PROPOSED REGULATION OF THE
STATE ENVIRONMENTAL COMMISSION

LCB FILE NO. R049-18I

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PROPOSED REGULATION OF

THE STATE ENVIRONMENTAL COMMISSION

File No. P2018-01

March 16, 2018

EXPLANATION – Matter in ***italics*** is new; matter in brackets ~~[omitted material]~~ is material to be omitted.

AUTHORITY: §§1-18, NRS 445A.860.

Section 1: NAC 445A.65825 is hereby amended to read as follows:

NAC 445A.65825 "Determined to be compatible with drinking water" means that a ***potable water system*** product is determined to be compatible with drinking water through:

1. Certification of the product in accordance with Standard 14, 42, 44, 53, 55, 58, 60, 61 or 372, as appropriate, as adopted by reference in NAC 445A.6663; or

2. Certification of the product by an independent laboratory approved by the Division or the appropriate district board of health.

3. For Standard 61, if a certified product is not available for a specific design application, or if a certified product is not the best choice for the engineered design, the Division or the appropriate district board of health may consider for review and approval a written request from a licensed professional engineer that confirms or demonstrates:

(a) a product's component parts that come into contact with drinking water are Standard 61 certified; or

(b) if (a) cannot be achieved, then equivalence with the purpose of the provisions in 445A.66615 and the intent of Standard 61 for protection of public health, is demonstrated.

Sec. 2: **NAC 445A.65845** is hereby amended to read as follows:

NAC 445A.65845 "Distribution system" means all the facilities of a public water system used to deliver finished water to service connections from the source of the water or from any related treatment ~~and/~~***or storage*** facilities.

Sec. 3. **NAC 445A.66085** is hereby amended to read as follows:

NAC 445A.66085 "Lead-free" means, with regard to:

1. Solder and flux, that not more than 0.2 percent of the composition of the solder or flux is lead.

2. Pipes, fittings and fixtures, that not more than a weighted average of 0.25 percent of the composition of the wetted surfaces of the pipe, fitting or fixture is lead, as calculated in accordance with Standard 372 of the American National Standards Institute and the National Sanitation Foundation International, as adopted by reference in NAC 445A.6663.

3. Demonstration of compliance with the definition of lead-free can be satisfied using:

a. NSF/ANSI Standard 61 on or after January 4, 2014; or

b. NSF/ANSI Standard 61 Annex G or Standard 372 between January 4, 2011 and January 3, 2014; or

c. As determined to be compatible with drinking water by the Division or the appropriate district board of health.

Sec. 4: **NAC 445A.66375** is hereby amended to read as follows:

NAC 445A.66375 "Service connection" ~~[means:~~

~~1. The point of connection between a public water system and the water system used by a customer of the public water system, at which the public water system loses its authority and control over the water;~~

~~2. If a meter is installed at a connection between a public water system and the water system used by a customer of the public water system, the downstream end of the meter; or~~

~~3. At a park for mobile homes or recreational vehicles, the riser for water service.]~~***has the meaning ascribed to it in NRS 445A.843.***

Sec. 5: NAC 445A.66395 is hereby amended to read as follows:

NAC 445A.66395 "Sewer main" means***:***

1. a ***gravity sanitary*** sewer line with a ***minimum*** diameter ~~[that exceeds]~~ ***of*** 6 inches***;***

2. a pressurized sanitary sewer line with a minimum diameter of 2 inches; or

3. a gravity storm sewer line with a minimum diameter of 12 inches.

Sec. 6: NAC 445A.6663 is hereby amended to read as follows:

NAC 445A.6663 1. The following provisions and publications are hereby adopted by reference:

(a) The *American Water Works Association Standards*, as those standards existed on July 1, 2014. A copy of those standards is available by mail from the American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235, by toll-free telephone at (800) 926-7337, or at the Internet address **http://www.awwa.org/store.aspx**, at a price of $2,538 for members and $4,376 for nonmembers.

(b) Standards 14, 42, 44, 53, 55, 58, 60, 61 and 372 of the American National Standards Institute and the National Sanitation Foundation International, as those standards existed on July 1, 2014. Those standards are available by mail from National Sanitation Foundation International, 3916 Ranchero Drive, Ann Arbor, Michigan 48108, by toll-free telephone at (800) 699-9277, or at the Internet address **http://www.techstreet.com/nsf/**, at a price of $165 for Standard 14, 42, 44, 53, 55 or 58, $325 for Standard 60 or 61 and $55 for Standard 372.

(c) Standard ~~[D3212]~~***D3139*** of the American Society for Testing and Materials, as that standard existed on ~~[July 1, 2014]~~***May 1, 2018***. That standard is available by mail from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania 19428, by toll-free telephone at (877) 909-2786, or at the Internet address **http://www.astm.org**, at a price of $~~[37]~~***41***.

(d) The *Manual of Cross-Connection Control*, tenth edition, as developed by the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California. This publication is available by mail from the University of Southern California, 3716 South Hope Street, Los Angeles, California 90089-7700, by toll-free telephone at (866) 545-6340, or at the Internet address **http://www.usc.edu/dept/fccchr/tools.html**, at a price of $70 for members and $95 for nonmembers.

(e) *Manual M14 Recommended Practice for Backflow Prevention and Cross-Connection Control*, third edition, as published by the American Water Works Association. This publication is available by mail from the American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235, by toll-free telephone at (800) 926-7337, or at the Internet address **http://www.awwa.org/store.aspx**, at a price of $76 for members and $122 for nonmembers.

(f) *Recommended Standards for Water Works*, 2012 edition, as developed and approved by the Great Lakes Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers. This publication is available by mail from Health Research Incorporated, 150 Broadway, Suite 560, Menands, New York 12204, by telephone at (518) 431-1200, or at the Internet address **http://www.healthresearch.org/store**, at a price of $20, or at no cost at the Internet address **http://10statesstandards.com**.

(g) *Standard Methods for the Examination of Water and Wastewater*, 22nd edition, as published by the American Water Works Association. This publication is available by mail from the American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235, by toll-free telephone at (800) 926-7337, or at the Internet address **http://www.awwa.org/store.aspx**, at a price of $195 for members and $295 for nonmembers.

(h) *Standard Specifications for Public Works Construction*, also known as the "Orange Book," 2012 edition, as sponsored and distributed by the Regional Transportation Commission of Washoe County, Washoe County, the City of Sparks, the City of Reno, Carson City and the City of Yerington. This publication may be obtained by mail from the Regional Transportation Commission of Washoe County, 2050 Villanova Drive, Reno, Nevada 89502, or by telephone at (775) 348-0400, at a price of $40, or at no cost at the Internet address **http://www.rtcwashoe.com/streetshighways/documents/2012%20ORANGEBOOK.pdf**.

(i) *Uniform Design and Construction Standards for Potable Water Distribution Systems*, third edition, as developed and adopted by Boulder City, Henderson, North Las Vegas, the Big Bend Water District and the Las Vegas Valley Water District***, or a subsequent edition as adopted by the governing boards for the respective local governments listed above and approved by the Division***. This publication is available by mail from the Las Vegas Valley Water District, Engineering Services Division, 1001 South Valley View Boulevard, Las Vegas, Nevada 89153, or by telephone at ~~[(702) 258-3165]~~***(702) 822-8518***, at a price of $12, or at no cost at the Internet address **http://www.lvvwd.com~~[/eng/references_udacs.html]~~**.

(j) The *Uniform Plumbing Code*, 2012 edition, as adopted by the International Association of Plumbing and Mechanical Officials. This publication is available by mail from the International Association of Plumbing and Mechanical Officials, 4755 E. Philadelphia Street, Ontario,

California 91761, by telephone at (909) 472-4208, or at the Internet address **http://iapmomembership.org**, at a price of $88.80 for members and $111 for nonmembers for a softcover copy, $107.20 for members and $134 for members for a looseleaf copy, and $80.80 for members and $101 for nonmembers for a CD-ROM or electronic copy.

~~[2. If there is any conflict between any of the provisions described in subsection 1, the most stringent of those provisions prevails.]~~

Sec. 7: NAC 445A.66685 is hereby amended to read as follows:

NAC 445A.66685 1. The design and construction of a public water system must comply with the provisions of:

(a) NAC 445A.65505 to 445A.6731, inclusive.

(b) For public water systems in Boulder City, Henderson, North Las Vegas, the Big Bend Water District or the Las Vegas Valley Water District, Uniform Design and Construction Standards for Potable Water Distribution Systems, as adopted by reference in NAC 445A.6663.

↳ If there is any conflict between provisions of subsection (a) and (b), the most stringent of those provisions prevails.

2. Additional design and construction standards for public water systems include:

(***a***~~b~~) The *American Water Works Association Standards*, as adopted by reference in NAC 445A.6663.

(***b***~~c~~) Standards 14, 42, 44, 53, 55, 58, 60**,** 61 and 372 of the American National Standards Institute and National Sanitation Foundation International, as adopted by reference in NAC 445A.6663.

(*c*~~d~~) *Manual M14 Recommended Practice for Backflow Prevention and Cross-Connection Control*, as adopted by reference in NAC 445A.6663.

(*d*~~e~~) *Recommended Standards for Water Works*, as adopted by reference in NAC 445A.6663.

(*e*~~f~~) For public water systems in Carson City, Fallon, Reno, Sparks, Yerington, Douglas County, Lander County, Lyon County, Nye County or Washoe County, *Standard Specifications for Public Works Construction*, also known as the "Orange Book," as adopted by reference in NAC 445A.6663.

~~(g) For public water systems in Boulder City, Henderson, North Las Vegas, the Big Bend Water District or the Las Vegas Valley Water District, *Uniform Design and Construction Standards for Potable Water Distribution Systems*, as adopted by reference in NAC 445A.6663.~~

(*g*~~h~~) *The Uniform Plumbing Code*, as adopted by reference in NAC 445A.6663.

(*h*~~i~~) Any other engineering standards approved by the Division.

3~~2~~. If there is any conflict between ***subsection 1(a) and*** any of the provisions described in subsection *2*~~1~~, ~~the most stringent of those provisions~~ ***NAC 445A.65505 to 445A.6731, inclusive,*** prevails ***unless a special exception is sought per NAC 445A.6665***.

Sec. 8: NAC 445A.6671 is hereby amended to read as follows:

NAC 445A.6671 1. The Division or the appropriate district board of health shall not approve a water project unless the application for approval of the water project demonstrates that the water project will comply with the applicable provisions of NAC 445A.65505 to 445A.6731, inclusive.

2. Approval of a water project is effective ***to commence within*** ~~for~~ 1 year, ***and has 1 year to complete the project after commencement,*** except that the Division or the appropriate district board of health may extend this period in 1-year increments if:

(a) Work is being performed on the water project; and

(b) The Division or the appropriate district board of health receives a schedule of work and periodic updates on the progress of the water project.

3. The Division or the appropriate district board of health shall revoke its approval of a water project if work on the water project:

(a) Does not commence within 1 year after the approval of the water project becomes effective; or

(b) Ceases for a continuous period of 1 year.

Sec. 9: NAC 445A.67105 is hereby amended to read as follows:

NAC 445A.67105 A supplier of water shall ensure that the distribution system of the public water system:

1. Is adequate to deliver sufficient volumes of water, of the appropriate quality and pressure, to the area of service of the public water system.

2. Complies with the requirements of NAC 445A.67105 to 445A.67145, inclusive.

3. Is protected and remains accessible for maintenance by ensuring coordination with the entity proposing a project to install or relocate sanitary or storm sewer facilities in the same road or easement as the existing public water system. Complete plans for the sanitary or storm sewer project, for the portion(s) related to proximity to existing water facilities, shall be submitted to the Division or the appropriate district board of health for review and approval to ensure compliance with the requirements of NAC 445A.67105 to 445A.67145, inclusive.

Sec. 10: NAC 445A.6715 is hereby amended to read as follows:

NAC 445A.6715 As used in NAC 445A.6715 to 445A.6718, inclusive, unless the context otherwise requires:

1. "Sewer main" includes:

(a) A sewer main ~~[of a sanitary sewer, storm sewer]~~ ***as defined by NAC 445A.66395*** or any other type of sewer; and

(b) Any unidentified conduit with a ***minimum*** diameter ~~[that exceeds]~~ ***of*** 6 inches.

(c) Does not include potable water irrigation service less than or equal to 2 inches in diameter.

(d) Does not include stormwater driveway crossings when used within open trench roadside drainages.

2. "Sewer service lateral" includes:

(a) A sewer service lateral of a sanitary sewer, storm sewer or any other type of sewer; and

(b) Any unidentified conduit with a diameter ~~[of not more]~~ ***less*** than 6 inches.

3. Where a gravity sewer line or gravity sewer main includes a catch basin or manhole, and the catch basin or manhole is designed or retrofitted to be water tight, the catch basin or manhole dimensions are not included in minimum separation distances for anything other than accessibility and maintenance.

4. "Area of special construction" includes locations in engineering design plans that do not meet the minimum preferred design criteria and special approval from the Division or the appropriate district board of health is sought. An area of special construction submitted for review and approval is to be clearly identified on the engineering design in plan view, in profile view, and by referencing a standard detail.

Sec. 11: NAC 445A.67155 is hereby amended to read as follows:

NAC 445A.67155 If a sewer main parallels a water main or water service lateral:

1. Whenever possible, the sewer main must be located lower than the water main or water service lateral.

2. Except as otherwise provided in subsection 3, the sewer main must be in a separate trench and:

(a) Located at least 10 feet away from the water main or water service lateral, as measured horizontally from the exterior walls of the pipes;

(b) If compliance with paragraph (a) is not practicable, located:

(1) At least 5 feet away from the water main or water service lateral, as measured horizontally from the exterior walls of the pipes; and

(2) At least 18 inches lower than the water main or water service lateral, as measured vertically from the exterior walls of the pipes; or

(c) If compliance with neither paragraph (a) nor paragraph (b) is practicable, located at least 6 feet away from the water main or water service lateral, as measured horizontally from the exterior walls of the pipes. If the sewer main:

(1) Is in place at the time a water project is performed, the sewer main must, except as otherwise provided in subparagraph (3), be totally encased in at least 4 inches of cement slurry;

(2) Is not in place at the time a water project is performed, ~~[the sewer main must, except as otherwise provided in subparagraph (3), be constructed of PVC with joints that comply with Standard D3212 of the American Society for Testing and Materials; or~~

~~(3) Is part of a storm sewer and has a diameter of not less than 24 inches, the sewer main must be installed with watertight joints that use joint sealants or joint gaskets.]~~ ***the professional engineer must demonstrate to the Division or the appropriate district board of health that design of water and sewer mitigations in the area of special construction are adequate to***

protect public health using appropriate modifications to water and/or sewer as authorized by the Division.

3. If compliance with the requirements for separation set forth in subsection 2 are not practicable~~[:~~

~~(a) The water main or water service lateral must be encased in at least 4 inches of cement slurry; and~~

~~(b) The sewer main must comply with the requirements of subparagraphs (1), (2) and (3) of paragraph (c) of subsection 2.]~~ ***the professional engineer must demonstrate to the Division or the appropriate district board of health that design of water and sewer mitigations in the area of special construction are adequate to protect public health using appropriate modifications to water and/or sewer as authorized by the Division.***

Sec. 12: **NAC 445A.6716** is hereby amended to read as follows:

NAC 445A.6716 If a sewer service lateral parallels a water main or water service lateral, the sewer service lateral must be in a separate trench and:

1. Located:

(a) At least 12 inches lower than the water main or water service lateral, as measured vertically from the exterior walls of the pipes; and

(b) At least 48 inches away from the water main or water service lateral, as measured horizontally from the exterior walls of the pipes; or

2. If compliance with subsection 1 is impracticable, ~~[located in such a manner as is authorized by the Division.]~~ ***the professional engineer must demonstrate to the Division or the appropriate district board of health that design of water and sewer mitigations in the area of***

special construction are adequate to protect public health using appropriate modifications to water and/or sewer as authorized by the Division.

Sec. 13: **NAC 445A.67165** is hereby amended to read as follows:

NAC 445A.67165 If a sewer main crosses a water main:

1. The sewer main must be located at least 18 inches lower than the water main, as measured vertically from the exterior walls of the pipes; or

2. If compliance with subsection 1 is impracticable:

(a) A reasonable effort must be made to place the pipeline joints of the sewer main and water main, other than any welded joints, an equal distance from the point of crossing;

(b) The sewer main and water main must be:

(1) Located at least 6 inches apart, as measured vertically from the exterior walls of the pipes; and

(2) Provided with such structural support as the supplier of water determines necessary; and

(3) ***the professional engineer must demonstrate to the Division or the appropriate district board of health that design of water and sewer mitigations in the area of special construction are adequate to protect public health using appropriate modifications to water and/or sewer as authorized by the Division.***

(c) The area of crossing must be constructed in such a manner that:

(1) The sewer main is composed of materials that:

(I) For public water systems in Carson City, Fallon, Reno, Sparks, Yerington, Douglas County, Lander County, Lyon County, Nye County or Washoe County, comply with *Standard*

Specifications for Public Works Construction, also known as the "Orange Book," and the *American Water Works Association Standards*;

(II) For public water systems in Boulder City, Henderson, North Las Vegas, the Big Bend Water District or the Las Vegas Valley Water District, comply with *Uniform Design and Construction Standards for Potable Water Distribution Systems* and the *American Water Works Association Standards*; or

(III) For public water systems in other areas of the State, comply with the *American Water Works Association Standards*;

(2) The sewer main consists of ***water quality*** PVC which is constructed with joints that comply with Standard ~~[D3212]~~***D3139*** of the American Society for Testing and Materials;

~~[(3) The sewer main or water main is totally encased in at least 4 inches of cement slurry for a distance of at least 10 feet on each side of the point of crossing; or~~

~~(4) The sewer main or water main is installed in a pipe sleeve that extends, without joints, at least 10 feet on each side of the point of crossing.]~~

Sec. 14: NAC 445A.6717 is hereby amended to read as follows:

NAC 445A.6717 1. If a sewer main crosses a water service lateral, the sewer main must be located:

(a) At least 18 inches lower than the water service lateral, as measured vertically from the exterior walls of the pipes; or

(b) If compliance with paragraph (a) is impracticable, ***the sewer main must consist of water quality pressure PVC which is constructed with joints that comply with Standard D3139 of the American Society for Testing and Materials, or*** ~~[in such a manner as is authorized by the Division.]~~ ***the professional engineer must demonstrate to the Division or the appropriate***

district board of health that design of water and sewer mitigations in the area of special construction are adequate to protect public health using appropriate modifications to water and/or sewer as authorized by the Division.

2. If a water service lateral is in place at the time a sewer main is constructed and must be relocated to comply with this section, the relocation must be performed:

(a) With the approval of and in accordance with the procedures and standards of the supplier of water; or

(b) If compliance with paragraph (a) is impracticable, ~~[in such a manner as is authorized by the Division.]~~ ***the professional engineer must demonstrate to the Division or the appropriate district board of health that design of water and sewer mitigations in the area of special construction are adequate to protect public health using appropriate modifications to water and/or sewer as authorized by the Division.***

Sec. 15: NAC 445A.67175 is hereby amended to read as follows:

NAC 445A.67175 1. If a sewer service lateral crosses a water main or water service lateral, the sewer service lateral must be located:

(a) At least 12 inches lower than the water main or water service lateral, as measured vertically from the exterior walls of the pipes; or

(b) If compliance with paragraph (a) is impracticable, ~~[in such a manner as is authorized by the Division.]~~ ***the professional engineer must demonstrate to the Division or the appropriate district board of health that design of water and sewer mitigations in the area of special construction are adequate to protect public health using appropriate modifications to water and/or sewer as authorized by the Division.***

2. If a water main or water service lateral is in place at the time a sewer service lateral is constructed and must be relocated to comply with this section, the relocation must be performed:

(a) With the approval of and in accordance with the procedures and standards of the supplier of water; or

(b) If compliance with paragraph (a) is impracticable, ~~[in such a manner as is authorized by the Division.]~~ ***the professional engineer must demonstrate to the Division or the appropriate district board of health that design of water and sewer mitigations in the area of special construction are adequate to protect public health using appropriate modifications to water and/or sewer as authorized by the Division.***

Sec. 16: NAC 445A.6719 is hereby amended to read as follows:

NAC 445A.6719 1. Each service connection must have an assembly for the prevention of backflow, of a type that is commensurate with the degree of hazard that exists on the property of the customer of a public water system. Except as otherwise provided in NAC 445A.67185 to 445A.67255, inclusive, the assembly may consist of any one of the following, as listed in the order of least to most protection:

(a) A double check valve assembly.

(b) A reduced pressure principle assembly.

(c) An air gap.

2. A reduced pressure principle assembly may be substituted for a double check valve assembly, and an air gap may be substituted for a reduced pressure principle assembly.

3. With the approval of the supplier of water:

(a) A double check detector check assembly may be substituted for a double check valve assembly; and

(b) A reduced pressure detector assembly may be substituted for a reduced pressure principle assembly.

4. A double check valve assembly or double check detector check assembly may be used only for protection against pollution.

5. A reduced pressure principle assembly or reduced pressure detector assembly may be used for protection against pollution or contamination, but a reduced pressure principle assembly must not be used for protection against sewage or reclaimed wastewater.

6. An assembly for the prevention of backflow must not be composed solely of a single check valve.

7. A water connection that serves a fire hydrant and is directly connected to a public water main, does not require a backflow device unless determined by the supplier of water to present a degree of hazard to the public water system. If determined to present a hazard, the supplier of water shall require a backflow device on the hydrant lateral that is commensurate with the hazard in accordance with NAC 445A.67185 to 445A.67255, inclusive.

Sec. 17: NAC 445A.67215 is hereby amended to read as follows:

NAC 445A.67215 1. A supplier of water shall ensure that:

(a) An appropriate assembly for the prevention of backflow is installed at each service connection between the public water system and a fire sprinkler system; and

(b) The assembly is:

(1) Tested upon installation; and

(2) Maintained and tested, and the results of those tests logged, annually.

↳ The testing required by this subsection must be conducted by a certified backflow prevention assembly tester.

2. An assembly for the prevention of backflow installed on a service connection between a public water system and a fire sprinkler system must:

(a) Be of such a type and installed in such a manner that the assembly:

(1) Protects the public water system; and

(2) Does not ***reasonably*** interfere with the capability of the fire sprinkler system, as engineered, to protect the safety of persons in the public or private facility in which the fire sprinkler system is located~~[.;]~~. ***The supplier of water, however, shall not be responsible if pressure reduction occurs through the installation of a backflow device on a user's premises pursuant to NAC 445A.67185 through NAC445A.67255***; and

(b) Prevent any pollution or contamination of drinking water, by any nonpotable water contained in the fire sprinkler system, which may be caused by any backpressure or backsiphonage that may occur during normal or abnormal operation of the fire sprinkler system or the public water system.

3. The supplier of water shall determine the type of assembly required on a particular service connection between the public water system and a fire sprinkler system based upon the degree of risk posed by the fire sprinkler system to the supply of potable water, considering the chemical and biological contents of the fire sprinkler system, the materials used to construct the fire sprinkler system and the possibility that backflow will occur.

4. Any reduced pressure principle assembly or reduced pressure detector assembly used on a service connection between a public water system and a fire sprinkler system must not have any holes drilled in the check valve clappers.

TEXT OF REPEALED SECTIONS

Sec. 18: NAC 445A.5403 is repealed:

~~[NAC 445A.5403 1. The Division or the appropriate district board of health shall not approve a project for a facility to treat groundwater unless the application for approval of the water project demonstrates that the water project will comply with the applicable provisions of NAC 445A.54022 to 445A.5405, inclusive.~~

~~2. Approval of a water project is effective for 1 year, except that the Division or the appropriate district board of health may extend this period in 1 year increments if:~~

~~(a) Work is being performed on the water project; and~~

~~(b) The Division or the appropriate district board of health receives a schedule of work and periodic updates on the progress of the water project.~~

~~3. The Division or the appropriate district board of health shall revoke its approval of a water project if work on the water project:~~

~~(a) Does not commence within 1 year after the approval of the water project becomes effective; or~~

~~(b) Ceases for a continuous period of 1 year.]~~