TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 5. DEPARTMENT OF ENVIRONMENTAL QUALITY ENVIRONMENTAL REVIEWS AND CERTIFICATION

ARTICLE 1. CLASSIFICATION OF WATER AND WASTEWATER FACILITIES AND CERTIFICATION OF OPERATORS

Article 1, consisting of Sections R18-5-101 through R18-5-115, recodified from R18-4-101 through R18-4-115 (Supp. 95-2).

Article 5 renumbered as Article 1 consisting of Sections R18-4-101 through R18-4-115, effective October 23, 1987.

Former Sections R9-20-504 through R9-20-512, R9-20-517, R9-20-519, and R9-20-520 amended and renumbered as Article 5 consisting of Sections R9-20-501, R9-20-503 through R9-20-510, R9-20-512, R9-20-514, and R9-20-515; and new Sections R9-20-502, R9-20-511, and R9-20-513 adopted effective October 23, 1987.

Former Sections R9-20-501 through R9-20-503, R9-20-513 through R9-20-516, and R9-20-518 repealed effective October 23, 1987.

Section

ARTICLE 2. PUBLIC AND SEMIPUBLIC SWIMMING POOLS AND SPAS

Article 2, consisting of Sections R18-5-201 through R18-5-251 and Illustrations A and B, adopted effective February 19, 1998 (Supp. 98-1).

Section

ARTICLE 3. WATER QUALITY MANAGEMENT PLANNING

Article 3, consisting of Sections R18-5-301 through R18-5-303, adopted by final rulemaking at 7 A.A.R. 559, effective January 2, 2001 (Supp. 01-1).

Section

ARTICLE 4. SUBDIVISIONS

Former Title 9, Chapter 8, Article 11, consisting of Sections R9-8-1011 through R9-8-1015, R9-8-1021, R9-8-1026, R9-8-1027, R9-8-1031, and R9-8-1032 through R9-8-1036 renumbered as Title 18, Chapter 5, Article 4, consisting of Sections R18-5-401 through R18-5-411 (Supp. 89-2).

Section

ARTICLE 5. MINIMUM DESIGN CRITERIA

Article 5, consisting of R18-5-501 through R18-5-509, recodified from 18 A.A.C. 4, Article 5 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

ARTICLE 1. CLASSIFICATION OF WATER AND WASTEWATER FACILITIES AND CERTIFICATION OF OPERATORS

R18-5-101. Definitions

The terms in this Article have the following meanings:

"Certified operator" or "operator" means an individual who holds a current certificate issued by the Department in the field of water or wastewater treatment, water distribution, or wastewater collection.

"Collection system" means a pipeline or conduit, a pumping station, a force main, or any other device or appurtenance used to collect and conduct wastewater to a central point for treatment and disposal.

"Department" means the Department of Environmental Quality or its designated representative.

"Director" means the Director of the Department of Environmental Quality or the Director's designated representative.

"Direct responsible charge" means day-to-day decision making responsibility for a facility or a major portion of a facility.

"Distribution system" means a pipeline, appurtenance, or device of a public water system that conducts water from a water source or treatment plant to consumers for domestic or potable use.

"Facility" means a water treatment plant, wastewater treatment plant, distribution system, or collection system.

"Industrial waste" means the liquid, gaseous, or solid waste produced at an industrial operation.

"Onsite operator" means an operator who visits a facility at least daily to ensure that the facility is operating properly.

"Onsite representative" means an individual located at a facility who monitors the daily operation at the facility and maintains contact with the remote operator regarding the facility.

"Operator" has the same meaning as certified operator, as defined in this Section.

"PDH" means professional development hour, as defined in this Section.

"Population equivalent" means the population that would contribute an equal amount of biochemical oxygen demand (BOD) computed on the basis of 0.17 pounds of five-day, 20-degree centigrade BOD per capita per day.

"Professional development hour" or "PDH" means one hour of participation in an organized educational activity related to engineering, biological or chemical sciences, a closely related technical or scientific discipline, or operations management.

"Public water system" has the same meaning prescribed in A.R.S. § 49-352.

"Qualifying discipline" means engineering, biology, chemistry, or a closely related technical or scientific discipline.

"Qualifying experience" means experience, skill, or knowledge obtained through employment that is applicable to the technical or operational control of all or part of a facility.

"Remote operator" means an operator who is not an onsite operator.

"Validated examination" means an examination that is approved by the Department after being reviewed to ensure that the examination is based on the class and grade of a system or facility.

"Wastewater" means sewage, industrial waste, and all other waterborne waste that may pollute any lands or waters of the state.

"Wastewater treatment plant" means a process, device, or structure used to treat or stabilize wastewater or industrial waste and dispose of the effluent.

"Water treatment plant" means a process, device, or structure used to improve the physical, chemical, or biological quality of the water in a public water system.

Historical Note

Former Section R9-20-504 repealed, new Section R9-20-504 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-504 amended, renumbered as Section R9-20-501, then renumbered as Section R18-4-101 effective October 23, 1987 (Supp. 87-4). R18-5-101 recodified from R18-4-101 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended by final rulemaking at 7 A.A.R. 5079, effective October 16, 2001 (Supp. 01-4). Amended by final rulemaking at 11 A.A.R. 998, effective April 2, 2005 (Supp. 05-1).

R18-5-102. Applicability

A. The rules in this Article apply to owners and operators of facilities in Arizona.

B. The following facilities are exempt from the requirements of this Article:

1. A public water system that meets the nonapplicability criteria in R18-4-102.
2. A septic tank or collection system that discharges to a septic tank.
3. A collection system that serves 2,500 or fewer persons and discharges into a facility that is operated by a certified operator.

4. A collection system that serves a nonresident population and discharges into a collection system operated by a certified operator.
5. An irrigation system, an industrial water facility, or a similar facility in which water is not used for domestic or drinking purposes.
6. An irrigation or industrial wastewater facility used to treat, recycle, or impound industrial or agricultural wastes within the boundaries of the industrial or agricultural property.
7. An industrial waste pretreatment facility in which treated wastewater is released to a collection system or wastewater treatment plant that is regulated by this Article.
8. A facility for treating industrial wastes that are not treatable by biological means.
9. A facility used to impound surface water before the water is conducted to a water treatment plant.
10. A wastewater treatment device that serves a home.

Historical Note
Adopted as Section R9-20-502 and renumbered as Section R18-4-102 effective October 23, 1987 (Supp. 87-4). R18-5-102 recodified from R18-4-102 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended by final rulemaking at 7 A.A.R. 5079, effective October 16, 2001 (Supp. 01-4).

R18-5-103. Certification Committee

A. Upon the effective date of this rule, the Director shall establish a certification committee to make recommendations and to provide the Department with technical advice and assistance related to this Article when requested.

B. The certification committee shall consist of 11 members as follows:
1. One employee of the Department;
2. One currently employed wastewater treatment plant operator with Grade 4 certification;
3. One currently employed water treatment plant operator with Grade 4 certification;
4. One currently employed wastewater collection system operator with Grade 4 certification;
5. One currently employed water distribution system operator with Grade 4 certification;
6. One faculty member teaching sanitary sciences at an Arizona university or community college;
7. One professional engineer, registered and residing in Arizona, engaged in consulting in the field of sanitary engineering;
8. One elected or appointed municipal official;
9. One representative of an investor-owned water or wastewater facility;
10. One representative of a small public water system; and
11. One currently employed remote operator representative.

C. The Director shall appoint each certification committee member.

D. The certification committee shall meet at least twice a year. At the first meeting of each calendar year, the certification committee shall select, from its membership, a chairperson and other officers as necessary. The Department's certification committee member is the executive secretary, who is responsible for keeping records of all meetings.

E. The term of a certification committee member is three years.

F. A meeting quorum consists of the chairperson or the chairperson's designated representative, the executive secretary or the executive secretary's designated representative, and three other members of the committee.

G. In the event of a vacancy caused by death, resignation, or removal for cause, the Director shall appoint a successor for the unexpired term.

H. A certification committee member may be reappointed, but a member shall not serve more than three consecutive terms.

Historical Note
Former Section R9-20-505 repealed, new Section R9-20-505 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-505 amended, renumbered as Section R9-20-503, then renumbered as Section R18-4-103 effective October 23, 1987 (Supp. 87-4). R18-5-103 recodified from R18-4-103 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1).

R18-5-104. General Requirements

A. A facility owner shall ensure that at all times:
1. A facility has an operator in direct responsible charge who is certified for the class of the facility and at or above the grade of the facility;
2. An operator makes all decisions about process control or system integrity regarding water quality or water quantity that affects public health; however, an administrator who is not a certified operator may make a planning decision regarding water quality or water quantity if the decision is not a direct operational process control or system integrity decision that affects public health;
3. An operator who is in direct responsible charge of more than one facility is certified for the class of each facility and at or above the grade of the facility with the highest grade;
4. An operator who replaces the operator in direct responsible charge does not begin operation of the facility before being certified for the applicable class and at or above the grade of the facility;
5. In the absence of the operator in direct responsible charge, the operator in charge of the facility is certified for the applicable class of facility and at a grade no lower than one grade below the grade of the facility; and
6. The names of all current operators are on file with the Department.

B. If the owner of a facility replaces an operator in direct responsible charge with another operator, the facility owner shall notify the Department in writing within 10 days of the replacement.

C. An operator shall notify the Department in writing within 10 days of the date the operator either ceases operation of a facility or commences operation of another facility.

D. An operator shall operate each facility in compliance with applicable state and federal law.

E. A facility owner shall ensure that a Grade 3 or Grade 4 facility has an onsite operator.

F. An operator holding certification in a particular class and grade may operate one or more Grade 1 or Grade 2 facilities as a remote operator if the facility owner ensures that the following requirements are met:
1. The remote operator is certified for the class of each facility and at or above the grade of each facility operated by the remote operator.
2. There is an onsite representative on the premises of each Grade 1 or Grade 2 facility, except for a Grade 1 water distribution system that serves fewer than 100 people, which is not required to have an onsite representative if the conditions of subsection (F)(8) are met. The onsite representative is not required to be an operator if the

facility has a remote operator who is certified at or above the grade of the facility.

3. The remote operator instructs, supervises, and provides written instructions to the onsite representative in the proper operation and maintenance of each facility and ensures that adequate records are kept.
4. The remote operator provides the onsite representative with a telephone number at which the remote operator can be reached at all times. If the remote operator is not available for any reason, the remote operator shall provide the onsite representative with the name and telephone number of a qualified substitute operator who will be available while the remote operator is not available.
5. The remote operator resides no more than 200 miles by ground travel from any facility that the remote operator serves.
6. The remote operator operates each facility in compliance with applicable state and federal laws.
7. The remote operator inspects a facility as often as necessary to ensure proper operation and maintenance, but in no case less than:
   a. Monthly for a Grade 1 or Grade 2 water treatment plant or distribution system that produces and distributes groundwater;
   b. Monthly for a Grade 1 wastewater treatment plant;
   c. Twice a month for a collection system that serves fewer than 2,500 people; and
   d. Weekly for a Grade 2 wastewater treatment plant or collection system that serves fewer than 1,000 people.
8. For a Grade 1 water distribution system that does not have an onsite representative and serves fewer than 100 people, the following conditions are met:
   a. The name and telephone number at which the remote operator can be reached is posted at the facility, enclosed with water bills, or otherwise made readily available to water users. If the remote operator is not available for any reason, the remote operator shall post at the facility the name and telephone number of a substitute operator of the applicable facility class and grade who will be available while the remote operator is not available;
   b. The remote operator or substitute operator resides no more than 200 miles by ground travel from the facility; and
   c. The remote operator inspects the facility weekly.

Historical Note

Former Section R9-20-506 repealed, new Section R9-20-506 adopted effective November 1, 1979 (Supp. 79-6). Amended effective March 19, 1980 (Supp. 80-2). Former Section R9-20-506 amended, renumbered as Section R9-20-504, then renumbered as Section R18-4-104 effective October 23, 1987 (Supp. 87-4). R18-5-104 recodified from R18-4-104 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended by final rulemaking at 7 A.A.R. 5079, effective October 16, 2001 (Supp. 01-4). Amended by final rulemaking at 11 A.A.R. 998, effective April 2, 2005 (Supp. 05-1).

R18-5-105. Certification

A. The Department shall issue an operator certificate to an applicant if the applicant:
1. Meets the experience and education requirements in R18-5-112 for the applicable class and grade,
2. Passes a written examination for the applicable class and grade, and
3. Has not had an operator's certificate revoked in Arizona or permanently revoked in another jurisdiction.

B. To apply for operator certification, an applicant shall submit or arrange to have submitted to the Department the following information, as applicable, in a format acceptable to the Department:
1. The applicant's full name, Social Security number, and operator number;
2. The applicant's current mailing address, home and work telephone numbers, fax number, and e-mail address;
3. The applicant's place of employment, including the facility identification number;
4. The class and grade of the facility where the applicant is employed;
5. Proof of successful completion of the examination for the applicable class and grade; and
6. Documentation of the applicant's experience and education required under R18-5-112.

Historical Note

Former Section R9-20-507 repealed, new Section R9-20-507 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-507 amended, renumbered as Section R9-20-505, then renumbered as Section R18-4-105 effective October 23, 1987 (Supp. 87-4). R18-5-105 recodified from R18-4-105 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended by final rulemaking at 14 A.A.R. 4527, effective January 31, 2009 (Supp. 08-4).

R18-5-106. Examinations

A. The Department shall provide for examinations for certification of operators. The Department may contract with third party examiners for administration of examinations, based on its assessment of the quality of the examination services. The Department shall ensure that a list of approved examiners is available upon request.

B. The Department shall validate all examinations before administration. Each examination shall include topics such as treatment technologies, system maintenance, regulatory protocols, safety, mathematics, and general system management.

C. The examiner shall grade the examination and make the results available to the applicant and the Department within seven days of the date of the examination.

D. An applicant shall not be admitted to an examination without a valid picture I.D.

E. An individual shall make a score of 70 percent on the examination in order to attain a passing grade.

Historical Note

Adopted effective March 19, 1980 (Supp. 80-2). Former Section R9-20-508 amended, renumbered as Section R9-20-506, then renumbered as Section R18-4-106 effective October 23, 1987 (Supp. 87-4). Amended subsection (F) effective November 30, 1988 (Supp. 88-4). R18-5-106 recodified from R18-4-106 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1).

R18-5-107. Certificate Renewal

A. If the Department renews a certificate, the certificate is renewed for three years, unless the operator requests a shorter renewal period in writing.

B. To renew a certificate, an operator shall complete and submit to the Department an operator certificate renewal form

approved by the Department. An operator shall maintain documentation and provide the documentation to the Department upon request to verify completion of at least 30 PDHs accumulated during a certification period. The operator shall provide documentation of PDHs in a format acceptable to the Department. At least 10 of the PDHs shall directly relate to the specific job functions of the operator. If an operator holds multiple certificates, the operator may apply required PDHs to all certificates if the PDHs are acquired within the applicable certification period. The operator's supervisor or the entity that provides the education or training shall verify completion of each PDH in writing. An operator shall maintain documentation of completion of PDHs for a minimum of five years.

C. As an alternative to the requirements of subsection (B), an operator may renew a certificate by taking and passing an examination for the applicable class and grade.

Historical Note

Former Section R9-20-509 repealed, new Section R9-20-509 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-509 amended, renumbered as Section R9-20-507, then renumbered as Section R18-4-107 effective October 23, 1987 (Supp. 87-4). Amended subsection (B) effective November 30, 1988 (Supp. 88-4). R18-5-107 recodified from R18-4-107 (Supp. 95-1). Section repealed; new Section adopted by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended by final rulemaking at 11 A.A.R. 998, effective April 2, 2005 (Supp. 05-1).

R18-5-108. Certificate Expiration

A. A certificate expires on the expiration date printed on the certificate. An operator may reinstate an expired certificate for the same class and grade without examination if the operator files the documentation required in R18-5-107(B) with the Department within 90 days of the certificate expiration date.

B. If an expired certificate is not renewed within 90 days of the certificate expiration date, the Department shall not reinstate the certificate. To be recertified, the operator shall reapply and be reexamined as a new applicant.

Historical Note

Former Section R9-20-510 repealed, new Section R9-20-510 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-510 amended, renumbered as Section R9-20-508, then renumbered as Section R18-4-108 effective October 23, 1987 (Supp. 87-4). Amended subsection (D) effective November 30, 1988 (Supp. 88-4). R18-5-108 recodified from R18-4-108 (Supp. 95-2). Section repealed; new Section adopted by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1).

R18-5-109. Denial, Suspension, Probation, and Revocation

A. If the Department decides to deny, suspend, or revoke a certificate, or to place an operator on probation, the Department shall act in accordance with A.R.S. Title 41, Chapter 6, Article 10 and 18 A.A.C. 1, Article 2.

B. The Department may revoke or suspend a certificate, or place an operator on probation, if the Department finds that the operator:

1. Operates a facility in a manner that violates federal or state law;
2. Negligently operates a facility or negligently supervises the operation of a facility;
3. Fails to comply with a Department order or order of a court;
4. Obtains, or attempts to obtain, a certificate by fraud, deceit, or misrepresentation;
5. Engages in fraud, deceit, or misrepresentation in the operation or supervision of a facility;
6. Knowingly or negligently prepares a false or fraudulent report or record regarding the operation or supervision of a facility;
7. Endangers the public health, safety, or welfare;
8. Fails to comply with the terms or conditions of probation or suspension; or
9. Fails to cooperate with an investigation by the Department including failing or refusing to provide information required by this Article.

C. The Department shall deny certification to an applicant who does not meet the requirements of R18-5-105 or R18-5-110, or who is ineligible for certification pursuant to a Department order or order of a court.

D. The Department may place an operator on probation or suspend an operator's certificate to address deficiencies in operator performance. The terms of probation or suspension may include completion of additional PDHs, increased reporting of operator activity, limitations on activities the operator may perform, or other terms to address deficiencies in operator performance.

E. During the period of suspension, an individual whose certificate is suspended shall not operate a facility of the class of the suspended certificate.

F. An operator whose certificate is suspended or revoked, or who has been placed on probation, shall immediately notify the owner of a facility where the operator is employed of the suspension, revocation, or probation.

Historical Note

Former Section R9-20-511 repealed, new Section R9-20-511 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-511 amended, renumbered as Section R9-20-509, then renumbered as Section R18-4-109 effective October 23, 1987 (Supp. 87-4). R18-5-109 recodified from R18-4-109 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended by final rulemaking at 11 A.A.R. 998, effective April 2, 2005 (Supp. 05-1). Amended by final rulemaking at 14 A.A.R. 4527, effective January 31, 2009 (Supp. 08-4).

R18-5-110. Reciprocity

The Department shall issue a certificate to an applicant who holds a valid certificate from another jurisdiction, if the applicant:

1. Passes a written, validated examination in Arizona or in another jurisdiction that administers an examination that is substantially equivalent to the examination in Arizona and validated by the Department, and
2. Submits written evidence of the experience and education required under R18-5-112.

Historical Note

Former Section R9-20-512 repealed, new Section R9-20-512 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-512 amended, renumbered as Section R9-20-510, then renumbered as Section R18-4-110 effective October 23, 1987 (Supp. 87-4). Amended subsection (B) effective November 30, 1988 (Supp. 88-4). R18-5-110 recodified from R18-4-110 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1).

R18-5-111. Repealed

Historical Note
Adopted as Section R9-20-511 and renumbered as Section R18-4-111 effective October 23, 1987 (Supp. 87-4). R18-5-111 recodified from R18-4-111 (Supp. 95-2). Section repealed by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1).

R18-5-112. Experience and Education

A. The Department shall consider the following criteria to determine whether an applicant has the experience and education required for certification in a specific class and grade:
1. Years of experience at a lower grade;
2. Qualifying experience in the same or a related field; and
3. Education in a qualifying discipline.

B. An applicant shall provide written evidence of education in a qualifying discipline. The applicant shall provide transcripts if the Department determines that the transcripts are necessary to verify completion of the education requirements.

C. An applicant shall provide written evidence of qualifying experience in the applicable facility class.

D. An applicant shall meet the following requirements for admission to a certification examination:
1. For Grade 1, high school graduation or the equivalent.
2. For Grade 2, at least:
   a. High school graduation or the equivalent and one year of qualifying experience as a Grade 1 operator or the equivalent of a Grade 1 operator in another jurisdiction;
   b. Two years of postsecondary education in a qualifying discipline and one year of qualifying experience, including six months as a Grade 1 operator or the equivalent of a Grade 1 operator in another jurisdiction; or
   c. A bachelor's degree in a qualifying discipline and six months of qualifying experience.
3. For Grade 3, at least:
   a. High school graduation or the equivalent and two years of qualifying experience, including one year as a Grade 2 operator or the equivalent of a Grade 2 operator in another jurisdiction;
   b. Two years of postsecondary education in a qualifying discipline, and 18 months of qualifying experience as a Grade 2 operator or the equivalent of a Grade 2 operator in another jurisdiction; or
   c. A bachelor's degree in a qualifying discipline and one year of qualifying experience.
4. For Grade 4, at least:
   a. High school graduation or the equivalent and three years of qualifying experience, including one year as a Grade 3 operator or the equivalent of a Grade 3 operator in another jurisdiction;
   b. Two years of postsecondary education in a qualifying discipline and 30 months of qualifying experience, including one year as a Grade 3 operator or the equivalent of a Grade 3 operator in another jurisdiction; or
   c. A bachelor's degree in a qualifying discipline, and two years of qualifying experience.

Historical Note
Former Section R9-20-517 repealed, new Section R9-20-517 adopted effective November 1, 1979 (Supp. 79-6). Amended effective March 19, 1980 (Supp. 80-2). Former Section R9-20-517 amended, renumbered as Section R9-20-512, then renumbered as Section R18-4-112 effective October 23, 1987 (Supp. 87-4). R18-5-112 recodified from R18-4-112 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended by final rulemaking at 7 A.A.R. 5079, effective October 16, 2001 (Supp. 01-4).

R18-5-113. Classes of Facilities

A. The Department shall classify a facility in one of four classes:
1. Water treatment plant,
2. Water distribution system,
3. Wastewater treatment plant, or
4. Wastewater collection system.

B. The Department shall classify a facility as one of four grades, Grades 1–4. The grade corresponds with the level of system complexity, with Grade 1 being the most simple and Grade 4 being the most complex.

C. For a multi-facility system, the Department shall grade each facility according to complexity and the total population or population equivalent served.

Historical Note
Adopted as Section R9-20-513 and renumbered as Section R18-4-113 effective October 23, 1987 (Supp. 87-4). Amended subsections (A) and (C) effective November 30, 1988 (Supp. 88-4). R18-5-113 recodified from R18-4-113 (Supp. 95-2). Section repealed; new Section adopted by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1).

R18-5-114. Grades of Wastewater Treatment Plants and Collection Systems

The Department shall grade a wastewater treatment plant or collection system according to population equivalent served, degree of hazard to public health, class of facility, and degree of treatment, as follows:
1. Grade 1 includes:
   a. A stabilization pond that serves 2,000 or fewer persons;
   b. A wastewater treatment plant not designated as Grade 2, 3, or 4; or
   c. A collection system that serves 2,500 or fewer persons.
2. Grade 2 includes:
   a. A stabilization pond that is designed to serve more than 2,000 persons;
   b. An aerated lagoon;
   c. A facility that employs biological treatment based upon the activated sludge principle or trickling filters and is designed to serve 5,000 or fewer persons, except as provided in subsection (3)(c); or
   d. A collection system that serves between 2,501 to 10,000 persons.
3. Grade 3 includes:
   a. A facility that employs biological treatment based upon the activated sludge principle and is designed to serve 5,001 to 20,000 persons;
   b. A facility that employs trickling filtration and is designed to serve 5,001 to 25,000 persons;
   c. A variation of biological treatment based on the activated sludge principle that requires specialized knowledge, including contact stabilization, and is designed to serve 20,000 or fewer persons; or
   d. A collection system that serves 10,001 to 25,000 persons.
4. Grade 4 includes:

a. A facility that employs biological treatment based upon the activated sludge principle and is designed to serve more than 20,000 persons;
b. A facility that employs trickling filtration and is designed to serve a population equivalent more than 25,000 persons; or
c. A collection system that serves more than 25,000 persons.

Historical Note

Former Section R9-20-519 repealed, new Section R9-20-519 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-519 amended, renumbered as Section R9-20-514, then renumbered as Section R18-4-114 effective October 23, 1987 (Supp. 87-4). R18-5-114 recodified from R18-4-114 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended to correct manifest typographical error in subsection (3)(d) (Supp. 01-3).

R18-5-115. Grades of Water Treatment Plants and Distribution Systems

A. Grading of water treatment plants. This subsection does not apply to a facility that distributes water but does not treat water or to a facility that distributes water and disinfects by chlorine gas or hypochlorite only to maintain disinfection levels in the distribution system. The Department shall grade a water treatment plant according to the sum of the points it the Department assigns for each plant characteristic.

1. The Department shall assign points for the purpose of grading a water treatment plant as follows:

Plant Characteristics	**Points**
Population	1 per 5,000
Maximum Design Capacity	1 per Millions of Gallons per Day up to 10
Groundwater Source	3
Surface or Groundwater Under the Direct Influence of Surface Water Source	5
Carbon Dioxide	2
pH Adjustment	3
Packed Tower Aeration	6
Air Stripping	6
Stability or Corrosion Control	3
Taste and Odor	8
Iron/Manganese Removal	8
Ion Exchange Softening	10
Chemical Precipitation Softening	15
Coagulant Addition	6
Flocculation	4
Sedimentation	4
Upflow Clarification	2
Fluoridation	5
Activated Alumina	6
Blending	5
Residual Waste Stream	5
Control Systems Technology	2
Biologically Active Filter	20
Granular Media Filter	15
Pressure Filter	15
Gravity Sand Filter	10
Membrane Filtration	15
Chlorine Gas	6
Hypochlorite Liquid	2
Hypochlorite Solid	2
Chloramine	9
Chlorine Dioxide	9
Ozone	12
Ultraviolet	3

2. The Department shall assign a grade by the total number of points assigned to the facility, as follows:

Grade	**Point Range**
Grade 1	1 to 25
Grade 2	26 to 50
Grade 3	51 to 70
Grade 4	More than 70

B. Grading of water distribution systems. The Department shall grade a distribution system according to the sum of the points the Department assigns for each system characteristic.

1. The Department shall assign points for the purpose of grading a distribution system as follows:

System Characteristics	**Points**
Population	1 per 5,000
Maximum Design Capacity	1 per Millions of Gallons per Day up to 10
Pressure Zones	5
Booster Stations	5
Storage Tanks	3
Blending	5
Fire Protection Systems/Testable Backflow Prevention Assemblies*	5
Cathodic Protection	3
Control System Technologies	2
Chlorine Gas	6
Hypochlorite Liquid	2
Hypochlorite Solid	2
Chloramine	9

Chlorine Dioxide	9

*The presence of one or both of these devices earns five points for the facility.

2. No points are added for Grade 1 small systems that:
   a. Only distribute groundwater;
   b. Serve fewer than 501 persons;
   c. Have no disinfection or disinfect by chlorine gas or hypochlorite only; and
   d. Do not store water or store water only in storage tanks.
3. The Department shall assign a grade by the total number of points assigned to the facility, as follows:

Grade	Point Range
Grade 1	0
Grade 2	1 to 20
Grade 3	21 to 35
Grade 4	More than 35

Historical Note
Former Section R9-20-520 repealed, new Section R9-20-520 adopted effective November 1, 1979 (Supp. 79-6). Former Section R9-20-520 amended, renumbered as Section R9-20-515, then renumbered as Section R18-4-115 effective October 23, 1987 (Supp. 87-4). R18-5-115 recodified from R18-4-115 (Supp. 95-2). Amended by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1). Amended by final rulemaking at 7 A.A.R. 5079, effective October 16, 2001 (Supp. 01-4). Amended by final rulemaking at 11 A.A.R. 998, effective April 2, 2005 (Supp. 05-1).

R18-5-116. Initial Grading and Regrading of Facilities

A. The Department shall act under A.R.S. Title 41, Chapter 6, Article 10 and 18 A.A.C. 1, Article 2 when initially grading or when regrading a facility.

B. If it is determining the initial grade of a facility or whether to regrade a facility, the Department shall consider the facility characteristics in R18-5-114 and R18-5-115, and whether:
1. The facility has special design features or characteristics that make it unusually difficult to operate;
2. The water or wastewater is unusually difficult to treat;
3. The facility uses effluent; or
4. The facility poses a potential risk to public health, safety or welfare.

C. The owner of a facility that is regraded under this Article shall ensure that the facility is operated by an operator, in compliance with this Article, no later than one year from the effective date of the facility regrading.

Historical Note
New Section adopted by final rulemaking at 7 A.A.R. 1171, effective February 16, 2001 (Supp. 01-1).

ARTICLE 2. PUBLIC AND SEMIPUBLIC SWIMMING POOLS AND SPAS

R18-5-201. Definitions

"Air induction system" means a system whereby a volume of air is induced into a hollow ducting in a spa floor, bench, or wall. An air induction system is activated by an air power blower and is separate from the water circulation system.

"Artificial lake" means a man-made lake, lagoon, or basin, lined or unlined, with a surface area equal to or greater than two acres (87,120 square feet), that is used or intended to be used for water contact recreation.

"Backwash" means the process of thoroughly cleaning a filter by the reverse flow of water through the filter.

"Barrier" means a fence, wall, building, or landscaping that obstructs access to a public or semipublic swimming pool or spa.

"Cartridge filter" means a depth, pleated, or surface-type filter component with fixed dimensions that is designed to remove suspended particles from water flowing through the filter.

"Construct" means to build or install a new public or semipublic swimming pool or spa or to enlarge, deepen, or make a major modification to an existing public or semipublic swimming pool or spa.

"Coping" means the cap on a swimming pool or spa wall that provides a finished edge around the swimming pool or spa.

"Cross-connection" means any physical connection or structural arrangement between a potable water system and the piping system for a public or semipublic swimming pool or spa through which it is possible to introduce used water, gas, or any other substance into the potable water system. A bypass arrangement, jumper connection, removable section, swivel or change-over device, or any other temporary or permanent device that may cause backflow is a cross-connection.

"Deck" means a hard surface area immediately adjacent or attached to a swimming pool or spa that is designed for sitting, standing, or walking.

"Deep area" means the portion of a public or semipublic swimming pool that is more than 5 feet in depth.

"Discharge piping" means the portion of the circulation system that carries water from the filter back to the swimming pool or spa.

"Diving area" means the area of a public or semipublic swimming pool that is designated for diving from a diving board, diving platform, or starting block.

"Fill-and-draw swimming pool or spa" means a swimming pool or spa where the principal means of cleaning is the complete removal of the used water and its replacement with potable water.

"Filtration rate" means the rate of water flowing through a filter during the filter cycle expressed in gallons per minute per square foot of effective filter area.

"Flow-through swimming pool or spa" means a swimming pool or spa where new water enters the swimming pool or spa to replace an equal quantity of water that constantly flows out.

"Freeboard" means the vertical wall section of a swimming pool or spa wall between the waterline and the deck.

"Hose bibb" means a faucet with a threaded nozzle to which a hose may be attached.

"Hydrotherapy jet" means a fitting that blends air and water and creates a high-velocity, turbulent stream of air-enriched water for injection into a spa.

"Make-up water" means fresh water used to fill or refill a swimming pool or spa.

"Maximum bathing load" means the design capacity or the maximum number of users that a public or semipublic swimming pool or spa is designed to hold.

"Natural bathing place" means a lake, pond, river, stream, swimming hole, or hot springs which has not been modified by man.

"Operate" means to run, maintain, or otherwise control or direct the functioning of a public or semipublic swimming pool or spa.

"Overflow collection system" means equipment designed to remove water from a swimming pool or spa, including gutters, overflows, surface skimmers, and other surface water collection systems of various designs and manufacture.

"Potable water" means drinking water.

"Private residential spa" means a spa at a private residence used only by the owner, members of the owner's family, and invited guests, or a spa that serves a housing group consisting of no more than three living units [for example, duplexes or triplexes].

"Private residential swimming pool" means a swimming pool at a private residence used only by the owner, members of the owner's family, and invited guests, or a swimming pool that serves a housing group consisting of no more than three living units [for example, duplexes or triplexes].

"Public spa" means a spa that is open to the public with or without a fee, including a spa that is operated by a county, municipality, political subdivision, school district, university, college, or a commercial establishment whose primary business is the operation of a spa.

"Public swimming pool" means a swimming pool that is open to the public with or without a fee, including a swimming pool that is operated by a county, municipality, political subdivision, school district, university, college, or a commercial establishment whose primary business is the operation of a swimming pool.

"Recessed treads" means a series of vertically spaced, preformed stepholes in a swimming pool wall.

"Return inlet" means an aperture or fitting through which filtered water returns to a swimming pool or spa.

"Rope and float line" means a continuous line not less than 3/4 inch in diameter that is supported by buoys and attached to opposite sides of a swimming pool to separate areas of the swimming pool.

"Semi-artificial bathing place" means a natural bathing place that has been modified by man.

"Semipublic spa" means a spa operated for the residents of lodgings such as hotels, motels, resorts, apartments, condominiums, townhouse complexes, trailer courts, mobile home parks, or similar establishments. A semipublic spa includes a spa that is operated by a neighborhood or community association for the residents of the community and their guests and any spa at a country club, health club, camp, or similar establishment where the primary business of the establishment is not the operation of a spa and where the use of the spa is included in the fee for the primary use of the establishment.

"Semipublic swimming pool" means a swimming pool operated for the residents of lodgings such as hotels, motels, resorts, apartments, condominiums, townhouse complexes, trailer courts, mobile home parks, or similar establishments. A semipublic swimming pool includes a swimming pool that is operated by a neighborhood or community association for the residents of the community and their guests and a swimming pool at a country club, health club, camp, or similar establishment where the primary business of the establishment is not the operation of a swimming pool and where the use of the swimming pool is included in the fee for the primary use of the establishment.

"Shallow area" means the portion of a public or semipublic swimming pool that is 5 feet or less in depth.

"Slip-resistant" means a surface that has a static coefficient of friction [wet or dry] of at least 0.50.

"Spa" means an artificial basin, chamber, or tank of irregular or geometric shell design that is intended only for bathing or soaking and that is not drained, cleaned, or refilled for each user. A spa may include features such as hydrotherapy jet circulation, hot water, cold water mineral baths, or an air induction system. Industry terminology for a spa includes "hydrotherapy pool," "whirlpool," "hot tub," and "therapy pool."

"Special use pool" means a swimming pool intended for competitive aquatic events, aquatic exercise, or lap swimming. A special use pool includes a wave action pool, exit pool for a water slide, swimming pool that is part of an attraction at a water recreation park, water volleyball pool, or a swimming pool with special features used for training and instruction.

"Suction outlet" means the aperture or fitting through which water is withdrawn from a swimming pool or spa.

"Suction piping" means the water circulation system piping that carries water from a swimming pool or spa to the filter.

"Swimming pool" means an artificial basin, chamber, or tank that is designed for swimming or diving.

"Turnover rate" means the number of hours required to circulate a volume of water equal to the capacity of the swimming pool or spa.

"User" means a person who uses a swimming pool, spa, or adjoining deck area.

"Wading pool" means a shallow swimming pool used for bathing and wading by small children.

"Water circulation system" means an arrangement of mechanical equipment connected to a swimming pool or spa by piping in a closed loop that directs water from the swimming pool or spa to the filtration and disinfection equipment and returns the water to the swimming pool or spa.

"Water circulation system components" means the mechanical components that are part of a water circulation system of a swimming pool or spa, including pumps, filters, valves, surface skimmers, ion generators, electrolytic chlorine generators, ozone process equipment, and chemical feeding equipment.

"Water level" means either:

a. On swimming pools and spas with skimmer systems, the midpoint of the operating range of the skimmers, or
b. On swimming pools and spas with overflow gutters, the height of the overflow rim of the gutter.

Historical Note

Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-202. Applicability

A. This Article applies to public and semipublic swimming pools and spas.

B. This Article does not apply to the following:
1. A private residential swimming pool or spa,
2. A swimming pool or spa used for medical treatment or physical therapy and supervised by licensed medical personnel,
3. A semi-artificial bathing place,
4. A natural bathing place, or
5. An artificial lake.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-203. Design Approval

A. A person shall obtain design approval from the Department before starting construction of:
1. A new public or semipublic swimming pool or spa;
2. A major modification to an existing public or semipublic swimming pool or spa. For purposes of this subsection, a major modification means a change to the shape, depth, water circulation system, or disinfection system of a public or semipublic swimming pool or spa or the installation of diving equipment at a public or semipublic swimming pool;
3. A change in use from a semipublic swimming pool to a public swimming pool; and
4. A change in use from a private residential swimming pool to a public or semipublic swimming pool.

B. An applicant for a design approval shall submit an ADEQ application form to the Department in quadruplicate with four complete sets of plans and specifications for the swimming pool or spa and the information in subsection (C).

C. The application for design approval shall include four copies of the following:
1. A general plot plan;
2. Plans and specifications showing the size, shape, cross-section, slope, and dimensions of each swimming pool or spa, deck areas, and barriers;
3. Plans and specifications showing the water circulation and disinfection systems, including all piping, fittings, drains, suction outlets, filters, pumps, surface skimmers, return inlets, chemical feeders, disinfection equipment, gauges, flow meters, and strainers;
4. Plans and specifications showing the source of water supply and the method of disposal of filter backwash water; used swimming pool or spa water, and wastewater from toilets, urinals, sinks, and showers;
5. Detailed plans of bathhouses, dressing rooms, equipment rooms, and other appurtenances; and
6. Additional data required by the Department for a complete understanding of the project.

D. A professional engineer, architect, or a swimming pool or spa contractor with a current A-9, A-19, KA-5, KA-6 license shall prepare or supervise the preparation of all plans and specifications submitted to the Department for review.

E. An applicant shall submit an application for design approval to the Department at least 60 days prior to the date that the applicant wishes to begin construction of a swimming pool or spa.

F. The Department shall determine whether the application for design approval is complete within 30 days of the date of receipt of the application by the Department.

G. The Department shall issue or deny the application for design approval within 30 days of the date that the Department determines that the application for design approval is complete.

H. Unless an extension of time is granted in writing by the Department, a design approval is void if construction is not started within one year after the date of its issuance or there is a halt in construction of more than one year.

I. The Department may issue a design approval with conditions. The Department shall not issue an Approval of Construction if the design approval is conditioned and the construction of the swimming pool or spa does not comply with the stated conditions.

J. The Department may issue design approvals in phases to allow a political subdivision to start construction of a public swimming pool or spa without issuing a design approval for the entire construction project. A design approval may be issued in phases provided all of the following conditions are met:
1. A phased design approval is needed to accommodate a design/build contract, phased construction contract, multiple construction contracts, turnkey contract, or special contract that requires construction to begin prior to the completion of design plans and specifications for the entire public swimming pool or spa construction project.
2. The applicant submits a detailed project description for the entire public swimming pool or spa construction project to the Department.
3. There is a written agreement between the applicant and the Department which includes the following:
   a. A construction project schedule,
   b. A schedule to submit applications and supporting documentation for the phased design approval including any anticipated variance requests,
   c. Negotiated time-frames for administrative completeness and substantive review of each application for phased design approval, and
   d. A schedule of construction inspections by the Department or third-party certifications by the applicant.
4. The applicant certifies in writing that the applicant understands that the public swimming pool or spa cannot be operated without an Approval of Construction for each phase of the construction project pursuant to R18-5-204.
5. If the applicant and the Department cannot reach agreement regarding a phased design approval or Approval of Construction, then the requirements of R18-5-203(A) through (I) and R18-5-204 apply.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-204. Approval of Construction

A. A public or semipublic swimming pool or spa shall not operate without receiving an Approval of Construction issued by the Department.

B. The construction of a public or semipublic swimming pool or spa shall conform to plans and specifications that have been approved by the Department. If the applicant wishes to make a change to the approved plans and specifications, the applicant shall submit revised plans and specifications with a written statement of the reasons for the change to the Department. The applicant shall obtain Department approval of the revised plans and specifications before starting any work affected by the change.

C. Prior to any construction that will cover the piping arrangement of the swimming pool or spa and at least 30 days prior to the expected date of completion of construction of a public swimming pool or spa, the applicant shall notify the Department to permit a construction inspection. The Department shall inspect the construction of a swimming pool or spa to determine if the swimming pool or spa has been constructed in

accordance with Department-approved plans, specifications, and conditions unless a professional engineer, architect, or registered sanitarian certifies that the swimming pool or spa has been constructed in accordance with Department-approved plans, specifications, and conditions.

D. If the swimming pool or spa has been constructed in accordance with Department-approved plans, specifications, and conditions, the Department shall issue the Approval of Construction within 30 days of the date of the construction inspection by the Department or the date the Department receives third-party certification.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-205. Prohibitions

A. A fill-and-draw swimming pool or spa shall not be used as a public or semipublic swimming pool or spa.

B. A private residential spa shall not be used as a public or semipublic spa.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-206. Water Source

Only water from a source that is approved by the Department shall be used in a public or semipublic swimming pool or spa. Reclaimed wastewater shall not be used as make-up water for a public or semipublic swimming pool or spa.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-207. Construction Materials

A. A public or semipublic swimming pool or spa shall be constructed of concrete or other structurally rigid material that is equivalent in strength or durability to concrete, except that a public or semipublic spa may be constructed of fiberglass or acrylic.

B. A public or semipublic swimming pool or spa shall be constructed of materials that are nontoxic.

C. A public or semipublic swimming pool or spa shall be constructed of waterproof materials that provide a watertight structure.

D. A public or semipublic swimming pool or spa shall have a smooth and easily cleaned surface, without cracks or joints, excluding structural joints, or to which a smooth, easily cleaned surface finish is applied or attached.

E. All corners in a public or semipublic swimming pool or spa shall be rounded, including the corners formed by the intersection of a wall and floor.

F. A surface within a public or semipublic swimming pool or spa intended to provide footing for users shall have a slip-resistant surface. The roughness or irregularity of the surface shall not cause injury or discomfort to users' feet during normal use.

G. The color, pattern, or finish of the interior of a public or semipublic swimming pool or spa shall not obscure objects, surfaces within the swimming pool or spa, debris, sediment, or algae. Surface finishes shall be white, pastel, or other light color. The interior finish shall completely line the swimming pool or spa to the coping, tile, or gutter system.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-208. Maximum Bathing Load

A. The maximum bathing load for a public or semipublic swimming pool or spa shall not be exceeded.

B. The maximum bathing load for a public or semipublic swimming pool shall be calculated as the sum of the following:

1. The shallow area of the swimming pool in square feet divided by 10 square feet, plus
2. The deep area of the swimming pool in square feet minus 300 square feet for each diving board divided by 24 square feet.

C. The maximum bathing load for a public swimming pool shall be limited by the number of users for the toilets, showers, or lavatories that are provided in the bathhouses or dressing rooms prescribed in R18-5-242.

D. The maximum bathing load for a public or semipublic spa shall not exceed the area of the spa in square feet divided by 9 square feet.

E. The maximum bathing load for a public or semipublic swimming pool or spa shall be posted.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-209. Shape

A. A public or semipublic swimming pool or spa may be any shape except that the designer shall shape a public or semipublic swimming pool or spa to minimize hazards to users and provide adequate circulation of swimming pool or spa water.

B. There shall be no protrusions, extensions, means of entanglement, or other obstructions in a public or semipublic swimming pool or spa that may cause entrapment of or injury to the user. This subsection does not prohibit water features such as water fountains, slides, water play equipment, or water volleyball and basketball nets.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-210. Walls

A. Where a racing lane terminates in a swimming pool, the wall shall be plumb to a minimum depth of 5 feet below the waterline. Below the 5-foot depth, the wall shall be radiused to join the floor.

B. There shall be no projections from a swimming pool or spa wall except for coping, cantilevered deck, ladders, and steps.

C. An underwater seat shall comply with the following:

1. The edges of an underwater seat shall be outlined with a sharply contrasting colored tile or other material that is clearly visible from the deck adjacent to the underwater seat;
2. An underwater seat shall have a slip-resistant surface;
3. An underwater seat shall be located outside of the deep area of a swimming pool that is equipped for diving. An underwater seat may be located in the deep area of a swimming pool that is not equipped for diving provided the underwater seat is either completely recessed into the swimming pool wall, shaped to be compatible with the shape of the swimming pool wall, or in a corner of the swimming pool;
4. The maximum depth of an underwater seat is 24 inches below the waterline. The minimum depth of an underwater seat is 12 inches below the waterline; and
5. The maximum width of an underwater seat is 20 inches.

D. If a spa is located immediately adjacent to a swimming pool, the separating wall between the spa and the swimming pool shall be no more than 8 inches wide. The top of the separating wall shall be no lower than the level of the coping of the swimming pool. If a separating wall is more than 8 inches wide, then the deck width shall comply with R18-5-217(D). A spa

shall not be located immediately adjacent to the deep area of a swimming pool.

E. Coping or cantilevered deck may project from a swimming pool or spa wall to provide a handhold for users. The coping or deck shall be rounded, have a slip-resistant surface finish, and shall not exceed 3 1/2 inches in thickness. The overhang of the coping or deck shall not exceed 2 inches or be less than 1 inch. All corners created by coping or cantilevered deck shall be rounded in both the vertical and horizontal dimensions to eliminate sharp corners.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-211. Freeboard

A. The freeboard in a public or semipublic swimming pool or spa shall not exceed 8 inches, except as provided in subsection (B).

B. The freeboard in a semipublic swimming pool may exceed 8 inches to provide for walls, terraces, or other design features. The Department shall review each request to allow an increase in freeboard on a case-by-case basis. In reviewing the request, the Department shall consider safety, exit distances, alternative exits, and location. The length and height of the section where the freeboard area may be increased is limited. All of the following requirements shall be met:

1. Guard rails or similar devices are provided to prevent any raised area from being used as a diving platform.
2. The vertical surfaces of the freeboard area are constructed of inorganic materials. All vertical surfaces shall be rigid, smooth, and easily cleanable.
3. The horizontal surface areas comply with the provisions of this Article for decks.
4. The vertical surface area is included as surface area of the swimming pool to determine the type, size, location, and numbers of equipment and piping.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-212. Floors

A. The slope of the floor of a public or semipublic swimming pool, from the end wall in the shallow area towards the deep area to the point of the first slope change shall be uniform and shall not exceed 1 foot of fall in 10 feet. The floor slope in a public or semipublic spa shall not exceed 1 foot of fall in 10 feet.

B. The floor slope of a public or semipublic swimming pool, from the point of the first slope change to the deepest part of the swimming pool, shall not exceed 1 foot of fall in 3 feet.

C. For a public or semipublic swimming pool that is equipped for diving, the depth of the swimming pool at the point of the first slope change shall be a minimum of 5 feet. For a public or semipublic swimming pool that is not equipped for diving, the depth of the swimming pool at the point of the first slope change shall be a minimum of 4 feet.

D. All portions of a swimming pool or spa floor shall slope towards a main drain.

E. The transitional radius where the floor of a public or semipublic swimming pool joins a wall shall comply with the following:

1. The center of the radius shall be no less than 3 feet below the waterline in the deep area or 2 feet below the waterline in the shallow area.
2. The radius shall be tangent at the point where the radius meets the wall or floor.
3. The radius shall be equal to or greater than the depth of the swimming pool minus the vertical wall depth measured from the waterline minus 3 inches.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-213. Entries and Exits

A. Each public or semipublic swimming pool shall have at least two means of entry or exit consisting of ladders, steps, or recessed treads.

B. There shall be at least one ladder, set of steps, or set of recessed treads for each 75 feet of perimeter of a public or semipublic swimming pool or spa.

C. At least one means of entry and exit shall be provided in the deep area and at least one means of entry and exit shall be provided in the shallow area of a public or semipublic swimming pool. Where the water depth is 2 feet at the swimming pool wall in the shallow area or where there is a zero depth entry pool [for example, an artificial beach], the area shall be considered a means of entry or exit.

D. A set of steps shall be provided in a public or semipublic spa.

E. The location of stairs, ladders, and recessed treads shall not interfere with racing lanes.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-214. Steps

A. Each set of steps shall be provided with at least one handrail to serve all treads and risers. Handrails shall be provided at one side or in the center of all steps. Handrails shall be installed in such a way that they can be removed only with tools.

B. Steps shall be permanently marked to be clearly visible from above and below the water level in a swimming pool or spa. The edges of steps shall be outlined with a sharply contrasting colored tile or other material that is clearly visible from the deck adjacent to the steps.

C. Steps may be constructed only in the shallow area of a public or semipublic swimming pool.

D. Steps shall not project into a public or semipublic swimming pool or spa in a manner that creates a hazard to users.

E. All tread surfaces on steps shall have slip-resistant surfaces.

F. Step treads shall have a minimum unobstructed horizontal depth of 10 inches. Risers shall have a maximum uniform height of 12 inches, with the bottom riser height allowed to vary ± 2 inches from the uniform riser height.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-215. Ladders

A. At least one ladder shall be provided in the deep area of a public or semipublic swimming pool. If the width of the deep area of a swimming pool is greater than 20 feet, then one ladders shall be located on opposite sides of the deep area.

B. A swimming pool or spa ladder shall be equipped with two handrails.

C. All treads on ladders shall have slip-resistant surfaces.

D. Ladder treads shall have a minimum horizontal depth of 1 1/2 inches. The distance between ladder treads shall range from a minimum of 7 inches to a maximum of 12 inches.

E. Below the waterline, there shall be a clearance of not more than 6 inches and not less than 3 inches between any ladder tread edge and the wall as measured from the side of the tread closest to the wall.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-216. Recessed Treads

A. Recessed treads with handrails may be substituted for ladders.
B. Recessed treads shall be pre-formed, readily cleanable, and designed to drain into the swimming pool or spa to prevent the accumulation of dirt in the recessed treads.
C. Each set of recessed treads shall be equipped with two handrails.
D. All recessed treads shall have slip-resistant surfaces.
E. The vertical distance between the swimming pool or spa coping edge or deck and the uppermost recessed tread shall be a maximum of 12 inches. Recessed treads at the centerline shall have a uniform vertical spacing of 12 inches maximum and 7 inches minimum.
F. Recessed treads shall be at least 5 inches deep and 12 inches wide.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-217. Decks and Deck Equipment

A. Decks, ramps, coping, and similar step surfaces shall be constructed of concrete or other inorganic material, have a slip-resistant finish, and be easily cleanable.
B. The minimum continuous unobstructed deck width, including the coping, shall be 10 feet for a public swimming pool and 4 feet for a semipublic swimming pool. The dimensional design of decks at public and semipublic swimming pools shall comply with the dimensions shown in Illustration B.
C. A minimum 5 feet of deck width shall be provided on the sides and rear of any diving equipment at a public swimming pool. A minimum 4 feet of deck width shall be provided on the sides and rear of any diving equipment at a semipublic swimming pool. If diving equipment is installed at a public swimming pool, there shall be a minimum 15 feet of deck width from the swimming pool wall to the edge of the deck behind the diving equipment [See Illustration B].
D. A continuous unobstructed deck width of at least 4 feet, which may include the coping, shall be provided on at least two contiguous sides and around at least 50% of the perimeter of a public or semipublic spa.
E. Decks shall be sloped to effectively drain either to perimeter areas or to deck drains. Drainage shall remove splash water, deck cleaning water, and rain water without leaving standing water. The minimum slope of the deck shall be 1/4 inch per 1 foot. The maximum slope of the deck shall be 1 inch per 1 foot, except for ramps.
F. Decks shall be edged to eliminate sharp corners.
G. Site drainage shall be provided to direct all perimeter deck drainage and general site and roof drainage away from a public or semipublic swimming pool or spa. Yard drains may be required to prevent the accumulation or puddling of water in the general area of the deck and related improvements.
H. Hose bibbs shall be provided along the perimeter of the deck so that all parts of the deck may be washed down. At a minimum, each hose bibb shall be protected against back siphonage with an atmospheric vacuum breaker. The Department may approve quick disconnect style hose bibbs.
I. Any valve that is installed in or under any deck shall provide a minimum 10-inch diameter access cover and a valve pit to facilitate the repair and maintenance of the valve.
J. Joints in decks shall be provided to minimize the potential for cracks due to changes in elevations or movement of the slab. The maximum voids between adjoining concrete slabs or between concrete slabs and expansion joint material shall be 3/16 inch of horizontal clearance with a maximum difference in vertical elevation of 1/4 inch. Areas where the deck joins concrete shall be protected by expansion joints to protect the swimming pool or spa from the pressures of relative movements. Construction joints where pool or spa coping meets the deck shall be watertight and shall not allow water to pass through to the underlying ground.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-218. Lighting

A. A public or semipublic swimming pool or spa and adjacent deck areas shall be lighted by natural or artificial means when they are in use.
B. A public or semipublic swimming pool or spa that is intended to be used at night shall be equipped with artificial lighting that is designed and spaced so that all parts of the swimming pool or spa, including the bottom, may be seen without glare.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-219. Water Depths

A. Except as provided in subsection (B), the minimum water depth in the shallowest area of a public or semipublic swimming pool shall be 2 feet. The maximum water depth in the shallowest area of a public or semipublic swimming pool shall be 3 feet. In public swimming pools, where racing lanes terminate, the minimum depth shall be 5 feet from the water level to the point where the vertical wall is radiused to join the floor.
B. The Department may approve a depth of less than 2 feet in a wading pool or to allow a zero depth entry swimming pool.
C. The maximum water depth in a public or semipublic spa shall be 42 inches, measured from the water level.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-220. Depth Markers

A. Water depths shall be conspicuously and permanently marked at or above the water level on the vertical wall and on the top of the coping or the edge of the deck next to a swimming pool.
  1. Depth markers on a vertical wall shall be positioned to be read from the water side.
  2. Depth markers on a deck shall be located within 18 inches of the side of the swimming pool and positioned to be read while standing on the deck facing the water. Depth markers that are located on a deck shall be made of slip-resistant materials.

B. Depth markers for a public or semipublic swimming pool shall be installed at points of maximum and minimum water depth and at all points of slope change. Depth markers are required in the shallow area at 1-foot depth intervals to a depth of 5 feet. Thereafter, depth markers shall be installed at 2-foot depth intervals. Depth markers shall not be spaced at distances greater than 25 feet.
C. Depth markers shall be located on both sides and at both ends of a public or semipublic swimming pool.
D. Depth markers shall be in Arabic numerals with a 4-inch minimum height. Arabic numerals shall be of contrasting color to the background.
E. In public swimming pools with racing lanes, approach warning markers shall be placed below the water level on the opposite walls at the ends of each racing lane. Warning markers shall be of contrasting color to the background. Warning markers shall be clearly visible in or out of the water from a minimum distance of 10 feet.

F. The shallow area of a public swimming pool shall be visually set apart from the deep area of the pool by a rope and float line.

G. Depth markers for a public or semipublic spa shall comply with all of the following:
1. A public or semipublic spa shall have permanent depth markers with numbers that are a minimum of 4 inches high. Depth markers shall be plainly and conspicuously visible from all points of entry.
2. The maximum depth of a public or semipublic spa shall be clearly indicated by depth markers.
3. There shall be a minimum of 2 depth markers at each public or semipublic spa.
4. Depth markers shall be spaced at no more than 25-foot intervals and shall be uniformly located around the perimeter of the spa.
5. Depth markers shall be positioned on the deck within 18 inches of the side of the spa. A depth marker shall be positioned so that it can be read by a person standing on the deck facing the water.
6. Depth markers that are on deck surfaces shall be made of slip-resistant material.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-221. Diving Areas and Equipment

A. The dimensions of a diving area in a public or semipublic swimming pool shall comply with minimum requirements for length, width, depth, area, and other dimensions specified in Illustration A. The diving well profile in Illustration A does not apply to a special use pool that is intended for competitive diving and has been approved by Department pursuant to R18-5-248(A).

B. Diving equipment shall be permanently anchored to the swimming pool deck. Equipment shall be rigidly constructed with sufficient bracing to ensure stability. Supports, platforms, steps, and ladders for diving equipment shall be designed to carry anticipated loads.

C. All diving stands higher than 21 inches, measured from the deck to the top of the board, shall be provided with stairs or a ladder.

D. Diving equipment shall have a durable finish. The surface finish shall be free of tears, splinters, or cracks that may be a hazard to users.

E. Steps and ladders leading to diving boards and diving platforms shall be of corrosion-resisting materials and shall have slip-resistant tread surfaces. Step treads shall be self-draining.

F. Diving boards, diving platforms, and starting blocks shall have slip-resistant tread surfaces.

G. Handrails shall be provided at all steps and ladders leading to diving boards that are 1 meter or more above the water.

H. Diving boards and diving platforms that are 1 meter or higher shall be protected with guard rails. Guard rails shall be at least 30 inches above the diving board or diving platform and shall extend to the edge of the swimming pool wall.

I. A label shall be permanently affixed to a diving board and shall include the following:
1. Manufacturer's name and address,
2. Board length, and
3. Fulcrum setting instructions.

J. The maximum diving board height over the water is 3 meters. The maximum height of a diving platform over the water is 10 meters.

K. Starting blocks shall be located in the deep end of a public swimming pool or where the depth of the water is at least 5 feet.

L. There shall be a completely unobstructed clear vertical distance of 13 feet above any diving board measured from the center of the front end of the board. This clear, unobstructed vertical space shall extend horizontally at least 8 feet behind, 8 feet to each side, and 16 feet ahead of the front end of the board.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-222. Prohibition Against Diving; Warning Signs

A. Diving equipment is prohibited in a public or semipublic swimming pool that does not meet the minimum diving well dimensions specified in Illustration A. If a public or semipublic swimming pool does not meet the dimensional requirements prescribed in Illustration A for diving, then the owner shall prominently display at least one sign that cautions users that the swimming pool is not suitable for diving. The warning sign shall state "NO DIVING" in letters that are 4 inches or larger or display the international symbol for no diving.

B. Diving from the deck of a public or semipublic swimming pool into water that is less than 5 feet deep shall be prohibited. Warning markers indicating in words or symbols that diving is prohibited shall be placed on the deck within 18 inches of the side of the shallow area of the swimming pool. A warning marker shall be positioned so that it can be read by a person standing on the deck facing the water.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-223. Water Circulation System

A. A public or semipublic swimming pool or spa shall have a water circulation system that provides complete circulation of water through all parts of the swimming pool or spa and can maintain water chemistry and water clarity requirements.

B. The water circulation system for a public or semipublic swimming pool shall have a turnover rate of at least once every 8 hours. The water circulation system of a public or semipublic spa shall have a turnover rate of at least once every 30 minutes. The water circulation system for a wading pool shall have a turnover rate of at least once every hour. The water circulation system shall be designed to give the proper turnover rate without exceeding the maximum filtration rate for the filter in R18-5-227(E).

C. Water circulation system components shall comply with American National Standard/NSF International Standard Number 50, "Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs," NSF International, 3475 Plymouth Road, P.O. Box 130140, Ann Arbor, Michigan [revised July, 1996, and no future editions] which is incorporated by reference and on file with the Office of the Secretary of State and the Department.

D. Water circulation system components shall be accessible for inspection, repair, or replacement.

E. Except as provided by this subsection, water withdrawn from a public or semipublic swimming pool or spa shall not be returned unless it has been filtered and adequately disinfected. Water may be withdrawn from a swimming pool for a water slide or a water fountain without being filtered or disinfected.

F. In a swimming pool complex with more than one swimming pool or where there is a combination of swimming pools and spas, each swimming pool and spa shall have a separate water circulation system.

G. Hydrotherapy jets or other devices which create roiling water or similar effects in a spa shall not be connected to the water

circulation system, but shall be operated through a separate system.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1). Manifest typographical error corrected in subsection (B) (Supp. 01-1).

R18-5-224. Piping and Fittings

A. The water velocity in discharge piping for public and semipublic swimming pools and spas shall not exceed 10 feet per second, except for copper discharge piping where the velocity shall not exceed 8 feet per second. The water velocity in suction piping shall not exceed 6 feet per second. Piping shall be sized to permit the rated flows for filtering and cleaning without exceeding the maximum head of the pump.

B. Water circulation system piping and fittings shall be constructed of materials that are able to withstand 150% of normal operating pressures. Suction piping shall be of sufficient strength so that it does not collapse when there is a complete shutoff of flow on the suction side of the pump. A licensed Arizona contractor shall conduct an induced static hydraulic pressure test of the water circulation system piping at 25 pounds per square inch for at least 30 minutes. The pressure test shall be performed before the deck is poured. Pressure in the water circulation system piping shall be maintained during the deck pour.

C. Water circulation piping and fittings shall be made of nontoxic, corrosion-resistant materials.

D. Water circulation piping and fittings shall be installed so that piping or fittings do not project into a public or semipublic swimming pool or spa in a manner that is hazardous to users.

E. Piping that is subject to damage by freezing shall have a uniform slope in one direction and shall be equipped with valves that will permit the complete drainage of the water in the swimming pool or spa.

F. Piping shall be designed to drain the swimming pool or spa water by removing drain plugs, manipulating valves, or other means.

G. Piping systems shall be identified by color or by stencils or labels located at conspicuous points.

H. Plastic water circulation piping shall comply with American National Standard/NSF International Standard Number 14, "Plastics Piping System Components and Related Materials," NSF International, 3475 Plymouth Road, P.O. Box 130140, Ann Arbor, Michigan [revised September, 1996, and no future editions] which is incorporated by reference and on file with the Office of the Secretary of State and the Department.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-225. Pumps and Motors

A. A pump and motor shall be provided for each water circulation system. The pump shall be sized to meet but not to exceed the flow rate required for filtering against the total head developed by the complete water circulation system. The pump shall be sized to comply with the turnover rate prescribed in R18-5-223(B).

B. Pumps and motors shall be readily and easily accessible for inspection, maintenance, and repair. When the pump is below the waterline, valves shall be installed on permanently connected suction and discharge lines. The valves shall be readily and easily accessible for maintenance and removal of the pump.

C. Each motor shall have an open, drip-proof enclosure. Each motor shall be constructed electrically and mechanically to perform satisfactorily and safely under the conditions of load in the environment normally encountered in swimming pool or spa installations. Each motor shall be capable of operating the pump under full load with a voltage variation of ± 10% from the nameplate rating. Each motor shall have thermal or current overload protection to provide locked rotor and running protection. Thermal or current overload protection may be built into the motor or in the line starter.

D. The pump shall be equipped with an emergency shut-off switch that is located within the swimming pool or spa enclosure to cut off power to the water circulation system if someone is entrapped on a main drain or suction outlet.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-226. Drains and Suction Outlets

A. A public and semipublic swimming pool shall be equipped with at least two main drains located in the deepest part of the swimming pool or a single gravity drain that discharges to a surge tank.

B. Each main drain shall be covered by a grate that is not be readily removable by users. The openings in the grate shall have a total area that is at least four times the area of the drain pipe.

C. The spacing of the main drains shall not be greater than 20 feet on centers and not more than 15 feet from each side wall.

D. A minimum of two suction outlets shall be provided for each pump in a suction outlet system for a public or semipublic spa. The suction outlets shall be separated by a minimum of 3 feet or located on two different planes [that is, one suction outlet on the bottom and one on a vertical wall or one suction outlet each on two separate vertical walls]. The suction outlets shall be plumbed to draw water through them simultaneously through a common line to the pump. Suction outlets shall be plumbed to eliminate the possibility of entrapping suction.

E. If the suction outlet system for a public or semipublic swimming pool or spa has multiple suction outlets that can be isolated by valves, then each suction outlet shall protect against user entrapment by either an antivortex cover, a grate, or other means approved by the Department.

F. A public or semipublic spa may be equipped with a single gravity drain which discharges to a surge tank instead of suction outlets. The total velocity of water through grate openings of the drain shall not exceed 2 feet per second.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-227. Filters

A. Filters shall be designed, located, and constructed to permit removal of filter manhole covers or heads for inspection, replacement, or repair of filter elements or filter media. No filtration system shall be installed beneath the surface of the ground or within an enclosure without providing adequate access for inspection and maintenance.

B. Pressure-type filters shall be equipped with a means to release internal pressure. Each pressure filter shall be equipped with an air relief piping system connected at an accessible point near the crown. Automatic air relief systems may be used instead of manual systems. The design of a filter with an automatic air relief system as its principal means of air release shall include lids that provide a slow and safe release of pressure. The design of a separation tank used in conjunction with any filter tank shall include a manual means of air release or a lid which provides a slow and safe release of pressure as it is opened.

C. Pressure filter systems shall be equipped with a sight glass installed on the waste discharge pipe.

D. Swimming pool and spa filters shall comply with American National Standard/NSF International Standard Number 50, "Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs," NSF International, 3475 Plymouth Road, P.O. Box 130140, Ann Arbor, Michigan [revised July, 1996, and no future editions] which is incorporated by reference and on file with the Office of the Secretary of State and the Department.

E. The maximum filtration rate shall not exceed the design flow rate prescribed by the National Sanitation Foundation Standard 50 for commercial filters. In no case shall the maximum filtration rate exceed the following:

1. The rate of filtration in a high-rate sand filter shall not exceed 25 gallons/minute/square foot.
2. The rate of filtration of a diatomaceous earth filter shall not exceed 2 gallons/minute/square foot.
3. The rate of filtration of a cartridge filter shall not exceed 0.375 gallons/minute/square foot.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-228. Return Inlets

A. Adjustable return inlets shall be provided for each public and semipublic swimming pool or spa. Return inlets shall be designed, sized, and installed to produce a uniform circulation of water throughout the swimming pool or spa. Where surface skimmers are used, return inlets on vertical walls shall be located to help bring floating particles within range of the surface skimmers.

B. A public or semipublic swimming pool shall have a minimum of two return inlets, regardless of the size of the swimming pool. The number of return inlets shall be based on two return inlets per 600 square feet of surface area, or fraction thereof.

C. Return inlets in a public or semipublic swimming pool shall be on a closed loop piping system. Public or semipublic spas with three or more return inlets shall be on a closed loop piping system.

D. Where the width of a public or semipublic swimming pool exceeds 30 feet, bottom returns shall be required. Bottom returns shall be flush with the pool bottom or designed to prevent injury to users.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-229. Gauges

A. Pressure gauges shall be installed on the water circulation system for each public and semipublic swimming pool and spa. Pressure gauges shall be installed in accessible locations where they can be read easily.

B. Pressure gauges shall be installed on the inlet and outlet manifold of the filter. Pressure gauges shall read at intervals of 1 pound per square inch [psi].

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-230. Flow meter

A public swimming pool shall be equipped with, a flow meter which indicates the rate of backwash through the filter. The flow meter shall be installed between the pump and the filter on a straight section of pipe in accordance with the manufacturer's specifications in a location where it can be read easily. The flow meter shall measure the rate of flow through the filter in gallons per minute and shall be accurate to within 5% under all conditions of flow. The flow meter shall have an indicator with a range of at least 150% of the normal flow rate.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-231. Strainers

The water circulation system shall include a removable strainer located upstream of the pump to prevent solids, debris, hair, or lint from reaching the pump and filters. The strainer shall be made of corrosion-resistant material. A strainer shall have openings that have a total area which is equal to at least four times the area of the suction piping.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-232. Overflow Collection Systems

A. An overflow collection system shall be installed in each public or semipublic swimming pool or spa.

B. The overflow collection system shall be designed and constructed so that the water level of the swimming pool is maintained at the mid-point of the operating range of the system's rim or weir device.

C. Rim type overflow collection systems shall be installed on at least two opposite sides and have a total length of at least 50% of the perimeter of a public or semipublic swimming pool. The overflow collection system shall be capable of carrying 50% of the design capacity of the water circulation system.

D. If overflow gutters are used, they shall be installed continuously around the swimming pool with the lip of the gutter level throughout its perimeter. Overflow gutters shall be provided with sufficient opening at the top and width at the bottom to permit easy cleaning. The overflow gutter bottom shall be pitched 1/4 inch per foot to drainage outlets located not more than 10 feet apart. Outlet piping shall be sized to circulate at least 50% of the capacity of the water circulation system and be properly covered by a drain grate. The surge tank for the overflow gutters shall be equipped with float controls which regulate the main drain, fill line, and overflow. The system surge capacity shall not be less than one gallon for each square foot of swimming pool surface area. Stainless steel gutters and other specialty gutter systems may be used if they are hydraulically equivalent to overflow gutters.

E. Surface skimmers shall be recessed into the swimming pool or spa wall and shall be installed to achieve effective skimming action throughout the swimming pool or spa.

1. A surface skimmer shall be provided for each 400 square feet of surface area, or fraction thereof, of a public or semipublic swimming pool. A minimum of two surface skimmers are required in a public or semipublic swimming pool. A surface skimmer shall be provided for each 200 square feet of surface area, or fraction thereof, of a public or semipublic spa.
2. The overflow slot shall be set level and shall not be less than 8 inches in width at the narrowest section.
3. The rate of flow through the skimmers shall be a minimum of 75% of the water circulation system capacity. Surface skimmers shall be designed to carry at least 30 gallons per minute per lineal foot of weir throat.
4. Where three or more surface skimmers are used, they must be on a closed loop piping system.
5. At least one surface skimmer shall be located on the side or near the corner of the swimming pool that is downwind of the area's prevailing winds.
6. Main drain piping shall be designed to carry at least 50% of the design flow.

F. Mixed inlet types [for example, surface skimmers and gutters] are prohibited in a public or semipublic swimming pool.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-233. Vacuum Cleaning Systems
A vacuum cleaning system shall be provided for each public and semipublic swimming pool. A vacuum cleaning system shall not create a hazard or interfere with the operation or use of the swimming pool. In integral systems, a sufficient number of vacuum cleaner fittings shall be located in accessible positions at least 10 inches below the water line. Alternatively, vacuum cleaner fittings may be installed as an attachment to the surface skimmers. A pressure cleaning system may be installed in addition to the required vacuum cleaning system.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-234. Disinfection
A. An adjustable automatic chemical feeder shall be provided to ensure the continuous disinfection of the water in a public or semipublic swimming pool or spa. Timers on disinfection equipment are prohibited. Disinfection shall be accomplished by chlorination or by another method that is approved by the Department. The method of disinfection shall effectively maintain an adequate disinfectant residual in the water which is subject to field testing by methods that are easy to use and accurate.
1. Chlorine disinfection equipment for a public or semipublic swimming pool shall be designed to maintain a free chlorine residual of 1.0 to 3.0 ppm. Chlorine disinfection equipment for a public or semipublic spa shall be designed to maintain a free chlorine residual of 3.0 to 5.0 ppm.
2. Bromine disinfection equipment for a public or semipublic swimming pool shall be designed to maintain a bromine residual of 2.0 to 4.0 ppm. Bromine disinfection equipment for a public or semipublic spa shall be designed to maintain a bromine residual of 3.0 to 5.0 ppm.

B. The use of chlorinated isocyanurates or cyanuric acid stabilizer for disinfection and stabilization is permitted. If used, chlorinated isocyanurates shall be fed so as to maintain required disinfectant residual levels. Cyanuric acid levels, whether from chlorinated isocyanurates or from the separate addition of cyanuric acid stabilizer, shall not exceed 150 ppm.

C. The use of chloramines as a primary disinfectant of swimming pool or spa water is prohibited.

D. The addition of gaseous disinfectant directly into a public or semipublic swimming pool is prohibited. The addition of dry or liquid disinfectant directly into a public or semipublic swimming pool or spa for routine disinfection is prohibited. This prohibition does not prohibit the use of liquid or dry disinfectants for shock treatment of a swimming pool or spa. A chlorine gas disinfection system shall not be used for the disinfection of water in a public or semipublic spa.

E. A common chlorine gas disinfection system may be utilized in separate swimming pools if separate metering and feeding devices are provided for each swimming pool.

F. If gaseous chlorine is used for disinfection, the following shall be provided:
1. The chlorinator, chlorine cylinders, and associated chlorination equipment shall be located in a separate well ventilated enclosure at or above ground level. The enclosure shall be reasonably gas-tight, noncombustible, and corrosion-resistant. The door of the enclosure shall open to the outside and shall not open directly toward the swimming pool.
2. If chlorination equipment is placed in a room, then an exhaust fan or gravity ventilation system shall be provided. Mechanical exhausters shall take suction 6 inches or less above the floor and discharge through corrosion-resistant louvers to a safe outside location. A gravity ventilation system shall be designed and constructed to discharge to the outside from floor level. Fresh air intakes shall be located no closer than 3 feet above the ventilation discharge. Chlorine room exhausts shall be directed away from the swimming pool to an area which is normally unoccupied. Chlorine room fans shall be capable of completely changing the air in the room at least once a minute.
3. Electrical switches to control lighting and ventilation in the chlorine room shall be located on the outside of the enclosure and adjacent to the door.
4. Chlorine cylinders shall be kept in an upright position and securely anchored to prevent them from falling. Chlorine cylinders may be stored indoors or out. If stored outside, chlorine cylinders shall not be stored in direct sunlight. Chlorine cylinders shall not be stored near an elevator, ventilation system, or heat source.
5. A warning sign shall be placed on the outside of the door to the chlorine room which cautions persons of the danger of chlorine gas within the enclosure. The warning shall be in letters 3 inches high or larger. The door to the chlorine room shall be provided with a shatter resistant inspection window.
6. Chlorinators shall be a solution-feed type, capable of delivering chlorine at its maximum rate without releasing chlorine gas to the atmosphere. Chlorinators shall be designed to prevent the backflow of water into the chlorine solution container.

G. Granular, tablet, stick, and other forms of dry disinfectant shall be fed by an adjustable automatic feeding device.

H. Disinfection equipment and chemical feeders shall comply with the requirements set forth in American National Standard/NSF International Standard 50, "Circulation System Components and Related Materials for Swimming Pools, Spas/Hot Tubs," NSF International, 3475 Plymouth Road, P.O. Box 130140, Ann Arbor, Michigan [revised July, 1996, and no future editions] which is incorporated by reference and on file with the Office of the Secretary of State and the Department.

I. If a chemical feeder is used, it shall be installed to inject solution downstream from the filter and the heater. An erosion-type feeder may be installed to feed solution to the suction side of the pump. A chemical feeder shall be wired so it cannot operate unless the filter pump is running.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-235. Cross-Connection Control
A. Cross-connections between the distribution system of a public water system and the water circulation system of a public or semipublic swimming pool or spa are prohibited.

B. Potable water for make-up water purposes may be introduced into a public or semipublic swimming pool or spa in any of the following ways:
1. Through an over-the-rim spout with an air-gap of at least twice the diameter of the pipe and not less than 6 inches above the overflow level. If an over-the-rim spout is used, it shall be located so that it does present a tripping hazard. The open end of an over-the-rim spout shall have no

sharp edges and shall not protrude more than 2 inches beyond the edge of the swimming pool or spa wall;
2. Through a float controlled make-up water feed tank with an air gap of at least 3 inches above the overflow level; or
3. Through a submerged inlet that is protected against back-siphonage by at least a pressure vacuum breaker that is installed so that the bottom of the backflow prevention assembly is a minimum of 12 inches above the level of the coping.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-236. Disposal of Filter Backwash, Wasted Swimming Pool or Spa Water, and Wastewater
All sewage from plumbing fixtures, including urinals, toilets, lavatories, showers, drinking fountains, floor drains, and other sanitary facilities shall be disposed of in a sanitary manner. Filter backwash and wasted swimming pool or spa water shall be discharged into a sanitary sewer through an approved air gap, an approved subsurface disposal system, or by other means that are approved by the Department. The method of disposal shall comply with applicable disposal requirements established by a county, municipal, or other local authority. There shall be no direct physical connection between the sewer system and the water circulation system of a public or semipublic swimming pool or spa.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-237. Lifeguard Chairs
Each public swimming pool shall have at least one elevated lifeguard chair for each 3,000 square feet of pool surface area or fraction thereof. At least one lifeguard chair shall be located close to the deep area of the swimming pool and shall provide a clear, unobstructed view of the swimming pool bottom. If a public swimming pool is provided with more than one lifeguard chair or the width of the public swimming pool is 45 feet or more, then lifeguard chairs shall be located on each side of the public swimming pool.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-238. Lifesaving and Safety Equipment
A. Public and semipublic swimming pools shall have lifesaving and safety equipment that is conspicuously and conveniently located and maintained ready for immediate use at all times.
B. Each public or semipublic swimming pool shall have one ring buoy or a similar flotation device. Each ring buoy or flotation device shall be attached to 50 feet of 1/4 inch rope.
C. Each semipublic and public swimming pool shall have at least one shepherd crook that is mounted on a rigid 16-foot pole.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-239. Rope and Float Lines
A rope and float line shall be installed across each public swimming pool on the shallow side of the break in grade between the shallow and deep portions of the pool [that is, within 1 to 2 feet of the point where the floor slope begins to exceed 1 foot in 10 feet]. The rope shall be a minimum of 3/4 inch in diameter and supported by floats spaced at intervals not greater than 7 feet. The rope and float line shall be securely fastened to wall anchors that are made of corrosion-resistant materials. The wall anchors shall be recessed or have no projection that constitutes a hazard when the float line is removed.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-240. Barriers
A. A public swimming pool or spa and deck shall be entirely enclosed by a fence, wall, or barrier that is at least 6 feet high. A semipublic swimming pool or spa and deck shall be entirely enclosed by a fence, wall, or barrier that is at least 5 feet high. The height of the fence, wall, or barrier shall be measured on the side of the barrier which faces away from the swimming pool or spa.
B. Fences or walls shall:
1. Be constructed to afford no external handholds or footholds;
2. Be of materials that are impenetrable to small children;
3. Have no openings or spacings of a size that a spherical object 4 inches in diameter can pass through; and
4. Be equipped with a gate that opens outward from the swimming pool or spa. The gate shall be equipped with a self-closing and self-latching closure mechanism or a locking closure located at or near the top of the gate, on the pool side of the gate, and at least 54 inches above the floor.

C. The distance between the horizontal components of a fence shall not be less than 45 inches apart. The horizontal members shall be located on the interior side of the fence. Spacing or openings between vertical members shall be of a size that a spherical object 4 inches in diameter cannot pass through.
D. The maximum mesh size for a wire mesh or chain link fence shall be a 1 3/4 inches square.
E. Masonry or stone walls shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
F. If a wall of a building serves as part of the barrier around a public or semipublic swimming pool or spa, there shall be no direct access to the swimming pool or spa through the wall except as follows:
1. Windows leading to the swimming pool or spa area shall be equipped with a screwed-in place wire mesh screen or a keyed lock that prevents opening the window more than 4 inches.
2. A hinged door leading to the swimming pool or spa area shall be self-closing and shall have a self-latching device. The release mechanism of the self-latching device shall be located at least 54 inches above the floor.
3. If an additional set of doors is required by the fire code allowing access to the swimming pool or spa, they shall be self-closing and self-latching, equipped with panic bars no less than 54 inches from the floor to the bottom of the bar and designated "For Emergency Use Only."
4. Sliding doors leading to the swimming pool or spa area are prohibited except for sliding doors that are self-closing and self-latching.

G. If a barrier is composed of a combination concrete masonry unit and wrought-iron, the wrought iron portion shall be installed flush with the outside vertical surface of the concrete masonry unit. The space between the wrought iron and the concrete masonry unit shall be 1/2 inch or less. The vertical members of the wrought iron shall be spaced 4 inches on center.
H. Filtration, disinfection, and water circulation equipment shall be enclosed by a wall or fence.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-241. Public Swimming Pools; Bathhouses and Dressing Rooms

A. Separate dressing rooms shall be provided for each sex. Dressing rooms shall be equipped with baskets or other checking facilities.

B. All entrances to and exits from the dressing rooms shall be effectively screened to interrupt the line of sight of persons outside the dressing rooms.

C. Walls and partitions of dressing rooms, locker rooms, toilets, and showers shall be light colored, smooth, nonabsorbent, and easily cleanable. Concrete or pumice blocks used for interior wall construction in these locations shall be finished and sealed to provide a smooth and easily cleanable surface. Partitions shall be designed so that a waterway is provided between partitions and the floor to permit thorough cleaning of the walls and floor areas with hoses and brooms.

D. Floors shall be of nonslip construction, free of cracks or openings, and sloped to adequate drains so the surface will be free of standing water and puddles. Floors shall be sloped not less than 1/4 inch per foot toward the drains to ensure positive drainage. Carpeting is prohibited.

E. All furniture shall be of simple character and easily cleanable. Locker compartments, partitions, booths, furniture, and other appurtenances in dressing rooms shall be so installed or raised above the floor to permit washing down the dressing rooms and bathhouse interiors.

F. An adequate number of hose bibs shall be provided for washing down the dressing room or bathhouse interior.

G. Dressing rooms, toilets, and showers shall be provided with adequate lighting and ventilation.

H. Toilet facilities shall be provided for each sex. For male users, there shall be one toilet and one urinal for each 100 bathers or fraction thereof. For female users, there shall be one toilet for each 50 bathers, or fraction thereof. In no case shall less than two toilets be provided for female users. Sanitary napkin dispensers shall be installed in toilet or shower areas designated for female users.

I. Shower and handwashing facilities with hot and cold water and soap shall be provided for each dressing room. Hot and cold water shall be provided at all shower heads. The water heater and thermostatic mixing valve shall be inaccessible to users and shall be capable of providing two gallons per minute of 90°F water to each shower head. A minimum of two shower heads shall be provided in each dressing room. Each dressing room shall have one shower head for each 50 bathers or fraction thereof.

J. One lavatory with an unbreakable mirror shall be provided in each dressing room for the first 100 users. An additional lavatory and unbreakable mirror shall be provided for each additional 100 users or fraction thereof. Soap dispensers for providing either liquid or powdered soap shall be provided at each lavatory. Soap dispensers shall be made of metal or plastic with no glass permitted.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-242. Semipublic Swimming Pools; Toilets and Lavatories

A. A bathroom with a minimum of one toilet shall be provided for each sex.

B. Each bathroom shall have at least one lavatory. Soap dispensers for providing either liquid or powdered soap shall be provided at each lavatory. Soap dispensers shall be made of metal or plastic with no glass permitted.

C. An establishment that operates a semipublic swimming pool or spa and provides a private room with a toilet and lavatory for bathers shall be deemed to have complied with the requirements of this Section.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-243. Drinking Water Fountains

Drinking water from an approved source and dispensed through one or more drinking fountains shall be located on the deck of each public swimming pool or spa.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-244. Wading Pools

A. A wading pool is a type of public or semipublic swimming pool. The design criteria prescribed in this Article for public or semipublic swimming pools apply, except as provided in this Section.

B. A wading pool shall be physically set apart from public and semipublic swimming pools.
1. A wading pool shall be separated from a public swimming pool by a minimum 4-foot high fence or partition with a self-closing, self-latching gate.
2. A wading pool shall be separated from a semipublic swimming pool by at least 4 feet of deck.
3. A wading pool shall not be located adjacent to the deep area of a public or semipublic swimming pool.

C. A wading pool shall have a maximum depth of 24 inches. Water depths may be reduced from the stated maximums and brought to zero at the most shallow point of the wading pool.

D. The floor of a wading pool shall be uniform with a maximum slope of 1 foot of fall in 10 feet. The floor of a wading pool shall have a slip-resistant surface.

E. All wading pools shall have separate equipment for water circulation and disinfection. There shall be no cross-connection between the water circulation system of a wading pool and a public or semipublic swimming pool. The water in a wading pool shall have a maximum turnover cycle of 1 hour.

F. At least two main drains shall be provided at the deepest point in a wading pool. Each main drain shall be covered by a grate which cannot be removed by users. The openings in the grate shall have a total area that is at least four times the area of the drain pipe. In the alternative, a wading pool may be equipped with a single gravity drain which discharges to a surge tank.

G. Surface skimmers shall be provided on the basis of at least one skimmer for each 200 square feet of wading pool surface area. Surface skimmer flow rates shall be the same as required for public and semipublic swimming pools. Where only one skimmer is provided, the main drain may be connected through the skimmer.

H. Return inlets shall be provided and arranged to produce a uniform circulation of water and maintain a uniform disinfectant residual throughout the wading pool. Where three or more return inlets are required, they shall be on a closed loop piping system.

I. Suction outlets in a wading pool shall have plumbing provisions so as to relieve any possibility of entrapping suction.

J. Gaseous chlorine shall not be used for the disinfection of wading pool water.

K. A drinking fountain at a height convenient to small children or a drinking fountain with a raised step shall be provided in the area of the wading pool.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-245. Timers for Public and Semipublic Spas
The timer for a public or semipublic spa which controls the hydrotherapy jets shall be located at least 5 feet from the spa and shall have a maximum time limit of 15 minutes.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-246. Air blower and Air Induction Systems for Public and Semipublic Spas
An air blower system or air induction system for a public or semipublic spa shall comply with the following requirements:

1. The system shall prevent water backflow which could cause an electrical shock hazard.
2. Air intake sources shall not introduce water, dirt, or contaminants into the spa.
3. The system shall be properly sized for a commercial spa application.
4. If the air blower is installed within an enclosure or indoors, then adequate ventilation shall be provided.
5. Integral air passages shall be pressure tested and shall provide structural integrity to a value of 1 1/2 times the intended working pressure.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-247. Water Temperature in Public and Semipublic Spas
The temperature of heated water coming into a public or semipublic spa shall not exceed 104°.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-248. Special Use Pools

A. A person who intends to construct a special use pool shall notify the Department and provide plans, specifications, and a description of the intended use of the special use pool. The Department shall use best professional judgment in approving a special use pool, taking into consideration the intended use of the pool, the conditions under which it will operate, and the safety of users. The Department may consider the design requirements prescribed by an official sanctioning athletic body such as the National Collegiate Athletic Association [NCAA], National Federation of State High School Associations [NFSHSA], U.S. Swimming, U.S. Diving, or the Internationale de Natation Amateur [FINA] in using best professional judgement to approve a special use pool that is intended for competitive swimming and diving.

B. A special use pool that is designed with exercise or training bars in the pool shall be restricted to the special use when the bars are located in the pool. The bars shall:

1. Be constructed of durable and corrosion-resistant material;
2. Be sealed, welded shut, or capped at both ends to prevent retention of water within the bars;
3. Bars may be removable. Removable bars shall be wedge anchored in place and the anchors shall be covered. Water-tight anchor plugs [95% efficiency] shall be provided when the bars are removed; and
4. Extend not more than 4 inches from the side of the pool into the water. The minimum clear opening from the inside of the bar to the side of the swimming pool shall not be less than 2 inches.

D. A special use pool that is designed with a ramp shall comply with the following:

1. The ramp shall be constructed of slip-resistant material;
2. The slope of the ramp shall not exceed 1 foot in 12 feet;
3. The width of the ramp shall be at least 3 feet;
4. The ramp shall have a level platform at the top and the bottom of the ramp;
5. The ramp shall be equipped with at least a 3 1/2 foot high guardrail installed on the deck and extending the length of the ramp;
6. The ramp shall be constructed with return inlets located on the pool and ramp walls along the length of the ramp.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-249. Variances

A. The Department may grant a variance from a requirement prescribed in this Article upon a demonstration by the applicant that an alternative design, material, appurtenance, or technology is equivalent to a requirement prescribed in this Article. If a variance is granted, it shall be conditioned upon the applicant's use of the approved alternative.

B. The Department shall not grant a variance that results in an unreasonable risk to the health of swimming pool or spa users.

C. The applicant shall request a variance in writing. A variance request shall contain the following information:

1. Identification of the requirement prescribed in this Article for which a variance is requested;
2. Explanation of the reasons why the applicant cannot comply with the requirement;
3. A complete description of the alternative design, material, or technology to be installed and used in the swimming pool or spa, including design plans, specifications, and a description of the cost;
4. A demonstration that the alternative design, material, or technology to be installed and used in the swimming pool or spa is equivalent to the requirement in this Article and will not result in an unreasonable risk to users; and
5. A statement that the applicant will perform reasonable requirements prescribed by the Department that are conditions of a variance.

D. The applicant shall submit a request for a variance with an application for design approval. The Department shall determine whether the application for design approval and the variance request are complete. Within 30 days after the date of the submittal of the application for design approval and the variance request, the Department shall issue a written notice to the applicant that states that the request for a variance and the application for design approval are complete or which states that the request for a variance or the application for design approval is incomplete and identifies specific information deficiencies in the application for design approval or the variance request.

E. The Department may convene an advisory committee consisting of representatives of public and semipublic swimming pool and spa owners, public and semipublic swimming pool and spa building contractors, professional engineers, and county environmental and health departments to make a recommendation on a variance request.

F. If the Department grants the request for a variance, the Department shall identify the requirement for which the variance is granted, specify any conditions to the grant of a variance, and issue a design approval. If the Department denies the request for a variance, the Department shall issue a notice of intent to deny the request for a variance to the applicant. The notice shall state the reasons for the denial of the request for a variance and shall include a description of the applicant's right to request a hearing on the denial of the variance request pursuant to A.R.S. § 41-1092.03 and to request an informal settlement

conference pursuant to A.R.S. § 41-1092.06. If the Department denies a request for a variance, the Department may either deny the application for design approval or issue a design approval that requires compliance with the requirement for which the variance is requested.

G. In considering a request for a variance from a requirement prescribed in this Article, the Director shall consider the following factors:

1. The intended use of the public or semipublic swimming pool or spa;
2. The safety of the alternative design, material, or technology for which a variance is requested; and
3. The cost and other economic considerations associated with requiring compliance with the requirement prescribed in this Article as compared to the alternative for which a variance is requested.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

R18-5-250. Inspections

A. An inspector from the Department, upon presentation of credentials, may enter into any public or semipublic swimming pool or spa to determine compliance with this Article. The inspector may inspect records, equipment, and facilities; take photographs; and take other action reasonably necessary to determine compliance with this Article.

B. The owner or manager of a public or semipublic swimming pool or spa may accompany the inspector during an inspection.

C. An inspector from the Department may inspect a public or semipublic swimming pool or spa without giving prior notice of the inspection to the owner or operator of the swimming pool or spa.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

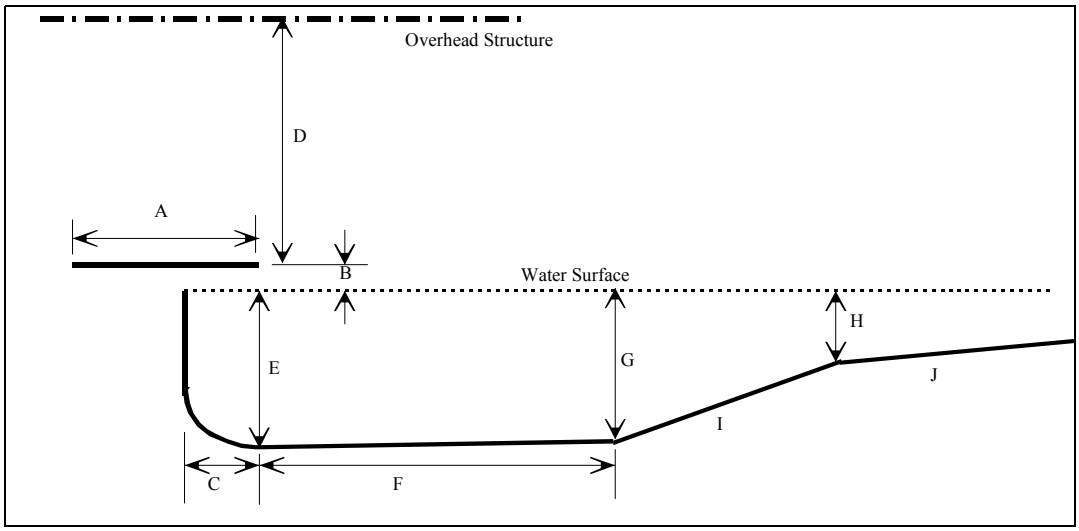
R18-5-251. Enforcement

A. If an inspector finds a violation of this Article, the Department may issue a notice of violation to the owner of a public or semipublic swimming pool or spa. A notice of violation shall state specifically the nature of the violation and shall allow a reasonable time for the owner to correct the violation.

B. If the Director has reasonable cause to believe that a person has constructed a public or semipublic swimming pool or spa in violation of this Article, the Director may order the closure of the swimming pool or spa by issuing a cease and desist order by following the procedures for abatement of environmental nuisances in A.R.S. § 49-142.

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

Illustration A. Diving Well Dimensions for Swimming Pools



Note: This profile does not apply to a special use pool that is designed for competitive diving.

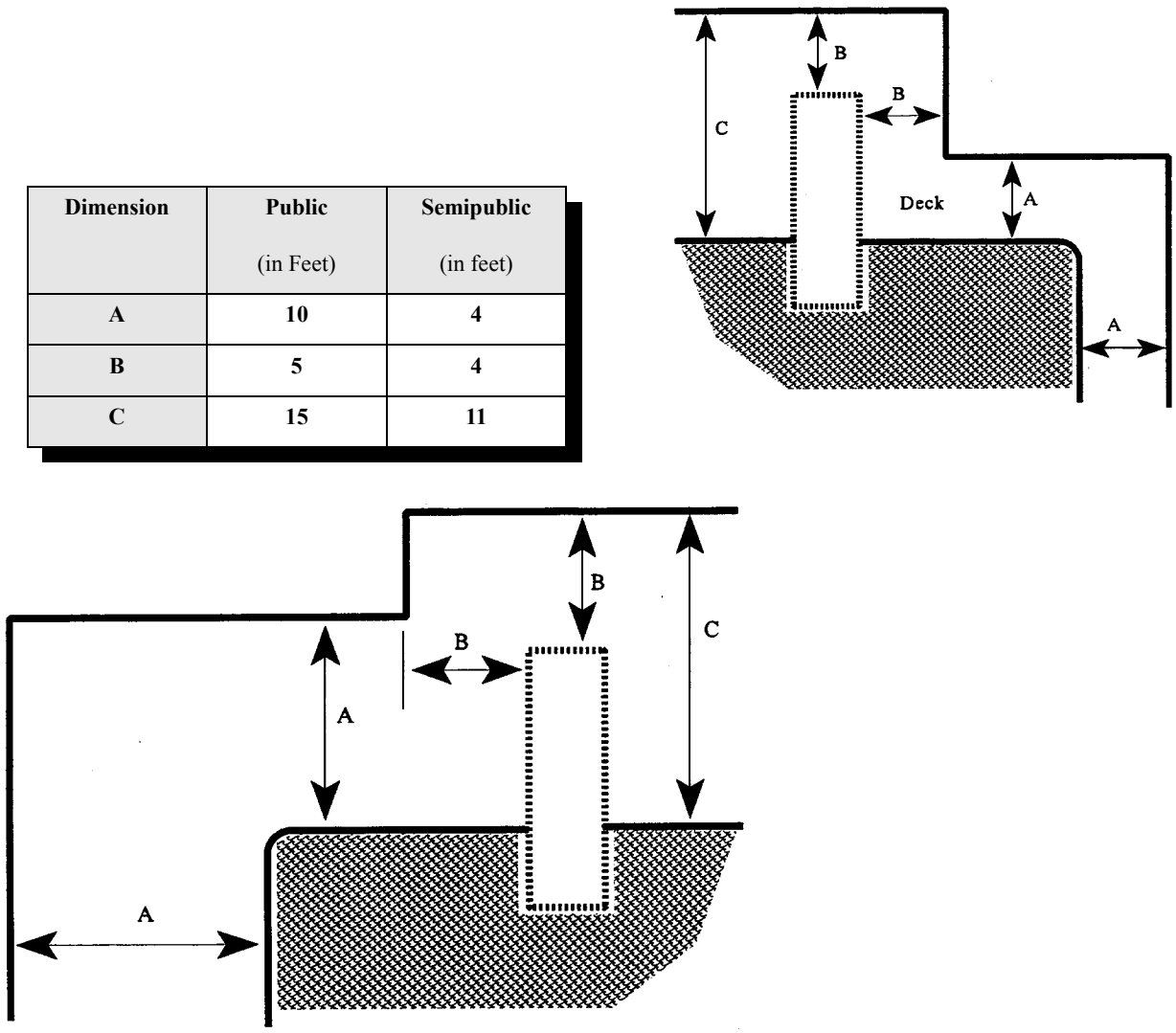
A. Maximum length of diving board	10 feet
B. Maximum height of board above the water	20 inches
C. Overhang of the board from wall	Minimum: 2 feet Maximum: 3 feet
D. Minimum distance to an overhead structure	15 feet
E. Minimum depth of water at the plummet	9 feet
F. Distance from plummet to start of upslope	18 feet
G. Minimum depth of water at start of the upslope	Depth of water at plummet minus 6 inches

H. Depth of water at the breakpoint	Public swimming pool: 5 feet Semipublic swimming pool: 4 feet
I. Maximum slope: breakpoint towards deep end	1 foot of fall in 3 feet
J. Slope of bottom in shallow area	1 foot of fall in 10 feet
Minimum width of pool in diving area	20 feet
From plummet to pool wall at the side	10 feet

Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

Illustration B. Minimum Distance Requirements for Decks

Dimension	Public (in Feet)	Semipublic (in feet)
A	**10**	**4**
B	**5**	**4**
C	**15**	**11**



Historical Note
Adopted effective February 19, 1998 (Supp. 98-1).

ARTICLE 3. WATER QUALITY MANAGEMENT PLANNING

R18-5-301. Definitions
In addition to the definitions established in R18-9-101, the following terms apply to this Article:

1. "Certified Areawide Water Quality Management Plan" means a plan prepared by a designated Water Quality Management Planning Agency under Section 208 of the Federal Water Pollution Control Act (P.L. 92-500) as amended by the Water Quality Act of 1987 (P.L. 100-4), certified by the Governor or the Governor's designee, and approved by the United States Environmental Protection Agency.
2. "Designated management agency" means those entities designated in a Certified Areawide Water Quality Management Plan to manage sewage treatment facilities and sewage collection systems in their respective area.
3. "Designated water quality planning agency" means the single representative organization designated by the Governor under Section 208 of the Federal Water Pollution Control Act (P.L. 92-500) as amended by the Water Quality Act of 1987 (P.L. 100-4) as capable of developing effective areawide sewage treatment management plans for the respective area. The state acts as the planning agency for those non-tribal portions of the state for which there is no designated water quality planning agency.
4. "Facility Plan" means the plans, specifications, and estimates for a proposed sewage treatment facility, prepared under Section 201 and 203 of the Federal Water Pollution Control Act (P.L. 92-500) as amended by the Water Quality Act of 1987 (P.L. 100-4), and submitted to the Department by and for a designated management agency.
5. "General Plan" means a municipal statement of land-development policies that may include maps, charts, graphs, and text that list objectives, principles, and standards for local growth and development enacted under state law.
6. "Service area" means the geographic region specified for a designated management agency by the applicable Certified Areawide Water Quality Management Plan, Facility Plan, or General Plan.
7. "State water quality management plan" means the following elements:
   a. Certified Areawide Water Quality Management Plans and amendments;
   b. Water quality rules and laws;
   c. Final total maximum daily loads approved by the United States Environmental Protection Agency for impaired waters;
   d. Water quality priorities established by the Department;
   e. Intergovernmental agreements between the Department and a designated water quality planning agency or a designated management agency; and
   f. Active management area plans adopted by the Department of Water Resources.

Historical Note
New Section adopted by final rulemaking at 7 A.A.R. 559, effective January 2, 2001 (Supp. 01-1).

R18-5-302. Certified Areawide Water Quality Management Plan Approval
A designated water quality planning agency shall submit a proposed Certified Areawide Water Quality Management Plan or plan amendment to the Director for review and approval. Upon approval, the Governor or the Governor's designee shall:

1. Certify that the plan or plan amendment is incorporated into and is consistent with the state water quality management plan, and
2. Submit the plan or plan amendment to the United States Environmental Protection Agency for approval.

Historical Note
New Section adopted by final rulemaking at 7 A.A.R. 559, effective January 2, 2001 (Supp. 01-1).

R18-5-303. Determination of Conformance
All sewage treatment facilities, including an expansion of a facility, shall, before construction, conform with the Certified Areawide Water Quality Management Plan, Facility Plan, and General Plans as specified in subsections (1) and (2).

1. The Department shall make the determination of conformance if the sewage treatment facility or expansion of the facility conforms with the Certified Areawide Water Quality Management Plan and Facility Plan that prescribe a configuration for sewage treatment and sewage collection system management by a designated management agency within the service area.
2. If the condition specified in subsection (1) is not met, the Department shall make the determination of conformance as follows:
   a. If no Facility Plan is applicable and a Certified Areawide Water Quality Management Plan as described in subsection (1) is available, the Department shall rely on the Certified Areawide Water Quality Management Plan for the determination of conformance.
   b. If no Certified Areawide Water Quality Management Plan as described in subsection (1) is available, the Department shall make the determination of conformance based on conformance with applicable General Plans and after conferring with the designated water quality planning agency for the area and any responsible and affected governmental unit.

Historical Note
New Section adopted by final rulemaking at 7 A.A.R. 559, effective January 2, 2001 (Supp. 01-1).

ARTICLE 4. SUBDIVISIONS

R18-5-401. Definitions
In this Article unless the context otherwise requires:

1. "Approved" or "approval" means approved in writing by the Department.
2. "Condominium" means a subdivision established as a horizontal property regime pursuant to A.R.S. § 33-551 et seq.
3. "Department" means the Department of Environmental Quality or its designated representative.
4. "Garbage" means putrescible animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food.
5. "Refuse" means all putrescible and nonputrescible solid wastes (except body wastes), including garbage, rubbish, ashes, street cleanings, dead animals, abandoned automobiles, and solid market and industrial wastes.
6. "Subdivision" has the meaning defined in A.R.S. § 32-2101.

Historical Note
Correction in subsection (E) citation to A.R.S. should have read § 32-2101. Amended effective June 21, 1978 (Supp. 78-3). Former Section R9-8-1011 renumbered without change as Section R18-5-401 (Supp. 89-2).

R18-5-402. Approval of plans required

A. No subdivision or portion thereof shall be sold, offered for sale, leased or rented by any corporation, company or person, or offered to the public in any manner, and no permanent building shall be erected thereon until plans and specifications for the water supply, sewage disposal and method of garbage disposal to be provided in or to serve such subdivision shall have been submitted to and approved by the Department.

B. The plans of any proposed water supply and sewage disposal system shall be submitted in quadruplicate on a plat of the subdivision as recorded, or as will be recorded, in the office of the county recorder.

Historical Note
Former Section R9-8-1012 renumbered without change as Section R18-5-402 (Supp. 89-2).

R18-5-403. Application for approval

A. An application for approval, prepared in duplicate on forms furnished by the Department, shall be filed at the time the plans are submitted for approval. The form shall be completely filled out unless indicated otherwise.

B. The distance to the nearest public water supply main and to a sewer main of a municipal or community system shall be given.

Historical Note
Former Section R9-8-1013 renumbered without change as Section R18-5-403 (Supp. 89-2).

R18-5-404. Size of lots

The minimum size lot approved by the Department will be governed largely by the area necessary for the safe accommodation of individual wells and/or sewage disposal systems. Where both the water supply and sewage disposal system must be developed on the same lot, the minimum size shall be at least one acre, excluding streets, alleys and other rights-of-way. Where water from a central system is provided for residential uses, the lot shall be sufficient to accommodate the sewage disposal system and provide for at least 100 percent expansion of the system based on a four-bedroom house within the bounds of the property allowing a minimum of five feet distance to the property lines. Where lots are zoned for commercial uses, the lot shall be sufficient to accommodate the sewage disposal system and provide for at least 100 percent expansion of the system within the bounds of the property allowing a minimum of five feet distance to the property lines.

Historical Note
Former Section R9-8-1014 renumbered without change as Section R18-5-404 (Supp. 89-2).

R18-5-405. Responsibility of subdivider

Where plans for a subdivision include a public water supply system, or public sewerage system, it shall be the responsibility of the subdivider to provide the facilities to each lot in the subdivision prior to human occupancy. The installation of such facilities shall be in accordance with plans, or any revisions thereof, approved by the Department.

Historical Note
Former Section R9-8-1015 renumbered without change as Section R18-5-405 (Supp. 89-2).

R18-5-406. Public water systems

A. Where water from an approved public water system is proposed for use in a subdivision, the inside diameter, length, and location of all proposed and existing water mains and valves necessary to serve each and every lot shall be shown on the subdivision plat. If the existing main to which a connection will be made is not immediately adjacent to the property, the direction and distance shall be indicated on the plat by an arrow or other suitable means.

B. A letter shall be obtained and submitted with the application for approval of the subdivision from responsible officials of the water system indicating that an agreement has been reached to supply water to each individual lot in the subdivision.

C. Where the owner of a subdivision, or other interested person, firm, company or corporation, proposes to develop a source or sources of supply and to construct a distribution system to furnish water to the subdivision, either free or for charge, complete details of the proposed water system including plans and specifications shall be furnished. Department approval of the supply and proposed system shall first be obtained before an approval for the sale of lots will be granted. The installation of such facilities shall be in accordance with the plans, and any revisions thereof, approved by the Department.

D. Proposed water supply and distribution systems shall comply with A.A.C. Title 18, Chapter 4, Article 2, except those distribution lines which are a common element of a condominium shall be exempt from A.A.C. R18-4-234.

E. Where water from an approved public water system is proposed for use in a subdivision, the Department shall issue a Certificate of Approval for Sanitary Facilities for a Subdivision only if the applicant has complied with subsections (A) and (B) of this Section and the public water system is either:

1. in compliance with the provisions of A.A.C. Title 18, Chapter 4, Article 2; or
2. making satisfactory progress toward compliance with the provisions of A.A.C. Title 18, Chapter 4, Article 2 under a schedule approved by the Department.

F. The Department shall revoke the Certificate of Approval for Sanitary Facilities for a Subdivision and notify the Department of Real Estate of such action if the public water system in use by the subdivision is creating an environmental nuisance pursuant to A.R.S. § 49-141 and is neither:

1. is compliance with the provisions of A.A.C. Title 18, Chapter 4, Article 2; nor
2. making satisfactory progress toward compliance with the provisions of A.A.C. Title 18, Chapter 4, Article 2 under a schedule approved by the Department.

Historical Note
Amended effective June 21, 1978 (Supp. 78-3). Former Section R9-8-1021 renumbered without change as Section R18-5-406 (Supp. 89-2). Amended effective July 25, 1990 (Supp. 90-3).

R18-5-407. Public sewerage systems

A. Where a public sewerage system is already in existence, or if sewers are proposed and have been approved by the Department, it shall be necessary to show lines indicating the approximate location and size of the sewers on the subdivision plat.

B. Where the proposed sewers will connect to an existing public sewerage system, a letter from officials of the system shall be required stating that acceptable plans have been submitted and that the subdivider has been granted permission to connect to and become a part of the public sewerage system.

C. Proposed sewage disposal facilities shall comply with A.A.C. Title 18, Chapter 9, Article 8, except those drain lines which

are a common element of a condominium shall be exempt from R18-5-811.

D. Where a public sewerage system is already in existence, or if sewers are proposed and have been approved by the Department, the Department shall issue a Certificate of Approval for Sanitary Facilities for a Subdivision only if the applicant has complied with subsections (A) and (B) of this Section and the public sewerage system is either:
1. in compliance with the provisions of A.A.C. Title 18, Chapter 9, Article 8; or
2. making satisfactory progress toward compliance with the provisions of A.A.C. Title 18, Chapter 9, Article 8 under a schedule approved by the Department.

E. The Department shall revoke the Certificate of Approval for Sanitary Facilities for a Subdivision and notify the Department of Real Estate of such action if the public sewerage system in use by the subdivision is creating an environmental nuisance pursuant to A.R.S. § 49-141 and is neither:
1. In compliance with the provisions of A.A.C. Title 18, Chapter 9, Article 8; nor
2. Making satisfactory progress toward compliance with the provisions of A.A.C. Title 18, Chapter 9, Article 8 under a schedule approved by the Department.

Historical Note
Amended effective June 21, 1978 (Supp. 78-3). Former Section R9-8-1026 renumbered without change as Section R18-5-407 (Supp. 89-2). Amended effective July 25, 1990 (Supp. 90-3).

R18-5-408. Individual sewage disposal systems

A. Recommendations are found in the engineering bulletins of the Department and such additional requirements as may be provided by local health departments to assist in approval regarding the design, installation and operation of individual sewage disposal systems. Copies of these bulletins may be obtained from the Department.

B. Where soil conditions and terrain features or other conditions are such that individual sewage disposal systems cannot be expected to function satisfactorily or where groundwater or soil conditions are such that individual sewage disposal systems may cause pollution of groundwater, they are prohibited.

C. Where such installations may create an unsanitary condition or public health nuisance, individual sewage disposal systems are prohibited.

D. The use of cesspools is prohibited.

E. Where an individual sewage disposal system is proposed, the following conditions shall be satisfied:
1. A geological report shall be made by an engineer, geologist or other qualified person. The geological report shall include results from percolation tests and boring logs obtained at locations designated by the county health departments. There shall be a minimum of one percolation test and boring log per acre, or one percolation test and boring log per lot where lots are larger than one acre, except when it can be shown by submission of other reliable data that soil conditions are such that individual disposal systems could reasonably be expected to function properly on each lot in the proposed subdivision. The Department may require additional tests when it deems necessary. The approval of a subdivision, based upon such reports, shall not extend to the plat if it is further subdivided or lot lines are substantially relocated.
2. Results of all tests shall be submitted to the Department and the local health department for review and approval of the subdivision for the use of individual sewage disposal systems.
3. Such approval must be obtained in writing from the local health department and a copy of the approval shall be submitted to the Department with the subdivision application for approval.

Historical Note
Former Section R9-8-1027 renumbered without change as Section R18-5-408 (Supp. 89-2).

R18-5-409. Refuse disposal

A. The storage, collection, transportation and disposal of refuse and other objectionable wastes shall be governed by A.A.C. Title 18, Chapter 8, Article 5.

B. Where an approved community or private refuse collection service is available, arrangements shall be made to have this service furnished to the subdivision. A letter, from the community or private collection company, stating that the collection service will be made available to the subdivision, is required.

C. Where refuse collection service is not available, it will be the responsibility of the subdivider to notify each purchaser or tenant that the hauling of all refuse is an individual responsibility and that all refuse must be properly stored pending removal and disposed of at disposal areas specified in the plan approved by the Department.

D. Where a collection service or an existing approved disposal area is not available to the subdivision, a plan approval will not be granted unless a separate disposal area is provided by the subdivider or arrangements are made to utilize a new, conveniently located disposal area. Such arrangements shall include, but not be limited to, the written permission of the person responsible for the operation of the new site.

Historical Note
Former Section R9-8-1031 renumbered without change as Section R18-5-409 (Supp. 89-2).

R18-5-410. Condominiums

A. New water distribution lines and new wastewater drain lines which are to be used as a common element of a condominium and are not under the ownership and control of a public utility shall be constructed in accordance with applicable provisions of the Uniform Plumbing Code adopted by reference in A.A.C. R9-1-412(D), including the minimum standards for construction contained therein.

B. Plans to be submitted shall include inside diameter, length and location of all proposed and existing common usage water distribution lines and inside diameter, length, slope and location of all proposed and existing common usage wastewater drain lines necessary to serve each and every unit. Plans and specifications should be submitted with sufficient detail to indicate compliance with subsection (A) above.

C. Appropriate sections of the covenants shall be submitted that indicate adequate provisions have been made for the maintenance of water distribution lines and wastewater drain lines in common usage.

D. Approval of existing housing to be converted to condominiums is conditioned upon the water distribution system and wastewater drainage system being:
1. Approved in writing at the time of original construction by the local building inspection authority, or
2. Currently operating under a permit issued by a local building inspection authority, or
3. Certified to be adequate by an Arizona registered professional engineer who has affixed his signature and seal to as-built plans submitted for approval.

Historical Note
Adopted effective June 21, 1978 (Supp. 78-3). Former Section R9-8-1032 renumbered without change as Section R18-5-410 (Supp. 89-2).

R18-5-411. Violations
Any person, firm, company or corporation who offers for sale, lease or rent any tract of land contrary to these regulations shall be prosecuted in accordance with A.R.S. § 49-142 or as otherwise may be provided by law.

Historical Note
Adopted effective June 21, 1978 (Supp. 78-3). Former Section R9-8-1036 renumbered without change as Section R18-5-411 (Supp. 89-2). Amended effective April 2, 1990 (Supp. 90-2).

ARTICLE 5. MINIMUM DESIGN CRITERIA

Article 5, consisting of R18-5-501 through R18-5-509, recodified from 18 A.A.C. 4, Article 5 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-501. Siting Requirements
To the extent practicable, a new public water system or an extension to an existing public water system shall be geographically located to avoid a site which is:

1. Subject to a significant risk from earthquakes, floods, fires, or other disasters which could cause a breakdown of the public water system or portion thereof; or
2. Within the flood plain of a 100-year flood, except for intake structures and properly protected wells.

Historical Note
Section recodified from R18-4-501 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-502. Minimum Design Criteria

A. A public water system shall be designed using good engineering practices. A public water system which is designed in a manner consistent with the criteria contained in Engineering Bulletin No. 10, "Guidelines for the Construction of Water Systems," issued by the Arizona Department of Health Services, May 1978 (and no future editions), which is incorporated herein by reference and on file with the Office of the Secretary of State, shall be considered to have been designed using good engineering practices. Other system designs shall be approved if the applicant can demonstrate that the system will function properly and may be operated reliably in compliance with this Chapter. Minimum design criteria which are not subject to modification are listed in this Section.

B. A potable water distribution system shall be designed to maintain and shall maintain a pressure of at least 20 pounds per square inch at ground level at all points in the distribution system under all conditions of flow.

C. Water and sewer mains shall be separated in order to protect public water systems from possible contamination. All distances are measured perpendicularly from the outside of the sewer main to the outside of the water main. Separation requirements are as follows:

1. A water main shall not be placed:
   a. Within 6 feet, horizontal distance, and below 2 feet, vertical distance, above the top of a sewer main unless extra protection is provided. Extra protection shall consist of constructing the sewer main with mechanical joint ductile iron pipe or with slip-joint ductile iron pipe if joint restraint is provided. Alternate extra protection shall consist of encasing both the water and sewer mains in at least 6 inches of concrete for at least 10 feet beyond the area covered by this subsection (C)(1)(a).
   b. Within 2 feet horizontally and 2 feet below the sewer main.
2. No water pipe shall pass through or come into contact with any part of a sewer manhole. The minimum horizontal separation between water mains and manholes shall be 6 feet, measured from the center of the manhole.
3. The minimum separation between force mains or pressure sewers and water mains shall be 2 feet vertically and 6 feet horizontally under all conditions. Where a sewer force main crosses above or less than 6 feet below a water line, the sewer main shall be encased in at least 6 inches of concrete or constructed using mechanical joint ductile iron pipe for 10 feet on either side of the water main.
4. The separation requirements do not apply to building, plumbing, or individual house service connections.
5. Sewer mains (gravity, pressure, and force) shall be kept a minimum of 50 feet from wells unless the following conditions are met:
   a. Water main pipe, pressure tested in place to 50 psi without excessive leakage, is used for gravity sewers at distances greater than 20 feet from water wells; or
   b. Water main pipe, pressure tested in place to 150 psi without excessive leakage, is used for pressure sewers and force mains at distances greater than 20 feet from water wells. "Excessive leakage" means any amount of leakage which is greater than that permitted under the AWWA Standard applicable to the particular pipe material or valve type.
6. Requests for authorization to use alternate construction techniques, materials, and joints shall be reviewed by the Department, and such requests may be approved on a case-by-case basis.

D. A public water system shall not construct or add to its system a well which is located:

1. Within 50 feet from existing sewers unless the sewer main has been constructed in accordance with subsection (C)(5)(a) or (b) of this Section;
2. Within 100 feet of any existing septic tank or subsurface disposal system;
3. Within 100 feet of a discharge or activity which is required to obtain an Individual Aquifer Protection Permit, pursuant to A.R.S. §§ 49-241(A) through 49-251;
4. Within 100 feet of an underground storage tank as defined in A.R.S. § 49-1001; or
5. Within 100 feet of hazardous waste facilities operated by large quantity generators and treatment, storage, and disposal facilities regulated under the Arizona Hazardous Waste Management Act, A.R.S. § 49-921 et seq.

Historical Note
Section recodified from R18-4-502 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-503. Storage Requirements

A. The minimum storage capacity for a CWS or a noncommunity water system that serves a residential population or a school shall be equal to the average daily demand during the peak month of the year. Storage capacity may be based on existing consumption and phased as the water system expands.

B. The minimum storage capacity for a multiple-well system for a CWS or a noncommunity water system that serves a residential population or a school may be reduced by the amount of the total daily production capacity minus the production from the largest producing well.

Historical Note
Section recodified from R18-4-503 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-504. Prohibition on the Use of Lead Pipe, Solder, and Flux
Construction materials used in a public water system, including residential and non-residential facilities connected to the public water system, shall be lead-free as defined at R18-4-101. This Section shall not apply to leaded joints necessary for the repair of cast iron pipes.

Historical Note
Section recodified from R18-4-504 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-505. Approval to Construct

A. The Department shall only approve an addition or a water main extension to a public water system that is in compliance with this Chapter or is making satisfactory progress towards compliance under a schedule approved by the Department. The Department shall approve a properly designed modification that can be expected to return a public water system to compliance.

B. A person shall not start to construct a new public water system, modify an existing facility, including an extension to an existing public water system, or make an alteration that will affect the treatment, capacity, water quality, flow, distribution, or operational performance of a public water system before receiving an Approval to Construct from the Department. Designing or consulting engineers may confer with the Department before proceeding with detailed designs of complex or innovative facilities. The following provisions shall apply:

1. An application for Approval to Construct, including the following documents and data, shall be submitted to the Department:
   a. Detailed construction plans of the site and work to be done, presented in legible form and of sufficient scale, to establish construction requirements to facilitate effective review;
   b. Complete specifications to supplement the plans;
   c. A design report that describes the proposed construction and basis of design, provides design data and other pertinent information that defines the work to be done, and establishes the adequacy of the design to meet the system demand;
   d. Analyses of a proposed new source of water that include:
      i. Microbiological; physical; radiochemical; inorganic, organic, and volatile organic chemicals; and
      ii. Microscopic particulates if the source meets the criteria of R18-4-301.01(A); and
   e. Other pertinent data required to evaluate the application for Approval to Construct.
2. All plans, specifications, and design reports submitted for a public water system shall be prepared by, or under the supervision of, a professional engineer registered in Arizona and have the seal and signature of the engineer affixed to them, except that an engineer not registered in Arizona may design a water treatment plant or additions, modifications, revisions, or extensions, which include extensions to potable water distribution systems, if the total cost of the construction does not exceed $12,500 for material, equipment, and labor, as verified by a cost estimate submitted with plan documents.
3. An existing public water system shall be exempt from the plan review requirements of this Article if the public water system is in compliance with this Chapter or is making satisfactory progress towards compliance under a schedule approved by the Department if the applicable structural revision, addition, extension, or modification:
   a. Has a project cost of $12,500 or less; or
   b. Is made to a water line that:
      i. Is not for a subdivision requiring plat approval by a city, town, or county;
      ii. Has a project cost of more than $12,500 but less than $50,000; and
      iii. Has a design that is sealed and signed by a professional engineer registered in Arizona and the construction of which is reviewed for conformance with the design by a professional engineer registered in Arizona.
4. Upon completion of a project exempt from the plan review requirements of this Article pursuant to subsection (B)(3), the public water system shall submit a notice of compliance which contains:
   a. A fair market value cost estimate for the project,
   b. The name of the design engineer and the review engineer, and
   c. The project completion date and the total construction time.

C. The Department shall act upon a complete Approval to Construct application submitted for approval within 30 days after its receipt.

D. The Department shall issue an Approval to Construct only when the following conditions have been met:

1. Plans and specifications submitted to the Department demonstrate that the proposed public water system reasonably can be expected to comply with this Chapter, including the MCLs in Article 2; and
2. The water system is in compliance with this Chapter or reasonably can be expected to return to compliance with this Chapter as a result of the proposed construction.

E. An Approval to Construct becomes void if an extension of time is not granted by the Department within 90 days after the passage of one of the following:

1. Construction does not begin within one year after the date the Approval to Construct is issued, or
2. There is a halt in construction of more than one year, or
3. Construction is not completed within three years after the date construction begins.

Historical Note
Section recodified from R18-4-505 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-506. Compliance with Approved Plans
All construction shall conform to approved plans and specifications. In order to make a change in an approved design that will affect water quality, capacity, flow, sanitary features, or performance, a public water system shall submit revised plans and specifications to the Department for review, together with a written statement regarding the reasons for the change. The public water system shall not proceed with the construction affected by the design change without written approval from the Department. Revisions not affecting water quality, capacity, flow, sanitary features, or performance may be permitted during construction without further approval if record drawings documenting these changes, prepared by a professional engineer registered in Arizona, are submitted to the Department under R18-5-508.

Historical Note
Section recodified from R18-4-506 at 10 A.A.R. 585,

effective January 30, 2004 (Supp. 04-1).

R18-5-507. Approval of Construction

A. A person shall not operate a newly constructed facility until an Approval of Construction is issued by the Department.

B. The Department shall not issue an Approval of Construction on a newly constructed public water system, an extension to an existing public water system, or any alteration of an existing public water system that affects its treatment, capacity, water quality, flow, distribution, or operational performance unless the following requirements have been met:

1. A professional engineer registered in Arizona or a person under the direct supervision of a professional engineer registered in Arizona, has completed a final inspection and submitted a Certificate of Completion on a form approved by the Department to which the seal and signature of the professional engineer registered in Arizona have been affixed;
2. The construction conforms to approved plans and specifications, as indicated in the Certificate of Completion, and all changes have been documented by the submission of record drawings under R18-5-508;
3. An operations and maintenance manual has been submitted and approved by the Department if construction includes a new water treatment facility; and
4. An operator, who is certified by the Department at a grade appropriate for each facility, is employed to operate each water treatment plant and the potable water distribution system.

C. The Department may conduct the final inspection required in subsection (B)(1), at a public water system's request, if both of the following notification requirements are met:

1. The public water system notifies the Department at least seven days before beginning construction on a public water system installation, change, or addition that is authorized by an Approval to Construct; and
2. The public water system notifies the Department of completion of construction at least 10 working days before the expected completion date.

Historical Note

Section recodified from R18-4-507 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-508. Record Drawings

A. A professional engineer registered in Arizona shall clearly and accurately record or mark, on a complete set of working project drawings, each deviation from the original plan and the dimensions of the deviation. The set of marked drawings becomes the record drawings, reflecting the project as actually built.

B. The professional engineer registered in Arizona shall sign, date, and place the engineer's seal on each sheet of the record drawings and submit them to the Department upon completion of the project. The record drawings shall be accompanied by an Engineer's Certificate of Completion, signed by the professional engineer registered in Arizona, and submitted on a form approved by the Department for any project inspected under R18-5-507(B).

C. Quality control testing results and calculations, including pressure and microbiological testing, and disinfectant residual records, shall be submitted with the Engineer's Certificate of Completion together with field notes and the name of the individual witnessing the tests.

Historical Note

Section recodified from R18-4-508 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).

R18-5-509. Modification to Existing Treatment Process

Before a public water system may make a modification to its existing treatment process, the public water system shall submit and obtain the Department's approval for a detailed plan that explains the proposed modifications and the safeguards that the public water system will implement to ensure that the quality of the water served by the system will not be adversely affected by the modification. The public water system shall comply with the provisions in the approved plans.

Historical Note

Section recodified from R18-4-509 at 10 A.A.R. 585, effective January 30, 2004 (Supp. 04-1).