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SECOND REPRINT

A.B. 163

ASSEMBLY BILL NO. 163—ASSEMBLYMEN WATTS;
COHEN, NGUYEN, PETERS AND SWANK

FEBRUARY 15, 2019

JOINT SPONSORS: SENATORS BROOKS;
AND SCHEIBLE

Referred to Committee on Natural Resources,
Agriculture, and Mining

SUMMARY—Revises provisions governing water conservation.
(BDR 48-798)

FISCAL NOTE: Effect on Local Government: May have Fiscal Impact.
Effect on the State: Yes.

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

AN ACT relating to water; revising certain requirements relating to a plan of water conservation; revising minimum standards for plumbing fixtures in new construction and expansions and renovations in certain structures; and providing other matters properly relating thereto.

Legislative Counsel's Digest:

Existing law requires each supplier of water and each public utility to adopt a plan of water conservation, which must be submitted to the Water Planning Section of the Division of Water Resources of the State Department of Conservation and Natural Resources or the Public Utilities Commission of Nevada, as applicable. The plan of water conservation must also be updated and submitted to the Section or Commission, as applicable, every 5 years. (NRS 540.131, 540.141, 704.662, 704.6622) **Sections 1 and 8** of this bill require each supplier of water and public utility: (1) who serves 3,300 persons or more to submit the results of a water loss audit with the plan of water conservation or update to the plan; and (2) who serves less than 3,300 persons to submit the results of certain calculations regarding water delivered and water billed with the plan of water conservation or update to the plan. Once a supplier or public utility has submitted the results of a water loss audit, **sections 1 and 8** require the supplier of water or public utility to submit with any future update to the plan of water conservation: (1) a comparison between the results of the most recent audit or calculations and the audit or calculations previously submitted; and (2) an analysis of any progress made towards certain goals which must be established in the plan of water conservation for water loss.



* A B 1 6 3 R 2 *

Sections 3 and 9 of this bill revise the provisions which must be included in a plan or a joint plan of water conservation to include establishing goals for acceptable levels of water loss.

Existing law establishes certain minimum standards for plumbing fixtures in new construction, expansions and renovations in residential, commercial or industrial structures, certain public buildings financed by a public body, manufactured buildings and homes and mobile homes. (NRS 278.582, 338.193, 461.175, 489.706) **Sections 4-7** of this bill revise these requirements to instead require that, if the WaterSense program established by the United States Environmental Protection Agency has established a final product specification for a type of toilet, shower apparatus, faucet or urinal, new construction, expansions and renovations on these structures must install toilets, shower apparatuses, faucets and urinals that have been certified under the WaterSense program. **Sections 4-7** exempt from these requirements any residential, commercial or industrial structure and public building financed by a public body that was constructed 50 years or more before the current year.

THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN
SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. Chapter 540 of NRS is hereby amended by adding thereto a new section to read as follows:

1. Except as otherwise provided in subsection 4, each supplier of water that is required to adopt or update a plan of water conservation in accordance with the provisions of NRS 540.131 and:

(a) Serves 3,300 persons or more must conduct a water loss audit in accordance with the methodology and software of the American Water Works Association for water loss auditing. The results of the water loss audit must be submitted by the supplier of water to the Section with the plan of water conservation or update to the plan of water conservation, as applicable.

(b) Serves less than 3,300 persons must calculate the amount of water delivered by the supplier of water and the amount of water that was billed to customers of the supplier of water for each year. The calculations must be submitted by the supplier of water to the Section with the plan for water conservation or update to the plan of water conservation, as applicable.

2. If the supplier of water has previously submitted the results of a water loss audit to the Section pursuant to paragraph (a) of subsection 1, and is submitting an update to the plan of water conservation, the supplier must also submit to the Section:

(a) A comparison between the results of the new water loss audit and the previous water loss audit; and

(b) An analysis of any progress made by the supplier towards the goals for acceptable water loss established in the plan for



1 *water conservation pursuant to paragraph (c) of subsection 1 of*
2 *NRS 540.141.*

3 *3. If the supplier of water has previously submitted the results*
4 *of the calculations conducted pursuant to paragraph (b) of*
5 *subsection 1 to the Section, and is submitting an update to the*
6 *plan of water conservation, the supplier must also submit to the*
7 *Section:*

8 *(a) A comparison between the results of the new calculations*
9 *and the previous calculations; and*

10 *(b) An analysis of any progress made by the supplier towards*
11 *the goals for acceptable water loss established in the plan for*
12 *water conservation pursuant to paragraph (c) of subsection 1 of*
13 *NRS 540.141.*

14 *4. The provisions of this section do not apply to a transient*
15 *water system as defined in NRS 445A.848.*

16 **Sec. 2.** NRS 540.121 is hereby amended to read as follows:

17 540.121 As used in NRS 540.121 to 540.151, inclusive, *and*
18 *section 1 of this act*, "supplier of water" includes, but is not limited
19 to:

20 1. Any county, city, town, local improvement district, general
21 improvement district and water conservancy district;

22 2. Any water district, water system, water project or water
23 planning and advisory board created by a special act of the
24 Legislature; and

25 3. Any other public or private entity,
26 ➤ that supplies water for municipal, industrial or domestic
27 purposes. The term does not include a public utility required to
28 adopt a plan of water conservation pursuant to NRS 704.662.

29 **Sec. 3.** NRS 540.141 is hereby amended to read as follows:

30 540.141 1. A plan or joint plan of water conservation
31 submitted to the Section for review must include provisions relating
32 to:

33 (a) Methods of public education to:

34 (1) Increase public awareness of the limited supply of water
35 in this State and the need to conserve water.

36 (2) Encourage reduction in the size of lawns and encourage
37 the use of plants that are adapted to arid and semiarid climates.

38 (b) Specific conservation measures required to meet the needs of
39 the service area, including, but not limited to, any conservation
40 measures required by law.

41 (c) The management of water to ~~the~~
42 ~~—(1) Identify~~ *identify* and reduce ~~[leakage]~~ *water loss* in
43 water supplies, inaccuracies in water meters and high pressure in
44 water supplies ~~[; and]~~, *which must include, without limitation:*



(1) *Goals for acceptable levels of water loss in water supplies. Such goals may use the following performance indicators and analyses, without limitation:*

- (I) *Infrastructure water loss index;*
- (II) *Water audit data validity score;*
- (III) *Operational basic apparent losses;*
- (IV) *Operational basic real losses; and*
- (V) *Economic level of water loss.*

(2) ~~Where~~ *A plan which analyzes how the supplier of water will progress towards the goals established for the acceptable levels of water loss.*

(d) *The management of water to, where* applicable, increase the reuse of effluent.

~~(d)~~ (e) A contingency plan for drought conditions that ensures a supply of potable water.

~~(e)~~ (f) A schedule for carrying out the plan or joint plan.

~~(f)~~ (g) A plan for how the supplier of water will progress towards the installation of meters on all connections.

~~(g)~~ (h) Standards for water efficiency for new development.

~~(h)~~ (i) Tiered rate structures for the pricing of water to promote the conservation of water, including, without limitation, an estimate of the manner in which the tiered rate structure will impact the consumptive use of water.

~~(i)~~ (j) Watering restrictions based on the time of day and the day of the week.

2. In addition to the requirements of subsection 1, a plan or joint plan of water conservation submitted to the Section for review by a supplier of water providing service for 500 or more connections must include provisions relating to:

(a) Measures to evaluate the effectiveness of the plan or joint plan.

(b) For each conservation measure specified in the plan or joint plan, an estimate of the amount of water that will be conserved each year as a result of the adoption of the plan or joint plan, stated in terms of gallons of water saved annually.

3. The Section shall review any plan or joint plan submitted to it within 120 days after its submission and approve the plan if it is based on the climate and living conditions of the service area and complies with the requirements of this section.

4. The Chief may exempt wholesale water purveyors from the provisions of this section which do not reasonably apply to wholesale supply.

5. To the extent practicable, the State Engineer shall provide on the Internet website of the State Engineer a link to the plans and joint plans that are submitted for review. In carrying out the



provisions of this subsection, the State Engineer is not responsible for ensuring, and is not liable for failing to ensure, that the plans and joint plans which are provided on the Internet website are accurate and current.

Sec. 4. NRS 278.582 is hereby amended to read as follows:

278.582 1. Each county and city shall include in its respective building code the requirements of this section. If a county or city has no building code, it shall adopt those requirements by ordinance and provide for their enforcement by its own officers or employees or through interlocal agreement by the officers or employees of another local government. Additionally, each county and city shall prohibit by ordinance the sale and installation of any plumbing fixture which does not meet the standards made applicable for the respective county or city pursuant to this section.

2. Except as otherwise provided in ~~subsections 3 and 4,~~ *subsection 6*, each residential, commercial or industrial structure on which construction begins on or after March 1, 1992, *and before March 1, 1993*, and each existing residential, commercial or industrial structure which is expanded or renovated on or after March 1, 1992, *and before March 1, 1993*, must incorporate the following minimal standards for plumbing fixtures:

(a) A toilet which uses water must not be installed unless its consumption of water does not exceed 3.5 gallons of water per flush.

(b) A shower apparatus which uses more than 3 gallons of water per minute must not be installed unless it is equipped with a device to reduce water consumption to 3 gallons of water or less per minute.

(c) Each faucet installed in a lavatory or kitchen must not allow water to flow at a rate greater than 3 gallons per minute.

(d) A urinal which continually flows or flushes water must not be installed.

3. Except as otherwise provided in subsection ~~[4.]~~ *6*, each residential, commercial or industrial structure on which construction begins on or after March 1, 1993, *and before January 1, 2020*, and each existing residential, commercial or industrial structure which is expanded or renovated on or after March 1, 1993, *and before January 1, 2020*, must incorporate the following minimal standards for plumbing fixtures:

(a) A toilet which uses water must not be installed unless its consumption of water does not exceed 1.6 gallons of water per flush.

(b) A shower apparatus which uses more than 2.5 gallons of water per minute must not be installed unless it is equipped with a



device to reduce water consumption to 2.5 gallons of water or less per minute.

(c) A urinal which uses water must not be installed unless its consumption of water does not exceed 1 gallon of water per flush.

(d) A toilet or urinal which employs a timing device or other mechanism to flush periodically, irrespective of demand, must not be installed.

(e) A urinal which continually flows or flushes water must not be installed.

(f) Each faucet installed in a lavatory or kitchen must not allow water to flow at a rate greater than 2.5 gallons per minute.

(g) Each faucet installed in a public restroom must contain a mechanism which closes the faucet automatically after a predetermined amount of water has flowed through the faucet. Multiple faucets that are activated from a single point must not be installed.

4. *Except as otherwise provided in subsection 6, each residential, commercial or industrial structure on which construction begins on or after January 1, 2020, and each existing residential, commercial or industrial structure which is expanded or renovated on or after January 1, 2020:*

(a) *If the WaterSense program established by the United States Environmental Protection Agency has developed a final product specification for a type of toilet, shower apparatus, urinal or faucet, must not install any toilet, shower apparatus, urinal or faucet that has not been certified under the WaterSense program.*

(b) *If the WaterSense program has not developed a final product specification for a type of toilet, shower apparatus, urinal or faucet, must not install any toilet, shower apparatus, urinal or faucet that does not comply with any applicable requirements of federal law and the building code of the county or city.*

5. *For the purposes of subsection 4:*

(a) *A plumbing fixture is considered certified under the WaterSense program if the fixture has been:*

(1) *Tested by an accredited third-party certifying body or laboratory in accordance with the United States Environmental Protection Agency's WaterSense program or an analogous successor program;*

(2) *Certified by the certifying body or laboratory as meeting the performance and efficiency requirements of the WaterSense program or an analogous successor program; and*

(3) *Authorized by the WaterSense program or an analogous successor program to use the WaterSense label or the label of an analogous successor program.*



(b) If the WaterSense program modifies the requirements for a plumbing fixture to be certified under the WaterSense program, a plumbing fixture that was certified under the previous requirements shall be deemed certified for use under the WaterSense program for a period of 12 months following the modification of the requirements for certification.

6. The requirements of this section for the installation of certain plumbing fixtures do not apply to any portion of ~~fan~~:

(a) An existing residential, commercial or industrial structure which is not being expanded or renovated ~~fan~~; or

(b) An existing residential, commercial or industrial structure if the structure was constructed 50 years or more before the current year, regardless of whether that structure has been expanded or renovated since its original construction.

Sec. 5. NRS 338.193 is hereby amended to read as follows:

338.193 1. Each public building sponsored or financed by a public body must meet the standards made applicable for the building pursuant to this section.

2. Except as otherwise provided in ~~subsections 3 and 4,~~ *subsection 6*, each public building, other than a prison or jail, on which construction begins on or after March 1, 1992, *and before March 1, 1993*, and each existing public building which is expanded or renovated on or after March 1, 1992, *and before March 1, 1993*, must incorporate the following minimal standards for plumbing fixtures:

(a) A toilet which uses water must not be installed unless its consumption of water does not exceed 3.5 gallons of water per flush.

(b) A shower apparatus which uses more than 3 gallons of water per minute must not be installed unless it is equipped with a device to reduce water consumption to 3 gallons of water or less per minute.

(c) Each faucet installed in a lavatory or kitchen must not allow water to flow at a rate greater than 3 gallons per minute.

(d) A toilet or urinal which employs a timing device or other mechanism to flush periodically irrespective of demand must not be installed.

3. Except as otherwise provided in subsection ~~4,~~ *6*, each public building, other than a prison or jail, on which construction begins on or after March 1, 1993, *and before January 1, 2020*, and each existing public building which is expanded or renovated on or after March 1, 1993, *and before January 1, 2020*, must incorporate the following minimal standards for plumbing fixtures:



(a) A toilet which uses water must not be installed unless its consumption of water does not exceed 1.6 gallons of water per flush.

(b) A shower apparatus which uses more than 2.5 gallons of water per minute must not be installed unless it is equipped with a device to reduce water consumption to 2.5 gallons of water or less per minute.

(c) A urinal which uses water must not be installed unless its consumption of water does not exceed 1 gallon of water per flush.

(d) A toilet or urinal which employs a timing device or other mechanism to flush periodically, irrespective of demand, must not be installed.

(e) A urinal which continually flows or flushes water must not be installed.

(f) Each faucet installed in a lavatory or kitchen must not allow water to flow at a rate greater than 2.5 gallons per minute.

(g) Each faucet installed in a public restroom must contain a mechanism which closes the faucet automatically after a predetermined amount of water has flowed through the faucet. Multiple faucets that are activated from a single point must not be installed.

4. *Except as otherwise provided in subsection 6, each public building, other than a prison or jail, on which construction begins on or after January 1, 2020, and each existing public building which is expanded or renovated on or after January 1, 2020:*

(a) *If the WaterSense program established by the United States Environmental Protection Agency has developed a final product specification for a type of toilet, shower apparatus, urinal or faucet, must not install any toilet, shower apparatus, urinal or faucet that has not been certified under the WaterSense program.*

(b) *If the WaterSense program has not developed a final product specification for a type of toilet, shower apparatus, urinal or faucet, must not install any toilet, shower apparatus, urinal or faucet that does not comply with any applicable requirements of federal law and the building code of the county or city.*

5. *For the purposes of subsection 4, a plumbing fixture is considered certified under the WaterSense program if the fixture meets the requirements of paragraph (a) or (b) of subsection 5 of NRS 278.582.*

6. The requirements of this section for the installation of certain plumbing fixtures do not apply to any portion of ~~fan~~:

(a) *An existing public building which is not being expanded or renovated ~~fan~~; or*

(b) *A public building if the public building was constructed 50 years or more before the current year, regardless of whether that*



public building has been expanded or renovated since its original construction.

Sec. 6. NRS 461.175 is hereby amended to read as follows:

461.175 1. ~~[Except as otherwise provided in subsection 2, each]~~ *Each* manufactured building on which construction begins on or after March 1, 1992, *and before March 1, 1993*, must incorporate the following minimal standards for plumbing fixtures:

(a) A toilet which uses water must not be installed unless its consumption of water does not exceed 3.5 gallons of water per flush.

(b) A shower apparatus which uses more than 3 gallons of water per minute must not be installed unless it is equipped with a device to reduce water consumption to 3 gallons of water or less per minute.

(c) Each faucet installed in a lavatory or kitchen must not allow water to flow at a rate greater than 3 gallons per minute.

2. Each manufactured building on which construction begins on or after March 1, 1993, *and before January 1, 2020*, must incorporate the following minimal standards for plumbing fixtures:

(a) A toilet which uses water must not be installed unless its consumption of water does not exceed 1.6 gallons of water per flush.

(b) A shower apparatus which uses more than 2.5 gallons of water per minute must not be installed unless it is equipped with a device to reduce water consumption to 2.5 gallons of water or less per minute.

(c) Each faucet installed in a lavatory or kitchen must not allow water to flow at a rate greater than 2.5 gallons per minute.

3. *Each manufactured building on which construction begins on or after January 1, 2020:*

(a) If the WaterSense program established by the United States Environmental Protection Agency has developed a final product specification for a type of toilet, shower apparatus, urinal or faucet, must not install any toilet, shower apparatus, urinal or faucet that has not been certified under the WaterSense program.

(b) If the WaterSense program has not developed a final product specification for a type of toilet, shower apparatus, urinal or faucet, must not install any toilet, shower apparatus, urinal or faucet that does not comply with any applicable requirements of federal law and the building code of the county or city.

4. *For the purposes of subsection 3, a plumbing fixture is considered certified under the WaterSense program if the fixture meets the requirements of paragraph (a) or (b) of subsection 5 of NRS 278.582.*



Sec. 7. NRS 489.706 is hereby amended to read as follows:

489.706 1. ~~[Except as otherwise provided in subsection 2, each]~~ *Each* manufactured home or mobile home on which construction begins on or after March 1, 1992, *and before March 1, 1993*, must incorporate the following minimal standards for plumbing fixtures:

(a) A toilet which uses water must not be installed unless its consumption of water does not exceed 3.5 gallons of water per flush.

(b) A shower apparatus which uses more than 3 gallons of water per minute must not be installed unless it is equipped with a device to reduce water consumption to 3 gallons of water or less per minute.

(c) Each faucet installed in a lavatory or kitchen must not allow water to flow at a rate greater than 3 gallons per minute.

2. Each manufactured home or mobile home on which construction begins on or after March 1, 1993, *and before January 1, 2020*, must incorporate the following minimal standards for plumbing fixtures:

(a) A toilet which uses water must not be installed unless its consumption of water does not exceed 1.6 gallons of water per flush.

(b) A shower apparatus which uses more than 2.5 gallons of water per minute must not be installed unless it is equipped with a device to reduce water consumption to 2.5 gallons of water or less per minute.

(c) Each faucet installed in a lavatory or kitchen must not allow water to flow at a rate greater than 2.5 gallons per minute.

3. Each manufactured home or mobile home on which construction begins on or after January 1, 2020:

(a) If the WaterSense program established by the United States Environmental Protection Agency has developed a final product specification for a type of toilet, shower apparatus, urinal or faucet, must not install any toilet, shower apparatus, urinal or faucet that has not been certified under the WaterSense program.

(b) If the WaterSense program has not developed a final product specification for a type of toilet, shower apparatus, urinal or faucet, must not install any toilet, shower apparatus, urinal or faucet that does not comply with any applicable requirements of federal law and the building code of the county or city.

4. For the purposes of subsection 3, a plumbing fixture is considered certified under the WaterSense program if the fixture meets the requirements of paragraph (a) or (b) of subsection 5 of NRS 278.582.



1 **Sec. 8.** Chapter 704 of NRS is hereby amended by adding
2 thereto a new section to read as follows:

3 **1. Except as otherwise provided in subsection 4, each public**
4 **utility that is required to adopt or update a plan of water**
5 **conservation in accordance with the provisions of NRS 704.662**
6 **and:**

7 **(a) Serves 3,300 persons or more must conduct a water loss**
8 **audit in accordance with the methodology and software of the**
9 **American Water Works Association for water loss auditing. The**
10 **results of the water loss audit must be submitted by the public**
11 **utility to the Commission with the plan of water conservation or**
12 **update to the plan of water conservation, as applicable.**

13 **(b) Serves less than 3,300 persons must calculate the amount**
14 **of water delivered by the supplier of water and the amount of**
15 **water that was billed to customers of the supplier of water for each**
16 **year. The calculations must be submitted by the public utility to**
17 **the Commission with the plan for water conservation or update to**
18 **the plan of water conservation, as applicable.**

19 **2. If the public utility has previously submitted the results of a**
20 **water loss audit to the Commission pursuant to paragraph (a) of**
21 **subsection 1, and is submitting an update to the plan of water**
22 **conservation, the public utility must also submit to the**
23 **Commission:**

24 **(a) A comparison between the results of the new water loss**
25 **audit and the previous water loss audit; and**

26 **(b) An analysis of any progress made by the public utility**
27 **towards the goals for acceptable water loss established in the plan**
28 **for water conservation pursuant to paragraph (c) of subsection 1**
29 **of NRS 704.6622.**

30 **3. If the public utility has previously submitted the results of**
31 **the calculations conducted pursuant to paragraph (b) of**
32 **subsection 1 to the Commission, and is submitting an update to the**
33 **plan of water conservation, the supplier must also submit to the**
34 **Commission:**

35 **(a) A comparison between the results of the new calculations**
36 **and the previous calculations; and**

37 **(b) An analysis of any progress made by the public utility**
38 **towards the goals for acceptable water loss established in the plan**
39 **for water conservation pursuant to paragraph (c) of subsection 1**
40 **of NRS 704.6622.**

41 **4. The provisions of this section do not apply to a transient**
42 **water system as defined in NRS 445A.848.**

43 **Sec. 9.** NRS 704.6622 is hereby amended to read as follows:

44 704.6622 1. A plan of water conservation submitted to the
45 Commission for approval must include provisions relating to:



(a) Methods of public education to:

(1) Increase public awareness of the limited supply of water in this state and the need to conserve water.

(2) Encourage reduction in the size of lawns and encourage the use of plants that are adapted to arid and semiarid climates.

(b) Specific conservation measures required to meet the needs of the service area, including, but not limited to, any conservation measures required by law.

(c) The management of water to ~~to~~

~~— (1) Identify~~ *identify* and reduce ~~leakage~~ *water loss* in water supplies, inaccuracies in water meters and high pressure in water supplies ~~and~~, *which must include, without limitation:*

(I) Goals for acceptable levels of water loss in water supplies. Such goals may use the following performance indicators and analyses, without limitation:

(I) Infrastructure water loss index;

(II) Water audit data validity score;

(III) Operational basic apparent losses;

(IV) Operational basic real losses; and

(V) Economic level of water loss.

(2) ~~Increase~~ *A plan which analyzes how the public utility will progress towards the goals established for the acceptable levels of water loss.*

(d) *The management of water to, where applicable, increase the reuse of effluent.*

~~(d)~~ (e) A contingency plan for drought conditions that ensures a supply of potable water.

~~(e)~~ (f) A schedule for carrying out the plan.

~~(f)~~ (g) *A plan for how the public utility will progress towards the installation of meters on all connections, if applicable.*

(h) *Standards for water efficiency for new development.*

(i) *Tiered rate structures for the pricing of water to promote the conservation of water, including, without limitation, an estimate of the manner in which the tiered rate structure will impact the consumptive use of water.*

(j) *Watering restrictions based on the time of day and the day of the week.*

(k) Measures to evaluate the effectiveness of the plan.

2. A plan submitted for approval must be accompanied by an analysis of the feasibility of charging variable rates for the use of water to encourage the conservation of water.

3. The Commission shall review any plan submitted to it and approve the plan if it is based on the climate and living conditions of the service area and complies with the requirements of this section.

Sec. 10. This act becomes effective:



- 1 1. Upon passage and approval for the purposes of adopting any
- 2 regulations and performing any other preparatory administrative
- 3 tasks that are necessary to carry out the provisions of this act; and
- 4 2. On January 1, 2020, for all other purposes.

