APPENDIX C
CODE CHANGE PROPOSAL
NORTH CAROLINA
BUILDING CODE COUNCIL

325North Salisbury Street, Room 5_44
Raleigh, North Carolina 27603
(919) 647-0009
carl.martin@ncdoi.gov

Petition for Rule Making Item Number _____

Granted by BCC	_____	**Adopted by BCC**	_____	**Approved by RRC**	_____
Denied by BCC	_____	**Disapproved by BCC**	_____	**Objection by RRC**	_____

PROPONENT: John Clark PHONE: (719) 505 - 4808
REPRESENTING: Woodford Manufacturing Company
ADDRESS: 2121 Waynoka Road
CITY: Colorado Springs STATE: CO ZIP: 80915
E-MAIL: jclark@woodfordmfg.com FAX: ( ) -

North Carolina State Building Code, Volume 2018 NC Residential Code - Section Residential P2903.10

CHECK ONE: [x] Revise section to read as follows: [ ] Delete section and substitute the following:
[ ] Add new section to read as follows: [ ] Delete section without substitution:

~~LINE THROUGH MATERIAL TO BE DELETED~~ UNDERLINE MATERIAL TO BE ADDED

Please type. Continue proposal or reason on plain paper attached to this form. See reverse side for instructions.

See attached

Will this proposal change the cost of construction? Decrease [ ] Increase [ ] No [x]
Will this proposal increase to the cost of a dwelling by $80 or more? Yes [ ] No [x]
Will this proposal affect the Local or State funds? Local [ ] State [ ] No [x]
Will this proposal cause a substantial economic impact (≥$1,000,000)? Yes [ ] No [x]

- Non-Substantial – Provide an economic analysis including benefit/cost estimates.
- Substantial – The economic analysis must also include 2-alternatives, time value of money and risk analysis.
- Pursuant to §143-138(a1)(2) a cost-benefit analysis is required for all proposed amendments to the NC Energy Conservation Code. The Building Code Council shall also require same for the NC Residential Code, Chapter 11.

REASON:

Signature: John Clark Date: 4/19/2023

INSTRUCTIONS

Each proposed Code change request shall comply with the following policies:

Rule 1: The Original and twenty-two (22) copies of the proposed Petition for Rule-Making along with supporting documentation shall be filed with the Building Code Council Secretary. Submit one (1) electronic copy via email.

Rule 2: The filing shall be received by the first day of the month prior to the quarterly scheduled meeting date. Example: A December meeting date will require filing by November 1 prior to the meeting.

Rule 3: Each request shall be typewritten on this form and shall contain the following:

(1) The proposed rule change must be set forth in full and contain explicit reference to the affected section or sections of the Code.
(2) The request shall state the reasons for the proposed rule change with supporting documentation.
(3) The proposed rule change shall comply with the standards set forth in GS 143-138(c) and reference to the particular standards shall be set forth in the request for the amendment.
(4) The proposed rule change shall contain an economic impact analysis as required by GS 143-138(a).
(5) A proposed rule change to the NC Energy Conservation Code shall have an accompanying cost-benefit analysis as required by GS 143-138(a1)(2).

Rule 4: When a request is improperly filed or not in accordance with all the rules listed above, the BCC Secretary shall reject the submittal and notify the applicant of the proper procedure to follow.

Rule 5: Upon the proper filing of a request, the BCC Secretary shall forward one copy of said request to each council member prior to the scheduled meeting date. Persons filing proposed petitions are hereby notified of the place and time of the scheduled hearings. The BCC Secretary shall cause to be published the notice of public hearing as specified in GS 143-138(a).

Rule 6: The Council shall either Grant or Deny the proposed Petition for Rulemaking at the meeting following receipt of the proposed rule change. The Council will take no further action on items that are Denied. Granted items may be referred to Committee for review.

Rule 7: The Council will hold a public hearing on Granted items at the next quarterly scheduled meeting. The Council will take final action on Granted items at the next quarterly scheduled meeting after the public hearing.

Timeline Example

Petition received:	**February 1**
Petition Granted:	**March BCC meeting**
Notice of Hearing published:	**April NC Register**
Committee review:	**May - June**
Hearing held:	**June BCC meeting**
Final Adoption:	**September BCC meeting**
Rules Review Meeting:	**November RRC meeting**
Approved:	**December 1**

P2903.10 Hose Bibb

Hose bibbs subject to freezing, ~~including the "frostproof" type,~~ shall ~~be equipped with an accessible stop-and-waste-type valve inside the building so that they can be controlled and drained during cold periods~~ comply with ASSE 1019.

~~**Exception:** Frostproof hose bibbs installed such that the stem extends through the building insulation into an open heated or semi*conditioned space* need not be separately valved (see Figure P2903.10).~~ Stop and waste systems that utilize ASSE 1011 devices may not be used as the vacuum breaker does not automatically drain and is subject to freezing.

Exception: ASSE 1011 equipped hose bibbs may be used in heated spaces where not exposed to freezing temperatures.

John Clark <jclark@woodfordmfg.com>

NC DOI

1 message

John Clark <jclark@woodfordmfg.com> Fri, Apr 7, 2023 at 10:48 AM
To: Jon Deaton <jond@qmarketing.biz>
Cc: Jay Hendricks <Jayh@qmarketing.biz>, Jennifer Deaton <jenniferd@qmarketing.biz>

Jon,

Stop and waste systems installed in freezing climates have glaring shortcomings. Usually, an ASSE 1011 device is installed on a simple boiler drain type valve with female hose threads at the end of a pipe protruding from the interior to an exterior wall with a ball valve upstream in a heated space. The idea is to shut off the ball valve upstream before freezing weather sets in. The main issue in areas that freeze is that ASSE 1011 devices will not drain. They require more pressure than gravity drainage creates in order to open and drain out. Thus, water is not evacuated from the system and can freeze causing damage and rendering the exterior wall bibb inoperable until it thaws.

Another shortcoming is that with female hose threads on the ASSE 1011 device, the vacuum breaker can be removed by the end user exposing the piping system to cross contamination risk. All ASSE 1019 devices are frost proof AND feature an integrated vacuum breaker and integrated check valve that cannot be modified. ASSE 1019 devices automatically drain when turned off.

Currently, 77 models of frost proof wall faucets are listed as compliant with the ASSE 1019 standard. So, for a home builder or plumber, the choices on picking a manufacturer of these products are quite vast. Any product listed to the 1019 standard will address the issues with using ASSE 1011 devices in freezing areas. We previously shared a video demonstrating how ASSE 1011 devices will not drain.

Video link: https://drive.google.com/drive/folders/1rRD2Ap2UEghE6xL9lL5GiFbKXFWBxlEI?usp=sharing

The ASSE 1019 standard was actually developed due to the shortcomings of stop and waste design utilizing ASSE 1011 devices.

During development of the ASSE 1019, the authors stated, (copy of actual document is attached to this email)

"Plumbing codes now stipulate that hose connections shall be protected by approved vacuum breakers that conform to the performance requirements of ASSE Standard Number 1011. Accordingly, hose bibbs, sill cocks, lawn faucets, frost free wall hydrants, and the like, must be so equipped."

"With specific reference to frost resistant wall hydrants, equipped with hose connection vacuum breakers poses a restriction to the post closure drainage essential to frost prevention. Such vacuum breakers must be manually triggered to permit drainage, thereby, in effect, negating the frost proof feature of the hydrant, which rely on automatic drainage. Thus, it becomes readily apparent to manufacturers of frost proof hydrants that the resolution of this matter would involve development of hydrants that incorporate vacuum breakers and retain automatic draining provisions essential to frost resistant design."

Being that North Carolina is an area that experiences freezing conditions on a regular basis, we believe that the ASSE 1019 standard should be required. If all hose bibbs complied with this standard, it would protect against back flow and back siphonage, as well as damage to an ASSE 1011 device when it doesn't automatically drain and freezes.

We propose this language for P2903.10:

Hose bibbs subject to freezing shall be installed such that the stem extends through the building insulation into an open heated or semi-conditioned space. Hose bibbs shall conform to ASSE 1019 standard.

Stop and waste systems that utilize ASSE 1011 devices may not be used as the vacuum breaker does not automatically drain and is subject to freezing.

Exception: ASSE 1011 listed hose bibbs may be used in heated spaces where not exposed to freezing temperatures.

John Clark
Sales Manager

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