ADOPTED REGULATION OF THE

STATE ENVIRONMENTAL COMMISSION

LCB File No. R049-18

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

AUTHORITY: §§1-23, NRS 445A.860.

A REGULATION relating to public water systems; revising the requirements for determining whether certain products are lead-free; providing that the dimensions of certain catch basins or manholes are not required to be included when calculating distances required for the separation of certain lines; authorizing, under certain circumstances, the connection from certain fire hydrants to certain water mains to not include an assembly for the prevention of backflow; requiring work on a water project to commence not later than 1 year after the project is approved; revising certain definitions related to public water systems; revising references to certain standards and publications adopted by reference; authorizing certain exceptions to the required standards for the design and construction of a public water system; revising certain definitions related to the separation of sewer and water lines; authorizing, under certain circumstances, an engineer to request approval for a modification to the minimum requirements related to the separation of sewer and water lines; making various other changes relating to public water systems; and providing other matters properly relating thereto.

Legislative Counsel's Digest:

Existing law authorizes the State Environmental Commission to adopt regulations for the construction, operation and maintenance of public water systems if those activities affect the quality of water. (NRS 445A.860)

Existing regulation requires that certain products used in a public water system be certified in accordance with Standard 61 of the National Science Foundation, among other standards, in order to be determined to be compatible with drinking water. (NAC 445A.65825) **Section 2** of this regulation authorizes, under certain circumstances, an engineer to use a product that is not certified in accordance with such standard.

Existing regulations establish minimum requirements for the separation of sewer and water lines. (NAC 445A.6715-445A.6718) **Section 3** of this regulation provides that, under certain circumstances, the dimensions of a catch basin or manhole are not required to be used when calculating minimum separation distances between the two types of lines. **Sections 18-22**

of this regulation authorize, under certain circumstances, an engineer to request the Division of Environmental Protection of the State Department of Conservation and Natural Resources or the appropriate district board of health to approve a modification to these minimum requirements when compliance with the minimum requirements is impracticable.

Existing regulation requires each service connection of a public water system to have an assembly for the prevention of backflow. (NAC 445A.6719) **Section 4** of this regulation provides that a fire hydrant which is directly connected to certain water mains does not require an assembly for the prevention of backflow unless the supplier of water determines that the lack of such an assembly presents a degree of hazard to the public water system. **Section 23** of this regulation makes a conforming change.

Section 7 of this regulation amends the definition of "distribution system" to include certain related storage facilities.

Existing law requires any pipe, fitting or fixture used in the installation or repair of a public water system to be lead-free. (NAC 445A.67125) **Section 8** of this regulation amends the definition of "lead-free" to require that the pipe, fitting or fixture also be determined to be compatible with drinking water.

Existing law defines the term "service connection." (NRS 445A.66375) **Section 9** of this regulation revises the definition of "service connection" used in regulations related to the design, construction, operation and maintenance of a public water system in order to make it consistent with the definition set forth in NRS.

Existing regulation defines a "sewer main" as a sewer line with a minimum diameter that exceeds 6 inches. (NAC 445A.66395) **Section 10** of this regulation defines the term to instead mean a: (1) gravity sanitary sewer line with a diameter that exceeds 6 inches or a diameter that equals 6 inches under certain circumstances; (2) pressurized sanitary sewer line with a minimum diameter of 2 inches; or (3) gravity storm sewer line with a minimum diameter of 12 inches. **Section 17** of this regulation excludes from the definition of "sewer main" certain potable water irrigation service and storm water driveway crossings.

Section 14 of this regulation: (1) revises certain standards and publications related to public water systems that are adopted by reference; and (2) updates information on how to obtain such standards and publications. (NAC 445A.6663)

Existing regulation requires the design and construction of a public water system to comply with certain standards and specifies that if any of the standards conflict with each other, the public water system must comply with the most stringent standard. (NAC 445A.66685) **Section 15** of this regulation provides that in such a circumstance, the public water system must comply with the most stringent standard unless a special exception has been granted.

Sections 5 and 16 of this regulation provide that, unless the period is extended by the Division or a district board of health, work on a water project must: (1) commence not later than 1 year after the project is approved; and (2) be completed, with limited exception, not later than 1 year after the date that work on the project has commenced.

Sections 6 and 11-13 of this regulation make technical changes.

Section 1. Chapter 445A of NAC is hereby amended by adding thereto the provisions set forth as sections 2, 3 and 4 of this regulation.

Sec. 2. ***If a product that is subject to certification pursuant to NAC 445A.65825 in accordance with Standard 61, as adopted by reference in NAC 445A.6663, in order to be determined to be compatible with drinking water is not available or if an engineer believes that such a product is not the best choice for a particular design, the engineer may submit a request to the Division or the appropriate district board of health to use a product that is not certified in accordance with Standard 61. The engineer must demonstrate in such request that:***

1. The components of the product which come into contact with drinking water are certified in accordance with Standard 61; or

2. Use of the product will not conflict with the provisions of NAC 445A.66615 and federal law.

Sec. 3. ***If a gravity sewer line or gravity sewer main includes a catch basin or manhole which is designed or retrofitted to be watertight, the catch basin or manhole dimensions are not required to be included when determining the minimum separation distances required pursuant to this section and NAC 445A.6715 to 445A.6718, inclusive, other than for accessibility and maintenance.***

Sec. 4. ***A fire hydrant that is directly connected to a water main which is accessible to the public does not require an assembly for the prevention of backflow unless the supplier of water determines that the lack of an assembly for the prevention of backflow presents a hazard to the public water system. If the supplier of water determines there is such a hazard to the public water system, the supplier of water must require the installation of an assembly for the prevention of backflow where the fire hydrant connects to the water main which is commensurate with the degree of hazard that exists in accordance with the requirements of this section and NAC 445A.67185 to 445A.67255, inclusive.***

Sec. 5. NAC 445A.5403 is hereby amended to read as follows:

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]~~ ***Work on*** a water project ~~[is effective for]~~ ***must commence not later than 1 year after the water project is approved. The water project must be completed not later than*** 1 year ~~[,]~~ ***after the date that work on the water project has commenced,*** 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. 6. NAC 445A.65505 is hereby amended to read as follows:

445A.65505 As used in NAC 445A.65505 to 445A.6731, inclusive, ***and sections 2, 3 and 4 of this regulation,*** unless the context otherwise requires, the words and terms defined in NAC 445A.6551 to 445A.6661, inclusive, have the meanings ascribed to them in those sections.

Sec. 7. NAC 445A.65845 is hereby amended to read as follows:

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 ***or storage*** facilities.

Sec. 8. NAC 445A.66085 is hereby amended to read as follows:

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]~~ ***:***

(a) 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.]~~ ***; or***

(b) Are determined to be compatible with drinking water.

Sec. 9. NAC 445A.66375 is hereby amended to read as follows:

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

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

1. Gravity sewer line with a diameter that ~~[exceeds]~~ ***:***

(a) Exceeds 6 inches ~~[.]~~ ***; or***

(b) Equals 6 inches if the gravity sewer line has connections from more than one sewer service lateral;

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

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

Sec. 11. NAC 445A.66615 is hereby amended to read as follows:

445A.66615 The purposes of NAC 445A.65505 to 445A.6731, inclusive, ***and sections 2, 3 and 4 of this regulation,*** are to:

1. Provide the public with reasonable assurance that its water is satisfactory for consumption and for ablutionary and culinary purposes;

2. Protect the public health and welfare by ensuring that water is developed, treated, stored and distributed in a safe manner;

3. Ensure a reliable supply of water;

4. Prevent the potential pollution or contamination of a public water system as a result of backpressure or backsiphonage;

5. Provide for the use of components in a public water system that are designed and constructed in accordance with accepted engineering principles, standards and practices; and

6. Protect the public investment in its infrastructure for the provision of water by public utilities.

Sec. 12. NAC 445A.6662 is hereby amended to read as follows:

445A.6662 1. Except as otherwise provided in subsection 2, the provisions of NAC 445A.65505 to 445A.6731, inclusive, ***and sections 2, 3 and 4 of this regulation*** apply to every public water system in this State.

2. Except for water projects performed after February 20, 1997, NAC 445A.65505 to 445A.6731, inclusive, ***and sections 2, 3 and 4 of this regulation*** do not apply to a public water system which the Division or the appropriate district board of health determines, based on a sanitary survey and past performance, to be safe and not subject to pollution or contamination as a result of the location, protection, construction, operation or maintenance of that public water system.

Sec. 13. NAC 445A.66625 is hereby amended to read as follows:

445A.66625 If any of the provisions of NAC 445A.65505 to 445A.6731, inclusive, ***and sections 2, 3 and 4 of this regulation,*** or any application of those provisions to any person, thing

or circumstance is declared invalid, it is intended that such invalidity not affect the remaining provisions or applications to the extent that they can be given effect.

Sec. 14. NAC 445A.6663 is hereby amended to read as follows:

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

~~[(a)]~~ ***1.*** 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]~~ ***$3,774*** for members and ~~[$4,376]~~ ***$5,990*** for nonmembers.

~~[(b)]~~ ***2.*** Standards 14, 42, 44, 53, 55, 58, 60, 61 and 372 of the American National Standards Institute and ~~[the National Sanitation Foundation]~~ ***NSF*** International, as those standards existed on July 1, 2014. Those standards are available by mail from ~~[National Sanitation Foundation International, 3916 Ranchero Drive,]~~ ***Techstreet, 3025 Boardwalk Drive, Suite 220,*** 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]~~ ***$220*** for Standard 14, 42, 44, 53, 55 or 58, ***$380 for Standard 60,*** $325 for Standard ~~[60 or]~~ 61 and ~~[$55]~~ ***$110*** for Standard 372.

~~[(c) Standard]~~

3. Standards D3212 ***and D3139*** of ~~[the American Society for Testing and Materials,]~~ ***ASTM International*** as ~~[that standard]~~ ***those standards*** existed on ~~[July 1, 2014. That standard is]~~ ***May 1, 2018. Those standards are*** 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. (d)]~~ ***$41.***

4. 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,]~~ ***Research Annex 219,*** 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,]~~ ***www.uscfoundationstore.com*** at a price of ~~[$70]~~ ***$90*** for members and ~~[$95]~~ ***$125*** for nonmembers.

~~[(e)]~~ ***5.*** *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)]~~ ***6.*** *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)]~~ ***7.*** *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]~~ ***$225*** for members and ~~[$295]~~ ***$395*** for nonmembers.

~~[(h)]~~ ***8.*** *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,]~~ ***1105 Terminal Way, Suite 108,*** Reno, Nevada 89502, or by telephone at (775) ~~[348-0400,]~~ ***348-0171,*** at a price of $40, or at no cost at the Internet address ~~[http://www.rtcwashoe.com/streetshighways/documents/2012%20ORANGEBOOK.pdf.~~

~~(i)]~~ ***https://www.rtcwashoe.com/engineering-resource/orange-book.***

9. *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 adopted by the respective governing body of such local governments 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,]~~ ***822-8518*** at a price of $12, or at no cost at the Internet address ~~[http://www.lvvwd.com/eng/references_udacs.html.~~

~~(j)]~~ ***https://www.lvvwd.com/engineering-resources/design/index.html.***

10. 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. 15. NAC 445A.66685 is hereby amended to read as follows:

445A.66685 1. ~~[The]~~ ***Except as otherwise provided in subsection 2, the*** design and construction of a public water system must comply with the provisions of:

(a) NAC 445A.65505 to 445A.6731, inclusive ~~[.]~~ ***, and sections 2, 3 and 4 of this regulation.***

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

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

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

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

(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.

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

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

2. If there is any conflict between any of the provisions described in subsection 1, the most stringent of those provisions prevails ~~[.]~~ ***unless a special exception has been granted pursuant to NAC 445A.6665.***

Sec. 16. NAC 445A.6671 is hereby amended to read as follows:

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 ~~[.]~~ ***, and sections 2, 3 and 4 of this regulation.***

2. ~~[Approval of]~~ ***Work on*** a water project ~~[is effective for]~~ ***must commence not later than*** 1 year ~~[,]~~ ***after the water project is approved. The water project must be completed not later than***

1 year after the date that work on the water project has commenced, 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. 17. NAC 445A.6715 is hereby amended to read as follows:

445A.6715 As used in NAC 445A.6715 to 445A.6718, inclusive, ***and section 3 of this regulation,*** unless the context otherwise requires:

1. "Sewer main" ~~[includes:~~

~~(a) A sewer main of a sanitary sewer, storm sewer or any other type of sewer; and~~

~~(b) Any]~~ ***:***

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

(b) Does not include:

(1) A potable water irrigation service with a diameter that is less than or equal to 2 inches; or

(2) A storm water driveway crossing when such a crossing is used within an open trench roadside drainage.

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.

Sec. 18. NAC 445A.67155 is hereby amended to read as follows:

445A.67155 ***1.*** If a sewer main parallels a water main or water service lateral:

~~[1.]~~ ***(a)*** Whenever possible, the sewer main must be located lower than the water main or water service lateral.

~~[2.]~~ ***(b)*** Except as otherwise provided in ~~[subsection 3,]~~ ***paragraph (c),*** the sewer main must be in a separate trench and:

~~[(a)]~~ ***(1)*** 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)]~~ ***(2)*** If compliance with ~~[paragraph (a)]~~ ***subparagraph (1)*** is not practicable, located:

~~[(1)]~~ ***(I)*** 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)]~~ ***(II)*** 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)]~~ ***(3)*** If compliance with neither ~~[paragraph (a)]~~ ***subparagraph (1)*** nor ~~[paragraph (b)]~~ ***subparagraph (2)*** 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)]~~ ***(I)*** 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)]~~ ***(II)*** 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.~~

~~3.]~~ ***(c)*** If compliance with the requirements ~~[for separation]~~ set forth in ~~[subsection 2 are]~~ ***subparagraph (b) is*** 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.]~~ ***, an engineer must:***

(1) Identify in the plans the area where compliance is impracticable in plan and profile views;

(2) Provide any applicable standard details for the area where compliance is impracticable;

(3) Propose a modification to the requirements;

(4) Demonstrate that the modification will not conflict with the provisions of NAC 445A.66615; and

(5) Request approval from the Division or the appropriate district board of health for the engineer's proposed modification.

2. The Division shall provide information regarding the process for proposing a modification pursuant to paragraph (c) at the Internet website https://ndep.nv.gov/water/drinking-water/engineering-reviews.

Sec. 19. NAC 445A.6716 is hereby amended to read as follows:

445A.6716 ***1.*** 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) ***Except as otherwise provided in paragraph (b), located:***

(1) 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)]~~ ***(2)*** 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.]~~ ***(b)*** If compliance with ~~[subsection 1]~~ ***paragraph (a)*** is impracticable, ~~[located in such a manner as is authorized by]~~ ***an engineer must:***

(1) Identify in the plans the area where compliance is impracticable in plan and profile views;

(2) Provide any applicable standard details for the area where compliance is impracticable;

(3) Propose a modification to the requirements;

(4) Demonstrate that the modification will not conflict with the provisions of NAC 445A.66615; and

(5) Request approval from the Division ~~[.]~~ ***or the appropriate district board of health for the engineer's proposed modification.***

2. The Division shall provide information regarding the process for proposing a modification pursuant to paragraph (b) at the Internet website https://ndep.nv.gov/water/drinking-water/engineering-reviews.

Sec. 20. NAC 445A.67165 is hereby amended to read as follows:

445A.67165 ***1.*** If a sewer main crosses a water main:

~~[1. The]~~ ***(a) Except as otherwise provided in paragraph (b), 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.]~~ ***(b)*** If compliance with ~~[subsection 1]~~ ***paragraph (a)*** is impracticable:

~~[(a)]~~ ***(1)*** 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]~~

(2) Except as otherwise provided in paragraph (c), the sewer main and water main must be:

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

~~[(2)]~~ ***(II)*** Provided with such structural support as the supplier of water determines necessary; and

~~[(c)]~~ ***(3)*** The area of crossing must be constructed in such a manner that:

(1) The 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]~~

➥ ***If the*** sewer main consists of ***water quality*** PVC ~~[which is]~~ ***, the sewer main must be*** 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.]~~ ***ASTM International.***

(c) If compliance with the requirements of subparagraph (2) of paragraph (b) of subsection 1 is impracticable, an engineer must:

(1) Identify in the plans the area where compliance is impracticable in plan and profile views;

(2) Provide any applicable standard details for the area where compliance is impracticable;

(3) Propose a modification to the requirements;

(4) Demonstrate that the modification will not conflict with the provisions of NAC 445A.66615; and

(5) Request approval from the Division or the appropriate district board of health for the engineer's proposed modification.

2. The Division shall provide information regarding the process for proposing a modification pursuant to paragraph (c) at the Internet website https://ndep.nv.gov/water/drinking-water/engineering-reviews.

Sec. 21. NAC 445A.6717 is hereby amended to read as follows:

445A.6717 1. ~~[If]~~ ***Except as otherwise provided in subsection 2, if*** a sewer main crosses a water service lateral, the sewer main must be located ~~[:~~

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

~~(b)]~~

2. If compliance with ~~[paragraph (a)]~~ ***subsection 1*** is impracticable ~~[, in such a manner as is authorized by]~~ ***:***

(a) The sewer main must consist of water quality PVC which is constructed with joints that comply with Standard D3139 of the American Society for Testing Materials; or

(b) An engineer must:

(1) Identify in the plans the area where compliance is impracticable in plan and profile views;

(2) Provide any applicable standard details for the area where compliance is impracticable;

(3) Propose a modification;

(4) Demonstrate that the modification will not conflict with the provisions of NAC 445A.66615; and

(5) Request approval from the Division ~~[.]~~ ***or the appropriate district board of health for the engineer's proposed modification.***

~~[2.]~~ ***3.*** 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]~~ ***an engineer must:***

(1) Identify in the plans the area where compliance is impracticable in plan and profile views;

(2) Provide any applicable standard details for the area where compliance is impracticable;

(3) Propose a modification;

(4) Demonstrate that the modification will not conflict with the provisions of NAC 445A.66615; and

(5) Request approval from the Division ~~[.]~~ ***or the appropriate district board of health for the engineer's proposed modification.***

4. The Division shall provide information regarding the process for proposing a modification pursuant to subsections 2 or 3 at the Internet website https://ndep.nv.gov/water/drinking-water/engineering-reviews.

Sec. 22. NAC 445A.67175 is hereby amended to read as follows:

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]~~ ***an engineer must:***

(1) Identify in the plans the area where compliance is impracticable in plan and profile views;

(2) Provide any applicable standard details for the area where compliance is impracticable;

(3) Propose a modification;

(4) Demonstrate that the modification will not conflict with the provisions of NAC 445A.66615; and

(5) Request approval from the Division ~~[.]~~ ***or the appropriate district board of health for the engineer's proposed modification.***

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]~~ ***an engineer must:***

(1) Identify in the plans the area where compliance is impracticable in plan and profile views;

(2) Provide any applicable standard details for the area where compliance is impracticable;

(3) Propose a modification;

(4) Demonstrate that the modification will not conflict with the provisions of NAC 445A.66615; and

(5) Request approval from the Division ~~[.]~~ ***or the appropriate district board of health for the engineer's proposed modification.***

3. The Division shall provide information regarding the process for proposing a modification pursuant to subsections 1 or 2 at the Internet website https://ndep.nv.gov/water/drinking-water/engineering-reviews.

Sec. 23. NAC 445A.6719 is hereby amended to read as follows:

445A.6719 1. ~~[Each]~~ ***Except as otherwise provided in section 4 of this regulation, 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, ***and section 4 of this regulation,*** 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.