency equipment, generators, and spill response materials;

(ii) identification of additional emergency equipment needs; and

(iii) procedures for obtaining additional services and equipment, including critical spare parts; and

(C) a plan for responding to complete or partial power loss;

(5) describe the duties and responsibilities of key water system personnel in emergencies, including an established chain of command that designates authority and takes into account the possible absence of any given individual;

(6) set out an outline of communication pathways among system personnel and between system personnel and non-system personnel who might be expected to respond to an emergency, including the locations of up-to-date emergency contact lists;

(7) set out provisions for emergency sampling and testing for the presence of chemical or microbiological contaminants in the water; those provisions must include

(A) identification and location of emergency sampling and testing supplies; and

(B) procedures for testing and sampling;

(8) identify alternate drinking water supplies sufficient to meet the needs of the water system's individual customers during an emergency, including

(A) a plan to provide an alternate water supply for the duration required to ensure the health and safety of the individuals whom that particular system serves; and

(B) procedures for obtaining and distributing water from each identified alternate water supply, including testing and treating the water if needed; and

(9) set out a plan for annually training staff in each component of the emergency response plan.

(e) An emergency priority measures plan for a system subject to (b) of this section must

(1) comply with (d)(4)(C), (5), (6), and (8) of this section, except that the owner of a transient non-community water system subject to (b) of this section may, in the emergency priority measures plan, elect to terminate service during an emergency instead of identifying alternate water supplies under (d)(8) of this section; and

(2) set out a plan for annually training staff in each components of the emergency priority measures plan.

(f) A public water system subject to this section must have, in a place available at all times to its operator, a copy of its current emergency response plan or a copy of its emergency priority measures plan, as applicable.

(g) The owner of a public water system subject to this section shall submit to the department an initial certification of compliance, on a form provided by the department and subject to 18 AAC 80.1900, as follows:

(1) for a public water system described in (a) of this section that is in operation on August 20, 2012, no later than 18 months after August 20, 2012, the owner shall certify that the system complies with the requirements of (a)(1) and (2) of this section;

(2) for a public water system subject to (b) of this section that is in operation on August 20, 2012, no later than 12 months after August 20, 2012, the owner shall certify that the system complies with the requirements of (b)(1) of this section;

(3) for a new public water system subject to (a) of this section that first becomes operational after August 20, 2012, no later than 60 days after receiving its approval to operate under 18 AAC 80.210(i) or (j), whichever comes first, in addition to complying with 18 AAC 80.207(d)(4), the owner shall certify that the system complies with the requirements of (a)(1) and (2) of this section.

(4) for a new public water system subject to (b) of this section that first becomes operational after August 20, 2012, no later than 60 days after receiving its approval to operate under 18 AAC 80.210(i) or (j), whichever comes first, in addition to complying with 18 AAC 80.207(d)(4), the owner shall certify that the system complies with the requirements of (b)(1) of this section.

(h) The owner of a public water system subject to this section shall submit to the department, on a form provided by the department and subject to 18 AAC 80.1900, a renewal of its certification of compliance, as set out under (a)(3) or (b)(2) of this section as applicable, no later than 60 days before each biennial anniversary of its initial certification.

(i) Failure to file the initial or renewal certifications required in (g) and (h) of this section is subject to administrative penalties imposed by 18 AAC 80.1200 – 18 AAC 80.1290. (Eff. 8/20/2012, Register 203)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Article 2. Public Water System Review and Approval Requirements.

Section

18 AAC 80.200. System classification and plan approval. (a) The department will classify each public water system as a community water system, non-transient non-community water system, transient non-community water system, or Class C public water system, based on information

(1) submitted by the owner of the system; and

(2) compiled by the department.

(b) Subject to (c), (d), (f), and (g) of this section, in order to construct, install, alter, renovate, operate, or improve a community water system, non-transient non-community water system or transient non-community water system, or any part of one, the owner must have prior written approval of engineering plans that comply with 18 AAC 80.205.

(c) Written approval under this section is not required for an emergency repair or routine maintenance of a public water system or for a single-service line installation or modification.

(d) The design of a public water system in existence on or before October 1, 1999 and that did not receive plan approval by the department must conform to standard sanitary engineering principles and practices and adequately protect the public health. If the system does not conform to standard sanitary engineering principles and practices, the owner may seek department approval for an alternate design for the system by submitting a report that justifies the alternate design. The report must

(1) be signed and sealed by a registered engineer;

(2) include considerations of soil type, surface water influence, groundwater, surface topography, geologic conditions, data showing the capability of the water system source to meet minimum water consumption needs, storage capacity, the production capability of the water treatment plant, well logs, well yield test results, and other conditions considered by the department as important in establishing the adequacy of the system to reliably protect public health;

(3) include a set of engineering plans of the existing system with an accurate description, including the number and location, of potential sources of contamination, water bodies, water sources in the area, and service connections; and

(4) include the name, address, telephone number, and facsimile number of the owner.

(e) If a public water system described in (d) does not adequately protect the public health, the department will require the system to be redesigned and approved in accordance with this chapter.

(f) If the department approves an alternate design under (d) of this section, the owner shall

(1) ensure that the system

(A) continues to meet the primary MCLs as required in 18 AAC 80.300(b); and

(B) meets the secondary MCLs as required in18 AAC 80.300(c); and

(2) in addition to the monitoring required for the contaminants for which MCLs are set under 18 AAC 80.300, perform any contaminant monitoring that the department determines necessary to serve the interests of public health.

(g) Written approval under this section is not required for a project that is approved to demonstrate an innovative technology or device in a public water system under 18 AAC 80.225, provided the project does not exceed one year from the date of installation to the date that the demonstration ends.

(h) Subject to (i) of this section, the department will approve a Class C public water system if the owner or a registered engineer submits to the department

(1) the fee required by 18 AAC 80.1910(b)(4);

(2) a completed inventory, sources, and system diagram form provided by the department;

(3) the results of nitrate and coliform samples, analyzed by a certified laboratory, indicating those contaminants do not exceed the MCL set at 40 C.F.R. 141.62(b) and 141.63(a) and (b), adopted by reference in 18 AAC 80.010(a); and

(4) a written statement by the owner that the source water protection requirements of 18 AAC 80.015, the minimum separation distance requirements of 18 AAC 80.020, and the cross-connection provisions of 18 AAC 80.025 are met; if a system does not meet the requirements of 18 AAC 80.020, the owner shall obtain a waiver under 18 AAC 80.020(c) - (e).

(i) In addition to the information required by (h) of this section, the owner of a Class C public water system shall submit the information required in (j) of this section, if the system uses a water source

(1) with a well depth less than 30 feet to the first opening for water collection;

(2) that is less than 50 horizontal feet to a surface water source;

(3) that uses an infiltration gallery, spring, rain catchment, or surface water source;

(4) that requires treatment to meet an MCL set under 18 AAC 80.300; or

(5) that requires other types of treatment; for purposes of this paragraph, other types of treatment

(A) include

(i) filtration, including granular activated carbon, slow sand, mixed media, and diatomaceous earth filtration;

(ii) fluoridation; and

(iii) corrosion control; and

(B) do not include water softening.

(j) If a Class C public water system uses a water source described in (i) of this section, the owner shall submit to the department

(1) information demonstrating that the water treatment is designed to consistently achieve 99.9 percent removal and inactivation of *Giardia lamblia* cysts and have one NTU or less of treated water turbidity;

(2) proof that the system was designed by a registered engineer;

(3) on a form provided by the department, a written statement by the owner, the person constructing the system, and the engineer who monitored the system's construction that the water system was constructed in accordance with this chapter and provides public health protection; and

(4) a written statement that the

(A) operator understands how to operate the system; or

(B) owner has contracted with a certified operator to operate the system.

(Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Editor's note: Guidance on standard sanitary engineering principles and practices, as addressed in 18 AAC 80.200(d), may be found in the references listed at 18 AAC 80.010(d).

18 AAC 80.205. Engineering plans. (a) Engineering plans submitted for approval under 18 AAC 80.200 must include

(1) a completed application, on a current form provided by the department;

(2) construction drawings and specifications for

(A) the water source;

(B) storage;

(C) the master meter;

(D) the distribution system;

(E) the water treatment works; and

(F) related structures, including well houses, treatment plant buildings, and pump stations;

(3) plans and profiles of the water mains, as applicable;

(4) design criteria, calculations, and flow analysis computations for water demand, storage tank sizing, distribution main sizing, pump sizing, and other components of the new public water system if requested by the department to ensure that the design is adequate; and

(5) a specification that at least 20 psi of service pressure at the highest elevation or pressure zone of a distribution main be maintained under peak design demand.

(b) The plans for each community water system, non-transient non-community water system, or transient non-community water system must include

(1) the fee required under 18 AAC 80.1910(b);

(2) data showing the capability of the public water system source to meet minimum water consumption needs, criteria for water demand calculations, and the production capability of the water plant;

(3) the location, stated as the horizontal position and elevation, of each proposed or existing wastewater treatment and disposal system, sewage pump station, sewer line manhole and cleanout, petroleum storage tank and line, and potential or actual source of pollution or contamination, including the sources listed in Table A in 18 AAC 80.020(a), within 500 feet or less of a proposed water source, regardless of property lines or ownership; however, the department will

(A) waive or modify the requirement of this paragraph, with respect to a particular potential or actual source of pollution or contamination, if the plans include documentation to the department's satisfaction that access to the property where the source is located has been denied, or that another circumstance beyond the owner's control prevents the statement of the source's location is required;

(B) require that the plans include the location of a potential or actual source of pollution or contamination that is more than 500 feet from a proposed water source, if the department considers the information necessary to assess the risk to public health;

(4) the location, in longitude and latitude to the closest second, of each well and surface water intake and the method used to determine longitude and latitude on a form provided by the department;

(5) the overall treatment scheme, including calculations, if required under 18 AAC 80.600 – 18 AAC 80.699, for disinfection and how *Giardia lamblia* and viruses will be removed or inactivated;

(6) the name, address, telephone number, and facsimile number of the owner;

(7) a specification that only lead-free pipe, flux, and solder will be used, as required by 18 AAC 80.500;

(8) for a public water system that uses compressed air to pressurize hydropneumatic tanks, information proving that air quality will not contribute contaminants to the water;

(9) other information that the department determines is necessary to assess compliance with this chapter; and

(10) documentation showing the existence or formation, before beginning construction of the system, of a local government organization, a homeowner's association, a private utility, a commercial entity, or other entity, the purpose of which is to operate and maintain the system.

(c) In addition to the information required by (a) and (b) of this section, the owner shall submit the following information:

(1) for a community water system, non-transient non-community water system, or transient non-community water system proposing to make a change in the water treatment process that could change water quality, such as adding new chemicals, changing the filtration process, or changing the disinfection process,

(A) the water quality test results for raw water and treated water that identify the contaminants for which MCLs are set under 18 AAC 80.300 and important to the design of the treatment process; and

(B) after construction, the effectiveness of the treatment;

(2) for a public water system proposing to use a new source, the results of raw water testing, conducted before operation, as shown in Table B of this paragraph; and

Table B. Minimum Raw Water Testing Requirements for a System Proposing to Use a New Water Source

	Community or Non-Transient Non-Community		**Transient Non-Community**		**Class C**	
	Ground water	**Surface Water**	**Ground water**	**Surface Water**	**Ground water**	**Surface Water**
Total Coliform Bacteria	Yes	Yes	Yes	Yes	Yes	Yes
Inorganic Chemicals (not including asbestos)	Yes	Yes	No	No	No	No
Nitrate	Yes	Yes	Yes	Yes	Yes	Yes
Nitrite	Yes	Yes	Yes	Yes	Yes	Yes
Volatile Organic Chemicals	Yes	Yes	No	No	No	No
Secondary Contaminants	Yes	Yes	No	No	No	No

(3) for a community water system, non-transient non-community water system, or transient non-community water system that has a new water source that is

(A) a groundwater source, raw water quality data sufficient for the department to determine whether the source is GWUDISW;

(B) surface water or GWUDISW, raw water quality sufficient to allow the department to determine whether the proposed water treatment equipment complies with 18 AAC 80.600 - 18 AAC 80.680;

(4) for a community water system or non-transient non-community water system whose owner plans to add a disinfectant to the water in any part of the drinking water treatment process, raw water quality data sufficient for the department to determine whether the public water system will comply with 18 AAC 80.300(b)(2)(C);

(5) for a community water system or non-transient non-community water system, raw water quality data sufficient to allow the department to determine whether the proposed water treatment equipment will control the corrosivity of the water;

(6) for all public water systems, raw water quality data for a potential contaminant, if the department determines that the data serves the interest of public health. (Eff. 10/1/99, Register 151; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.207. Capacity. (a) The department will not issue an approval to construct a new community water system or non-transient non-community water system under 18 AAC 80.210 unless the department determines, based on the information provided under (b) – (d) of this section, that the community water system or non-transient non-community water system has the managerial, financial, and technical capacity to operate in compliance with 40 C.F.R. 141 and this chapter.

(b) The department will base a determination of technical capacity upon the capability of the public water system to consistently produce and deliver water in compliance with this chapter. To assess that capability, the department will examine

(1) the physical infrastructure of the system, including the adequacy of

(A) the source water; and

(B) infrastructure components, including

(i) treatment;

(ii) storage;

(iii) distribution;

(iv) pumps, pump facilities, and controls; and

(v) a master meter as described in 18 AAC 80.235;

(2) the ability of system personnel to adequately operate and maintain the system and otherwise implement technical knowledge; and

(3) for a new community water system or non-transient non-community water system, the engineering plans; those plans must include documentation showing the system's technical capacity, including

(A) a written plan for the operation and maintenance of all components of the proposed system;

(B) the information required under 18 AAC 80.205; and

(C) other information that the department considers necessary to assess the technical capacity of the proposed system.

(c) The department will base a determination of financial capacity upon the capability of the owner of a new community water system or non-transient non-community water system to provide the financial resources necessary for the consistent production and delivery of water in compliance with this chapter. To assess that capability, the department will examine the owner's revenue sufficiency, credit worthiness, and fiscal controls. The owner of a new community water system or non-transient non-community water system shall provide

(1) for a proposed public water system that is a public utility and is not exempt from AS 42.05 under AS 42.05.711 or AS 42.05.712,

(A) a copy of the application for the certificate of public convenience and necessity that has been submitted to the Regulatory Commission of Alaska; and

(B) written verification from the Regulatory Commission of Alaska that an application for a certificate of public of convenience and necessity has been submitted;

(2) for a proposed public water system that is a public utility but is exempt from AS 42.05 under AS 42.05.711 or 42.05.712, including a municipally owned system, a completed application on a form provided by the department, describing the owner's revenue sufficiency, credit worthiness, and fiscal controls;

(3) for a proposed public water system that is not a public utility

(A) a proposed financial plan and annual budget showing estimated system income and operation costs; and

(B) a completed financial capability assessment, on a form provided by the department and as described in 18 AAC 76.225(b)(7), or on the forms used by the Department of Commerce, Community, and Economic Development to assist communities in dealing with sanitation utility issues;

(4) other information that the owner believes will demonstrate financial capacity; and

(5) other information that the department considers necessary to assess the financial capacity of the proposed public water system.

(d) The department will base a determination of managerial capacity upon the capability of the owner of a new community water system or new non-transient non-community water system to provide the management structure necessary for the consistent production and delivery of water in compliance with this chapter. To assess that capability, the department will examine the owner's ownership accountability, staffing, organization, and means of communication with customers, professional service providers, the department, and other regulatory agencies. The owner of a new community water system or new non-transient non-community water system shall provide

(1) for a proposed public water system that is a public utility and is not exempt from AS 42.05 under AS 42.05.711 or AS 42.05.712,

(A) a copy of the application for the certificate of public convenience and necessity that has been submitted to the Regulatory Commission of Alaska; and

(B) written verification from the Regulatory Commission of Alaska that an application for a certificate of public of convenience and necessity has been submitted;

(2) for a proposed public water system that is a public utility but is exempted from AS 42.05 under AS 42.05.711 or 42.05.712, including a municipally owned system, a completed application on a form provided by the department, describing the owner's ownership accountability, staffing, organization, and means of communication with customers;

(3) for a proposed public water system that is not a public utility

(A) documentation showing ownership and plans, if any, for transfer of that ownership on completion of construction or after a period of operation;

(B) a description of the management structure of the proposed system, including the duties of each position; in providing this information, the owner may include bylaws, ordinances, articles of incorporation, or procedures and policy manuals that describe the management organization structure;

(C) a description of the proposed staffing, including training, experience, certification or licensing, and continuing education completed by the proposed system staff; and

(D) an explanation of how the proposed system will establish and maintain effective communications and relationships between the public water system management, its customers, professional service providers, and regulatory agencies;

(4) a written contingency plan showing that the owner is able to provide water in compliance with this chapter to each customer within 24 hours after an event that has the potential to cause

(A) contamination of the water system above applicable MCLs as described in 18 AAC 80.300; or

(B) a lack of water pressure or supply;

(5) the name, address, telephone number, and facsimile number of each individual operator and verification that each individual operator is certified under 18 AAC 74, if required;

(6) other information that the owner believes will demonstrate managerial capacity; and

(7) other information that the department considers necessary to assess the managerial capacity of the proposed public water system. (Eff. 10/1/99, Register 151; am 8/19/2006, Register 179; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Editor's note: As of Register 171 (October 2004), the regulations attorney made technical revisions under AS 44.62.125(b)(6) to reflect the name change of the Department of Community and Economic Development to the Department of Commerce, Community, and Economic Development made by ch. 47, SLA 2004 and the corresponding title change of the commissioner of community and economic development.

18 AAC 80.210. Department review; post-approval procedures. (a) The department will issue its approval or denial to construct a community water system, non-transient non-community water system, or transient non-community water system within 30 days after the department receives all of the plans and information required by this chapter. If the submittals are deficient, the department will notify the owner that additional information is needed.

(b) Failure of the department to issue an approval or denial to construct within 30 days does not constitute automatic approval of the plans.

(c) If the department grants an approval to construct for a set of plans and specifications, the department will

(1) sign the construction portion of a construction and operation certificate for public water systems;

(2) send a copy of the certificate, as signed under (1) of this subsection, to the owner of the public water system; and

(3) assign the public water system an identification number.

(d) The department will not issue an approval to construct a new community water system or a new non-transient non-community water system if the department determines that the submitted plans, specifications, and information do not meet the requirements of technical, financial, and managerial capacity under 18 AAC 80.207.

(e) The department will issue a final approval to operate for a new water well if raw water analyses submitted under 18 AAC 80.205(c)(2) show that the minimum testing requirements in Table B of that paragraph are met.

(f) A signed construction and operation certificate for public water systems does not relieve the owner of the public water system of the responsibility to

(1) construct, operate, and maintain the system in compliance with this chapter; or

(2) obtain a permit to appropriate water under AS 46.15; or

(3) comply with other state law.

(g) A public water system that has received a department approval to construct may not serve water for public consumption until

(1) construction is complete;

(2) the finished water analyses for coliform bacteria and for any raw water contaminant that exceeded an MCL under 18 AAC 80.300 are complete and approved;

(3) based on the requirements of this subsection, the department grants interim approval to operate under (i) of this section; and

(4) for a new community water system or new non-transient non-community water system, the terms and conditions set by the department regarding financial and managerial capacity under 18 AAC 80.207 have been met.

(h) The well logs for a well intended to serve a public water system, including wells not in operation but that are connected to the public water system on a standby basis for purposes such as fire protection and emergencies, must be submitted to the department within 30 days after the construction of the public water system. The well log must contain the following information as applicable:

(1) the method of construction;

(2) the type of fluids used for drilling;

(3) the location of the well;

(4) an accurate log of the soil and rock formations encountered and the depth at which the formations occur;

(5) the depth of the casing;

(6) the height of the casing above ground;

(7) the depth and type of grouting;

(8) the depth of any screens;

(9) the casing diameter;

(10) the casing material;

(11) the depth of perforation or opening in the casing;

(12) the well development method;

(13) the total depth of the well;

(14) the depth to the static water level;

(15) the anticipated use of the well;

(16) the maximum well yield;

(17) the results of any well yield, aquifer, or drawdown test that was conducted;

(18) if the water well contractor or person who constructs the well installs a pump at the time of construction, the depth of the pump intake and the pump performance data.

(i) If the department grants interim approval to operate under (g) of this section, the department will

(1) sign the interim operation portion of a construction and operation certificate for public water systems; upon the department's signing of the interim operation section of the certificate, operation of the water system for a 90-day interim period is approved; and

(2) send a copy of the certificate, as signed under (1) of this subsection, to the owner.

(j) The department will grant final approval to operate if

(1) record drawings, signed and sealed by a registered engineer, are submitted during the interim approval period;

(2) the record drawings submitted under (1) of this subsection confirm that the system meets the requirements of this chapter and provides public health protection;

(3) all written terms and conditions set by the department for the construction are met; and

(4) for all new community water systems or new non-transient non-community water systems, the new system meets the technical capacity requirements of 18 AAC 80.207; and

(5) for a new community water system, new non-transient non-community water system, or new transient non-community water system, a summary of information, from the initial construction submittals of plans and information required by this chapter, and from record drawings required in (1) of this subsection, is

(A) completed and signed by the registered engineer who signed and sealed the record drawings; and

(B) submitted on a current form provided, and in a format approved, by the department with the request for final approval to operate.

(k) If the department grants final approval to operate under (j) of this section, the department will

(1) sign the final operation portion of a construction and operation certificate for public water systems; and

(2) send a copy of the certificate, as signed under (1) of this subsection, to the owner.

(*l*) The department will waive the requirement for submission of record drawings if it makes an onsite inspection and finds that the system was constructed as approved. The owner shall pay the fee required by 18 AAC 80.1910(a)(1) for an onsite inspection conducted under this subsection. (Eff. 10/1/99, Register 151; am 1/11/2006, Register 177; am 11/9/2006, Register 180; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.215. Revocation of approval. (a) The department will revoke an approval issued under 18 AAC 80.210 if

(1) the owner fails to comply with the procedures set out in 18 AAC 80.210; and

(2) the department determines that revocation is necessary to protect the public health.

(b) If the applicant fails to construct, install, alter, renovate, or improve the public water system within two years after the department issues an approval to construct under 18 AAC 80.210(c), the approval is void and the plans and information required under 18 AAC 80.210(a) must be resubmitted for department review and approval. If during the two-year period the site conditions, plans and information, and requirements in this chapter do not change, and if the applicant pays the fee required by 18 AAC 80.1910(a)(12), the department will grant the applicant an extension. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.220. Vehicle used to distribute potable water. (a) The owner of a public water system that uses a vehicle to distribute potable water shall submit the plans and specifications required under 18 AAC 80.200 - 18 AAC 80.205 for each vehicle to the department before using the vehicle to distribute potable water. As the department determines necessary to serve the interests of public health, the department will require that the plans and specifications be signed and sealed by a registered engineer.

(b) After receiving plans and specifications required under 18 AAC 80.200 - 18 AAC 80.205, and if the department determines that an onsite inspection is necessary to serve the interests of public health, the department will require that the owner make the vehicle available for onsite inspection, and will inspect the vehicle no later than 30 days after receiving notice that the vehicle is available for inspection. The owner shall pay the fee required by 18 AAC 80.1910(a)(1) for an inspection conducted under this subsection.

(c) After the department approves the plans and specifications under 18 AAC 80.210, and after a vehicle passes an inspection, if required under (b) of this section, the department will grant final approval to operate under 18 AAC 80.210(k).

(d) An approval to operate under this section does not relieve the owner of the responsibility to operate and maintain the vehicle in compliance with this chapter.

(e) The owner shall conspicuously mark a vehicle used to distribute potable water "POTABLE WATER ONLY." (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.761
AS 46.03.050 AS 46.03.720

18 AAC 80.225. Application to demonstrate an innovative technology or device. (a) The department will approve an application to demonstrate an innovative technology or device at a public water system if the

(1) purpose of a demonstration is to

(A) assure that the innovative technology or device meets the necessary safety and performance standards of this chapter; and

(B) allow the innovative technology or device to be field-tested in this state without plan review under 18 AAC 80.200 – 18 AAC 80.210 during the demonstration period;

(2) department determines that the requirements of (e) and (f) of this section are met; and

(3) department finds that the public health and the public water system is adequately protected.

(b) The owner of a public water system who proposes the use or application of an innovative technology or device in the public water system's infrastructure shall submit an application for department approval under this section.

(c) An application under this section must be accompanied by the fee required by 18 AAC 80.1910(a)(10) and must describe the innovative technology or device, its proposed use, and its performance. The application must include

(1) the name of the innovative technology or device;

(2) a list of the construction materials;

(3) the proposed configuration;

(4) performance claims made by the manufacturer;

(5) information regarding approvals in other states or countries, if any, including if known, the name, address, and telephone number of the reviewing officer in each state or country;

(6) quality assurance information, including

(A) the name of the person responsible for overseeing the demonstration project;

(B) a plan for monitoring raw water quality, pretreatment effluent water quality, and finished water quality to verify and ensure that assumptions for the design of the treatment equipment are met;

(C) the innovative technology or device's controls for eliminating or reducing operator error; and

(D) the operational requirements for the innovative technology or device and its ease of use;

(7) information about reliability features including unit alarms, automatic shutdown, and the system's capability for effective and safe manual operation if an automated system failure occurs;

(8) information on how the public water system's customers will be notified of the proposed and ongoing project;

(9) a description of the basic operation and maintenance needs, including

(A) chemicals, spare parts, labor, instrumentation, energy requirements, and ongoing monitoring;

(B) a replacement and maintenance schedule;

(C) the availability and cost of parts, servicing equipment, and controls;

(D) a description of periodic cleaning requirements, including the expected resulting down time;

(E) the response time of the equipment supplier to service calls;

(F) provisions for storage, auxiliary treatment, or bypassing if equipment problems occur;

(G) required backwashing frequency, the filter-to-waste capability, and any disposal and storage requirements related to backwashing;

(H) auxiliary needs, including media regeneration;

(10) pretreatment requirements;

(11) chemical feed requirements;

(12) finished water storage;

(13) operator expertise required to operate the innovative technology or device;

(14) manuals and training to be provided to the operator;

(15) the capability of the treatment process to produce finished water of a consistent quality, on a 24-hour per day, 8-hour per day, intermittent, and seasonal basis;

(16) environmental impacts, including waste disposal needs;

(17) the life cycle costs of the innovative technology or device, including the costs of

(A) the facilities;

(B) the appurtenances;

(C) the expected power consumption; and

(D) parts that must routinely be replaced such as membranes, filters, and cartridges;

(18) objective and verifiable data to support performance claims, including third-party certifications, data from independent third parties, study data, the manufacturer's test data, and approvals from other states, countries, or federal agencies; the information submitted under this paragraph must be sufficient for the department to determine, as applicable,

(A) the pathogen removal credits for the *Giardia lamblia* virus and other viruses as appropriate;

(B) compliance with MCLs of concern;

(C) appropriate performance standards; and

(D) monitoring frequency required for the innovative technology or device; information on monitoring frequency must be obtained from product and process technical information, including shop drawings, process schematics and descriptions, power requirements, capacity and dimensional data, required auxiliary equipment, information on conditions for and limitations on process applicability, and quality control processes;

(E) the effectiveness of the innovative technology or device under site-specific conditions with respect to

(i) source water quality, considering seasonal variations;

(ii) finished water quality requirements;

(iii) finished water quality produced, including consistency;

(iv) design flow rates;

(v) the useful life of the device;

(vi) external environmental issues;

(vii) storage requirements, space requirements, and accessibility;

(viii) other treatment needs, such as pre-treatment water or post-treatment water;

(ix) the range of field extremes;

(x) the worst case and best case adaptability of the technology or device to various raw water qualities;

(xi) differential pressure conditions;

(xii) the reliability of treatment facilities, including redundancy of equipment; and

(xiii) operational conditions, including stopping and starting;

(F) the availability of technical support, including water treatment system manufacturer or supplier support;

(G) the qualifications of the water treatment system supplier;

(H) how operators will be trained;

(I) the laboratory services to be used; and

(J) the names of independent engineering consultants, if any, to be used in the project;

(19) a list of nationally recognized codes and standards that were followed in developing and planning the installation of the device;

(20) materials safety verification that includes supporting documentation concerning safety and use; the applicant may include as verification

(A) a listing within an ANSI, NSF, UL, or MIL standard or an equivalent; and

(B) documentation of compliance with appropriate regulations of the United States Food and Drug Administration for food additives, found in 21 C.F.R. 170-190;

(21) material safety data sheets; and

(22) an operations manual for using the innovative technology or device in the proposed configuration.

(d) If the information submitted under (c) of this section is not sufficient for an approval under this section, the department will authorize a pilot test as a method of evaluating onsite performance and to prove that the technology or device is appropriate for use in this state. The department will authorize a pilot test only if the test serves the interests of public health, and only with an approved plan of action from the applicant. The plan of action must include necessary monitoring, quality control, data recording and reporting, evaluations, and a project summary. The department will provide written guidelines describing the criteria to be evaluated in the demonstration. A demonstration is not subject to the plan review requirements of 18 AAC 80.200 - 18 AAC 80.225 if the duration of the project does not exceed one year from the date of installation to the date that the demonstration ends. All other requirements of this chapter that apply to the public water system remain in effect during the demonstration. If the department allows a pilot test of the proposed technology or device, in addition to the requirements of (d) of this section, the applicant shall

(1) describe each known risk associated with the demonstration project;

(2) describe how drinking water contamination will be prevented during the demonstration project; means of preventing contamination include

(A) use of the innovative technology or device in conjunction with existing approved devices; and

(B) discharging the treated water;

(3) provide an example of the records and data to be collected during the demonstration project;

(4) provide the qualifications of each person who will record data;

(5) estimate the duration of the demonstration;

(6) provide plan drawings of the proposed installation;

(7) provide the names and telephone numbers of contact persons;

(8) identify the proposed installation site;

(9) submit a letter from the owner of the public water system, agreeing to participation.

(e) The department will evaluate an application submitted under (a) of this section to assess compliance with this chapter and the suitability of the innovative technology or device for use in the public water system. The department will base its denial or approval upon an evaluation of

(1) the potential risk of contamination entering the public water system during normal operation, abnormal operation, or catastrophic failure;

(2) the methods used to determine the potential risk of contamination entering the public water system during normal operation, abnormal operation, or catastrophic failure;

(3) factors relating to the ease of use, including the operator skills required to operate the innovative technology or device safely and effectively, the necessity for spare parts or special chemicals, and the ease of obtaining products for maintenance and repair;

(4) whether the device met performance claims and regulatory requirements during the field test;

(5) conditions particular to this state and known or suspected to limit the effectiveness of technology; those conditions include permafrost and freezing;

(6) the history of the device in other water systems in this state, other states, or other countries.

(f) Based on a review of the innovative technology's performance, its suitability for use in this state, and the results of any pilot test or field demonstration performed under this section, the department will approve or deny the application for use of an innovative technology or device. Approval constitutes

(1) approval of a generic technology, not an endorsement or approval of a specific commercial product;

(2) site-specific approval of the innovative technology or device for initial use or for a pilot test; and

(3) approval for the proposed project only.

(g) Permanent installation of approved innovative technology is subject to 18 AAC 80.200 - 18 AAC 80.225. Engineering plans submitted under 18 AAC 80.200 must include a plan for converting from a temporary to a permanent installation.

(h) The applicant may resubmit an application that has been denied under this section after correcting each deficiency identified by the department in its denial of the initial application.

(i) The department will maintain a list of each innovative technology or device approved under this section. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.230. Qualified operator for a system that fluoridates. Repealed. (Eff. 10/1/99, Register 151; repealed 9/28/2001, Register 159)

18 AAC 80.235. Master meter. The owner of each community water system has until August 19, 2009, and the owner of each non-transient non-community water system has until August 19, 2011, to install a master meter to determine water treated, distributed, and wasted as part of a treatment process. (Eff. 8/19/2006, Register 179)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Article 3. Standards, Monitoring, Variances, and Exemptions.

Section

18 AAC 80.300. Maximum contaminant levels (MCLs). (a) **General requirement.** Subject to a variance issued under 18 AAC 80.370, a variance issued under 18 AAC 80.371, or an exemption granted under 18 AAC 80.375, the owner or operator of a public water system may not cause or allow the use of water from that system for human consumption if the water contains, or has a significant potential for containing

(1) a contaminant in a concentration that exceeds a primary maximum contaminant level (MCL) set under (b) of this section; or

(2) a contaminant other than one described in (1) of this subsection, if the department determines that the concentration of that contaminant is high enough to make the water a hazard to human health.

(b) **Primary MCLs.** The primary MCLs for a public water system are as follows:

(1) for inorganic chemical contaminants, the MCLs set out in 40 C.F.R. 141.62(b), adopted by reference in 18 AAC 80.010(a);

(2) for organic chemical contaminants that are

(A) synthetic organic chemicals, the MCLs set out in 40 C.F.R. 141.61(c), adopted by reference in 18 AAC 80.010(a);

(B) volatile organic chemicals, the MCLs set out in 40 C.F.R. 141.61(a), adopted by reference in 18 AAC 80.010(a);

(C) disinfection byproducts, the MCLs set out in 40 C.F.R. 141.64(a), adopted by reference in 18 AAC 80.010(a);

(3) for turbidity, for a community water system, non-transient non-community water system, or transient non-community water system that uses a surface water source or a GWUDISW source and that

(A) meets the criteria for avoiding filtration under 40 C.F.R. 141.71, adopted by reference in 18 AAC 80.010(a), and under 18 AAC 80.620, the MCL as set out in 40 C.F.R. 141.71(a)(2);

(B) does not meet the criteria for avoiding filtration, the MCL as set out in 40 C.F.R. 141.73, adopted by reference in 18 AAC 80.010(a);

(4) for total coliform bacteria, the MCL set out in 40 C.F.R. 141.63(a) and (b), adopted by reference in 18 AAC 80.010(a):

(5) for radionuclides, the MCLs set out in 40 C.F.R. 141.66, adopted by reference in 18 AAC 80.010(a).

(c) **Secondary MCLs.** The secondary MCLs for a public water system are set out in 40 C.F.R. 143.3, adopted by reference in 18 AAC 80.010(a). The department will require a public water system to meet the secondary MCLs if the department determines that public health is threatened or that exceeding a secondary MCL is not in the public interest.

(d) Repealed 4/24/2009. (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159; am 1/11/2004, Register 169; am 5/2/2004, Register 170; am 1/11/2006, Register 177; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

18 AAC 80.302. Maximum residual disinfectant levels (MRDL). The requirements of 40 C.F.R. 141.65, adopted by reference in 18 AAC 80.010(a) apply to a

(1) community water system

(2) non-transient non-community water system; or

(3) transient non-community water system using chlorine dioxide as a disinfectant or oxidant. (Eff. 9/28/2001, Register 159; am 1/11/2006, Register 177)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.305. MCL compliance. (a) The department will determine MCL compliance based on analytical results and other information compiled by the department.

(b) The requirements for complying with the MCLs for inorganic chemicals are set out in 40 C.F.R. 141.23(i), adopted by reference in 18 AAC 80.010(a).

(c) The requirements for complying with the MCLs for organic chemicals are set out in 40 C.F.R. 141.24(f) and (h), adopted by reference in 18 AAC 80.010(a).

(d) The requirements for complying with the MCLs for disinfection byproducts are set out in 40 C.F.R. 141.133(b), adopted by reference in 18 AAC 80.010(a).

(e) The requirements for complying with the MCLs for turbidity are set out in 40 C.F.R. 141.71(a)(2) and (c), 141.73(a) – (c)(2), and 141.74(a)(1), (b)(2), and (c)(1), adopted by reference in 18 AAC 80.010(a).

(f) The department will determine compliance with the MCL for total coliform bacteria, set under 18 AAC 80.300(b)(4), as follows:

(1) for each month in which monitoring for coliforms is required, compliance will be based on the results of all routine and repeat samples that the department does not invalidate under 18 AAC 80.425;

(2) the department will count repeat samples toward the month in which the operator collected the routine sample that required the repeat sampling, regardless of the month in which the operator actually collected the repeat samples.

(g) Compliance with an MCL for radionuclides set under 18 AAC 80.300(b)(5) is achieved if the average of the analytical results of the four most recent consecutive quarterly samples, or the analytical result of a composite sample made up of the four most recent quarterly samples, does not exceed the MCL. (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159; am 1/11/2004, Register 169; am 1/11/2006, Register 177; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.310. Routine sampling and analysis. (a) The owner of a community water system, non-transient non-community water system, or transient non-community water system shall ensure that routine sampling and analysis of the water samples from that system are conducted at points and times in compliance with this chapter. The department will require routine sampling at particular points and times and at more frequent intervals, if the department determines that the sampling serves the interests of the public health.

(b) If a public water system is contaminated, or at risk of becoming contaminated, by a substance or material harmful to human health, the department will direct the owner or operator to conduct sampling at particular points and times for that substance or material.

(c) The department will require the owner or operator of a Class C public water system to sample, analyze, and report a contaminant listed in 18 AAC 80.300, at frequencies determined by the department but no more often than daily if

(1) the department determines that a potential exists for that contaminant to occur; or

(2) that a contaminant exceeds the MCL set by 18 AAC 80.300.

(d) If a public water system provides water to one or more other public water systems, and if the department determines that modification is necessary to serve the interests of public health, the department will modify the monitoring requirements of this chapter by considering the water systems as a single system.

(e) A water hauler shall

(1) obtain water from a public water system that is approved by the department under 18 AAC 80.210 and that has the same or higher system classification as the water hauler; and

(2) submit to the department the results of one total coliform analysis per month per vehicle, unless the department, in writing, reduces the monitoring frequency. The department will reduce the monitoring frequency if, in the previous 12 months during which the water hauler provided water to the public, the water hauler did not have a total coliform monitoring violation. The department will not reduce the monitoring frequency to less than one sample per quarter per water hauler.

(f) A public water system with a primary water source that is a rain catchment system is exempt from the monitoring requirements of (a)-(e) of this section. The owner or operator shall meet the following monitoring requirements:

(1) the owner of a community water system, non-transient non-community water system, or transient non-community water system shall ensure that

(A) the water system is in compliance with

(i) the provisions of 18 AAC 80.035 for disinfection;

(ii) the provisions of 18 AAC 80.315(b)(4) for nitrate;

(iii) the requirements set under 18 AAC 80.650 for filtration;

(iv) the provisions of 18 AAC 80.400 - 18 AAC 80.430 and 18 AAC 80.440 for coliform bacteria

(v) the provisions of 18 AAC 80.500 – 18 AAC 80.505 for lead and copper; and

(B) within one year after the system begins to provide potable water, one sample is taken for the contaminants for which MCLs are set under 18 AAC 80.300(b)(1) and (2)(B); each sample must be taken at an entry point to the distribution system and must be collected after treatment; the owner shall ensure that the results of the sampling are reported to the department, subject to the report certification requirements of 18 AAC 80.1900; and

(2) the owner of a community water system or non-transient non-community water system that serves a resident population of less than 10,000 individuals shall ensure that, within one year after the system begins to provide potable water, one sample is taken for the disinfection byproducts listed in 40 C.F.R. 141.64(a), adopted by reference in 18 AAC 80.010(a); the sample must be taken at the most distant point from treatment in the distribution system; the owner shall ensure that results of the sampling are reported to the department, subject to the report certification requirements of 18 AAC 80.1900. (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159; am 8/19/2006, Register 179; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

18 AAC 80.315. Inorganic chemical sampling requirements. (a) For the purposes of this section, a GWUDISW source is considered a surface water source.

(b) In addition to the requirements of 40 C.F.R. 141.23(a) – (h), adopted by reference in 18 AAC 80.010(a), the following requirements apply:

(1) for 40 C.F.R. 141.23(a)(4)(iii), the results reported to the department within 14 days after completing the analysis of the composite sample are subject to the report certification requirements of 18 AAC 80.1900;

(2) in addition to the requirements of 40 C.F.R. 141.23(b), asbestos monitoring requirements including the following:

(A) the owner may apply to the department for a waiver of the asbestos monitoring requirement in 40 C.F.R. 141.23(b)(2) using a form provided by the department;

(B) the department will grant an asbestos-monitoring waiver, if the department determines that a waiver serves the interest of public health and that the potential for asbestos contamination of the public water system is low, based on the criteria set out in 40 C.F.R. 141.23(b)(3);

(3) for 40 C.F.R. 141.23(c)(8), in order to qualify for a decrease in the quarterly monitoring requirement, the owner of a combination-source system must ensure the taking of at least four quarterly samples from each surface water source and two quarterly samples from each groundwater source that exceeded an inorganic chemical MCL listed in 40 C.F.R. 141.62(b), adopted by reference in 18 AAC 80.010(a);

(4) for 40 C.F.R. 141.23(d), if monitoring data are generally consistent with the monitoring requirements to determine compliance with the MCL for nitrate listed in 40 C.F.R. 141.62(b), adopted by reference in 18 AAC 80.010(a), the department will allow the owner of a public water system to use that data to comply with the monitoring requirement for the initial compliance period;

(5) in addition to the monitoring requirements for the MCL for nitrite in 40 C.F.R. 141.23(e), the following requirements apply:

(A) for 40 C.F.R. 141.23(e)(2), the monitoring frequency for the MCL of nitrite after the initial monitoring under 141.23(e)(1) is as follows:

(i) for a system with an analytical result for nitrite less than 50 percent of the MCL listed in 40 C.F.R. 141.62(b), adopted by reference in 18 AAC 80.010(a), additional monitoring is not required;

(ii) if the water system has a reported nitrite result that is more than 50 percent of the MCL listed in 40 C.F.R. 141.62(b), adopted by reference in 18 AAC 80.010(a), the owner shall ensure that, within 31 days after notification of the nitrite result, a repeat nitrite sample is taken at each sampling point where a nitrite result was more than 50 percent of the MCL;

(B) if monitoring data are generally consistent with the requirements of 40 C.F.R. 141.23(e), the department will allow the owner to use that data to comply with the monitoring requirement for the initial compliance period;

(6) the owner of a public water system that adds fluoride shall ensure that monitoring and sampling for fluoride occurs at the entry point of the distribution system each day that water is served to the public, except that if the public water system is a fill-and-draw system, the owner shall ensure that monitoring and sampling occur each day that fluoride is added to the water when making water; the owner shall ensure the reporting of the results of sampling done under this paragraph monthly to the department;

(7) with respect to the requirements for taking confirmation samples as set out in 40 C.F.R. 141.23(f), the department will delete results of obvious sampling errors;

(8) for 40 C.F.R. 141.23(g), the department will, if it determines that increased monitoring serves the interests of public health, require more frequent monitoring than that specified in 40 C.F.R. 141.23(b) – (e), and in (2) – (6) of this subsection, or require confirmation samples for positive or negative results. (Eff. 10/1/99, Register 151; am 5/2/2004, Register 170;

am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.320. Sampling requirements for synthetic organic chemicals. (a) For purposes of this section, a GWUDISW source is considered a surface water source.

(b) In addition to the sampling and analytical requirements of 40 C.F.R. 141.24(h), adopted by reference in 18 AAC 80.010(a), for determining compliance with the MCLs for the synthetic organic chemicals specified in 40 C.F.R. 141.61(c), adopted by reference in 18 AAC 80.010(a), the following requirements apply:

(1) under the requirements of 40 C.F.R. 141.24(h)(5) – (6) for a waiver from the monitoring requirements for synthetic organic chemicals, the following requirements apply:

(A) the owner must apply for the waiver to the department on a form provided by the department;

(B) an application for a waiver or renewal of a waiver must be accompanied by any fee required by 18 AAC 80.1910(a)(6);

(C) in addition to evaluating the criteria set out in 40 C.F.R. 141.24(h)(6), the department will issue a waiver only if the department determines that a waiver serves the interests of public health;

(D) based upon new information received, the department will modify or revoke a waiver issued under this paragraph, if the department determines that modification or revocation serves the interests of public health;

(2) under 40 C.F.R. 141.24(h)(9), the department will require a confirmation sample for positive or negative results, if the department determines that a confirmation sample serves the interests of public health; the department will delete results of obvious sampling errors from the calculation of the sampling averages;

(3) under 40 C.F.R. 141.24(h)(10), the department will allow the use of compositing, and the report certification requirements of 18 AAC 80.1900 apply to the report of the duplicate sample analysis results that the owner ensures is provided to the department;

(4) if monitoring data are generally consistent with the requirements of this section, the department will allow systems to use that data to satisfy the monitoring requirement for the initial compliance period. (Eff. 10/1/99, Register 151; am 1/11/2006, Register 177; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.325. Volatile organic chemical sampling requirements. (a) Under the requirements of 40 C.F.R. 141.24(f), adopted by reference in 18 AAC 80.010(a), the department will not allow

(1) a waiver, as referenced in 40 C.F.R. 141.24(f)(7) – (10) and (11)(iv), from the monitoring requirements for the organic chemicals listed in 40 C.F.R. 141. 61(a);

(2) the use of grandfathered samples for purposes of initial compliance monitoring, referenced in 40 C.F.R. 141.24(f)(18).

(b) For purposes of this section, a GWUDISW source is considered a surface water source.

(c) Under 40 C.F.R. 141.24(f)(14), the department will allow the use of compositing; the report certification requirements of 18 AAC 80.1900 apply to the report of the duplicate sample analysis results that the owner ensures is provided to the department. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.330. Inorganic and organic chemicals: additional analyses after MCL exceedance. If the results of a routine inorganic or organic chemical analysis required under 18 AAC 80.310 – 18 AAC 80.325 exceed an MCL set by 18 AAC 80.300(b), additional analyses of samples must be performed according to a schedule set by the department. (Eff. 10/1/99, Register 151)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.335. Radioactive contaminants. Radioactive contaminant monitoring requirements for gross alpha particle activity, radium-226, and radium-228 must be performed in compliance with 40 C.F.R. 141.26, adopted by reference in 18 AAC 80.010(a). (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.340. Examination of water: owner or operator requirements. (a) **General requirements.** To meet the applicable analytical requirements of this chapter, the owner or operator of a public water system must comply with the requirements of this section. Except as otherwise provided in this section and 18 AAC 80.350, the owner or operator shall

ensure that an analysis that is required under this chapter for inorganic, organic, radioactive, and microbiological contaminants described in 18 AAC 80.300 or 18 AAC 80.335 is performed by a certified laboratory. The owner or operator shall ensure that the results of that analysis are reported to the department within the first 10 days following the month in which the result is received, or within the first 10 days following the end of the required monitoring period, whichever is sooner. If the owner or operator submits the results, the submission is subject to the report certification requirements of 18 AAC 80.1900. If the owner or operator submits to a certified laboratory water samples for analysis for contaminants described in 18 AAC 80.300, the owner or operator shall clearly identify that the samples are from a drinking water source for a public water system.

(b) **Analytical procedures and results.** The owner or operator shall ensure that analyses under (c) - (e) of this section are performed by an individual trained in and capable of demonstrating proficiency in the analytical procedures referenced in this section. Results of analyses conducted under (c) and (d) of this section must be submitted to the department within the first seven days following the month in which the result is received, or the first seven days following the end of the required monitoring period, whichever is sooner. Submission of those results is subject to the report certification requirements of 18 AAC 80.1900.

(c) **Fluoride.** If fluoride is added to a public water system, the analysis required by 18 AAC 80.310 and (b) of this section must be performed using an approved method from 40 C.F.R. 141.23(k)(1), adopted by reference in 18 AAC 80.010(a).

(d) **Analytical methods for surface water treatment.** Only the analytical methods set out in this subsection may be used to demonstrate compliance with 18 AAC 80.600 - 18 AAC 80.680 and 18 AAC 80.699. The following procedures must be performed in accordance with the publications listed for each procedure, adopted by reference in 18 AAC 80.010(b):

(1) **turbidity:** turbidity must be measured by Standard Method 2130-B (Nephelometric Method), as set out in *Standard Methods for the Examination of Water and Wastewater*;

(2) **residual disinfectant concentration:** For each of the following disinfectants that is used, residual disinfectant concentration must be measured using one of the following methods as set out in *Standard Methods for the Examination of Water and Wastewater*:

(A) **total chlorine, free chlorine, and combined chlorine (chloramines):** residual disinfectant concentrations for total chlorine, free chlorine, and combined chlorine must be measured by Standard Method 4500-Cl D (Amperometric Titration Method), Standard Method 4500-Cl F (DPD Ferrous Titrimetric Method), or Standard Method 4500-Cl G (DPD Colorimetric Method), except that

(i) residual disinfectant concentration for free chlorine may be measured by Standard Method 4500-Cl H (Syringaldazine (FACTS) Method);

(ii) residual disinfectant concentration for total chlorine may be measured by Standard Method 4500-Cl E (Low Level Amperometric Titration Method); or Standard Method 4500-Cl I (Iodometric Electrode Technique);

(iii) residual disinfectant concentrations for total chlorine, free chlorine, combined chlorine, and chloramines may be measured using DPD colorimetric test kits; and

(iv) residual disinfectant concentrations for free and total chlorine may be measured continuously by adapting, for use with a continuous monitoring instrument, a method specified in this subparagraph if the chemistry, accuracy, and precision remain the same; instruments used for continuous monitoring must be calibrated using a grab sample measurement at least every five days, or following a protocol approved by the department to serve the interests of public health;

(B) **chlorine dioxide:** residual disinfectant concentration for chlorine dioxide must be measured by Standard Method 4500-ClO_2 C (Amperometric Method I), Standard Method 4500-ClO_2 D (DPD Method), or Standard Method 4500-ClO_2 E (Amperometric Method II);

(C) **ozone:** residual disinfectant concentration for ozone must be measured by Standard Method 4500-O_3 B (Indigo Colorimetric Method);

(D) **iodine:** residual disinfectant concentration for iodine must be measured by Standard Method 4500-I B (Leuco Crystal Violet Method), or Standard Method 4500-I C (Amperometric Titration Method);

(3) **temperature:** temperature must be measured by Standard Method 2550, as set out in *Standard Methods for the Examination of Water and Wastewater*;

(4) **pH:** pH must be measured by

(A) Standard Method 4500-H+B (Electrometric Method), as set out in *Standard Methods for the Examination of Water and Wastewater*, adopted by reference in 18 AAC 80.010(b); or

(B) EPA Method 150.1 or 150.2, as set out in *Methods for Chemical Analysis of Water and Wastes*, adopted by reference in 18 AAC 80.010(b).

(e) Repealed 1/11/2006. (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159; am 5/2/2004, Register 170; am 1/11/2006, Register 177; am 8/19/2006, Register 179)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

Editor's note: Information about how to review or obtain reference materials referred to in this section is in the editor's note to 18 AAC 80.010

18 AAC 80.345. Special monitoring requirements. Repealed. (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 1/11/2006, Register 177; am 8/19/2006, Register 179)

18 AAC 80.350. Variance on sample holding time for coliform bacteria samples taken in certain remote sites. (a) Instead of complying with the 30-hour maximum holding time for a coliform bacteria sample set in EPA's *Manual for the Certification of Laboratories Analyzing Drinking Water, Criteria and Procedures Quality Assurance*, adopted by reference in 18 AAC 80.010(b), the owner or operator of a public water system at a remote site shall ensure that coliform bacteria samples, collected as required by this chapter, are delivered to and analyzed by a certified laboratory within 48 hours after collection.

(b) A laboratory subject to this chapter may not accept for analysis a sample that has been held longer than the maximum holding times established in (a) of this section or in EPA's *Manual for the Certification of Laboratories Analyzing Drinking Water, Criteria and Procedures Quality Assurance* adopted by reference in 18 AAC 80.010(b).

(c) For purposes of (a) of this section, the department will determine a site to be remote based on an assessment of factors that prevent the delivery of samples to and the analysis of those samples by a certified laboratory within 30 hours after collection. Those factors include the

(1) distance from the public water system to the nearest certified laboratory;

(2) absence of a road connection between the public water system and a certified laboratory; and

(3) absence of regularly scheduled aircraft flights between the public water system and a certified laboratory.

(4) weather conditions that may interfere with shipment of samples to a certified laboratory. (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710
AS 46.03.050 AS 46.03.720

18 AAC 80.355. Reporting requirements. (a) A certified laboratory shall report to the department the results of an analysis required under this chapter. Subject to (b) of this section, a laboratory certified under 18 AAC 80.1100 – 18 AAC 80.1110 shall ensure that results are reported to the department and the owner or operator of a public water system within the first seven days following the month in which the results are received, or the first seven days following the end of the required monitoring period, whichever is sooner. Reports of results are subject to the report certification requirements of 18 AAC 80.1900.

(b) For a report of an analysis indicating nitrate in excess of the contaminant level set by 18 AAC 80.300(b)(1), or indicating positive coliform bacteria

(1) oral or facsimile notice must be given to the department's local drinking water program office closest to the public water system and to the owner or operator as soon as possible after the analysis results are known; and

(2) written notice must be sent to the department and to the owner or operator within 24 hours after the analysis results are known.

(c) Reports for total coliform bacteria, inorganic, organic, and radioactive contaminants must include

(1) the public water system identification number assigned under 18 AAC 80.210(c);

(2) the date, time, place, and specific location of each sample, and the name of the individual who collected the sample;

(3) identification of the sample as a routine distribution system sample, a repeat sample, a raw or finished water sample, or a special purpose sample;

(4) the date and time that the sample was received and analyzed;

(5) the name of the laboratory and the laboratory employees responsible for the analysis;

(6) the analytical technique or method used; and

(7) the results of the analysis by the certified laboratory.

(d) The owner or operator of a public water system shall report to the department the results of any analyses required by this chapter for turbidity, fluoride, and residual disinfectant within 10 days after the end of the month during which the samples were taken, subject to the report certification requirements of 18 AAC 80.1900. The report must include

(1) the public water system identification number assigned under 18 AAC 80.210(c);

(2) the date and time the sample was taken;

(3) the name of the public water system;

(4) the sample location;

(5) for fill-and-draw systems, the date on which water was made;

(6) the results of the analysis by the certified laboratory; and

(7) the name of the individuals who collected and analyzed the sample.

(e) Compliance with deadlines for reporting in this section is determined by

(1) the postmark of a written report transmitted to the department by mail; or

(2) the time and date the department receives a report transmitted orally, by facsimile, telegraph, telex, courier, electronic data transfer, or a means of communication other than mail.

(f) Within 30 days after a change in facility name, ownership, operator, address, or status, the owner shall notify the department, in writing, of the change. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Editor's note: Offices for the department's local drinking water program, as discussed in 18 AAC 80.355(b)(1), are located in Anchorage, Fairbanks, Juneau, Soldotna, and Wasilla.

18 AAC 80.360. Use of noncentralized treatment devices. (a) The owner of a community water system or non-transient non-community water system may use a point-of-entry treatment device to meet the MCLs set under 18 AAC 80.300(b)(1) and (2)(A) – (B), if the device meets the requirements of this section.

(b) The owner must obtain department approval to use a point-of-entry treatment device. To seek approval, the owner must submit plans for the device. Before deciding whether to approve those plans, the department will require adequate certification of performance, field testing, and a sealed engineering design review of a treatment device. The design and application of a device must address the tendency for an increase in heterotrophic bacteria concentrations in water treated with activated carbon. As conditions for its approval, the department will require frequent back-washing, post-contactor disinfection, and heterotrophic plate count monitoring to ensure that the microbiological safety of the water is not compromised, if the department determines that those conditions serve the interests of public health.

(c) The owner shall develop and obtain department approval for a monitoring plan before installing the point-of-entry treatment device as a means of achieving compliance. Under an approved plan, each device must provide health protection equivalent to central water treatment designed to treat the contaminant of interest. For purposes of this subsection, a device provides equivalent health protection if the water would meet all MCLs set under 18 AAC 80.300(b), and would be of acceptable quality, similar to water distributed by a properly operated and maintained central water treatment works.

(d) The operator shall properly operate and maintain the point-of-entry treatment device. In addition to the monitoring required under this chapter, the operator shall monitor the operation and maintenance of the device, including physical measurements and observations such as total flow treated and the mechanical condition of the treatment device.

(e) Under an approved plan for a point-of-entry treatment device, the owner shall ensure that the treatment is effective and properly applied and that the microbiological safety of the water is maintained. The owner may not use a point-of-entry treatment device to achieve compliance with an MCL or treatment technique requirement for a microbial contaminant.

(f) The owner shall ensure that consumers are protected and shall install, maintain, and adequately monitor a treatment device in each building connected to the system. The department will require the owner to provide assurance that each building is subject to treatment and monitoring, and that the rights of the public water system's customer are conveyed with the title upon sale of the building.

(g) The department will require the owner of a community water system or non-transient non-community water system to use point-of-entry devices to avoid an unreasonable risk to health as a condition for granting an exemption under 18 AAC 80.375 from the requirements for lead and copper under 40 C.F.R. 141.83 (Source Water Treatment Requirements) or 40 C.F.R. 141.84 (Lead Service Line Replacement Requirements), both adopted by reference in 18 AAC 80.010(a). In requiring the use of a point-of-entry device under this subsection, the department will allow only a device that does not cause increased corrosion of lead- and copper-bearing materials located between the device and the tap that could increase contaminant levels at the tap. (Eff. 10/1/99, Register 151; am 1/11/2004, Register 169; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

18 AAC 80.365. Bottled water, point-of-use treatment devices, and point-of-entry treatment devices. (a) The use of bottled water or point-of-use treatment devices to achieve compliance with an MCL in 18 AAC 80.300 or with the requirements for lead and copper in 40 C.F.R. 141.81-141.84, adopted by reference in 18 AAC 80.010(a), is prohibited, except

(1) on a temporary basis to avoid an unreasonable risk to health; or

(2) if required by the department under (b) of this section.

(b) As necessary to serve the interests of public health, the department will require the owner of a community water system or non-transient non-community water system to use

(1) bottled water, point-of-use treatment devices, or point-of-entry treatment devices as a condition of granting a variance under 18 AAC 80.370, a variance under 18 AAC 80.371, or an exemption under 18 AAC 80.375 from the requirements of 18 AAC 80.300(b)(1) and (2)(A) - (B); or

(2) bottled water or point-of-use treatment devices as a condition of granting an exemption under 18 AAC 80.375 from the requirements of 40 C.F.R. 141.81 – 141.84, adopted by reference in 18 AAC 80.010(a).

(c) The owner of a community water system or non-transient non-community water system that uses bottled water or point-of-use treatment devices as a condition of obtaining a variance under 18 AAC 80.370 or 18 AAC 80.371 shall

(1) use best available technology; and

(2) maintain the microbiological safety of the water at all times.

(d) The owner of a community water system or non-transient non-community water system that uses bottled water as a condition of obtaining a variance under 18 AAC 80.370, a variance under 18 AAC 80.371, or an exemption under 18 AAC 80.375 from the requirements of 18 AAC 80.300(b)(1) and (2)(A) - (B), or an exemption under 18 AAC 80.375 from the requirements of 40 C.F.R. 141.81 – 141.84, adopted by reference in 18 AAC 80.010(a), shall supply each customer with sufficient amounts of bottled water that complies with 18 AAC 31.740, via door-to-door bottled water delivery. If a customer believes the amount of bottled water supplied to be insufficient, the department will determine the sufficiency of the amount supplied, based on whether the amount serves the interests of public health. In addition, the owner shall

(1) develop and implement an approved monitoring program that provides reasonable assurance that the bottled water meets each MCL; for the first quarter during which bottled water is supplied to the public, and annually thereafter, the owner shall ensure the monitoring of a representative sample of the bottled water for each contaminant for which an MCL is set under 18 AAC 80.300(b)(1) and (2)(A) – (B); or

(2) provide proof that the bottled water company from which the water is obtained has a department permit under 18 AAC 31.020, has an equivalent permit from another state, or otherwise meets the requirements of 21 C.F.R. 129, adopted by reference in 18 AAC 80.010(a).

(e) The owner of a community water system or non-transient non-community water system shall provide

(1) the results of a monitoring program conducted under (d)(1) of this section to the department annually; or

(2) the proof required by (d)(2) of this section to the department the first quarter after supplying bottled water and annually thereafter.

(f) Before installing a point-of-use treatment device, the owner of a community water system or non-transient non-community water system must obtain department approval of a monitoring plan that ensures that the device provides health protection equivalent to that

provided by central water treatment designed to treat the contaminant of interest. For purposes of this subsection, a device provides equivalent health protection if the water would meet all MCLs set under 18 AAC 80.300(b) and would be of acceptable quality, similar to water distributed by a properly operated and maintained central water treatment works. Before issuing approval under this subsection, the department will

(1) determine that buildings connected to the system have sufficient point-of-use treatment devices that are properly installed, maintained, and monitored so that each consumer is protected; and

(2) certify performance of the point-of-use treatment device after performing field testing and a sealed engineering design review of the point-of-use treatment device.

(g) In addition to the other requirements of this section, the owner of a community water system or non-transient non-community water system that uses point-of-use treatment devices as a condition for obtaining a variance under 18 AAC 80.370, a variance under 18 AAC 80.371, or an exemption under 18 AAC 80.375 from the MCLs set under 18 AAC 80.300(b)(1) and (2)(A) – (B) must

(1) ensure the operation and maintenance of the point-of-use treatment devices; and

(2) ensure that the design and application of a point-of-use treatment device addresses the potential for increasing concentrations of heterotrophic bacteria in water treated with activated carbon; the department will require the use of frequent backwashing, post-contactor disinfection, and heterotrophic plate count monitoring to ensure that the microbiological safety of the water is not compromised, if the department determines that those requirements serve the interests of public health. (Eff. 10/1/99, Register 151; am 1/11/2004, Register 169; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

Editor's note: For guidance regarding best available technology, as described in 18 AAC 80.365(c)(1), see the *Alaska Water Treatment Guidance Manual*, referenced at 18 AAC 80.010(d).

18 AAC 80.370. Variances. (a) The requirements of 40 C.F.R. 142.40-142.46, adopted by reference in 18 AAC 80.010(a), apply to the department's issuance of a variance to a public water system.

(b) To request a variance, the owner must

(1) submit on a form provided by the department a written application that includes the information described in 40 C.F.R. 142.41, adopted by reference in 18 AAC 80.010(a); and

(2) pay the applicable fee required in 18 AAC 80.1910(e).

(c) The owner must submit each variance or variance extension request on a separate application.

(d) As required in 18 AAC 80.1910(f)(1), the owner shall reimburse the department for expenses related to publication under 40 C.F.R. 142.44, adopted by reference in 18 AAC 80.010(a). (Eff. 10/1/99, Register 151; am 5/2/2004, Register 170; am1/11/2006, Register 177; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.371. Small system variances. (a) The requirements of 40 C.F.R. 142.301 - 142.309, adopted by reference in 18 AAC 80.010(a), apply to the department's issuance of a variance to a public water system serving fewer than 10,000 people that cannot comply with MCLs or treatment techniques required by this chapter.

(b) To request a small system variance, the owner must

(1) submit on a form provided by the department a written application that includes documentation, including Regulatory Commission of Alaska rate approval documents, mean household income data, and other information relevant to the ability of the public water system to afford to comply with the rule, as described in 40 C.F.R. 142.306, adopted by reference in 18 AAC 80.010(a); and

(2) pay the applicable fee required in 18 AAC 80.1910(e).

(c) The owner must submit each small system variance or small system variance extension request on a separate application.

(d) In addition to publishing notice as required in 40 C.F.R. 142.308(b), adopted by reference in 18 AAC 80.010(a), the department will publish a proposal to grant a small system variance on the Alaska Online Public Notice System established under AS 44.62.175.

(e) As required in 18 AAC 80.1910(f)(1), the owner shall reimburse the department for expenses related to publication required under 40 C.F.R. 142.308(b), adopted by reference in 18 AAC 80.010(a). (Eff. 1/11/2006, Register 177; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.375. Exemptions. (a) The requirements of 40 C.F.R. 142.50 - 142.57, adopted by reference in 18 AAC 80.010(a), apply to the department's issuance of an exemption to a public water system that cannot comply with MCLs or treatment techniques required by this chapter, or cannot implement measures to develop an alternative source of water supply.

(b) To request an exemption, the owner must

(1) submit on a form provided by the department a written application that includes the information described in 40 C.F.R. 142.51, adopted by reference in 18 AAC 80.010(a); and

(2) pay the applicable fee required in 18 AAC 80.1910(e).

(c) The owner must submit each request for an exemption or an exemption extension as a separate application.

(d) As required in 18 AAC 80.1910(f)(1), the owner shall reimburse the department for expenses related to publication required under 40 C.F.R. 142.54, adopted by reference in 18 AAC 80.010. (Eff. 10/1/99, Register 151; am 1/11/2004, Register 169; am 1/11/2006, Register 177; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Article 4. Coliform Bacteria Requirements.

Section

18 AAC 80.400. Applicability of coliform bacteria requirements. The requirements of 18 AAC 80.400 – 18 AAC 80.430 and 18 AAC 80.440 apply only to the owner or operator of a community water system, non-transient non-community water system, or transient non-community water system or to a certified laboratory that analyzes a sample from that system. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

18 AAC 80.405. Routine monitoring. (a) The operator of a community water system, non-transient non-community water system, or transient non-community water system shall collect total coliform samples at sites that are representative of water throughout the distribution system according to a written sample siting plan that complies with 18 AAC 80.410. Special monitoring and reporting provisions for consecutive public water systems will be determined by the department as necessary to serve the interests of public health.

(b) The monitoring frequency for total coliforms required for a community water system or non-transient non-community water system is based on the population expected to be served daily by the system, as set out in Table C in this subsection.

TABLE C. TOTAL COLIFORM MONITORING FREQUENCY FOR COMMUNITY OR NON-TRANSIENT NON-COMMUNITY WATER SYSTEMS

Population expected to be served daily	Minimum number of samples per month*
25 to 1,000[a]	1[b]
1,001 to 2,500	2[b]
2,501 to 3,300	3[b]
3,301 to 4,100	4[b]
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270
970,001 to 1,230,000	300
1,230,001 to 1,520,000	330
1,520,001 to 1,850,000	360
1,850,001 to 2,270,000	390
2,270,001 to 3,020,000	420
3,020,001 to 3,960,000	450
3,960,001 or more	480

Notes to Table C:

[a] If a community water system or non-transient non-community water system has at least 15 service connections, but serves fewer than 25 individuals, the minimum number of samples per month is the number for a system expected to serve 25-1,000 individuals daily.

[b] This number is subject to the requirement for additional routine samples as described in 18 AAC 80.410(d).

* For seasonal operations that include partial months, the operator shall consider the first partial month of operation as an entire month of operation; the operator need not sample during the last partial month of operation.

(c) Upon written request from the owner, the department will, in writing, reduce the monitoring frequency in Table C in (b) of this section for a community water system or non-transient non-community water system that is expected to serve 1,000 or fewer individuals daily if the system

(1) in the previous 12 months during which the system in its current configuration provided water to the public did not have a history of total coliform contamination or of total coliform monitoring violations;

(2) within five years before the request underwent a sanitary survey that showed the system to be free of sanitary defects;

(3) is supplied solely by a protected groundwater source; and

(4) has a final approval to operate issued by the department under 18 AAC 80.210(j).

(d) The department will not reduce the monitoring frequency under (c) of this section to less than one sample per quarter.

(e) The monitoring frequency for total coliforms for a transient non-community water system is as follows:

(1) the operator of a transient non-community water system that uses only groundwater and that is expected to serve 1,000 or fewer individuals daily shall monitor at least once each calendar quarter that the system provides water to the public;

(2) the operator of a transient non-community water system that uses only groundwater and that is expected to serve more than 1,000 individuals daily during any month shall monitor at the same frequency as a community water system or non-transient non-community water system expected to serve the same number of individuals, as specified in Table C in (b) of this section;

(3) the operator of a transient non-community water system using surface water, in whole or in part, shall monitor at the same frequency as a community water system or non-transient non-community water system expected to serve the same number of individuals, as specified in Table C in (b) of this section;

(4) the owner of a transient non-community water system using GWUDISW, in whole or in part, shall ensure monitoring at the same frequency as a community water system or non-transient non-community water system expected to serve the same number of individuals, as specified in Table C in (b) of this section; the owner shall ensure that monitoring begins at that frequency beginning six months after the department determines that the groundwater is under the direct influence of surface water.

(f) The operator of a community water system, non-transient non-community water system, or transient non-community water system shall collect the samples required under (b) and (e) of this section at regular time intervals throughout the month. However, the operator of a system using only groundwater and expected to serve 4,900 or fewer individuals daily may collect all required samples on a single day if the samples are taken from different sites.

(g) The operator of a community water system, non-transient non-community water system, or transient non-community water system that uses, in whole or in part, surface water or GWUDISW and that does not filter in accordance with 40 C.F.R. 141.73, adopted by reference in 18 AAC 80.010(a), and 18 AAC 80.600 – 18 AAC 80.699 shall collect at least one sample for total coliform analysis near the first service connection each day that the turbidity level of the source water, measured as specified in 40 C.F.R. 141.74(b)(2), adopted by reference in 18 AAC 80.010(a), exceeds one NTU. If one or more turbidity measurements in any day exceed one NTU, the operator of the system shall collect this coliform sample within 24 hours after the first measurement unless the department finds, as set out in (h) and (i) of this section, that the operator, for logistical reasons outside the operator's control, cannot have the sample analyzed within 30 hours after collection, or within 48 hours after collection for an area described in 18 AAC 80.350(a). The department will not grant a waiver described in this subsection due to a lack of sampling containers. Sample results from this coliform monitoring must be included in determining compliance with the MCL for total coliforms in 40 C.F.R. 141.63(a) – (b), adopted by reference in 18 AAC 80.010(a).

(h) The department will grant a waiver described in (g) of this section if

(1) the laboratories available to the public water system cannot analyze the sample within 30 hours after collection, or within 48 hours after collection for an area described in 18 AAC 80.350(a), because of limited days of operation or limited laboratory capacity;

(2) weather conditions prevent shipment of the sample to the laboratory and analysis within 30 hours after collection, or within 48 hours after collection for an area described in 18 AAC 80.350(a);

(3) shipping services available to the public water system are limited so that the sample cannot be shipped and analyzed within 30 hours after collection, or within 48 hours after collection for an area described in 18 AAC 80.350(a); or

(4) another unusual or unpredictable situation, such as a landslide closing the road or knocking out a transmission line, makes it impossible for the public water system to meet the 30-hour or the 48-hour requirement.

(i) After it has been established under (h) of this section that the public water system is unable to meet the 30-hour or the 48-hour requirement, the department will grant a waiver to the owner. The waiver is a written record of telephone communication with the owner describing the logistical problem. The record of the waiver will be placed in the department's water system file. If the logistical problems are likely to persist, the department will grant a standing waiver

that will remain in effect until the department rescinds or revises it. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.410. Sample siting plan review and approval. (a) The owner of a community water system, non-transient non-community water system, or transient non-community water system shall submit for department review and approval for compliance with this section a written sample siting plan that includes

(1) the public water system identification number assigned under 18 AAC 80.210(c);

(2) the name, address, telephone number, and facsimile number of the public water system;

(3) the name, address, telephone number, and facsimile number of the owner or operator or a designee;

(4) the number of routine samples required each month or quarter;

(5) the number of service connections;

(6) the size of the population served each month;

(7) a list of sites where samples will be taken during each monitoring period, and the reasons for choosing those sites; and

(8) a map of the water system showing the location of source waters and types, water treatment facilities, water storage facilities, distribution lines, pressure zones, the first service connection, pressure reducing stations, booster stations, dead ends and the last service connection, major commercial and industrial areas, and the areas, zones, or actual sites for routine sampling; the owner may provide a hand-drawn map, an as-built map, a street map, or a schematic of the water system; sampling sites must be spread throughout the system, to assure that sampling is done at sites that are representative of the public water system, and must include as many of the locations listed in this paragraph as possible; for a large system, the owner may indicate sampling sites by dividing the distribution system into sampling zones instead of pinpointing sampling taps, and may draw sampling zones according to pressure zones, areas served by a particular source water, or areas served by a particular storage or treatment facility.

(b) The total number of routine sampling sites needed to adequately cover the entire distribution system in one year may be more than the required number of monthly samples. Parts of the distribution system not sampled during one year must be covered in the next year. The owner of a community water system, non-transient non-community water system, or transient non-community water system shall provide to the department an explanation of rotating

sampling locations during those years. If the operator takes more than one sample each month, samples must be collected at evenly-spaced intervals throughout the month.

(c) For an unfiltered surface water system, a total coliform sample must be taken at the location of the first service connection shown on the map provided under (a) of this section, whenever the raw water turbidity exceeds one NTU. The department will use this sample to determine compliance with the total coliform MCL.

(d) If an operator of a community water system, non-transient non-community water system, or transient non-community water system who collects four or fewer samples per month finds a total coliform positive routine sample during that month, the operator shall collect five routine samples during the next month the public water system provides water to the public and indicate in the sampling plan where the five samples will be taken. These samples must be located throughout the distribution system.

(e) The owner of a community water system, non-transient non-community water system, or transient non-community water system shall designate at least two alternative sampling sites to be used if the sampling site chosen for a particular monitoring period is not accessible, to assure that sampling is always done according to the sample siting plan.

(f) For a community water system, non-transient non-community water system or transient non-community water system with only one service connection, the owner shall include a narrative statement indicating that the routine sample will be taken from the single service connection and addressing how repeat monitoring will be done in the case of a positive routine sample as provided in 18 AAC 80.415(a)(3). The narrative statement must also indicate the procedures to be used to collect the five routine samples required by (d) of this section in the month following a positive routine sample.

(g) The owner of a community water system, non-transient non-community water system, or transient non-community water system shall keep the approved plan in the system files. The sanitary survey inspector shall review the plan during routine sanitary surveys or during inspections triggered by total coliform positive results and shall note any deficiencies in the plan, making suggestions for improvement.

(h) If a plan submitted under this section has major deficiencies, the department will send the owner a report of these deficiencies within 30 days after receiving the plan. The owner shall submit a revised plan to the department within 30 days after receiving the report, unless the department and the owner agree in writing to another date.

(i) Before the department inspects a community water system, non-transient non-community water system, or transient non-community water system, the department will review bacteriological data to determine if the operator is sampling in more than one location in the water system. As part of the review, the department will consider changes in sampling locations, monthly spacing of samples, and frequency of monitoring. The owner may revise a sample siting plan without prior department approval, if the owner or operator documents the reasons for revising the plan and makes these records available during a sanitary survey.

(j) A sample siting plan for a community water system, non-transient non-community water system, or transient non-community water system that is classified as a system using groundwater must comply with the requirements of 40 C.F.R. 141.400 – 141.405, adopted by reference in 18 AAC 80.010(a). (Eff. 10/1/99, Register 151; am 1/11/2006, Register 177; am 4/24/2009, Register 190; am 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710
AS 46.03.050 AS 46.03.720

18 AAC 80.415. Repeat monitoring. (a) Except as provided in (b) of this section, if a routine sample is total coliform positive, the operator of a community water system, non-transient non-community water system, or transient non-community water system

(1) with more than one service connection shall collect the required number of repeat samples, as provided in (c) of this section, within 24 hours after being notified of the positive result; repeat samples must be collected on the same day;

(2) with one service connection and one tap shall collect four repeat samples, or one 400 ml repeat sample within 24 hours after being notified of the positive result; and

(3) with one service connection and more than one tap shall collect the required number of repeat samples, as provided in (c) of this section, within 24 hours after being notified of the positive result; all of the repeat samples must be collected on the same day unless the department allows the operator to collect

(A) the required number of repeat samples over a four-day period; or

(B) a larger volume repeat sample in one or more sample containers of any size in one day; the total volume collected must be at least 400 ml, or at least 300 ml for a system that collects more than one routine sample each month.

(b) The department will extend the 24-hour time limit set in (a) of this section if there is a logistical problem in collecting the repeat samples that is due to unusual and unpredictable circumstances beyond the owner's or operator's control and that makes meeting the 24-hour requirement impossible. For an extension under this subsection, the department will specify how much time the system has to collect repeat samples.

(c) For each total coliform positive sample found during routine sampling, the operator of a community water system, non-transient non-community water system, or transient non-community water system

(1) who collects

(A) two or more routine samples each month shall collect at least three repeat samples; or

(B) one routine sample or less each month shall collect at least four repeat samples; or

(2) with one service connection shall collect at least four repeat samples.

(d) The operator of a community water system, non-transient non-community water system, or transient non-community water system shall collect repeat samples as follows:

(1) if the system has two or more service connections, the operator shall collect at least one repeat sample from the tap where the original total coliform positive sample was taken, at least one repeat sample from a tap within five service connections upstream of the tap where the original total coliform positive sample was taken, and at least one repeat sample from a tap within five service connections downstream;

(2) if the system has one service connection and five or more taps, the operator shall collect at least one repeat sample from the tap where the original total coliform positive sample was taken, at least one repeat sample from the first tap, and at least one repeat sample from a tap within five taps downstream of the tap where the original total coliform positive sample was taken;

(3) if the system has one service connection and two to four taps, the operator shall collect at least one repeat sample from the first tap, at least one repeat sample from the last tap, and at least one repeat sample from the tap where the original total coliform positive sample was taken;

(4) if the system is classified as a groundwater system subject to 18 AAC 80.800, the operator, in addition to meeting the requirements of (1), (2), or (3) of this subsection, shall meet the requirements of 40 C.F.R. 141.402, adopted by reference in 18 AAC 80.010(a).

(e) If one or more samples in the set of repeat samples required under (a) of this section is total coliform positive and if the MCL for total coliforms in 40 C.F.R. 141.63(a) – (b), adopted by reference in 18 AAC 80.010(a), has not been exceeded, the operator shall

(1) collect an additional set of repeat samples as specified in (a) - (d) of this section; the additional samples must be collected within 24 hours after being notified of the positive result, unless the department extends the limit under (b) of this section; and

(2) repeat the process required in (1) of this subsection until total coliforms are not detected in one complete set of repeat samples or the department finds that the MCL for total coliforms in 40 C.F.R. 141.63(a) – (b), adopted by reference in 18 AAC 80.010(a), has been exceeded.

(f) If the operator of a community water system, non-transient non-community water system, or transient non-community water system that collects four or fewer routine samples each month has one or more total coliform positive routine samples and the department does not invalidate a sample under 18 AAC 80.425, the operator shall collect routine samples as required by this subsection. During the next month the system provides water to the public, the operator of a system with

(1) two or more service connections shall collect five routine samples;

(2) one service connection and five or more taps shall collect five routine samples; and

(3) one service connection and one to four taps shall collect five routine samples.

(g) The department will waive the requirements of (f) of this section if the conditions described in (1) or (2) of this subsection are met. The department will not waive the requirements of (f) of this section solely because all repeat samples are total coliform negative. The department will waive the requirement in (f) of this section if

(1) the department, before the end of the next month the system provides water to the public, conducts a site visit sufficiently detailed to determine whether additional monitoring or corrective action is needed; a system employee may not conduct this site visit even if that employee is an agent approved by the department under 18 AAC 80.435 to conduct sanitary surveys; a site visit under this paragraph is subject to the fee required by 18 AAC 80.1910(a)(1); or

(2) the department determines 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; the department will

(A) document in writing a decision under this paragraph to waive the following month's additional monitoring requirement;

(B) have the decision approved and signed by the supervisor of the department official who recommended the decision;

(C) make the decision available to EPA and the public; and

(D) describe the specific cause of the total coliform positive sample and describe what action the owner of the system has taken or will take to correct that problem.

(h) If the department waives the requirements of (f) of this section under (g)(2) of this section, the operator shall take at least one routine sample before the last day of the next month the system serves water to the public unless the department finds that the owner or operator corrected the problem before the operator took the repeat samples required under (a) - (e) of this section and all repeat samples were total coliform-negative.

(i) If, before learning the analytical results of a routine sample that is found to contain total coliform, the operator collects a subsequent routine sample from within five adjacent service connections of the initial sample, the operator may count the subsequent sample as a repeat rather than a routine sample. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190; am 7/25/2010, Register 195; am 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.420. Fecal total coliform and *Escherichia coli* (*E. coli*) testing and laboratory reporting. (a) If a routine or repeat sample is total coliform positive, the certified laboratory performing the analysis shall analyze that total coliform positive culture medium to determine if fecal coliforms are present, except that the laboratory may test for *Escherichia coli* instead of fecal coliforms. The laboratory shall report a positive total coliform bacteria analysis to the owner and to the department within 24 hours after obtaining the result.

(b) If the laboratory confirms the presence or absence of fecal coliforms or *Escherichia coli*, the laboratory shall notify the department, by telephone or by facsimile transmission, of those results by the close of business on the day the laboratory notifies the owner. However, if the owner is notified of the results after the department office is closed, the laboratory shall notify the department before the close of business on the next working day, but not later than 24 hours after obtaining the result. (Eff. 10/1/99, Register 151; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 47.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.425. Invalidation of total coliform samples. (a) A total coliform positive sample invalidated under this section may not be counted toward meeting the minimum monitoring requirements of 18 AAC 80.405 - 18 AAC 80.415. The department will not invalidate a total coliform positive sample because all repeat samples are total coliform negative. However, the department will invalidate a total coliform positive sample if

(1) the certified laboratory that performed the analysis establishes that improper sample analysis caused the total coliform positive result;

(2) the department, based on the results of repeat samples collected under 18 AAC 80.415(a) - (e), finds that the total coliform positive sample resulted from a domestic or other nondistribution system plumbing problem; the department will not invalidate a sample on the basis of repeat sample results

(A) unless all repeat samples collected at the same tap as the original total coliform positive sample are also total coliform positive and all repeat samples collected within five service connections of the original tap are total coliform negative; or

(B) if the community water system, non-transient non-community water system, or transient non-community water system has only one service connection; or

(3) the department has substantial grounds to determine that a total coliform positive result is due to a circumstance or condition that does not reflect water quality in the distribution system; the operator must collect all repeat samples required under 18 AAC 80.415(a) - (e) and use them to determine compliance with the MCL for total coliforms in 40 C.F.R. 141.63(a) – (b), adopted by reference in 18 AAC 80.010(a).

(b) If the department invalidates a total coliform positive sample under (a) of this section, the department will

(1) document the decision in writing;

(2) make the decision available to the EPA and the public; and

(3) describe the specific cause of the total coliform positive sample and what action the owner or operator of the system has taken or will take to correct that problem.

(c) The certified laboratory performing a total coliform analysis shall invalidate a sample in which total coliforms are not detected if the sample produces

(1) a turbid culture in the absence of gas production using an analytical method where gas formation is examined;

(2) a turbid culture in the absence of an acid reaction in the presence-absence coliform test; or

(3) confluent growth or colonies too numerous to count with an analytical method using a membrane filter.

(d) If a certified laboratory invalidates a sample under (c) of this section, the laboratory shall notify the department and the owner by telephone or facsimile within 24 hours after invalidating the sample. The operator shall collect another sample from the same location as the original sample within 24 hours after being notified of the invalidation and shall have the new sample analyzed for the presence of total coliforms. If the laboratory invalidates the new sample or a subsequent sample, the operator shall continue to re-sample within 24 hours after receiving notification of the invalidation and shall have the samples analyzed until a valid result is obtained. The department will waive the 24-hour time limit if the department determines that public health is adequately protected. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

18 AAC 80.430. Sanitary surveys. (a) The owner of a community water system, non-transient non-community water system, or transient non-community water system shall ensure that sanitary surveys addressing the eight components of a sanitary survey set out in EPA's *Guidance Manual for Conducting Sanitary Surveys of Public Water Systems; Surface Water and Ground Water Under the Direct Influence (GWUDI)*, Chapter 3, and in EPA's *Sanitary Survey Guidance Manual for Ground Water Systems*, Chapter 4, both adopted by reference in 18 AAC 80.010(b), are completed as set out in this section.

(b) Except as provided in (c) of this section, the owner of a community water system, non-transient non-community water system, or transient non-community water system shall ensure that a sanitary survey is completed, and a report filed with the department, at least every

(1) three years for a community water system; and

(2) five years for a non-transient non-community water system and a transient non-community water system.

(c) A community water system may apply to the department for recognition as a system having outstanding performance. The application must be made in writing in a format approved by the department, and must include any supporting information or documentation that the department may require. A community water system that the department determines, in writing, to have outstanding performance may have a sanitary survey conducted every five years. When determining outstanding performance, the department will consider

(1) whether the MCLs set under 18 AAC 80.300 have been violated since the last sanitary survey;

(2) whether the applicable monitoring and reporting requirements of this chapter have been violated since the last sanitary survey;

(3) whether any violations of this chapter occurred during the past six years;

(4) whether any confirmed waterborne disease outbreaks attributable to the community water system occurred during the past six years;

(5) whether the community water system practices disinfection, and if so, its disinfection practices and performance;

(6) the community water system's history of deficiencies and correction of deficiencies from its last two sanitary surveys;

(7) whether the community water system has system capacity sufficient to meet the requirements of 18 AAC 80.207;

(8) whether the community water system has a stable water source that has not experienced an interruption in supply;

(9) whether the community water system has complied with 18 AAC 80.015(c), has developed source water protection strategies based on information obtained in complying with 18 AAC 80.015(c), and has implemented or is implementing those strategies;

(10) whether the community water system has received final approval to operate in accordance with 18 AAC 80.210; and

(11) in the case of a groundwater system, whether the system has achieved 4-log treatment of viruses.

(d) No later than 30 days after completing the on-site water system inspection, a sanitary survey inspector shall provide a completed sanitary survey report to the department and to the owner

(1) on a current form provided, and in a format approved, by the department;

(2) accurately describing the results of the sanitary survey inspection.

(e) The department will reject a sanitary survey report that is incomplete or is not on a current form provided by the department. The department shall notify the sanitary survey inspector and the affected water system of the rejected sanitary survey report, and will allow the sanitary survey inspector up to 30 days after the date of notification to provide a complete sanitary survey report to both the department and the owner on a form provided by the department. If completing a rejected or incomplete sanitary survey report requires it, the sanitary survey inspector must complete another site visit to the affected public water system.

(f) If a significant deficiency is found during a sanitary survey inspection, and poses or has the potential to pose an imminent threat to public health or safety, the sanitary survey inspector shall notify, by telephone or facsimile transmission, the department of the deficiency no later than 24 hours after the deficiency is found.

(g) No later than 30 days after receiving a report of any significant deficiency under (d) or (e) of this section, or notification of any significant deficiency under (f) of this section, the department will contact the owner to determine a corrective action plan.

(h) A corrective action plan for one or more significant deficiencies

(1) must be approved by the department;

(2) must be in writing; however, if the department determines that corrective action need not be delayed for submission of a written corrective action plan, the department may waive the requirement of this paragraph, may allow the owner to propose a corrective action plan orally, and my approve the plan orally; if the department gives an oral approval, the department will issue a written confirmation of the owner’s corrective action plan no later than five days after the date of the oral approval ; in the event of an alleged discrepancy between the

oral communication and the written communication, the owner shall comply with the corrective action plan as expressed in the written confirmation;

(3) must include a schedule with one or more dates for completion of specified corrective actions, and a date for final completion of all corrective actions; unless the department requires or approves a different schedule, final completion of all corrective actions must be no later than 120 days after the date of department approval of the corrective action plan;

(4) may require the owner to notify the department within a specified time of any failure to complete specified actions under the corrective action schedule;

(5) must require the owner to notify the department no later than five days after final completion of all corrective actions; and

(6) may be amended upon written approval from the department.

(i) If an employee of the department performs a sanitary survey required under this section, the owner shall pay the fee required in 18 AAC 80.1910(a)(2)..

(j) Failure to comply with the sanitary survey requirements of this section is a monitoring violation and requires that the owner provide public notification under 18 AAC 80.1020.

(k) A person aggrieved by a decision under this section may request a hearing under 18 AAC 80.1920. (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190; am 7/25/2010, Register 195; am 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.435. Application, training, examination, and approval requirements for sanitary survey inspectors. (a) A person must be approved under this section in order to conduct a sanitary survey inspection, complete a sanitary survey report, or submit a sanitary survey report to the department. The sanitary survey inspector who conducted the sanitary survey shall sign the sanitary survey report, subject to the report certification requirements of 18 AAC 80.1900. An owner, operator, or employee of a public water system may not conduct a sanitary survey of that system.

(b) An individual applying for approval to conduct sanitary surveys must

(1) attend and successfully complete an approved sanitary survey training program for public water systems that covers standard sanitary engineering practices and principles at a level of knowledge that the department determines will adequately protect public health;

(2) submit a completed application on a current form provided by the department;

(3) pay the fee required by 18 AAC 80.1910(a)(7);

(4) submit verification that the applicant has completed the sanitary survey training program and passed the written sanitary survey examination with a score of 70 percent or more; and

(5) submit documentation showing the applicant's education, certified vocational or academic program training, credentials, and employment history demonstrating the applicant's competency to conduct sanitary surveys and prepare the reports required by this chapter, and the applicant's knowledge and understanding of drinking water systems, including

(A) water sources;

(B) treatment;

(C) distribution system;

(D) finished water storage;

(E) pumps, pump facilities, and controls;

(F) monitoring, reporting, and data verification;

(G) water system management and operation;

(H) operator compliance with department requirements; and

(I) materials and supplies.

(c) The department will evaluate the information submitted by the applicant in (b) of this section and approve or deny the applicant to conduct sanitary surveys in this state.

(d) Unless revoked under 18 AAC 80.439, an approval issued under this section is valid for two years.

(e) A person aggrieved by a decision under this section may request a hearing under 18 AAC 80.1920. (Eff. 10/1/99, Register 151; am 11/9/2006, Register 180; am 7/25/10, Register 195; am 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.438. Approval for renewal. (a) A sanitary survey inspector who seeks to renew an approval to conduct sanitary surveys must

(1) submit a completed application on a current form supplied by the department;

(2) pay the fee required by 18 AAC 80.1910(a)(8);

(3) submit verification that the applicant has completed an approved advanced refresher sanitary survey training program for public water systems and passed the written sanitary survey examination with a score of 70 percent or more;

(4) provide a list of all sanitary surveys completed by that inspector since the initial approval, or the last renewal, including the date of each survey, the public water system name, and the public water system identification number issued by the department; and

(5) provide a written update of the information previously provided under 18 AAC 80.435(b)(5) or this subsection.

(b) The department will notify the inspector within 30 days after receipt of a complete application packet required in (a) of this section of the department's approval or rejection of the renewal request.

(c) Unless revoked under 18 AAC 80.439, a renewal of an approval issued under this section is valid for two years.

(d) A person aggrieved by a decision under this section may request a hearing under 18 AAC 80.1920. (Eff. 1/11/2006, Register 177; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.439. Revocation of approval. (a) The department may revoke an approval that was issued under 18 AAC 80.435 or 18 AAC 80.438 if the department finds that

(1) fraud or deceit was used to obtain approval;

(2) the sanitary survey inspector has substantially or willfully violated a requirement of this chapter;

(3) the sanitary survey inspector failed to identify, document, or timely report a significant deficiency; or

(4) the sanitary survey inspector's performance was otherwise deficient or negligent.

(b) If the department revokes a sanitary survey inspector's approval issued under 18 AAC 80.435 or 18 AAC 80.438, the department will send the sanitary survey inspector a notice that states

(1) the grounds for the revocation;

(2) that the revocation begins 30 days after the date of the notice;

(3) that the sanitary survey inspector may not perform sanitary surveys on or after the date when the revocation begins; and

(4) that the sanitary survey inspector may appeal the revocation in accordance with 18 AAC 80.1920 within 15 days after receiving the department's notice and may request an adjudicatory hearing under 18 AAC 80.1920 within 30 days after receiving the notice.

(c) A sanitary survey inspector whose certification has been revoked under (a) of this section may not apply for re-certification for 12 months after the date of revocation and must complete the requirements of 18 AAC 80.435(b). (Eff. 1/11/2006, Register 177; am 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710
AS 46.03.050 AS 46.03.720

18 AAC 80.440. Standard sample volume. The standard sample volume required for total coliform analysis, regardless of the analytical method used, is 100 ml. (Eff. 10/1/99, Register 151)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Article 5. Lead and Copper Requirements.

Section

18 AAC 80.500. Use of lead prohibited. Except as provided under (b) of this section, an owner may use only lead-free pipes, pipe fittings, plumbing fittings, fixtures, solder, or flux in the installation or repair of

(1) a public water system; or

(2) plumbing in a residential or nonresidential facility that

(A) provides water for human consumption; and

(B) is connected to a public water system.

(b) The requirements set out in (a) of this section do not apply

(1) to leaded joints necessary to repair cast iron pipes;

(2) if pipes, pipe fittings, plumbing fittings, or fixtures, including backflow preventers, are used exclusively with nonpotable services; for purposes of this paragraph, nonpotable surfaces include manufacturing, industrial processing, irrigation, outdoor watering, and other uses where the water is not anticipated to be used for human consumption; or

(3) to toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, fire hydrants, service saddles, or water distribution main gate valves that are two inches in diameter or larger.

(c) For purposes of (a) in this section,

(1) solder and flux is lead-free if it contains not more than 0.2 percent lead;

(2) pipes, pipe fittings, plumbing fittings, and fixtures are lead-free if the maximum lead content in the pipes, pipe fittings, plumbing fittings, and fixtures is not more than a weighted average of 0.25 percent lead with respect to the wetted surfaces of the pipes, pipe fittings, plumbing fittings, and fixtures; the weighted average lead content of a pipe, pipe fitting, plumbing fitting, or fixture must be calculated using the following formula:

(A) for each wetted component, the percentage of lead in the component is multiplied by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to arrive at the weighted percentage of lead of the component;

(B) the weighted percentage of lead of each wetted component is added together, and the sum of the weighted percentages constitutes the weighted average lead content of the product;

(C) the lead content of the material used to produce wetted components will be used to determine compliance with this paragraph;

(D) for lead content of materials that are provided as a range, the maximum content of the range will be used.

(d) In (a) and (c) of this section, "fixture" includes a backflow preventer in contact with water intended for human consumption. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190; am 12/13/2014, Register 212; am 12/26/2014, Register 212)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.505. Applicability of lead and copper requirements. The requirements of 40 C.F.R. 141.80 – 141.91, adopted by reference in 18 AAC 80.010, apply to a

(1) community water system; and

(2) non-transient non-community water system. (Eff. 10/1/99, Register 151; am 1/11/2004, Register 169)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.510. General requirements. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.515. Identification of construction materials. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.520. Applicability of corrosion control treatment steps to small, medium, and large water systems. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.525. Description of corrosion control treatment steps. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.530. Source water treatment requirements. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.535. Lead service line replacement requirements. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.540. Public education and supplemental monitoring requirements. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.545. Monitoring requirements for lead and copper in tap water. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.550. Monitoring requirements for water quality parameters. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.555. Monitoring requirements for lead and copper in source water. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.560. Reporting requirements. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

18 AAC 80.565. Recordkeeping requirements. Repealed. (Eff. 10/1/99, Register 151; repealed 1/11/2004, Register 169)

Article 6. Surface Water Treatment.

Section

18 AAC 80.600. Applicability of surface water treatment requirements. The requirements of 40 C.F.R. 141.70 – 141.76, adopted by reference in 18 AAC 80.010(a), and of 18 AAC 80.600 – 18 AAC 80.699 apply only to the owner or operator of a community water system, non-transient non-community water system, or transient non-community water system using a surface water source or a GWUDISW source or to a certified laboratory that analyzes a sample from that system. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

18 AAC 80.605. GWUDISW determination. (a) The owner of a community water system, non-transient non-community water system, or transient non-community water system shall provide the information that the department considers necessary to make a determination whether to classify a water source as GWUDISW.

(b) For a new water source, the department will classify the water source based on the plans submitted under 18 AAC 80.205, the physical area proposed for the source, and other information that the department considers necessary to make the determination as to the classification of that source. The new water source may be subject to additional testing as described in (c)(5) of this section before the department makes the determination.

(c) The department will determine if a water source is GWUDISW after an evaluation of information that the department considers necessary to make that determination. The evaluation includes

(1) consideration of the source's history and current conditions, including

(A) the current physical condition of the source and the source's distance from a surface water source;

(B) the results of laboratory analyses of untreated water from the source for biological quality, turbidity, or other water quality parameters useful for comparing the source to surface water; indicators of surface water influence include

(i) positive bacteriological results from those analyses;

(ii) surface water runoff draining down the well casing; or

(iii) influence from a nearby surface water body;

(C) the history of waterborne disease outbreaks, if any; if the system using a groundwater source has experienced a waterborne disease outbreak directly related to the water source the department will classify the water source as GWUDISW; and

(D) information from past sanitary surveys;

(2) a review of the records of the water source, including wells, springs, and infiltration galleries; the department will consider

(A) construction records of the well, including the depth of the well, the type and depth of the grouting, a profile of material along the depth of the well casing, and the location and length of the screened portion of the intake; if well construction does not comply with 18 AAC 80.015 to the extent that surface water or surface contamination can directly contaminate the well water, the department will require the owner of the system to take steps to bring the well into compliance; if the owner fails to take these steps, the department will classify the water source as GWUDISW;

(B) construction records of how the water source is protected from surface runoff; if the source is not protected from surface runoff or influence, the department will require the owner of the water system to take steps to remedy the deficiency; if the owner fails to take these steps, the department will classify the water source as GWUDISW; and

(C) additional information needed by the department to make its determination;

(3) a field assessment by the department, after payment by the owner of the fee required in 18 AAC 80.1910(a)(5)(A), or a field assessment by an individual authorized to perform sanitary surveys under 18 AAC 80.435; after payment by the owner of the fee required in 18 AAC 80.1910(a)(5)(B), the department will review a field assessment by an individual authorized to perform sanitary surveys under 18 AAC 80.435; a field assessment must include

(A) the topography of the area surrounding the wellhead, spring, or infiltration gallery, including a description of whether drainage of surface water is directed away from the water source being evaluated;

(B) a thorough inspection of the wellhead and whether it complies with 18 AAC 80.015(a); for a spring or infiltration gallery, protection from surface water runoff must be noted; if well construction does not comply with the 18 AAC 80.015 to the extent that surface water or surface contamination can directly contaminate the well water, the department will require the owner or operator to bring the well into compliance; if the owner or operator fails to do so, the department will classify the water source as GWUDISW; if the water source from a spring or infiltration gallery is not protected from surface water runoff, the department will require the owner or operator to remedy the deficiency; if the owner or operator fails to do so, the department will classify the water source as GWUDISW;

(C) an evaluation of possible sources of biological contamination that could affect water quality, including the location of nearby surface waterbodies and types of waste disposal and wastewater discharges, if any; and

(D) hydrogeological evidence submitted by the owner or operator of the water system and prepared by a registered engineer or a professional geologist specializing in hydrogeology;

(4) if the department requires one, a water quality assessment by the owner or operator; the assessment must compare physical, biological, and chemical characteristics of nearby surface water to those of the groundwater source; the owner or operator shall include all data collected in the assessment and shall present the data in a format approved by the department; after the owner or operator pays the fee required in 18 AAC 80.1910(a)(5)(C), the department will review the assessment to determine whether a correlation between the two sets of characteristics exists; a correlation indicates that the source is GWUDISW; before sampling, the owner or operator shall submit for department approval a water quality assessment plan that includes

(A) the purpose of the assessment;

(B) the scope of water sources and bodies of surface water to be included in the study;

(C) the water quality parameters to be measured, including temperature, pH, conductivity, microscopic analysis, coliform analysis, and turbidity; and

(D) a list of equipment to be used and of sample locations and times;

(5) additional testing by the owner or operator, using more advanced water testing methods and analyses, if the department considers the information obtained under (1)-(4) of this subsection to be insufficient for the department to make a determination whether the source is GWUDISW; the owner or operator shall submit test methods to the department for approval before taking samples and before analysis; advanced water testing methods and analyses include, as necessary under this paragraph,

(A) microscopic analysis of the particulate matter in a water sample for surface water indicators, including algae, nematodes, insect or plant debris, and pollen;

(B) a particle count analysis that examines the number and size of particles in the surface water body and compares that data to the number and size of particles in water from the source being evaluated;

(C) an examination of the water for specific chemical tracers that indicate a surface water contaminant;

(D) specialized analyses, such as examining the source water and surface water for specific ionic ratios, or comparing the source water to other known groundwater sources; and

(E) tracers, dyes, or other tests that the department determines will provide data helpful to the department's determination.

(d) The department will keep a written record of each GWUDISW determination that the department makes, and will retain that record for 40 years after the date of the determination. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.610. Turbidity. (a) A community water system, non-transient non-community water system, or transient non-community water system that uses a surface water source or a GWUDISW source shall meet the applicable turbidity requirements in 40 C.F.R. 141.71 – 141.74, adopted by reference in 18 AAC 80.010(a).

(b) An owner or operator who submits a turbidity report to the department shall comply with the report certification requirements of 18 AAC 80.1900. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.615. General requirements. The department will not grant a variance from a requirement of 40 C.F.R. 141.70 – 141.76, adopted by reference in 18 AAC 80.010(a), or of 18 AAC 80.600 – 18 AAC 80.699. (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.620. Criteria for avoiding filtration. The requirements of 40 C.F.R. 141.71 (criteria for avoiding filtration), adopted by reference in 18 AAC 80.010(a), apply to a community water system, non-transient non-community water system, or transient non-community water system that uses a surface water source or a GWUDISW source and that seeks to avoid filtration. In addition to those requirements, the system must follow the requirements listed below when seeking to avoid filtration:

(1) under 40 C.F.R. 141.71, the owner must pay to the department the fee required under 18 AAC 80.1910(a)(3) for each initial review and approval of a complete surface water treatment rule filtration avoidance criteria determination that is conducted by the department;

(2) under 40 C.F.R. 141.71(b)(2), the annual watershed control program maintenance report submitted to the department for review and approval must

(A) be submitted on or before July 1 each year; and

(B) meet the report certification requirements of 18 AAC 80.1900;

(3) under 40 C.F.R. 141.71(b)(3), only the department will conduct the annual onsite inspection to determine whether the public water system may continue to avoid filtration; in addition,

(A) the department will prepare a report of the annual onsite inspection summarizing all findings and will provide a copy of its report to the owner within 30 days after the inspection;

(B) the owner shall pay to the department the fees required under 18 AAC 80.1910(a)(4) for the onsite inspection;

(4) the department, after making a determination under (3) of this section, will notify the owner in writing and provide an opportunity to comment on and appeal the decision under 18 AAC 80.1920;

(5) under 40 C.F.R. 141.71(b)(4), in determining whether a waterborne disease outbreak has occurred and whether the public water system was the source of the outbreak, the department will consult with the Department of Health and Social Services, division of public health; if the system is identified as the source of a disease outbreak, the department will

ascertain the physical system configuration and operating practices in place at the time of the outbreak and identify the cause of the outbreak within the public water system; the department will determine whether the physical configuration or operating practices have changed since the outbreak and whether the changes are sufficient to prevent another disease outbreak; the department will require physical changes, including the installation of alarms, automatic shutoff valves, and redundant components as the department determines necessary to prevent another outbreak, unless the department, after considering the possibility for human error, determines that operational changes alone are likely to prevent another outbreak; if further changes are required to prevent another outbreak, the department will notify the owner and will specify the nature of the required changes, a time frame for implementing the changes, and interim measures required, if any, to prevent another outbreak; if the changes are not sufficient to prevent another outbreak, the department will notify the owner in writing of the need to install treatment as required under 40 C.F.R. 141.70 – 141.76, adopted by reference in 18 AAC 80.010(a), and under 18 AAC 80.600 – 18 AAC 80.699, offering the owner an opportunity to comment on the decision, correct factual information, and appeal the decision under 18 AAC 80.1920;

(6) based on information obtained from the onsite inspection report required under 40 C.F.R. 141.71(b)(3), the department will revoke the watershed control program approval issued under 40 C.F.R. 141.71(b)(2) if the department finds that an owner does not adequately maintain or implement a watershed control program; in revoking an approval under this paragraph, the department will provide

(A) written notice to the owner describing specific deficiencies; and

(B) an opportunity for the owner to

(i) correct information and comment on the notice;

(ii) correct deficiencies within a time specified by the department; and

(iii) appeal a revocation decision under 18 AAC 80.1920;

(7) the owner may request a waiver of the requirements of 40 C.F.R. 141.71(b)(1)(iv) and 40 C.F.R. 141.71(b)(5) on the basis that the failure was not caused by a deficiency in treatment of the source water; the request must include a summary of events leading to the problem, a summary of measures taken to correct the problem, and a conclusion as to the cause of the problem, with supporting documentation; the department will investigate the failure, including an onsite visit as necessary to determine the cause, and will review the information provided by the owner; the department will issue written findings and conclusions as to the cause of a failure, the adequacy of corrective action, if any, and whether the cause was a result of a deficiency in treatment of the source water or whether the problem occurred after treatment; the department will provide the owner with an opportunity to review, comment on, and appeal the department's findings under 18 AAC 80.1920;

(8) for purposes of 40 C.F.R. 141.71(a) and (b), an event or circumstances are unusual and unpredictable if the department determines that the event or the circumstances do not have a recurrence interval or that the probability of occurrence is less than 10 percent in a year; in making the determination, the department will consider

(A) supporting information, if any, provided by the owner;

(B) whether the event or circumstances last more than a few days;

(C) whether the event or circumstances cause routinely reported water quality parameters to be exceeded;

(D) whether the owner installs modifications to the system to decrease the likelihood that the event or circumstances will reoccur; and

(E) whether an event or circumstances, or their recurrence, pose an unreasonable risk to public health. (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 9/28/2001, Register 159; am 11/9/2006, Register 180; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Editor's note: For guidance on watershed control programs, see the *Alaska Water Treatment Guidance Manual*, referenced in 18 AAC 80.010(d).

18 AAC 80.625. Public hearing on filtration determination. (a) If the department determines that a public water system must install filtration, the department will issue a notice of the department's determination to the owner of the system and will publish notice of the department's determination in a newspaper of general circulation. In the public notice, the department will

(1) describe the reasons for the determination and indicate the date by which filtration must be installed; and

(2) state that the department will hold a public hearing if the owner of the system requests a hearing or if sufficient public interest is shown.

(b) A request for a public hearing under this section must be submitted in writing to the department within 10 days after publication of notice under (a) of this section. The request must describe the requestor's interests and the aspect of the determination that is requested to be heard. If the department grants a request for public hearing, the department will publish notice of the date, time, and place of the hearing at least 10 days before the hearing.

(c) A hearing under this section does not stay the department's determination. The only aspects of the department's determination that will be heard are

(1) whether the department has correctly determined that filtration is required; and

(2) whether the department has provided reasonable time within which the owner of the public water system must install filtration. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.635. Disinfection requirements. (a) In addition to complying with the requirements of 40 C.F.R. 141.72 (disinfection), adopted by reference in 18 AAC 80.010(a), a community water system, non-transient non-community water system, or transient non-community water system that uses a surface water source or a GWUDISW source must meet the applicable requirements of this section.

(b) If the department or the EPA has not determined in writing that filtration is required,

(1) The owner of a system that does not provide filtration treatment and that uses a surface water source and is a new system must apply the disinfection treatment requirements of 40 C.F.R. 141.72(a)(3) and (4), adopted by reference in 18 AAC 80.010(a), beginning when the system starts operation after the department issues final approval to operate for the system under 18 AAC 80.210(k);

(2) the owner of a system that does not provide filtration treatment and that uses a GWUDISW source must,

(A) within six months after the department determines that the groundwater source is under the direct influence of surface water, apply the disinfection treatment requirements of 40 C.F.R. 141.72(a)(3) and (4), adopted by reference in 18 AAC 80.010(a); and

(B) within 18 months after the department determines that the groundwater source is under the direct influence of surface water, provide disinfection treatment as described in 40 C.F.R. 141.72(a)(1) and (2), adopted by reference in 18 AAC 80.010(a).

(c) For a system that does not provide filtration treatment, the department will allow automatic shutoff of delivery of water to the distribution system under 40 C.F.R. 141.72(a)(2)(ii), adopted by reference in 18 AAC 80.010(a), if

(1) the department’s evaluation of the system configuration confirms adequate protection against negative pressures in the system;

(2) provisions exist for high demand periods including fire flow requirements;

(3) the department's evaluation of the system confirms that the system has adequate distribution system storage to maintain positive pressure of at least 20 pounds per square inch for continued water use; and

(4) the department finds that automatic shutoff does not cause unreasonable risk to health or interfere with fire protection.

(d) For a system that provides filtration treatment, the department will, under 40 C.F.R. 141.72(b)(1), adopted by reference under 18 AAC 80.010(a), assess the effectiveness of the removal or inactivation of *Giardia lamblia* cysts and viruses in accordance with standard sanitary engineering practices and principles. The owner shall provide a minimum of 0.5 log *Giardia lamblia* cyst inactivation to supplement filtration and shall maintain a second treatment barrier for microorganisms. (Eff. 10/1/99, Register 151; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Editor's note: For guidance regarding standard sanitary engineering practices and principles, as addressed in 18 AAC 80.635(d), see EPA's *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources* and the *Alaska Water Treatment Guidance Manual*. Both publications are referenced at 18 AAC 80.010(d), and information about how to review or obtain them is in the editor's note to 18 AAC 80.010.

18 AAC 80.640. Disinfection requirements for systems avoiding filtration. Repealed. (Eff. 10/1/99, Register 151; repealed 4/24/2009, Register 190)

18 AAC 80.645. Disinfection requirements for filtered systems. Repealed. (Eff. 10/1/99, Register 151; repealed 4/24/2009, Register 190)

18 AAC 80.650. Filtration. (a) In addition to complying with the requirements of 40 C.F.R. 141.73 (filtration), adopted by reference in 18 AAC 80.010(a), the owner of a community water system, non-transient non-community water system, or transient non-community water system that uses conventional filtration, direct filtration, or slow sand filtration may submit a written request to the department to allow a higher turbidity level. On a case-by-case basis and if the written request includes sufficient information to allow a determination in accordance with standard sanitary engineering practices and principles, the department will determine whether to allow turbidity levels of up to

(1) one NTU for a system using conventional filtration or direct filtration under 40 C.F.R. 141.73(a), adopted by reference in 18 AAC 80.010(a);

(2) five NTUs for a system using slow sand filtration under 40 C.F.R. 141.73(b), adopted by reference in 18 AAC 80.010(a).

(b) A community water system, non-transient non-community water system, or transient non-community water system that meets the requirements in 40 C.F.R. 141.73(d), adopted by reference under 18 AAC 80.010(a), to use an alternative filtration system, and that serves fewer than 10,000 individuals, must comply with the requirements of 40 C.F.R. 141.550 – 141.553 (combined filter effluent requirements), adopted by reference in 18 AAC 80.010(a). (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Editor's note: Guidance on standard sanitary engineering practices and principles, as addressed in 18 AAC 80.650(a), may be found in the department's *Alaska Water Treatment Guidance Manual*, and in EPA's *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources.* Information about how to review or obtain these documents is in the editor's note to 18 AAC 80.010.

18 AAC 80.655. General monitoring requirements. (a) With respect to the monitoring requirements of 40 C.F.R. 141.74(b) and (c), adopted by reference under 18 AAC 80.010(a), with which the owner or operator of a community water system, non-transient non-community water system, or transient non-community water system using a surface water source or a GWUDISW source must comply, the department will

(1) under 40 C.F.R. 141.74(b)(6)(i) and (c)(3)(i), allow disinfectant residual samples to be taken at points other than the total coliform sampling points described in 18 AAC 80.400 – 18 AAC 80.425, if the department determines that those alternative points are more representative of disinfected water quality within the distribution system; to seek department approval under this paragraph for a system that uses groundwater combined with either surface water or GWUDISW, the owner must submit a request for alternate sampling locations; the request must include the disinfectant residual sample siting plan approved by the department showing each proposed alternative sampling location, a narrative rationale for relocation of the sampling site, a description or ratio of flow of groundwater and surface water at the proposed location, the mixing zone pipe length, and the velocity of flow; as a condition for approval of an alternative sampling site, the department will require additional monitoring as the department considers necessary to verify that the disinfectant residual limit of 0.2 mg/l is being met at the approved location; if heterotrophic bacteria is measured instead of residual disinfectant concentration, it must be measured as heterotrophic plate count (HPC) under 40 C.F.R. 141.74(a), adopted by reference in 18 AAC 80.010(a);

(2) for a system that does not provide filtration treatment, but for which the department has determined in writing that filtration is required, specify alternative monitoring requirements until filtration is in place.

(b) For a system required to determine a total inactivation ratio, the total inactivation ratio may be based on the $CT_{99.9}$ values in tables 1.1 – 1.6, 2.1, and 3.1 in 40 C.F.R. 141.74(b)(3), adopted by reference in 18 AAC 80.010(a), or on the CT values calculated using the following formula:

$CT = (\text{log inactivation})(5.057)(e^a)(e^b)(e^c)$
where:
log inactivation can vary from 0.5 to 3;
e = natural logarithm, approximately 2.71828;
a = -0.0693 x temperature in degrees Celsius;
b = 0.361 x pH;
c = 0.113 x chlorine concentration in mg/l;

(c) Under 40 C.F.R. 141.74(b)(2) and (c)(1), adopted by reference in 18 AAC 80.010(a), the department will approve continuous monitoring for a system if the turbidimeter is properly operated and is calibrated and validated at the frequency recommended by the manufacturer, or at least weekly, whichever is more frequent. In determining the percent of turbidity readings exceeding limits when a system uses continuous monitoring, the operator shall use the turbidity levels reading from the strip chart or other record every four hours, beginning with the reading at midnight. This method will also apply to a turbidity "event" under 40 C.F.R. 141.71(a)(2), adopted by reference in 18 AAC 80.010(a), for a system that does not provide filtration treatment.

(d) The department will not grant an exemption from the requirements of 40 C.F.R. 141.72(a)(3) or (b)(2), adopted by reference in 18 AAC 80.010(a). (Eff. 10/1/99, Register 151; am 1/11/2006, Register 177; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

18 AAC 80.660. Monitoring requirements for systems avoiding filtration. The requirements of 40 C.F.R. 141.74(b), adopted by reference in 18 AAC 80.010(a), and of 18 AAC 80.655 apply to a community water system, non-transient non-community water system, or transient non-community water system that uses a surface water source or a GWUDISW source, and that does not provide filtration treatment. In addition,

(1) the department will require that a system that uses a GWUDISW source, that does not provide filtration treatment, and that is seeking to avoid filtration under 40 C.F.R. 141.71, adopted by reference under 18 AAC 80.010(a), begin monitoring in accordance with 40 C.F.R. 141.74(b) six months after the department determines that the groundwater source is under the direct influence of surface water.

(2) the department will allow the system to substitute continuous turbidity monitoring for grab sample monitoring if the operator validates the continuous measurement for accuracy on a regular basis using a method approved under 18 AAC 80.655(c);

(3) for 40 C.F.R. 141.74(b)(3)(v) for a system using a disinfectant other than chlorine, the owner shall demonstrate to the department, through standard sanitary engineering practices and principles, that $CT_{99.9}$ values other than those specified in Tables 2.1 and 3.1 in 40 C.F.R. 141.74(b)(3) or other operational parameters are adequate to demonstrate that the system is achieving the minimum inactivation rates required by 40 C.F.R. 141.72(a)(1), adopted by reference in 18 AAC 80.010(a);

(4) the requirements in 40 C.F.R. 141.74(b)(1), for one fecal or total coliform density measurement every day the system serves water to the public and the turbidity of the source water exceeds one NTU, apply unless the department finds that the owner or operator, for logistical reasons outside the owner's or operator's control, cannot have the sample analyzed within 30 hours after collection, or within 48 hours after collection for an area described in 18 AAC 80.350(a); if the logistical problem is likely to persist, the department will grant a standing waiver that will remain in effect until the department rescinds or revises it; the department will keep a copy of the waiver in the department's file for the public water system until one year after the waiver expires or is rescinded or revised; the department will not grant a waiver from the requirement of this section because of a lack of sampling containers; for purposes of this paragraph, the department will consider any of the following situations to be logistical reasons outside the owner's or operator's control:

(A) the certified laboratories available to the system cannot analyze the samples within 30 hours after collection, or within 48 hours after collection for an area described in 18 AAC 80.350(a), because of limited days of operation or limited laboratory capacity;

(B) weather conditions make it impossible to ship the samples to the laboratory for analysis within 30 hours after collection, or within 48 hours after collection for an area described in 18 AAC 80.350(a);

(C) shipping services from the system are limited so that samples cannot be collected, shipped, and analyzed within 30 hours, or within 48 hours for an area described in 18 AAC 80.350(a);

(D) other unusual or unpredictable situations, such as a landslide closing the road or knocking out a transmission line, make it impossible for the owner or operator to meet the 30-hour or 48-hour requirement;

(5) if a circumstance described in (4)(B) – (D) of this section prevents heterotrophic plate count (HPC) sample analysis,

(A) the owner who routinely uses HPC measurements instead of distribution system disinfectant residual measurements shall notify the department; a notification must include

(i) a description of how the owner routinely has HPC samples analyzed;

(ii) the specific reason a sample cannot be analyzed as required;

(iii) a proposed disinfectant residual measurement or other plan to be used to confirm adequate disinfection in the distribution system;

(iv) a summary of disinfectant concentrations entering the distribution system; and

(v) system coliform results for the preceding month;

(B) the department will confirm that the circumstance described in (4)(B) - (D) of this section prevents HPC sample analysis and will specify an alternate method to assure adequate system disinfection by adopting or modifying the proposal submitted by the owner or specifying another method; an alternate method of assuring adequate disinfection in the absence of HPC samples will usually involve monitoring system disinfection levels as prescribed by 40 C.F.R. 141.70 – 141.76, adopted by reference in 18 AAC 80.010(a);

(C) the department will disallow the HPC method if HPC analysis is prevented for more than five percent of the required samples in any one-year period, and the department will require monitoring of system disinfectant concentrations, if disallowing the HPC method and requiring monitoring serves the interests of public health; the department will notify the owner of a decision to disallow the HPC method. (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

Editor's note: Guidance on standard sanitary engineering practices and principles, as addressed in 18 AAC 80.660(3), may be found in the department's *Alaska Water Treatment Guidance Manual.* Information about how to review or obtain this document is in the editor's note to 18 AAC 80.010.

18 AAC 80.665. Monitoring requirements for systems that provide filtration treatment. The requirements of 40 C.F.R. 141.74(c), adopted by reference in 18 AAC 80.010(a), and of 18 AAC 80.655 apply to a community water system, non-transient non-community water system, or transient non-community water system that uses a surface water source or GWUDISW source and that provides filtration treatment. In addition, under 40 C.F.R. 141.74(c)(1), the department will allow the system to

(1) substitute continuous turbidity monitoring for grab sample monitoring if the operator validates the continuous measurement for accuracy on a regular basis using a method approved under 18 AAC 80.655(c);

(2) reduce turbidity sampling frequency to once each day, for the systems described in 40 C.F.R. 141.74(c)(1), if the department finds that less frequent monitoring is sufficient to indicate effective filtration performance for the system, and if the owner

(A) submits a written request to the department, including turbidity monitoring data for the previous 12 months; and

(B) has continuously met, during those 12 months, the applicable turbidity requirements of 40 C.F.R. 141.73(b) and (c), adopted by reference in 18 AAC 80.010(a). (Eff. 10/1/99, Register 151; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.050 AS 46.03.070 AS 46.03.710 AS 46.03.720

18 AAC 80.670. Reporting and recordkeeping requirements. In addition to the requirements of 40 C.F.R. 141.75 (reporting and recordkeeping requirements), adopted by reference in 18 AAC 80.010(a), the owner or operator of a community water system, non-transient non-community water system, or transient non-community water system using a surface water source or a GWUDISW source shall comply with the following requirements:

(1) reports submitted under 40 C.F.R. 141.75 are subject to the report certification requirements of 18 AAC 80.1900;

(2) for a system that does not provide filtration treatment, and that uses

(A) a surface water source, but for which the department or the EPA has determined in writing that filtration is required, the department may specify alternative reporting requirements until filtration is in place;

(B) a GWUDISW source, the reporting requirements of 40 C.F.R. 141.75(a)(2) apply when disinfection is installed, but no later than six months after the department determines that the groundwater source is under the direct influence of surface water;

(3) for a system that provides filtration treatment, each turbidity measurement report required by 40 C.F.R. 141.75(b)(1) must include the date, time, and value of each turbidity measurement. (Eff. 10/1/99, Register 151; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.675. Reporting and recordkeeping requirements for systems avoiding filtration. Repealed. (Eff. 10/1/99, Register 151; repealed 4/24/2009, Register 190)

18 AAC 80.680. Reporting and recordkeeping requirements for filtered systems. Repealed. (Eff. 10/1/99, Register 151; repealed 4/24/2009, Register 190)

18 AAC 80.685. Department approval of onsite inspectors. Repealed. (Eff. 10/1/99, Register 151; repealed 4/24/2009, Register 190)

18 AAC 80.699. Definition for surface water treatment requirements. In 18 AAC 80.600 – 18 AAC 80.699, unless the context requires otherwise, "new" means in existence after October 1, 1999, with reference to a public water system. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Article 7. Enhanced Surface Water Treatment..

Section

18 AAC 80.700. Applicability of enhanced surface water treatment requirements. The requirements of 40 C.F.R. 141.170 – 141.175 (Subpart P: Enhanced Filtration and Disinfection), as adopted by reference in 18 AAC 80.010(a), apply to a public water system that

(1) is identified in 18 AAC 80.600; and

(2) serves 10,000 or more individuals. (Eff. 9/28/2001, Register 159; am 11/9/2006, Register 180)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.701. Applicability of long-term enhanced surface water treatment requirements. The requirements of 40 C.F.R. 141.500 – 141.571 (Subpart T - Enhanced Filtration and Disinfection—Systems Serving Fewer Than 10,000 People), as adopted by reference in 18 AAC 80.010(a), apply to a public water system that

(1) is identified in 18 AAC 80.600; and

(2) serves fewer than 10,000 individuals. (Eff. 8/19/2006, Register 179)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.702. Applicability of enhanced treatment for *Cryptosporidium* requirements. The requirements of 40 C.F.R. 141.700 - 141.723 (Subpart W - enhanced treatment for *Cryptosporidium*), adopted by reference in 18 AAC 80.010(a), apply to a public water system that is identified in 18 AAC 80.600. (Eff. 11/11/2010, Register 196)

Authority: AS 44.46.020 AS 46.03.050 AS 46.03.720
AS 46.03.020 AS 46.03.710

18 AAC 80.705. Composite correction program. (a) If the department determines that a composite correction program serves the interest of public health, the owner of a public water system identified in 18 AAC 80.700, 18 AAC 80.701, or 18 AAC 80.702 shall conduct a composite correction program to

(1) identify opportunities for improving the performance of water treatment and distribution; and

(2) implement changes that will capitalize on opportunities identified under (1) of this subsection.

(b) A composite correction program must include

(1) a comprehensive performance evaluation that

(A) is conducted by the department, upon payment of the fee required by 18 AAC 80.1910(a)(13);

(B) thoroughly reviews and analyzes a treatment plant's performance-based capabilities and associated administrative, operation, and maintenance practices;

(C) identifies factors that may adversely impact the public water system's capability to achieve compliance with this chapter;

(D) emphasizes approaches that the public water system can implement without significant capital improvements; and

(E) includes each of the following components to identify plant-specific areas for improvement:

(i) an assessment of plant performance;

(ii) an evaluation of major unit processes;

(iii) identification and prioritization of performance limiting factors;

(iv) identification of training needs in the public water system;

(v) an assessment of the applicability of comprehensive technical assistance as described in (2) of this subsection;

(vi) preparation of a written report that discusses the results of the comprehensive performance evaluation; and

(2) a comprehensive technical assistance phase, if the results of the comprehensive performance evaluation, as conducted under (1) of this subsection, indicate improved performance potential unrelated to design flaws; the comprehensive technical assistance phase includes the preparation of a report by the department that references the assessment identified in (1)(E)(v) of this subsection and that includes any recommendations or

requirements of the department; in coordination with the department, comprehensive technical assistance shall be implemented by the owner of a public water system to improve performance of the public water system; comprehensive technical assistance includes one or more of the following:

(A) a plan for implementing process control priority-setting techniques;

(B) a plan for systematically training staff and administrators in accordance with any recommendations or requirements made in the report prepared under this paragraph;

(C) a plan for systematically addressing the plant-specific areas for improvement that were identified in the comprehensive performance evaluation;

(D) a plan for implementation of any recommendations or requirements of the department made in the report prepared under this paragraph.

(c) The owner of the public water system shall comply with any requirements set by the department in the report prepared under (b)(2) of this section. (Eff. 9/28/2001, Register 159; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190; am 7/25/2010, Register 195; am 11/11/2010, Register 196)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Article 8. Groundwater Disinfection.

Section:

18 AAC 80.800. Applicability of groundwater disinfection requirements. The requirements of 40 C.F.R. 141.400 – 141.405 (Subpart S – ground water rule), adopted by reference in 18 AAC 80.010(a), apply to a community water system, non-transient non-community water system, or transient non-community water system that uses, as its water source, groundwater that is not combined with surface water or GWUDISW before treatment. (Eff. 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.810. Invalidation of fecal indicator-positive samples. (a) Under 40 C.F.R. 141.402(d), adopted by reference in 18 AC 80.010(a), the department will invalidate a fecal indicator-positive sample if

(1) the certified laboratory that performed the analysis establishes that improper sample analysis caused the positive result; or

(2) the department, based on the results of triggered source water samples collected under 40 C.F.R. 141.402(a), adopted by reference in 18 AAC 80.010(a), finds that the fecal indicator-positive sample resulted from a domestic or other nondistribution system plumbing problem; the department will not invalidate a sample on the basis of repeat sample results.

(b) If the department invalidates a fecal indicator-positive sample under (a) of this section, the department will

(1) document the decision in writing;

(2) make the decision available to EPA and the public; and

(3) describe the specific cause of the fecal indicatory-positive sample and what action the owner or operator of the system has taken or will take to correct that problem.

(c) A fecal indicator-positive sample invalidated under this section may not be counted toward meeting the additional five source water samples required under 40 C.F.R. 141.402(a)(3), adopted by reference in 18 AAC 80.010(a). (Eff. 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.820. Invalidation of samples in which fecal indicators are not detected. (a) If performing a fecal indicator analysis conducted for the purposes of a public water system's compliance with 40 C.F.R. 141.400 – 141.405, adopted by reference in 18 AAC 80.010(a), a certified laboratory shall invalidate a sample in which fecal indicators are not detected if the sample produces

(1) a turbid culture in the absence of gas production using an analytical method where gas formation is examined;

(2) a turbid culture in the absence of an acid reaction in the presence-absence coliform test; or

(3) confluent growth or colonies too numerous to count with an analytical method using a membrane filter.

(b) If a certified laboratory invalidates a sample under (a) of this section, the laboratory shall notify the department and the owner by telephone or facsimile transmission no later than 24 hours after invalidating the sample. The operator shall collect another sample from the same location as the original sample no later than 24 hours after being notified of the invalidation, and shall have the new sample analyzed for the presence of fecal indicators. If the laboratory invalidates the new sample or a subsequent sample, the operator shall continue to re-sample no later than 24 hours after receiving notification of the invalidation, and shall have the samples analyzed until a valid result is obtained. The department will waive the 24-hour time limit if the department determines that public health is adequately protected. (Eff. 5/20/2011, Register 198)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Article 9. Disinfection and Disinfection Byproducts.

Section

18 AAC 80.900. Applicability of disinfectant and disinfection byproducts requirements. The requirements of 40 C.F.R. 141.130 – 141.135 (Subpart L: Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors), as adopted by reference in 18 AAC 80.010(a), apply to a

(1) community water system that adds a chemical disinfectant to the water during any part of the drinking water treatment process for any purpose; and

(2) non-transient non-community water system that adds a chemical disinfectant to the water during any part of the drinking water treatment process for any purpose.

(3) transient non-community water system that uses chlorine dioxide as a disinfectant or oxidant. (Eff. 9/28/2001, Register 159; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.905. Applicability of initial distribution system evaluations. The requirements of 40 C.F.R. 141.600 - 141.605 (Subpart U - initial distribution system evaluations), adopted by reference in 18 AAC 80.010(a), apply to a

(1) community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light; and

(2) non-transient non-community water system that serves at least 10,000 individuals and

(A) uses a primary or residual disinfectant other than ultraviolet light; or

(B) delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light. (Eff. 11/11/2010, Register 196)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.910. Applicability of Stage 2 disinfection byproducts requirements. The requirements of 40 C.F.R. 141.620 - 141.629 (Subpart V - Stage 2 disinfection byproducts requirements), adopted by reference in 18 AAC 80.010(a), apply to a

(1) community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light; or

(2) non-transient non-community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light. (Eff. 11/11/2010, Register 196)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Article 10. Public Notification Requirements.

Section

18 AAC 80.1000. Public notification requirements. (a) The requirements of 40 C.F.R. 141.201 – 141.210 and Appendices A, B, and C to 40 C.F.R. 141, Subpart Q, adopted by reference in 18 AAC 80.010, apply to a

(1) community water system;

(2) non-transient non-community water system; and

(3) transient non-community water system. (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159 am 1/11/2004, Register 169; am 5/2/2004, Register 170)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.1005. Public notice requirements for operating under a variance or exemption. Repealed. (Eff. 10/1/99, Register 151; am 1/11/2004, Register 169; repealed 5/2/2004, Register 170)

18 AAC 80.1010. General content for public notice. Repealed. (Eff. 10/1/99, Register 151; repealed 5/2/2004, Register 170)

18 AAC 80.1015. Mandatory health effects language for public notice. Repealed. (Eff. 10/1/99, Register 151; am 9/28/2001, Register 159; am 1/11/2004, Register 169; repealed 5/2/2004, Register 170)

18 AAC 80.1020. Public notice requirements for sanitary survey violations. The owner who fails to conduct a sanitary survey required by 18 AAC 80.430 shall notify persons served by the system as required by 40 C.F.R. 141.204 – 141.205, adopted by reference in 18 AAC 80.010(a). If a public water system has a distribution system separable from other parts

of the distribution system, with no interconnections, and if the department determines that public health is adequately protected, the department will allow the owner to give public notice to only that area served by that portion of the system that is out of compliance. (Eff. 10/1/99, Register 151; am 5/2/2004, Register 170; am 11/9/2006, Register 180; am 4/24/2009, Register 190)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.1025. Reporting and public notice requirements for fluoride. Repealed. (Eff. 10/1/99, Register 151; repealed 5/2/2004, Register 170)

18 AAC 80.1030. Reporting and public notice requirements for certain unregulated contaminants. Repealed. (Eff. 10/1/99, Register 151; am 5/2/2004, Register 170)

18 AAC 80.1035. Failure to comply. (a) If the owner fails to comply with the public notification requirements of 18 AAC 80.1000 or 18 AAC 80.1020, the department may issue the required public notice on behalf of the owner. The owner shall reimburse the department the cost of issuing the public notice as specified in 18 AAC 80.1910(f)(2). Public notice by the department does not relieve the owner of the obligation to meet the requirements of 18 AAC 80.1000 and 18 AAC 80.1020.

(b) Except if a different reporting period is specified in this chapter, the owner shall report to the department within 48 hours the failure to comply with a requirement of this chapter, including failure to comply with monitoring requirements, subject to the report certification requirements of 18 AAC 80.1900. (Eff. 10/1/99, Register 151; am 5/2/2004, Register 170; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.1040. Consumer confidence reports. Consumer confidence reports must be provided in compliance with, and to the extent required by, 40 C.F.R. 141.151 – 40 C.F.R. 141.155 (Subpart O – Consumer Confidence Reports) and Appendix A to Subpart O, adopted by reference in 18 AAC 80.010(a). (Eff. 8/23/2000, Register 155; am 1/11/2006, Register 177)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

Article 11. Laboratory Certification Requirements.

Section

18 AAC 80.1100. Laboratory certification. (a) To meet the applicable analytical requirements of this chapter, analyses for inorganic, organic, radioactive, and microbiological contaminants must be performed by a laboratory holding, for the analytical method to be employed, valid certification from the department in one of the following classifications:

(1) full certification under (c)(1) of this section;

(2) interim certification under (c)(2) of this section;

(3) provisional certification under (c)(3) of this section;

(4) certification under (d) of this section of a laboratory holding certification by another certifying agency.

(b) Except as provided in (d) of this section, the department will certify a laboratory for an analytical method if the laboratory

(1) submits, in a format specified by the department, a complete application for certification specifying each method for which the laboratory wishes to be certified, along with each applicable fee under 18 AAC 80.1110;

(2) demonstrates to the department that the laboratory meets the minimum standards listed in the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, adopted by reference in 18 AAC 80.010(b);

(3) submits to the department the results of annual proficiency testing showing that the laboratory correctly analyzed proficiency testing samples for each method being certified; the testing samples shall be purchased by that laboratory from a supplier acceptable to the department; and

(4) submits to the department for review and approval a quality assurance plan that complies with the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, adopted by reference in 18 AAC 80.010(b).

(c) The department will give a laboratory that meets the requirements of (b) of this section

(1) certification for one or more methods, if

(A) the department determines that the laboratory meets each applicable criterion for that method in the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, adopted by reference in 18 AAC 80.010(b); and

(B) the laboratory has passed an onsite inspection under 18 AAC 80.1105;

(2) interim certification for one or more methods, if

(A) the department determines that the laboratory meets each applicable criterion for that method in the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, as adopted by reference in 18 AAC 80.010(b); and

(B) the laboratory has not passed an onsite inspection under 18 AAC 80.1105, the laboratory has not received an initial onsite inspection under 18 AAC 80.1105(a), or more than three years have elapsed since the date of the last onsite inspection under 18 AAC 80.1105(b) or (c) ; or

(3) provisional certification for one or more methods, if

(A) the department determines that the laboratory has not met one or more of the applicable criteria for that method in the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, adopted by reference in 18 AAC 80.010(b); and

(B) the department determines that the laboratory is capable of consistently producing data within the limits specified under this chapter.

(d) Notwithstanding (b) of this section, the department will certify a laboratory holding a current certification from another EPA-approved certifying agency if the laboratory submits each applicable fee under 18 AAC 80.1110 and verification from the certifying agency, in a form acceptable to the department, that the laboratory holds that certification and has satisfied the requirements of (b)(2) – (4) of this section with the other certifying agency, with respect to each method for which the laboratory seeks department recognition of certification by the other certifying agency. A certification under this subsection is subject to the same requirements of 18 AAC 80.1100 – 18 AAC 80.1103 and 18 AAC 80.1109 – 18 AAC 80.1110 as a certification under (b) and (c) of this section.

(e) A laboratory holding provisional certification shall notify its clients of the laboratory's provisionally certified status on any analysis report of samples to which the provisional certification pertains.

(f) Certification under this section may be obtained at any time, and is not valid after June 30, unless the laboratory renews the certification in accordance with this subjection. To request renewal of a certification under (b) and (c) of this section, the laboratory must submit a complete application for renewal, along with each applicable fee under 18 AAC 80.1110, and must satisfy the requirements of (b)(2) – (4) of this section. To request renewal of a certification under (d) of this section, the laboratory must submit a complete application for renewal, along with each applicable fee under 18 AAC 80.1110, and must submit verification from the other certifying agency, in a form acceptable to the department, that the laboratory holds that certification and has satisfied the requirements of (b)(2) – (4) of this section with the other certifying agency. If the department receives a complete application no later than May 30 for renewal, and approves that application under (b) and (c) of this section or under (d) of this section, as applicable, the renewed certification is valid on July 1. If the department receives a complete application after May 30 for renewal, and approves that application under (b) and (c) of this section or under (d) of this section, as applicable, the renewed certification is valid on July 1 or on the date that the department approves the application, whichever date is later. A renewed certification is not valid after the following June 30.

(g) No later than seven days after the first day that the certification is no longer valid, a laboratory whose certification has expired shall give written notice of the expiration to each client. The notice must include a statement that the laboratory may not submit data to the department under an expired certification. No later than 14 days after the first day that the certification is no longer valid, the laboratory shall certify to the department in writing , subject to 18 AAC 80.1900, that the notice has been given.

(h) The department may downgrade or revoke a certification under this section for one or more methods, for reasons described in the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, adopted by reference in 18 AAC 80.010(b). If another EPA-approved certifying agency revokes or downgrades the certification upon which the department based a certification under (d) of this section, the department will revoke its certification or downgrade it to a classification corresponding to the classification by the other certifying agency. If the certification upon which the department based a certification under (d) of this section expires, the department's certification under (d) of this section becomes invalid on the same date that the other certification becomes invalid. A person aggrieved by a department certification decision under this section may request a review under 18 AAC 80.1920. This subsection does not affect a person's rights under AS 44.62 (Administrative Procedure Act). (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 9/28/2001, Register 159; am 8/19/2006, Register 179; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Editor's note: Information about how to review or obtain the reference materials referred to in 18 AAC 80.1100 is in the editor's note to 18 AAC 80.010.

18 AAC 80.1103. Analytical methods for which certification may be granted. The analytical requirements and method detection limits for water contaminants are as follows:

(1) for the organic chemicals listed in 40 C.F.R. 141.61, adopted by reference in 18 AAC 80.010(a), the analytical requirements and method detection limits are set out in 40 C.F.R. 141.24(e) and (f)(17), adopted by reference in 18 AAC 80.010(a);

(2) for the disinfection byproducts listed in 40 C.F.R. 141.64(a), adopted by reference in 18 AAC 80.010(a), the analytical requirements and method detection limits are set out in 40 C.F.R. 141.131, adopted by reference in 18 AAC 80.010(a);

(3) for the inorganic chemicals listed in 40 C.F.R. 141.62, adopted by reference in 18 AAC 80.010(a), the analytical requirements and method detection limits are set out in 40 C.F.R. 141.23(a)(4)(i) and (k), adopted by reference in 18 AAC 80.010(a);

(4) for the secondary contaminants listed in 40 C.F.R. 143.3, adopted by reference in 18 AAC 80.010(a), requirements for sampling and analysis are set out in 40 C.F.R. 143.4, adopted by reference in 18 AAC 80.010(a);

(5) analyses for total coliform, fecal coliform, and *Escherichia coli* required under 18 AAC 80.400 – 18 AAC 80.440 must be conducted in accordance with 40 C.F.R. 141.21(c)(2) and (f), adopted by reference in 18 AAC 80.010(a);

(6) measurements for total coliform, fecal coliform, and heterotrophic plate count required under 18 AAC 80.600 – 18 AAC 80.699 must be conducted in accordance with 40 C.F.R. 141.74(a), adopted by reference in 18 AAC 80.010(a);

(7) analyses for lead and copper must be conducted using methods required by 40 C.F.R. 141.23(k), adopted by reference in 18 AAC 80.010(a); the practical quantitation limits for lead and copper are set out in 40 C.F.R. 141.89(a)(1)(ii) and (iii), adopted by reference in 18 AAC 80.010(a);

(8) analyses for pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature must be conducted using methods required by 40 C.F.R. 141.23(k), adopted by reference in 18 AAC 80.010(a);

(9) the analytical requirements and method detection limits for the radiological contaminants listed in 18 AAC 80.335 are set out in 40 C.F.R. 141.25, adopted by reference in 18 AAC 80.010(a). (Eff. 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.04.050

Editor's note: Information about how to review or obtain the reference materials referred to in 18 AAC 80.1103 is in the editor's note to 18 AAC 80.010.

18 AAC 80.1105. Onsite inspections. (a) After the department issues a laboratory's initial certification under 18 AAC 80.1100(c), the laboratory must receive an initial onsite inspection from the department to review the laboratory's work product and quality control systems. A laboratory's initial certification will be classified as interim certification under 18 AAC 80.1100(c)(2) until the laboratory receives and passes the initial onsite inspection.

(b) During the three-year period that starts on the date of its initial certification, and during each subsequent three-year period that starts on the day after the date of an inspection under this subsection or (c) of this section, a laboratory certified under 18 AAC 80.1100(b) and (c) must receive and pass, as a condition of maintaining certification, an onsite inspection to review the laboratory's work product and quality control systems. The inspection is in addition to the initial inspection required under (a) of this section. If a laboratory does not receive an onsite inspection in accordance with this subsection, and the laboratory qualifies for interim certification under 18 AAC 80.1100(c)(2), the laboratory's certification will be classified as interim certification until the laboratory receives and passes the inspection.

(c) Nothing in this section prevents the department from conducting, at any time under AS 46.03.020 and 46.03.860, an onsite inspection of a laboratory certified under 18 AAC 80.1100(b) and (c). The laboratory must pass the inspection as a condition of maintaining certification.

(d) If an inspection under this section indicates that the inspected laboratory is in compliance with all conditions for certification under 18 AAC 80.1100(c)(1)(A), the department will notify the laboratory in writing that it has passed the inspection.

(e) If an inspection under this section indicates that the inspected laboratory fails to maintain quality control standards as required under 18 AAC 80.1100(b)(2), or is otherwise deficient in a requirement for maintaining certification, the department will report the deficiencies to the laboratory in writing and provide an opportunity for response. Based on the results of the inspection and on the information supplied in the laboratory's response, if any, the department may revoke or downgrade certification under 18 AAC 80.1100(h). (Eff. 10/1/99, Register 151; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.1109. Reporting and recordkeeping. (a) Each laboratory certified under this section must provide sample information on a form provided by the department and must transmit sample information to the department by electronic means in an approved format.

(b) A certified laboratory performing analyses under this chapter is subject to the reporting requirements of this chapter, including the requirements of 18 AAC 80.355 and the report certification requirements of 18 AAC 80.1900.

(c) A certified laboratory shall maintain records of chemical and microbiological analyses of compliance samples, including all raw data, calculations, and quality control data, for five years or until its next onsite inspection as provided in 18 AAC 80.1105(b) is completed, whichever period is longer. Changes in ownership, mergers, closures of laboratories, or changes in certification status, including decertification, do not eliminate these requirements. Before disposing of a public water system's records, a laboratory shall notify the client water system so that the system may request copies if needed.

(d) In this section, "sample information" means the

(1) identity of the laboratory performing the analysis;

(2) identity of the water system that supplied the sample;

(3) sampling location;

(4) name of the individual who collected the sample;

(5) date and time that the sample was collected;

(6) date and time that the laboratory received the sample;

(7) sample type;

(8) name of the laboratory technician who performed the analysis;

(9) analyte code;

(10) method code;

(11) date and time of the analysis;

(12) result of the analysis, including units of measure; and

(13) method reporting limit, practical quantitation limit, or method detection limit, including units of measure, as appropriate for the contaminant for which the sample was tested. (Eff. 8/19/2006, Register 179; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

18 AAC 80.1110. Laboratory certification fees. (a) The owner or operator of a laboratory shall pay fees to the department as follows:

(1) a base fee, for initial certification or for renewal under 18 AAC 80.1100 for any method, of

(A) $150 if applying for certification under 18 AAC 80.1100(b) and (c) in one or more microbiological methods, or for renewal of that certification;

(B) $135 if applying for certification under 18 AAC 80.1100(d) in one or more microbiological methods, or for renewal of that certification;

(C) $500 if applying for certification under 18 AAC 80.1100(b) and (c) in one or more chemistry methods, or for renewal of that certification;

(D) $475 if applying for certification under 18 AAC 80.1100(d) in one or more chemistry methods, or for renewal of that certification;

(2) in addition to the base fee, a method fee as set out in (c) of this section, for initial certification or for renewal, for each method listed in 18 AAC 80.1110(c) for which the laboratory seeks to be certified.

(b) The applicable base fee is paid only one time for the period during which a certification is valid, even if the laboratory later applies for one or more certifications in additional methods during that same period.

(c) The annual method certification fees are as follows:

(1) microbiological methods, category I, consisting of enzyme substrate methods: $126 per method;

(2) microbiological methods, category II, consisting of fermentation methods, including confirmation test methods, and heterotrophic plate-count methods: $410 per method;

(3) microbiological methods, category III, consisting of membrane filtration methods, including confirmation test methods: $441 per method;

(4) chemistry methods, category I, consisting of methods using ion-selective electrode, nephelometry, or spectrophotometery, for analytes including nitrate, nitrite, o-phosphate, alkalinity, pH, odor, color, conductivity, EDTA (calcium), turbidity, hardness, chloride, fluoride, cyanide, sulfate, total dissolved solids, and foaming agents, and also consisting of radiochemistry methods, including EPA 900 series and liquid scintillation counting: $284 per method;

(5) chemistry methods, category II, consisting of analysis of inorganic chemicals, including trace metals and inorganic non-metals, using ion chromatography, atomic absorption spectroscopy, inductively coupled plasma/mass spectroscopy, including analysis for uranium by EPA 200.8, inductively coupled plasma/non-mass spectroscopy, hydride atomic absorption, and cold vapor atomic absorption: $441 per method;

(6) chemistry methods, category III, consisting of organic chemicals analysis by methods using gas chromatography, high pressure liquid chromatography or gas chromatography/mass spectroscopy, including EPA 500 series, EPA 1613, SM 6251B, SM6610, and SM 6651: $788 per method;

(7) chemistry methods, category IV, consisting of asbestos analysis by transmission electron microscopy (TEM): $1,040 per method.

(d) For conducting an onsite inspection of a laboratory under 18 AAC 80.1105(c), the department will charge an hourly fee of $64 for staff time required to prepare for and conduct the inspection, and to complete any follow-up actions required by the results of the inspection.

(e) Fees assessed under this section are nonrefundable. (Eff. 10/1/99, Register 151; am 8/19/2006, Register 179; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.720
AS 46.03.050

Article 12. Administrative Penalties.

Section

18 AAC 80.1200. Circumstances for assessing a penalty. The department may assess a penalty against an entity that violates or causes or permits to be violated a term or condition of this chapter, or a term or condition of an order, permit, approval, or certificate issued under this chapter. The penalty assessed will be stated in terms of dollars per day per violation in accordance with AS 46.03.761(g). (Eff. 9/21/2002, Register 163)

Authority: AS 46.03.020 AS 46.03.761

18 AAC 80.1210. Notice of violation. (a) Before assessing an administrative penalty under 18 AAC 80.1200 - 18 AAC 80.1290, the department will provide to the entity, by personal service or by certified mail, return receipt requested, a written notice in conformance with AS 46.03.761(b) of the violation. The department will send a copy of the notice of violation to the governing body of the community or municipality whose residents are served by the public water system.

(b) In the written notice under (a) of this section, the department will

(1) include each date of the violation;

(2) include a description of the nature of the violation, and what regulation, order, permit, approval, or certificate the entity allegedly violated;

(3) inform the entity of the amount of time allowed to correct the violation; the amount of time allowed to correct the violation will be based on

(A) the nature of the violation;

(B) whether the violation poses an immediate threat to the public health; and

(C) the public health risk factors presented by the violation;

(4) unless the violation poses an immediate threat to the public health, inform the entity that the entity may request an extension of each deadline provided in the notice of violation, if the entity submits information demonstrating that the extension is not sought for purposes of delay, the public health is adequately protected, and the required construction or alteration of facilities cannot reasonably be completed in the time allowed in the notice of violation; and

(5) if the department determines that the entity lacks the resources or expertise to obtain technical assistance from other sources, include an offer of technical assistance from the department to the entity; for purposes of this paragraph, a public water system lacks the resources or expertise to get technical assistance from other sources if

(A) the public water system is not capable of consistently producing and delivering water in compliance with this chapter; in making this determination, the department will examine the

(i) adequacy of the source water;

(ii) physical infrastructure adequacy in terms of treatment, storage, and distribution; and

(iii) ability of system personnel to operate and maintain the system adequately and otherwise implement technical knowledge;

(B) the public water system does not have the financial resources necessary to hire an independent engineer and consistently produce and deliver water in compliance with this chapter; in making this determination, the department will examine the entity’s

(i) revenue sufficiency;

(ii) creditworthiness; and

(iii) fiscal controls;

(C) the entity is not capable of providing the management structure necessary for the consistent production and delivery of water in compliance with this chapter; in making this determination, the department will examine the entity’s

(i) ownership accountability;

(ii) staffing;

(iii) organization; and

(iv) means of communication with customers, professional service providers, the department, and other regulatory agencies; and

(D) the public water system is not served by a circuit rider through a regional health corporation or the department.

(c) The department may grant an extension of the deadlines in the notice of violation if the department determines that good cause exists, based on the information that the entity submits under (b)(4) of this section.

(d) An extension granted under (c) of this section may be withdrawn if the department determines that the entity is not taking the steps necessary to achieve compliance by the extended deadline.

(e) If an offer of technical assistance made under (b)(5) of this section is not accepted within two working days after receipt of the offer, the department will assume that technical assistance is not being requested. (Eff. 9/21/2002, Register 163; am 1/11/2006, Register 177)

Authority: AS 46.03.020 AS 46.03.761

18 AAC 80.1220. Calculation of penalty. (a) Subject to (f) of this section and the limits imposed by AS 46.03.761(g), the per day per violation administrative penalty will be calculated in accordance with the following formula:

penalty = (A x B x C x $10) + D

where:

A = the point value assigned under (b) of this section;

B = the point value assigned under (c) of this section;

C = the point value assigned under (d) of this section;

D = the number determined under the formula set out in (e) of this section.

(b) For the amount "A" in the penalty formula in (a) of this section, the department will assign to the violation a point value reflecting the public health risk factor, as follows:

(1) for the following violations that have a minor effect on the public health:

(A) failure to comply with 18 AAC 80.1040 (Consumer Confidence Reports): one point;

(B) failure to meet a secondary MCL as required under 18 AAC 80.300(c): one point;

(C) a violation of the requirements under this chapter that the department determines to have a minor effect on the public health: one point;

(D) failure to submit to the department a timely certification required under 18 AAC 80.055(g) or (h): one point;

(2) for the following violations that prevent the department's assessment of safety:

(A) failure to submit to the department information required by this chapter: two points;

(B) failure to submit documentation sealed by a registered engineer if required by this chapter: two points;

(C) failure to perform routine sampling and analysis as required under 18 AAC 80.310(a), other than a failure described in (4)(A) or (4)(B) of this subsection: two points;

(D) failure to correct, within the department's specified timeframe, deficiencies found during a sanitary survey, other than significant deficiencies: two points;

(E) a violation of the requirements under this chapter that the department determines to prevent the department's assessment of safety: two points;

(3) for the following violations that could prevent the public water system from supplying drinking water to the public:

(A) construction, installation, alteration, renovation, or improvement of a public water system without approval as required under 18 AAC 80.200(b): three points;

(B) failure to operate with a certified operator in accordance with 18 AAC 80.007: three points;

(C) failure to obtain a sanitary survey in accordance with 18 AAC 80.430: three points;

(D) failure to meet the separation distance requirements of 18 AAC 80.020 without a waiver under that section: three points;

(E) a violation of the requirements under this chapter that the department determines could prevent the public water system from supplying drinking water to the public: three points;

(4) for the following violations in which a known, specific health concern exists:

(A) failure to perform routine sampling and analysis as required under 18 AAC 80.310(a) to determine compliance with a treatment technique requirement under 40 C.F.R. 141.70 – 141.73, adopted by reference in 18 AAC 80.010(a), and under 18 AAC 80.655 – 18 AAC 80.665: four points;

(B) failure to monitor for coliform bacteria, as required under 18 AAC 80.405, or to conduct nitrate and nitrite monitoring as required by 18 AAC 80.315(b)(4) – (5): four points;

(C) failure to install filtration or provide filtration treatment, if required under 18 AAC 80.650: four points;

(D) failure to cover a reservoir if required under 40 C.F.R. 141.170(c), adopted by reference in 18 AAC 80.010(a): four points;

(E) failure to meet the MCL for a contaminant for which an MCL is set under 18 AAC 80.300 other than nitrate, nitrite, or total nitrate and nitrite as set out in 40 C.F.R. 141.62(b), adopted by reference in 18 AAC 80.010(a), and other than total coliform bacteria as set out in 40 C.F.R. 141.63(a) – (b), adopted by reference in 18 AAC 80.010(a): four points;

(F) failure to perform public education or public notification, if required under 40 C.F.R. 141.85, adopted by reference in 18 AAC 80.010, or if required 40 C.F.R. 141.201 – 141.210, adopted by reference in 18 AAC 80.010, other than a failure described in (6)(I) of this subsection: four points;

(G) a violation of the requirements under this chapter for which the department determines that a known, specific health concern exists: four points;

(5) for the following violations that could result in an unapproved or deficient public water system in use:

(A) operation of a public water system without a valid final or interim approval to operate as required under 18 AAC 80.200(b) and 18 AAC 80.210(g) and (j): five points;

(B) failure to make physical modifications as required by the department under 18 AAC 80.200(e): five points;

(C) failure to correct, within the department's specified timeframe, significant deficiencies found during a sanitary survey: five points;

(D) a violation of the prohibition of cross-connections under 18 AAC 80.025(a), or failure to install, maintain, or test a backflow prevention device as required under 18 AAC 80.025(b): five points;

(E) a violation of the requirements under this chapter that the department determines could result in an unapproved or deficient public water system in use: five points;

(6) for the following violations that could result in an immediate threat to the public health:

(A) failure to perform repeat monitoring if required under this chapter: six points;

(B) failure to monitor fluoridation as required under 18 AAC 80.315 and 18 AAC 80.340: six points;

(C) failure to meet the MCL for turbidity as set under 18 AAC 80.300(b)(3): six points;

(D) failure to comply with a treatment technique requirement: six points;

(E) failure to meet the monthly coliform MCL set out in 40 C.F.R. 141.63(a) – (b), adopted by reference in 18 AAC 80.010(a): six points;

(F) failure to disinfect a newly constructed or reworked well as required under 18 AAC 80.015(b)(6): six points;

(G) failure to use a certified laboratory: six points;

(H) failure to meet the MCL for nitrate, nitrite, or total nitrate and nitrite, as set out in 40 C.F.R. 141.62(b), adopted by reference in 18 AAC 80.010(a), and as determined according to 40 C.F.R. 141.23(i)(3), adopted by reference in 18 AAC 80.010(a): six points;

(I) failure to provide public notification, as required under 40 C.F.R. 141.201 – 141.210, adopted by reference in 18 AAC 80.010, for a violation of the MCL for a contaminant or the MRDL for a disinfectant that might pose an acute risk to human health: six points;

(J) failure to meet the monitoring requirements as required under 18 AAC 80.655 – 660 for a community water system, non-transient non-community water system, or transient non-community water system that uses a surface water source or a GWUDISW source and that does not provide filtration treatment: six points;

(K) a violation of the requirements under this chapter that the department determines could result in an immediate threat to the public health: six points.

(c) For the amount "B" in the penalty formula in (a) of this section, the department will assign to the violation a point value reflecting the entity's previous record of compliance under this chapter, as follows:

(1) if, within five years before the date when the department issues a preliminary determination under 18 AAC 80.1230, a notice of violation has been issued under AS 46.03.850 for a violation under (b)(4) - (b)(6) of this section by the entity: seven points;

(2) if, within one year before the date when the department issues a preliminary determination under 18 AAC 80.1230, a notice of violation has been issued under AS 46.03.850 for a violation under (b)(1) - (b)(3) of this section by the entity: three points;

(3) if the entity's compliance history does not include circumstances described in (1) or (2) of this subsection: one point.

(d) For the amount "C" in the penalty formula in (a) of this section, the department will assign to the violation a point value reflecting the population that the entity serves, as follows:

(1) for a transient non-community water system: one point;

(2) for a non-transient non-community water system, or for a community water system with fewer than 100 service connections: two points;

(3) for a community water system with 100 - 500 service connections: three points;

(4) for a community water system with 501 - 999 service connections: four points;

(5) for a community water system with 1,000 - 9,999 service connections: five points;

(6) for a community water system with 10,000 or more service connections: six points.

(e) For the amount "D" in the penalty formula in (a) of this section, the department will assign a number calculated in accordance with the following formula:

D = (economic savings + department's reasonable costs) ÷ number of days of violation

(f) The department may increase or decrease the penalty computed under the formula in (a) of this section based on the consideration of the following factors:

(1) whether the violation prevented the entity from supplying drinking water to the public;

(2) the extent to which the violation reduced the quality of water being provided to the public;

(3) the extent to which the violation negatively impacted the integrity of the source;

(4) the likelihood that the penalty amount will deter future violations of this chapter by the entity subject to the penalty;

(5) whether the entity achieved compliance with the violated requirement within the shortest feasible time, taking into consideration

(A) the cost of compliance;

(B) the availability of professional or technical personnel;

(C) the availability of materials and equipment; and

(D) the extent to which major construction or alteration of facilities was needed to bring the public water system into compliance with applicable statutes and this chapter;

(6) whether the expenditures that would have prevented or minimized the violation are relatively small in comparison to the overall investment in infrastructure by the public water system;

(7) whether any delay in compliance was out of the control of the entity; for purposes of this paragraph, a delay out of the control of the entity includes a delay

(A) because parts or chemicals that had been timely ordered by the entity were on back order or delayed in transit;

(B) due to circumstances beyond the entity's reasonable control and ability to foresee, and despite the due diligence of the entity; for purposes of this subparagraph, circumstances beyond the entity's reasonable control and ability to foresee

(i) include war, riots, and acts of God; and

(ii) do not include increased costs of compliance with this chapter, or reasonably foreseeable seasonal fluctuations in the weather conditions of the region; and

(C) due to the timing of regular flights or other freight transportation into the community where the public water system is located;

(8) whether the entity knowingly violated the regulations, order, permit, approval, or certificate of the department. (Eff. 9/21/2002, Register 163; am 1/11/2004, Register 169; am 5/2/2004, Register 170; am 1/11/2006, Register 177; am 4/24/2009, Register 190; am 8/20/2012, Register 203)

Authority: AS 46.03.020 AS 46.03.761 AS 46.03.850

18 AAC 80.1230. Issuance of preliminary determination. (a) If the entity does not correct the violation within the time allowed under 18 AAC 80.1210(b)(3), the department will make a preliminary determination to assess an administrative penalty. The department will provide to the entity, by personal service or by certified mail, return receipt requested, a written notice of the preliminary determination. The department will send a copy of the notice of the preliminary determination to the governing body of the community or municipality whose residents are served by the public water system.

(b) In the written notice of preliminary determination under (a) of this section, the department will

(1) include each date of each violation;

(2) include a description of the nature of the violation;

(3) list the regulations, order, permit, approval, or certificate that the entity violated;

(4) explain why the department is assessing a penalty;

(5) calculate, in accordance with 18 AAC 80.1220, the amount of the proposed administrative penalty per day per violation;

(6) calculate the number of days in violation;

(7) state that the entity may, within 10 days after receipt of the notice of preliminary determination, request in writing reconsideration of the preliminary determination to assess the penalty, but that a request for reconsideration may not be based upon the amount of technical assistance offered to the entity or whether the department offered technical assistance to the entity;

(8) state that the request for reconsideration submitted under (7) of this subsection must include

(A) information regarding the extent to which the violation has been abated or partially abated;

(B) information whether the violation was out of the entity's control, including information regarding the unavailability of professional or technical personnel or of materials and equipment; and

(C) additional relevant information that was

(i) not initially available to the department; or

(ii) initially available to the department, but that the department overlooked;

(9) inform the entity that the entity may seek an extension of the 10-day period for making a request for reconsideration; the department will describe the requirements of (c)(1) - (c)(2) of this section; and

(10) state that if the department does not receive a timely request for reconsideration, or if after reconsideration the department determines that a penalty should be assessed, the department will issue a notice of assessment and assess the penalty.

(c) An entity may request reconsideration of a preliminary determination made by the department. The request for reconsideration must be made in writing and received by the department within 10 days after the entity’s receipt of the notice of preliminary determination, or within the time period allowed in any extension granted by the department under this subsection. The request for reconsideration may not be based upon the amount of technical assistance offered to the entity or whether the department offered technical assistance to the entity. The department will extend the 10-day period for making a request for reconsideration if

(1) the entity requests an extension within the 10-day period; and

(2) the department determines that

(A) the extension is not sought for purposes of delay;

(B) good cause is shown for the extension; and

(C) the public is adequately protected.

(d) If an entity timely submits a request for reconsideration under (c) of this section, the department will base reconsideration on the information submitted in accordance with (b)(8) of this section. (Eff. 9/21/2002, Register 163; am 1/11/2006, Register 177)

Authority: AS 46.03.020 AS 46.03.761 AS 46.03.850

18 AAC 80.1240. Notice of assessment. (a) If the department does not receive a timely request for reconsideration in accordance with 18 AAC 80.1230(c) - (d), or if after reconsideration the department determines that the penalty should be assessed, the department will provide to the entity, by personal service or by certified mail, return receipt requested, a written notice of assessment.

(b) In the written notice of assessment under (a) of this section, the department will

(1) include instructions for contesting and appealing the assessment, including instructions substantially as follows: "The entity has 45 days to file a notice with the department contesting the proposed penalty. If, within 45 days after receiving the notice of assessment issued by the department, the entity fails to file a notice contesting the proposed penalty, the proposed penalty is considered a final order not subject to review by the superior court. If the entity contests the proposed penalty by filing a notice with the department, the department will afford an opportunity for a hearing in accordance with 18 AAC 15.195 - 18 AAC 15.340. After an opportunity for a hearing, the department will issue an order, based upon findings of fact, affirming, modifying, or rescinding the administrative penalty.";

(2) include each date of each violation, a list of the regulations, orders, permits, approvals, or certificates violated, the amount of the proposed administrative penalty per day per violation, and the total amount of the proposed penalty; and

(3) inform the entity that the entity may seek an extension of the 45-day period for filing a notice of intent to contest the proposed administrative penalty; the department will describe the requirements of (c)(1) - (c)(2) of this section.

(c) If the entity notifies the department in writing, within 45 days after receiving the notice of assessment, or within the time period allowed in any extension granted by the department under this subsection, of the intent to contest the proposed administrative penalty, the department will conduct an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. The department will extend the 45-day period for filing a notice of intent if

(1) the entity requests the extension within the 45-day period; and

(2) the department determines that

(A) the extension is not sought for purposes of delay;

(B) good cause is shown; and

(C) the public is adequately protected.

(d) If the entity does not notify the department in writing, within 45 days after receiving the notice of assessment, or within the time period allowed in any extension granted by the department under (c) of this section, of the intent to contest the proposed administrative penalty, the proposed penalty is considered a final order that is not subject to review by the superior court, and is immediately due to the department. If a penalty is not paid within 30 days after the date that the notice of assessment becomes a final order, the department may bring an action to collect the penalty, interest, and full reasonable attorney fees and costs. (Eff. 9/21/2002, Register 163)

Authority: AS 46.03.020 AS 46.03.761

18 AAC 80.1250. Department order after hearing. (a) After affording an opportunity for a hearing under 18 AAC 15.195 - 18 AAC 15.340, the department will issue an order in writing affirming, modifying, or rescinding an administrative penalty. In the order, the department will include text that reads substantially as follows: "This administrative order is the final agency decision. The entity may obtain judicial review of this administrative penalty order by filing a notice of appeal in the superior court in the [number of the judicial district] judicial district at [address of the court] within 30 days from the date that the decision appealed from is mailed or otherwise distributed as provided by the Alaska Rule of Appellate Procedure 602. An administrative penalty order becomes final and is not subject to review by a court if an appeal is not timely filed with the superior court."

(b) If a penalty is not paid within 30 days after the date that the administrative penalty order becomes a final order by virtue of not being appealed to the superior court, the department may bring an action to collect the penalty, interest, and full reasonable attorney fees and costs. (Eff. 9/21/2002, Register 163)

Authority: AS 46.03.020 AS 46.03.761

18 AAC 80.1290. Definitions. In 18 AAC 80.1200 – 18 AAC 80.1290, unless the context requires otherwise,

(1) "department's reasonable costs" means the following costs that can reasonably be attributed to the violation:

(A) the number of hours, multiplied by $64, that department employees worked in the detection, investigation, and attempted correction of the violation;

(B) administrative costs;

(C) travel costs;

(D) the cost of collecting, transporting, and analyzing samples paid for or performed by the department;

(E) the cost of contracted services related to the detection, investigation, and attempted correction of the violation;

(2) "economic savings" means the sum that an entity would have been required to expend for the planning, acquisition, construction, installation, and operation of a facility necessary to ensure compliance with the standard violated;

(3) "entity" has the meaning given in AS 46.03.761(l);

(4) "immediate threat to the public health" has the meaning given the term "acute risk" in 18 AAC 80.1990(a);

(5) "number of days of violation" means the number of days between the entity's receipt of the notice of violation under 18 AAC 80.1210 and the date

(A) of correction of the violation; or

(B) on which the department issues a notice of preliminary determination under 18 AAC 80.1230, if the violation has not yet been corrected. (Eff. 9/21/2002, Register 163; am 1/11/2006, Register 177; am 7/25/2010, Register 195)

Authority: AS 46.03.020 AS 46.03.761 AS 46.03.850

Article 13. General Provisions.

Section

18 AAC 80.1900. Report certification requirements. (a) An owner, an operator, another responsible person or a sanitary survey inspector approved under 18 AAC 80.435 or 18 AAC 80.438, shall certify by signature that the information and data contained in a report, certification or other document required to be filed under this chapter are true and correct to the best of the signer's knowledge and belief.

(b) If an owner, operator, other responsible person or sanitary survey inspector knowingly signs and files with the department a report, certification, or other document that contains false information, the department may revoke or downgrade any certification or approval issued to that individual, including operator certification under 18 AAC 74.830, sanitary survey inspector approval under 18 AAC 80.439, or laboratory certification under 18 AAC 80.1100(h) or may apply other penalties. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190; am 5/20/2011, Register 198; am 8/20/2012, Register 203)

Authority: AS 46.03.020 AS 46.03.710 AS 46.03.761
AS 46.03.050 AS 46.03.720

18 AAC 80.1905. Recordkeeping requirements. Repealed. (Eff. 10/1/99, Register 151; am 1/11/2006, Register 177)

18 AAC 80.1910. Fees. (a) The owner of a public water system, or an individual receiving approval under (7) or (8) of this subsection, shall pay a fee to the department as follows:

(1) for each onsite inspection of a public water system by the department under AS 46.03.020(6), 46.03.860, or this chapter, unless a more specific fee for a visit, inspection, or examination is provided in this section: $64 per hour;

(2) for each sanitary survey conducted by the department under AS 46.03.020(6) or 18 AAC 80.430 for a water system that

(A) uses a groundwater source, for

(i) the first source: $398; and

(ii) each additional source: $117;

(B) uses a surface water source or a GWUDISW source, for

(i) the first source: $585; and

(ii) each additional source: $117;

(C) uses a combination of sources, for

(i) one surface water source and one groundwater source: $585; and

(ii) each additional surface water or groundwater source: $117;

(D) is a consecutive public water system: $257; or

(E) is a water hauler: $205;

(3) for each initial review and approval of a complete surface water treatment rule filtration avoidance criteria determination under 18 AAC 80.620: $1,697;

(4) for each annual onsite inspection and report under 18 AAC 80.620(3) of a public water system seeking to maintain filtration avoidance, for

(A) inspecting the first source: $626; and

(B) inspecting each additional source: $117;

(5) for each determination of whether a system is served by groundwater or GWUDISW,

(A) if the department does a field assessment under 18 AAC 80.605(c)(3): $720;

(B) if the department reviews, under 18 AAC 80.605(c)(3), a field assessment performed by an individual authorized to perform sanitary surveys under 18 AAC 80.435: $100; and

(C) if the department requests and reviews a water quality assessment provided by the owner under 18 AAC 80.605(c)(4): $720;

(6) for each monitoring waiver application for contaminants listed in 40 C.F.R. 141.61(c), adopted by reference in 18 AAC 80.010(a),

(A) for a new waiver, for processing the application: $99;

(B) for a new waiver, in addition to the processing fee required in (A) of this paragraph, one of the following fees for reviewing the application:

(i) if a synthetic organic chemical is not used or has not been used in the waiver review area: $257;

(ii) if a synthetic organic chemical is used or has been used in the waiver review area: $708;

(C) for renewal of an existing waiver, for processing the application: $99;

(D) for renewal of an existing waiver, in addition to the processing fee required in (C) of this paragraph, if a substantial change in the waiver review area has occurred since the existing waiver was issued, one of the following fees for reviewing the application:

(i) if a synthetic organic chemical is not used or has not been used in the waiver review area: $257;

(ii) if a synthetic organic chemical is used or has been used in the waiver review area: $708;

(7) for each initial application for approval under 18 AAC 80.435 of a sanitary survey inspector: $293;

(8) for each application for biennial renewal of an approval under (7) of this subsection: $204;

(9) for each review by the department of documentation submitted for a designation of optimal corrosion control treatment under 40 C.F.R. 141.82(d), adopted by reference in 18 AAC 80.010(a): $842;

(10) for each review of an application for approval of an innovative technology or device under 18 AAC 80.225: $796;

(11) for each request for a waiver of the minimum separation distance required under 18 AAC 80.020,

(A) other than a waiver described in (B) of this paragraph: $585;

(B) for a waiver of the separation distance between a water line and a sewer line: $585 for each 1,000 consecutive linear feet of water pipe or part of that length;

(12) for each review of a request for extension of time under the construction and operation certificate provided for in 18 AAC 80.210: $193;

(13) for each comprehensive performance evaluation conducted by the department under 18 AAC 80.705(b)(1): $64 per hour.

(b) The owner of a public water system shall pay a fee to the department when engineering plans are submitted for approval under 18 AAC 80.200 - 18 AAC 80.220, as follows:

(1) for a community water system or non-transient non-community water system

(A) that uses a groundwater source without treatment and serves

(i) 25 – 150 individuals: $971;

(ii) 151 – 1,000 individuals: $1,837;

(iii) more than 1,000 individuals: $3,627; or

(B) that uses a water source with a treatment technique requirement and serves

(i) 25 – 150 individuals: $1,404;

(ii) 151 – 1,000 individuals: $2,258;

(iii) more than 1,000 individuals: $4,224;

(2) for a transient non-community water system for which engineering plans are required under 18 AAC 80.200(b), and that uses a

(A) groundwater source without treatment: $491; or

(B) water source with treatment: $797;

(3) if surface water or GWUDISW is a source for the system, and in addition to any fee required under (1) or (2) of this subsection: $468;

(4) for a Class C public water system registration under 18 AAC 80.200(i): $75.

(c) A person seeking department approval of a modification or revision to a public water system that has been approved under 18 AAC 80.200 - 18 AAC 80.220 shall pay a fee to the

department for the plan review based on the percentage increase in the design parameters over the previously established parameters for which approval was granted. The department will require an hourly fee of $64 for a plan review under this section if assessment of an hourly fee results in a total fee that is less than the fee that would be applicable under (1) - (3) of this subsection. If the increase in parameters is

(1) no more than 20 percent, the fee is 20 percent of the fee applicable to the pre-modification parameters under (b)(1) or (2) of this section;

(2) over 20 percent but no more than 50 percent, the fee is the equivalent percentage of the fee applicable to the pre-modification parameters under (b)(1) or (2) of this section;

(3) more than 50 percent, the fee is 100 percent of the fee applicable to the pre-modification parameters under (b)(1) or (2) of this section.

(d) The owner of a public water system shall pay a fee to the department for applying for approval to replace a distribution main, extend a distribution main, replace a source water transmission line, or extend a source water transmission line, as follows:

(1) for 1,000 feet or less: $386;

(2) for greater than 1,000 feet: $386 plus $117 for each 1,000-foot increment or part of that increment over the first 1,000 feet.

(e) A person applying for a variance, an exemption, a variance extension, or an exemption extension shall pay the applicable fee to the department, as follows:

(1) for a variance: $878;

(2) to extend a variance: $585;

(3) for an exemption: $878;

(4) to extend an exemption: $585.

(f) An owner of a public water system shall reimburse the department for expenses incurred by the department, as follows:

(1) if an owner applies for a variance under 18 AAC 80.370, a variance under 18 AAC 80.371, or an exemption under 18 AAC 80.375,

(A) the cost to publish the public notice; and

(B) an hourly fee of $64 to prepare the public notice and to prepare for and conduct a public hearing;

(2) if the department issues, under 18 AAC 80.1035, a required public notice on behalf of an owner: the cost to publish the public notice;

(3) if, to secure compliance by a public water system with this chapter, the department reasonably incurs any direct cost, not including travel, for inspecting, investigating, monitoring, sampling, testing, or analyzing any part of that public water system: the department's direct costs , not including travel expenses, and not to exceed $5,000; if activities subject to a fee under this paragraph include one or more inspections, the fee under this paragraph is in addition to the hourly fee under (a)(1) of this section, and applies to direct costs not already covered under (a)(1) of this section.

(g) A fee required under this section for an application or request must be submitted with the application or request for which it is required. A fee is not refundable if the department denies the application or request. If, after an application or request has been denied, the applicant submits a new application or request for the same purpose, the required fee must accompany the new application or request. If a fee required under (a), (c), or (f) of this section is to reimburse the department for time spent or expense incurred, the department will invoice the owner of the affected public water system. An invoice for reimbursement is payable upon receipt.

(h) A person who disputes the determination or computation of a fee under this section may request a fee review under 18 AAC 15.190. (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 9/28/2001, Register 159; am 7/11/2002, Register 163; am 1/11/2004, Register 169; am 5/2/2004, Register 170; am 1/11/2006, Register 177; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 44.46.025 AS 46.03.050 AS 46.03.720
AS 46.03.020 AS 46.03.710

18 AAC 80.1915. Public interest waiver. (a) The department will waive a fee for performing an inspection or analysis under this chapter if the department finds that

(1) after conducting an inspection or analysis in response to a complaint, the complaint was unfounded;

(2) a public health or environmental emergency exists, and an inspection or analysis at no cost to the owner is needed to meet the emergency; or

(3) an inspection or analysis is necessary to prevent a public health or environmental emergency, and charging a fee for that inspection or analysis would not be in the public interest.

(b) A circumstance listed in (a) of this section does not constitute an automatic fee waiver. (Eff. 10/1/99, Register 151; am 4/24/2009, Register 190; am 7/25/2010, Register 195)

Authority: AS 44.46.025 AS 46.03.050 AS 46.03.720
AS 46.03.020 AS 46.03.710

18 AAC 80.1920. Appeals. (a) Within 15 days after receiving the department's decision concerning plans submitted for approval under 18 AAC 80.200 - 18 AAC 80.220, a classification under 18 AAC 80.200(a), a waiver, a variance, an exemption or any other decision under this chapter, the applicant, owner or operator, or other person adversely affected by the decision may request an informal review of the decision under 18 AAC 15.185, and may, within 30 days, request an adjudicatory hearing under 18 AAC 15.195 – 18 AAC 15.340.

(b) Repealed 7/11/2002.

(c) Repealed 7/11/2002. (Eff. 10/1/99, Register 151; am 7/11/2002, Register 163; am 1/11/2006, Register 177)

Authority: AS 46.03.020 AS 46.03.070 AS 46.03.720
AS 46.03.050 AS 46.03.710

18 AAC 80.1990. Definitions, abbreviations, and symbols. (a) Unless the context indicates otherwise, in this chapter

(1) "acute risk" means a possible source of a hazard, danger, loss, or injury that could quickly affect public health;

(2) "ANSI" means the American National Standards Institute, Inc.;

(3) "approved" and "approval" mean approved by or the approval of the department;

(4) "aquifer" means a formation, a group of formations, or part of a formation that contains sufficient saturated permeable material to yield economical quantities of water to wells and springs;

(5) "AWWA" means the American Water Works Association;

(6) "backflow" means the flow, in a direction opposite to the normal flow, of a foreign liquid, gas, or substance into the collection or distribution system of a public water system;

(7) "best available technology" means the best technology, treatment technique, or other means that the department finds is available, after examining it for effectiveness under field conditions and laboratory conditions, and after taking cost into consideration;

(8) “bottled water” means water that is sealed in bottles or other containers and intended for human consumption;

(9) "cathodic protection well" means an artificial excavation to install equipment or facilities for the protection of metallic equipment in contact with the ground;

(10) "certified laboratory" means a laboratory certified by the department under 18 AAC 80.1100 - 18 AAC 80.1110 or by the EPA;

(11) “chloramines” means a group of chlorine ammonia compounds formed when chlorine combines with ammonia or organic nitrogen in the water;

(12) repealed 4/24/2009;

(13) repealed 4/24/2009;

(14) "Class C public water system" means a public water system that is not a community water system, a non-transient non-community water system, a transient non-community water system, or a private water system;

(15) “cleanout” has the meaning given in 18 AAC 72.990;

(16) "coagulation" means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs;

(17) "coliform" means

(A) aerobic and facultative anaerobic, gram-negative, non-spore-forming, rod-shaped bacteria that ferment lactose with gas production within 48 hours at 35 degrees Celsius;

(B) aerobic and facultative anaerobic, gram-negative, non-spore-forming, rod-shaped bacteria that produce a dark colony with a metallic sheen within 24 hours at 35 degrees Celsius on an Endo-type medium containing lactose; and

(C) those organisms able to produce the enzyme beta-galactosidase which hydrolyzes substrate present in a chemically defined medium according to EPA approved methods listed in the *Manual for the Certification of Laboratories Analyzing Drinking Water*, adopted by reference in 18 AAC 80.010(b), and in accordance with 40 C.F.R. 141.21(f);

(18) "combination-source system" means a public water system that uses a combination of two or more of the following as source water:

(A) a groundwater source;

(B) a surface water source;

(C) a GWUDISW source;

(19) “combined chlorine” means the concentration of residual chlorine that is combined with ammonia, organic nitrogen, or both in water as a chloramine or other chloroderivative;

(20) "community sewer line" means that portion of a sewerage serving

(A) one or more multi-family dwellings;

(B) a mobile home park, a trailer park, or a recreational vehicle park;

(C) two or more

(i) single-family homes or duplexes;

(ii) commercial establishments;

(iii) industrial establishments; or

(iv) institutions; or

(D) a combination of two or more of the structures listed in (C)(i) – (iv) of this paragraph;

(21) “community water system” means a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents;

(22) "compliance cycle" means the nine calendar-year cycle during which the owner or operator of a public water system must monitor; the first compliance cycle begins January 1, 1993 and ends December 31, 2001; the second compliance cycle begins January 1, 2002 and ends December 31, 2010; the third compliance cycle begins January 1, 2011 and ends December 31, 2019;

(23) "compliance period" means a set three-year calendar-year period during which the owner or operator of a public water system must monitor; three compliance periods make up a compliance cycle; the first compliance period is the first three calendar years of a compliance cycle; the second compliance period is the middle three calendar years of a compliance cycle; the third compliance period is the last three calendar years of a compliance cycle;

(24) "composite sample" means a sample created by a certified laboratory by mixing equal parts of water from up to five different samples;

(25) “compositing” means using or creating a composite sample;

(26) “composite correction program” means a program that includes a comprehensive performance evaluation and a comprehensive technical assistance activity;

(27) “comprehensive technical assistance” means the performance improvement phase

(A) that is implemented if the comprehensive performance evaluation results indicate improved performance potential; and

(B) during which identified plan-specific factors are systematically addressed and eliminated;

(28) "confirmation sample" means a second sample collected at the same sampling point as the first sample and used for re-analysis;

(29) "confluent growth" or "CG" means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion of one, in which bacterial colonies are not discrete;

(30) "consecutive public water system" means a public water system that is provided water by another public water system;

(31) "contaminant" means a physical, chemical, biological, or radiological substance or material in water that, in sufficient quantity, makes water unfit for human consumption;

(32) "contamination" means the presence in water of

(A) a contaminant at a level exceeding a maximum contaminant level set by 18 AAC 80.300 or the lead or copper action level established under 40 C.F.R. 141.80, adopted by reference in 18 AAC 80.010; or

(B) any other contaminant in sufficient quantity to make the water unfit for human consumption;

(33) "conventional filtration treatment" means a series of processes that results in substantial particulate removal; “conventional filtration treatment” includes coagulation, flocculation, sedimentation, and filtration;

(34) "corrosivity" means the tendency of internal water to oxidize piping and appurtenances; a noncorrosive water is characterized by a slightly positive Langelier index, a driving force index greater than 1.0, or an aggressive index greater than or equal to 12.0 for asbestos-cement pipe;

(35) repealed 5/20/2011;

(36) "cross-connection" means a physical arrangement by which a public water system is connected, directly or indirectly, with an unapproved water system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device that contains, or might contain, wastewater or other substances of unknown or unsafe quality that might be capable of contaminating the water supply through backflow; “cross connection” includes a bypass arrangement, jumper connection, removable section, swivel or change-over device, and other temporary, permanent, or potential connection through which, or because of which, backflow could occur;

(37) "CT” or “CTcalc" means the result obtained by multiplying the residual disinfectant concentration (C), in mg/l, determined before or at the first customer, and the corresponding disinfectant contact time (T), in minutes;

(38) "$CT_{99.9}$" is the CT value required for 99.9 percent (3-log) inactivation of *Giardia lamblia* cysts;

(39) "decommission" means to fill or plug a well so that it is rendered unproductive and does not produce water or serve as a channel for water movement;

(40) “deficiency” means a condition of a public water system , or an action or omission of an owner or operator of a public water system, that directly or indirectly causes, or has the potential to cause,

(A) a risk to public health

(B) an unplanned interruption of service in the public water system; or

(C) any deviation from professional standards of engineering, sanitation or public health applicable to public water systems;

(41) “demonstrate” or “demonstration” means to prove or proof through documentation or other evidence to the department’s satisfaction;

(42) "department" means the Alaska Department of Environmental Conservation;

(43) “design criteria” means information and numerical data such as rates, loadings, and other parameters upon which a specific facility design is based; “design criteria” include

(A) engineering guidelines that specify construction details and materials; and

(B) objectives, results, or limits that a facility, structure, or process must meet in the performance of its intended function;

(44) “detected” means that the analytical result exceeds the detection limit specified for the method used to analyze a contaminant;

(45) "diatomaceous earth filtration" means a filtration process in which

(A) particles are substantially removed from the water; and

(B) water is passed through a precoat cake of diatomaceous earth filter media that is deposited on a support membrane while additional filter media known as body feed are continuously added to the feed water in order to maintain the permeability of the filter cake;

(46) "direct filtration" means a series of processes, including coagulation and filtration, that result in substantial particulate removal; “direct filtration’ does not include sedimentation;

(47) "director” means the director of the department’s division assigned to environmental health;

(48) "disinfectant" means an oxidant or equivalent agent that is intended to inactivate pathogenic microorganisms and that is added to water during the treatment or distribution process; “disinfectant” includes chlorine, chlorine dioxide, chloramines, and ozone;

(49) "disinfectant contact time" means

(A) if only one measurement is taken of residual disinfection concentration the time in minutes for water to move from the point of disinfectant application to a point before or at the point of the measurement;

(B) if more than one measurement is taken of residual disinfectant concentration,

(i) for the first measurement, the time in minutes for water to move from the first or only point of disinfectant application to a point before or at the point of the first measurement; and

(ii) for subsequent measurements, the time in minutes for water to move from the previous measurement point to the measurement point for which

the particular disinfectant contact time is being calculated;

(C) for pipelines, the result obtained by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe; and

(D) for mixing basins and storage reservoirs, the result determined by tracer studies or an equivalent demonstration;

(50) "disinfection" means a process that inactivates pathogenic organisms in water by chemical oxidants or equivalent agents;

(51) "distribution system" means post-treatment storage facilities, conduits, mains, lines, fixtures, pumping stations, or other devices used to carry water to the consumer;

(52) "domestic or other nondistribution system plumbing problem" means, in a public water system with more than one service connection, a coliform contamination problem that is limited to the specific service connection from which the coliform positive sample was taken;

(53) “DPD” means N-N-diethyl-p-phenylenediamine;

(54) "drinking water” means water that is provided for human consumption;

(55) "duplex" means a single structure designed to house two single-family dwelling units;

(56) "engineering plans" means a set of plans signed and sealed, and dated by a registered engineer;

(57) "EPA" means the United States Environmental Protection Agency;

(58) "fill-and-draw system" means a water system where the storage tanks are filled with treated water on an intermittent basis, while water is drawn as needed from the storage tanks;

(59) "filtration" means a process to remove particulate matter from water by passage through porous media;

(60) "flocculation" means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means;

(61) “free chlorine” means the amount of chlorine available as a dissolved gas, hypochlorous acid, or hypochlorite ion that is not combined with an amine or other organic compound;

(62) "gross alpha particle activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample; “gross alpha particle activity” includes the radioactivity of radium-226; “gross alpha particle activity” does not include the radioactivity of radon and uranium;

(63) "gross beta particle activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample;

(64) "groundwater" means water beneath the surface of the ground; “groundwater” does not include GWUDISW;

(65) “groundwater system” means a public water system that uses only groundwater as source water;

(66) "groundwater under the direct influence of surface water" or “GWUDISW” has the meaning given “GWUDI” in 40 C.F.R. 141.2, adopted by reference in 18 AAC 80.010(a);

(67) repealed 4/24/2009;

(68) "heterotrophic plate count" or "HPC" means the procedure for estimating the number of live heterotrophic bacteria in a water sample;

(69) "holding tank" means a watertight vessel or tank for the temporary storage of wastewater, urine, or excrement; "holding tank" includes a vault privy; “holding tank” does not include a pit privy;

(70) “holding time” means the time elapsed from the time a water sample is gathered into the sample bottle until it is analyzed;

(71) "human consumption” means the use of water for drinking, bathing, showering, cooking, dishwashing, maintaining oral hygiene, and other similar uses;

(72) "infiltration gallery" means a system

(A) of perforated pipes, cribbed pits, or similar collection devices that are laid along the banks or under the bed of a stream, lake, or other surface waterbody; and

(B) that is installed to collect water from the formation beneath or adjacent to the waterbody;

(73) "innovative technology or device” means water system technology that is new, non-conventional, alternative, or untested in this state; “innovative technology or device” includes technology related to

(A) disinfection methods;

(B) of *Giardia lamblia* removal;

(C) particulate reduction;

(D) turbidity reduction;

(E) storage tank materials; and

(F) computer models for water treatment;

(74) "inspection" means an onsite review by an individual approved by the department to determine compliance with this chapter;

(75) “install” means to construct or fabricate components necessary to create a public water system or a portion of a public water system; installations may be done by the owner or an individual who is contracted to do the work for the owner;

(76) repealed 12/13/2014;

(77) repealed 4/24/2009;

(78) “master meter” means a water meter or system of water meters that measures both instantaneous and total flow of water for a public water system.

(79) "maximum contaminant level" or "MCL" means the maximum permissible level of a contaminant in water that is delivered to any user of a public water system;

(80) “maximum residual disinfectant level” or “MRDL” means a level of disinfectant added for water treatment that may not be exceeded at the consumer’s tap without an unacceptable possibility of adverse health effects;

(81) repealed 4/24/2009;

(82) “microbial contaminant” means a living organism in water, that is not visible individually without a microscope, and that, in sufficient quantity, makes the water unsafe for human consumption; “microbial contaminants” include bacteria, viruses, and parasites such as *Cryptosporidium parvum*;

(83) “MIL” means Military Standards and Specifications;

(84) "monthly average" means the result obtained by dividing the sum of the result of sample analyses taken in a month by the number of samples taken during that month;

(85) “multi-family dwelling” means a dwelling unit housing more than two single-family residences;

(86) "near the first service connection" means within the first 20 percent of all service connections after the water supply treatment facility, as measured by water transport time within the distribution system;

(87) "new community water system" means

(A) a community water system that is constructed after October 1, 1999;

(B) a community water system that has not received a public water system identification number under 18 AAC 80.210(c)(3) as of October 1, 1999; or

(C) an existing water system other than a community water system, if as a result of expanding its infrastructure, the system falls within the definition of a community water system;

(88) "nonpoint source" means a source of pollution other than a point source; “nonpoint source” includes a discharge of pollutants from the use of pesticides to control insect and weed pests on agricultural areas, on forest lands, in the home and in gardens, and from other land application uses of pesticides;

(89) repealed 4/24/2009;

(90) “non-community water system” means a public water system that is not a community water system; a non-community water system is either a non-transient non-community water system or a transient non-community water system;

(91) “non-transient non-community water system” means a public water system that is not a community water system and that regularly serves at least 25 of the same individuals over six months per year;

(92) "NSF" means NSF International;

(93) "NTU" means nephelometric turbidity unit;

(94) "organic drilling fluid" means a synthetic polymer drilling fluid that is not specifically designed for use in the potable water well drilling industry;

(95) "owner" means the owner of a public water system;

(96) repealed 4/24/2009;

(97) repealed 7/25/2010;

(98) "pilot" means serving as an experimental trial apparatus or operation in which processes or techniques planned for use in full-scale operation are tested in advance;

(99) "pilot plant study" means an evaluation, on a scale larger than laboratory or bench scale but smaller than full scale, of the amenability of drinking water or wastewater to treatment with the proposed method, operation, or process;

(100) “pit privy” has the meaning given in 18 AAC 72.990;

(101) repealed 4/24/2009;

(102) “point-of-entry treatment device” means a water treatment device that is located where water enters a building and before the point of use, and is for the purpose of reducing contaminants in the drinking water distributed throughout that building;

(103) "point-of-use treatment device" means a water treatment device applied to a single tap and used for the purpose of reducing contaminants in drinking water at that one tap;

(104) repealed 4/24/2009;

(105) "pollution" has the meaning given in AS 46.03.900;

(106) "potable water system" means a source of water, intake works, collection system, water treatment works, storage facility, or distribution system from which water is available for human consumption;

(107) "private sewer line" has the meaning given in 18 AAC 72.990;

(108) "private water system" means a potable water system serving one single-family residence or duplex;

(109) “professional geologist” means a geologist certified under AS 08.02.011;

(110) "public utility" has the meaning given in AS 42.05.990;

(111) "public water system"

(A) means an intake works, collection system, water treatment works, storage facility, constructed conveyance, distribution main, or vehicle that provides water for human consumption to

(i) one or more multi-family dwellings;

(ii) a factory, office building, restaurant, school, or similar facility; or

(iii) two or more duplexes or single-family residences; and

(B) does not include a private water system;

(112) “quality assurance” means ensuring that analytical data is of a known and documented degree of excellence; “quality assurance” covers the general areas of accuracy, completeness, representativeness, and comparability of data;

(113) “quality assurance plan” means a totally integrated program for quality assurance, ensuring reliability of measurement data;

(114) "quarter" or "quarterly" means January through March, April through June, July through September, or October through December;

(115) "rain catchment system” means a public water system for which the primary source of drinking water is precipitation caught by a manmade device;

(116) "record drawings” means the original plans prepared for construction and department approval, revised to reflect how the system was constructed or installed;

(117) “regional health corporation” means a federally recognized corporation under 25 U.S.C. 450f that receives federal money for the purpose of providing health care to Alaska Natives;

(118) "registered engineer" means a professional engineer registered to practice in this state under AS 08.48;

(119) "repeat compliance period" means a subsequent compliance period after the initial compliance period;

(120) "repeat sample" means a follow-up sample taken in the same way as a routine sample to confirm the results obtained from a routine sample;

(121) "resident" means an individual occupying a dwelling unit as a primary place of abode;

(122) "residual disinfectant concentration" means the concentration of disinfectant measured in mg/l in a representative sample of water;

(123) "routine maintenance" means activity normally required to maintain the components of a public water system in good working order; “routine maintenance” includes the replacement of a pump, 40 feet or less of pipe, a valve, valve coating, a hydro-pneumatic tank, or

a storage tank; “routine maintenance” does not include changes that affect the system's configuration, materials, treatment, or capacity;

(124) "routine sample" means a sample required by 18 AAC 80.300 - 18 AAC 80.355, 18 AAC 80.405, or 18 AAC 80.500 - 18 AAC 80.565;

(125) “sampling site” means a location identified within a distribution system of a public water system where a water sample is collected for analysis;

(126) "sanitary defect" means a condition that poses a threat to the microbiological quality of water;

(127) "sanitary seal" means a device that

(A) is attached to the top of a well casing or pipe sleeve;

(B) prevents insects, dirt, or water or other liquid from entering the well under normal conditions; and

(C) that allows air to flow in and out of the well;

(128) "sanitary survey"

(A) means a review consisting of

(i) an onsite inspection and review of the water source, treatment, the distribution system, finished water storage, each pump and pump facility and controls, monitoring, reporting, data verification, and management and operation of a public water system to evaluate the adequacy of the source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water; and

(ii) a review of operator compliance with 18 AAC 74 and this chapter; and

(B) includes writing, signing, and submitting the completed report to the department and owner;

(129) "sealed" means prepared by a registered engineer or an individual under that engineer’s direct supervision, and bearing the signature and seal of that engineer as required by AS 08.48.221 and 12 AAC 36.185;

(130) "sedimentation" means a process that removes solids from water by gravity or separation and before filtration;

(131) “septic tank” has the meaning given in 18 AAC 72.990;

(132) "serve" means to cause or allow the provision of water for human consumption;

(133) "service connection" means a single building or structure that receives water for human consumption from a public water system; “service connection” includes a residence, school, hospital, clinic, office, restaurant, gas station, hotel, motel, washeteria, or watering point; "service connection” does not include mobile facilities; for purposes of this paragraph, “mobile facilities” includes planes, boats, recreational vehicles, and tents;

(134) "service line" means the pipe works that extend from a water distribution main line to a single service connection;

(135) "sewer” and "sewer line" have the meanings given in 18 AAC 72.990;

(136) "sewerage" has the meaning given in 18 AAC 72.990;

(137) “significant deficiency” means a defect, including a failure or malfunction, in a public water system’s source, design, treatment, storage, distribution, operation, management, maintenance, or security, that the department determines to be causing, or to have potential to cause, contamination of water delivered to consumers or any other risk to public health or safety;

(138) "slow sand filtration" means a process involving passage of water through a bed of sand at low velocity, resulting in substantial particulate removal by physical and biological mechanisms;

(139) "soil absorption system" has the meaning given in 18 AAC 72.990;

(140) "surface water" means water that is open to the atmosphere and subject to surface runoff;

(141) “surface water system” means a public water system that uses only surface water for a source;

(142) "too numerous to count," with respect to the total number of bacterial colonies, means in excess of 200 on a 47-mm diameter membrane filter used for coliform detection;

(143) “total chlorine” means the total concentration of chlorine in water, including the combined chlorine and the free chlorine that are present in water;

(144) repealed 4/24/2009;

(145) repealed 4/24/2009;

(146) repealed 4/24/2009;

(147) “transient non-community water system” means a non-community water system that does not regularly serve at least 25 of the same individuals over six months per year;

(148) “treatment technique requirement” means a requirement in this chapter that specifies for a contaminant a treatment technique that leads to a reduction in the level of a contaminant sufficient to satisfy an MCL listed at 18 AAC 80.300;

(149) repealed 4/24/2009;

(150) repealed 4/24/2009;

(151) “UL” means Underwriters Laboratories;

(152) "unusual and unpredictable circumstances" means events with a low probability of occurrence;

(153) “utilidor” means an enclosure constructed above ground or below ground that contains one or more water lines, sewer lines, or other utilities and that provides access for their installation and maintenance;

(154) "vault privy" means a holding tank with a seat or seats, or other appurtenances attached, that allows for excretion of human wastes directly into the tank;

(155) "virus" means a virus of fecal origin that is infectious to humans by waterborne transmission;

(156) "volatile organic chemical" or "VOC" means a carbon-based compound with the property of escaping easily from water into the air;

(157) repealed 4/24/2009;

(158) "waiver review area" means the area around a water source that is evaluated for activities that may use, store, or dispose of synthetic organic chemicals and other organic chemicals;

(159) "wastewater" has the meaning given in 18 AAC 72.990;

(160) "wastewater disposal system" has the meaning given in 18 AAC 72.990;

(161) "wastewater treatment works" has the meaning given in 18 AAC 72.990;

(162) "waterborne disease outbreak" means a significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system that is deficient in treatment;

(163) "water hauler" means a public water system that consists of one or more vehicles that are owned by the same person and used to distribute potable water; “water hauler” does not include vehicles owned and operated solely by a community as part of the community’s community water system or non-transient non-community water system;

(164) “watering point” means a common tap from which a community obtains potable water;

(165) "water treatment works" means the structure and appurtenances, including chemical feeders, coagulation and sedimentation tanks, filtration devices, ion exchange apparatus, aeration tanks, or other works, used to condition, purify, or refine water for human consumption;

(166) "well" means an excavation, opening, shaft, or hole from which water can be extracted;

(167) "well log" means a written report that includes

(A) a description and classification of soil and ice strata and the depths at which they are encountered;

(B) the depth to groundwater;

(C) the depth of the well;

(D) the length, diameter, wall thickness, and type of casing;

(E) the location of perforations in casing or screen;

(F) the geographic location of the well;

(G) the yield and draw down test; and

(H) the names of the owner and the well driller;

(168) “working day” means a day other than Saturday, Sunday, or a state holiday

(169) “new non-transient non-community water system” means

(A) a non-transient non-community water system that is constructed after October 1, 1999;

(B) a non-transient non-community water system that has not received a public water system identification number under 18 AAC 80.210(c)(3) as of October 1, 1999; or

(C) an existing water system other than a non-transient non-community water system, if as a result of expanding its infrastructure, the system falls within the definition of a non-transient non-community water system;

(170) “new transient non-community water system” means

(A) a transient non-community water system that is constructed after October 1, 1999;

(B) a transient non-community water system that has not received a public water system identification number under 18 AAC 80.210(c)(3) as of October 1, 1999; or

(C) an existing water system other than a transient non-community water system, if as a result of expanding its infrastructure, the system falls within the definition of a transient non-community water system;

(171) “operator” means the operator of a public water system.

(172) “method detection limit” has the meaning given in Appendix C of the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, adopted by reference in 18 AAC 80.010(b);

(173) “method reporting limit” has the meaning given in Appendix C of the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, adopted by reference in 18 AAC 80.010(b);

(174) “practical quantitation limit” has the meaning given “method reporting limit” in this subsection;

(175) “proficiency testing sample” has the meaning given in Appendix C of the *Manual for the Certification of Laboratories Analyzing Drinking Water: Criteria and Procedures, Quality Assurance*, adopted by reference in 18 AAC 80.010(b).

(176) "finished water" has the meaning given in 40 C.F.R. 141.2, adopted by reference in 18 AAC 80.010(a).

(177) “corrective action”

(A) means an action taken to remedy

(i) a deficiency; or

(ii) a direct, indirect, or potential cause, in whole or in part, of a risk to public health, regardless of whether that cause is a deficiency;

(B) includes interim and final measures taken to remedy the deficiency or cause of a risk to public health;

(178) “corrective action plan” means a proposal, either made by the department or submitted by the owner of a public water system to the department for approval, to take one or more corrective actions according to a specified schedule;

(179) “fecal indicator” means microbes whose presence indicates that the water may be contaminated with human or animal wastes;

(180) “emergency” means an unforeseen event that causes damage to or disrupts normal operations of a public water system and requires immediate action to protect public health and safety.

(b) In this chapter,

(1) "mg/l" means milligrams per liter and equals parts per million;

(2) “ml” means milliliter;

(3) “mm” means millimeter;

(4) “mrem” means millirems;

(5) "µg/l" means micrograms per liter and equals parts per billion;

(6) "µm" means micrometer;

(7) "pCi/l" means picocuries per liter;

(8) “≤” means less than or equal to;

(9) “≥” means greater than or equal to;

(10) "Σ" means the sum of. (Eff. 10/1/99, Register 151; am 3/25/2001, Register 157; am 9/28/2001, Register 159; am 1/11/2004, Register 169; am 1/11/2006, Register 177; am 8/19/2006, Register 179; am 11/9/2006, Register 180; am 4/24/2009, Register 190; am 11/20/2009, Register 192; am 7/25/2010, Register 195; am 11/11/2010, Register 196; am 5/20/2011, Register 198; am 8/20/2012, Register 203; am 12/13/2014, Register 212)

Authority: AS 46.03.010 AS 46.03.050 AS 46.03.720
AS 46.03.020 AS 46.03.710

Editor's note: As of Register 179 (October 2006), the definitions in 18 AAC 80.1990(a) were reorganized to put them in alphabetical order, regardless of when each of them was adopted.

As of Register 187 (October 2008), the regulations attorney made technical revisions under AS 44.62.125(b)(6), to correct a gap in paragraph numbering in 18 AAC 1990(a), and made other technical revisions to 18 AAC 80.1990.