**15-041**

**1. State Building Code to be Amended:**

International Building Code  State Energy Code

ICC ANSI A117.1 Accessibility Code  International Mechanical Code

International Existing Building Code  International Fuel Gas Code

International Residential Code  NFPA 54 National Fuel Gas Code

International Fire Code  NFPA 58 Liquefied Petroleum Gas Code

Uniform Plumbing Code  Wildland Urban Interface Code

**Section(s):**

WAC 51-50-0200 & WAC 51-50-2902.5.1

**Title:**

State Building Code Adoption and Amendment of the 2012 Edition of the International Building Code

**2. Proponent Name (Specific local government, organization or individual):**

**Proponent: Victor Colman, Childhood Obesity Prevention Coalition (WA State)**

**Title: Director**

**Date: Feb. 26, 2015**

**3. Designated Contact Person:**

**Name: Victor Colman**

**Title: Director**

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**4. Proposed Code Amendment**. Reproduce the section to be amended by underlining all added language, striking through all deleted language. Insert new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code additional pages may be attached. (Examples on the SBCC [website](https://fortress.wa.gov/ga/apps/sbcc/Page.aspx?nid=191))

1. **Code(s)** 51-50-0200\_\_\_\_\_\_\_\_\_\_ **Section(s)** \_202 - Definitions

Enforceable code language must be used; see an example [by clicking here](https://fortress.wa.gov/ga/apps/SBCC/File.ashx?cid=1803).

Amend section to add a new definition as follows:

Bottle filling stations refers to a plumbing fixture connected to the potable water distribution system and sanitary drain system that is designed and intended for filling personal use drinking water bottles or containers not less than 10 inches (254 mm) in height. Such fixtures can be either separate from or integral to a drinking fountain and can incorporate a water filter and a cooling system for chilling the drinking water.

1. **Code(s)** 51-50-2902.5.1\_\_\_\_\_\_\_\_ **Section(s)**

Enforceable code language must be used; see an example [by clicking here](https://fortress.wa.gov/ga/apps/SBCC/File.ashx?cid=1803).

Amend section to read as follows:

**Chapter 29 – Plumbing systems**

**2902.5.1 Drinking fountain number**. Occupant loads over 30 shall have one drinking fountain for the first 150 occupants, then one per each additional 500 occupants. Bottle filling stations shall be included on or used as a substitute for at least 50% of the required number of drinking fountains.

1. **Briefly explain your proposed amendment, including the purpose, benefits and problems addressed.** Specifically note any impacts or benefits to business, and specify construction types, industries and services that would be affected. Finally, please note any potential impact on enforcement such as special reporting requirements or additional inspections required.

Because the proposed WAC section does not apply to any residential settings, we confine our narrative to commercial, industrial and institutional alone.

These proposed requirements further two critical goals: one supporting healthier communities by encouraging greater consumption of public tap water, and, two, providing greater environmental protection by encouraging the consumption of potable water using reusable water bottles as an alternative to single use disposable bottles.

Nationally, obesity rates among children aged 6 to 11 have more than doubled in the last 20 years and the increased consumption of sugar-sweetened beverages is a clear culprit. Research tells us that Americans are consuming approximately 278 more calories today than they did in the mid‐1970s with 43 percent

of these calories coming from sugar sweetened beverages.[[1]](#footnote-1) Providing access to drinking water gives students a healthy alternative to sugar-sweetened beverages. It helps to increase students’ overall water consumption, maintain hydration, and reduce energy intake if substituted for sugar-sweetened beverages. Adequate hydration also may improve cognitive function in children and adolescents. Drinking water, if fluoridated, also plays a role in preventing dental caries (cavities). In short, there is a growing research base that demonstrates that increasing water consumption is beneficial for a student’s health and well‐being and can positively impact weight and academic performance.

The same health benefits also apply to adults. Not only is individual health status achieved, but healthier workers are more productive workers. So encouraging healthy hydration habits through water bottle filling stations should be part of worksite wellness efforts that can pay real dividends to the employer.

The production, transport, use and disposal of bottled water have a large environmental impact in comparison with municipal tap water. Bottled water requires the use of petroleum for the creation of plastic bottles. In contract with tap water, bottled water requires more energy and materials for production and delivery. While most water bottles are recyclable, it is estimated that over 85% of plastic water bottles become garbage or litter.

The growing focus on water has clearly accelerated the interest and usage of water bottle filling stations. In December 2010, the Healthy, Hunger-Free Kids Act was signed into law, a section of which required all

schools participating in the school lunch program to provide free potable water during mealtimes where

food is served. Although not requiring water bottle-refill stations specifically, such an amenity is a desirable solution for the schools that can afford to install them. There is an ongoing campaign to “Ban the Bottle” or “Take Back the Tap” on college campuses where students are activated to enact bans on one-time use plastic water bottles and encourage hydration through greater usage of public tap water. Lastly, the 2015 International Plumbing Code included water bottle filling stations for the first time by calling them out as adequate substitutes for regular water fountains.

Once installed, there are no identified enforcement requirements. There is basic upkeep that is not really different when compared to the upkeep of drinking fountains, with one exception. Filters must be replaced in periodically to yield the benefits provided by filtration.

1. **Specify what criteria this proposal meets.** You may select more than one.

The amendment is needed to address a critical life/safety need.

The amendment is needed to address a specific state policy or statute.

The amendment is needed for consistency with state or federal regulations.

The amendment is needed to address a unique character of the state.

The amendment corrects errors and omissions.

1. **Is there an economic impact:**  Yes      No

Explain:

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

| Building Type | Construction[[2]](#footnote-2) | | Enforcement[[3]](#footnote-3) | | Operations & Maintenance[[4]](#footnote-4) | |
| --- | --- | --- | --- | --- | --- | --- |
| Costs | Benefits[[5]](#footnote-5) | Costs | Benefits4 | Costs | Benefits4 |
| Residential |  |  |  |  |  |  |
| Single family |  |  |  |  |  |  |
| Multi-family |  |  |  |  |  |  |
| Commercial/Retail | *See narrative below.* | | | | | |
| Industrial |
| Institutional |

Because the proposed WAC section does not apply to any residential settings, we confine our narrative to commercial, industrial and institutional alone.

Water bottle filling stations as an alternative to drinking fountains are a fairly new product on the market. Further, the notion of promoting water as an alternative to sugary beverages is also a new effort, with increased interest in this work coming in just the last few years. That being said, there is not yet an unequivocal research base to recent water promotion and policy initiatives. The hypotheses are clear: it is assumed that greater access to (more attractive forms of) water via water bottle filling stations will lead to both greater water consumption and less sugary drink consumption. Having water that is both chilled and filtered that can be easily dispensed into reusable water bottles are the features that can drive greater consumption of water. There is also at least the perception, if not the reality, that water fountains, if not temperature-controlled or properly sanitized, can spread bacteria and illness. It is also assumed that water bottle filling stations will lead to less usage and disposal of plastic water bottles. These outcomes are real and achievable in the short-term but because the outcomes are more global in nature it is difficult to develop a cost/benefit ratio at this time.

Figure 1

It is easier to develop the cost side of this equation. Most water bottle filling station models do cost more than regular drinking fountains – the range of additional costs depends on the model. There are stand-alone water bottle filling station versions that would be close to or just slightly above the cost of a regular drinking fountain (see Figure 1 where a typical price would be $400-800 depending on whether the water is chilled and filtered).

There are other models that include both a drinking fountain and a water bottle filling station (with cooling and filtering); these may cost 2-3 times the price of a regular water fountain (see Figure 2). A typical price for this unit is $1,200.

Figure 2

For new buildings it is anticipated that the installation costs would not be different than installation of water fountains. In the case of retrofits, there may be additional installation costs when compared to just replacing a drinking fountains but the magnitude of such costs are hard to project given the variances in retrofit settings.

As noted previously, once installed, the enforcement requirements are negligible. There is basic upkeep that is not really different when compared to drinking fountains, with one exception. Filters must be replaced annually to yield the benefits provided by filtration.

In sum, we believe that the mid and long-term goals of improving individual health and reducing environmental impacts are clearly important and feasible which then outweigh the slight additional upfront costs.

Please send your completed proposal to: [sbcc@ga.wa.gov](mailto:sbcc@ga.wa.gov)

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.

1. Woodward-Lopez G, Kao J, Ritchie L. To what extent have sugar-sweetened beverages contributed to the obesity epidemic? Pub Health Nutrition. 2010;14:499–509. [↑](#footnote-ref-1)
2. $ / square foot of floor area or other cost. Attach data. **Construction** costs are costs prior to occupancy, and include both design and direct construction costs

   that impact the total cost of the construction to the owner/consumer. [↑](#footnote-ref-2)
3. Cost per project plan. Attach data. **Enforcement** costs include governmental review of plans, field inspection, and other action required for enforcement. [↑](#footnote-ref-3)
4. Cost to building owner/tenants over the life of the project. [↑](#footnote-ref-4)
5. Measurable benefit. [↑](#footnote-ref-5)