

**NFPA 70®-2020 Edition**

**National Electrical Code®**

**TIA Log No.: 1598**

**Reference:** 406.9(C), Exception No. 2(new)

**Comment Closing Date: August 23, 2021**

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[www.nfpa.org/70](http://www.nfpa.org/70)

1. Add a new Exception No. 2 to Section 406.9(C) to read as follows:

**406.9 Receptacles in Damp or Wet Locations. ...**

**(C) Bathtub and Shower Space.** Receptacles shall not be installed within a zone measured 900 mm (3 ft) horizontally and 2.5 m (8 ft) vertically from the top of the bathtub rim or shower stall threshold. The identified zone is all-encompassing and shall include the space directly over the tub or shower stall.

*Exception No. 1: In bathrooms with less than the required zone the receptacle(s) shall be permitted to be installed opposite the bathtub rim or shower stall threshold on the farthest wall within the room.*

*Exception No. 2: In a dwelling unit, a single receptacle shall be permitted for an electronic toilet or personal hygiene device such as an electronic bidet seat. The receptacle shall be readily accessible and located on one of the following:*

*(1) The wall behind the toilet but not behind the tank*

*(2) The opposite side of the toilet from the bathtub or shower*

**Substantiation:** It is quite common for a toilet to be located next to a bathtub or shower in a residential bathroom. The existing text in NFPA 70 could prevent the installation of a receptacle that is necessary for the operation of an electronic toilet (also known as a “smart toilet”) or personal hygiene device (e.g., electronic bidet seat) where a toilet is located within 3 feet horizontally of a bathtub or shower. Application of the receptacle placement requirements has the potential to place an undue burden on the consumer whereby additional cost may be incurred to position the receptacle in an acceptable location without considering potential structural barriers behind the wall that may further restrict installation. Therefore, the proposed exception is necessary to ensure that such plumbing products are permitted to be installed while not jeopardizing the level of electrical safety that the standard seeks [see below photo(s)/diagram(s) that provide clarity for the proposed exception]. As such, due to the proximity of the individual receptacle to the bathtub or shower, it would be required by NEC Section 210.8(A)(9) to be protected by a Class A GFCI device minimizing any potential shock hazard. Moreover, it is our understanding that products like electronic toilets and personal hygiene devices were not taken into consideration during the discussion of the proposal prior to adoption into the current standard.

**Emergency Nature:** The proposed TIA intends to correct a circumstance in which the revised NFPA Standard has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process or was without adequate technical (safety) justification of the action.

Making an allowance for these listed products (which are permitted in all major plumbing codes), which have been in the market for decades, is necessary for safeguarding public health and safety. People all over the United States use such products in their bathrooms, and they are necessary for people with special needs or abilities to maintain their dignity, privacy and self-reliance. Ease of cleaning for seniors is of immediate benefit and critical to their hygiene. Additional hygiene-oriented benefits are obtained by people experiencing colorectal issues such as hemorrhoids, irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD),<sup>1</sup> as well as women experiencing severe constipation during pregnancy<sup>2</sup> or recovering from postpartum activity. These products also help to maintain hand hygiene<sup>3</sup> which is critical for preventing the spread of disease. Many smart toilets include health monitoring features that analyze one's stool or urine to detect health issues such as sugar levels for a diabetic. Also, smart toilets have proven to be quite beneficial for those who are rehabilitating from a stroke.<sup>4</sup> Personal hygiene devices are necessary for some in maintaining their cleanliness as they may not be able to use toilet paper due to medical reasons. Also, personal hygiene devices have been proven to lead to fewer instances of rashes, hemorrhoids, and urinary tract infections. The bottom line is these products are necessary for many individuals around the United States for maintaining their health, and the existing text in NFPA 70 would prevent the installation of such products in many residential bathrooms.



1 “How to Decide If You Need a Bidet,” by Amber J. Tresca, 2019, Verywell Health, <https://www.verywellhealth.com/do-i-need-a-bidet-1942839>

2 “The Effect of Bidet Use on Severity of Constipation and Quality of Life Among Pregnant Women,” by Sultan Alan, Ebru Gozuyesil and Sule Gokyildiz Surucu, August 2020, Yonago Acta Medica (YAM), Journal of Medical Sciences, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7435113/>

3 “The Use of Electric Toilet Seats with Water Supply Is Efficacious in Maintaining Hand Hygiene in Experimental Model,” by Shigeharu Oie, Hiromi Aoshika, Emiko Arita and Akira Kamiya, 2018, Japanese Journal of Infectious Diseases, [https://www.jstage.jst.go.jp/article/yoken/71/4/71\\_JJID.2017.515/article/-char/en](https://www.jstage.jst.go.jp/article/yoken/71/4/71_JJID.2017.515/article/-char/en)

4 “Technology-assisted toilets: Improving independence and hygiene in stroke rehabilitation,” by David Yachnin, Georges Gharib, Jeffrey Jutai and Hillel Finestone, August 2017, Journal of Rehabilitation and Assistive Technologies Engineering, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6453101/>