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Natural Resources Conservation Services
U.S. Department of Agriculture
1400 Independence Avenue, SW
Washington, DC 20250

Via regulations.gov

Re: Comments of the International Code Council on USDA’s Notice of Proposed Revisions to the National Handbook of Conservations Practices for the Natural Resources Conservation Service (Docket number NRCS-2020-0008)

The International Code Council (ICC) is nonprofit organization, driven by the engagement of its more than 64,000 members, that is dedicated to helping communities and the building industry provide safe, resilient, and sustainable construction through the development and use of model codes (I-Codes) and standards used in design, construction, and compliance processes. Most U.S. states and communities, federal agencies, and many global markets choose the I-Codes to set the standards for regulating construction and major renovations, plumbing and sanitation, fire prevention, and energy conservation in the built environment. The Code Council appreciates the opportunity to submit the following comments on the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service’s (NRCS) proposed revision to the National Handbook of Conservations Practices (NHCP) in the above captioned matter.

ICC’s model building codes and standards are “voluntary consensus standards” under Office of Management and Budget (OMB) Circular A-119 and the National Technology Transfer Advancement Act (NTTAA), meaning they are developed in an open forum—with a balance of interests represented and due process—that, ultimately, ensures a consensus outcome. Federal agencies, including USDA, communities, developers, and affordable housing advocates are active participants in the code development process, ensuring the final consensus result balances cost, safety, and other public interest considerations.

The Code Council’s comments on the NHCP center on the NRCS Conservation Practice Standard Code 558 covering Roof Runoff Structure and Code 442 covering Sprinkler Systems and recommend that Code 558 incorporate the Canadian Standards Group (CSA)/ICC 805-2018 Rainwater Harvesting Standard and that Code 442 incorporate the American Society of Agricultural and Biological Engineers (ASABE)/ICC 802-2020 Landscape Irrigation Sprinkler and Emitter Standard. Doing so would significantly augment current guidance, integrates the NHCP with the building and plumbing requirements utilized by the federal government and most states and local governments, and, consistent with OMB Circular A-119, would do so by leveraging private sector developed standards.

Augmenting Current Practice

The CSA/ICC 805 can be used to significantly augment the guidance provided by Code 558 by improving safety and expanding applications for reuse. The Standard provides complete provisions that apply to

the design, materials, installation, and operation of rainwater harvesting systems for potable and non-potable applications. It can be used from the beginning of intended water harvesting catchment system projects to the end intended use of this harvested water. The Standard was jointly developed with the CSA Group through a consensus standards development process — approved by the Standards Council of Canada (SCC) and the American National Standards Institute (ANSI), respectively—and can be readily implemented in both Canada and the U.S.

The CSA/ICC 805-2018 Rainwater Harvesting Standard addresses roof surface rainwater and stormwater (i.e., rainwater that has come in contact with the ground or a green roof) collected for use as source water. It addresses rainwater harvested for use in non-potable applications (e.g., irrigation, fire protection, toilet and urinal flushing, clothes washing, hose bibbs, decorative fountains, and vehicle washing) as well potable applications (e.g., human consumption, oral care, food preparation, dishwashing, and bathing). The term “rainwater harvesting” is used generically in this standard and can refer to harvesting of either roof runoff or stormwater runoff.

Recognizing that the risk to public health increases with the number of persons using a rainwater harvesting system, the ICC 805 standard provides different methods for protecting water based on the influent water quality, the system, and the application. Stormwater runoff is expected to have a higher likelihood of contamination as a result of its flowing overland. Therefore, the standard specifies additional treatment requirements for stormwater runoff and limits its use to a range of non-potable applications.

The CSA/ICC 805 can also work in tandem with stormwater control measures that are required through existing federal, state, or local stormwater management regulations. In some cases, rainwater harvesting can reduce the amount of stormwater to be handled, retained, or treated.

The collection and storage of precipitation has offered a long-standing means to support agricultural needs—including providing water for livestock, fish, and wildlife—and advance conservation measures. The addition of the CSA/ICC 805 standard to NRCS Conservation Practice Standard Codes 558 would provide a safe, resilient, and detailed framework for implementing rainwater harvesting systems for an even wider range of applications.

Additional technical requirements within the standard that build upon and enhance the information currently found in Code 558 include:

- Development of a Water Safety Plan (WSP). The WSP is required for all rainwater harvesting systems regardless of the intended end use. WSP framework reflects the regional, local, and site-specific water quality considerations to address the specific project needs.
- Resiliency and continuity of supply. Harvested water systems can act as primary supply for a distribution system, or as a secondary source to provide a redundant source of supply.
- Backflow protection. Where a secondary water supply is provided or where there is an interconnection between a non-potable water system and the potable water source, proper backflow prevention and cross-connection control practices are required to protect the potable water source.

- Preventing contamination. Rainwater harvesting systems must prevent the entrance of insects and vermin, including within the storage tank, vents, and piping systems.
- Collection and conveyance subsystems. The Standard addresses differing collection surfaces. Devices like debris excluders are addressed, which limit the introduction of large contaminants such as leaves, sticks, or other unwanted debris. Other devices, like first flush diverters are addressed that allow the first, dirtiest quantity of water collected from a precipitation event to be diverted from entering the conveyance system to further limit contamination.

Although not intended for sprinklers and emitters for use exclusively within agricultural irrigation systems, the ASABE/ICC 802 standard applies to sprinklers and emitters designed by the manufacturer for utilization within landscape irrigation systems. As such, it could augment Code 442 by providing additional guidance for sprinkler systems, including microirrigation emitters and microsprays, regarding design, performance, test methods, and marking requirements for landscape irrigation sprinklers and emitters.

Integrating with Existing with Federal, State, and Local Building and Plumbing Requirements

The CSA/ICC 805 is included and referenced within the latest International Plumbing Code (IPC) and International Residential Code (IRC), which ensures that it integrates seamlessly with the building and plumbing requirements utilized by the federal government and most states and local governments. All 50 states use the International Building Code (IBC) as the basis for commercial and multifamily housing construction and safety regulation. The IBC incorporates the IPC, which itself is also adopted or in use in 37 states. The IRC is in use or adopted in 49 states. The General Services Administration (GSA) requires the I-Codes (including the IBC, IRC, and IPC) for civilian governmental buildings¹ and the Department of Defense (DOD) requires the IBC, IRC, and IPC for all U.S. military bases.²

Leveraging Private Sector-Developed Standards

The NTTAA, supplemented by OMB Circular A-119, encourages federal agencies to use voluntary consensus codes and standards wherever possible in their procurement and regulatory activities. USDA has applied these principles repeatedly across its programs. For example, USDA’s Direct Single Family Housing Loans and Grants Field Office Handbook notes that state-licensed inspectors are to inspect property “according to the International Code Council.”³ New construction of single family and low-rise multifamily homes backed by USDA guaranteed housing loans, rural housing direct loans, and mutual self-help loans must adhere to the Code Council’s International Energy Conservation Code.⁴ The Forest Service worked on fire tests and other research to relevant to changes in the 2021 International Building Code that now allow mass timber buildings of up to 18-stories.⁵

¹ GSA, Facilities Standards for Public Buildings Service (“GSA P-100”) (July 2018).

² DOD, Unified Facilities Criteria, DoD Building Code (General Building Requirements) (Nov. 2018).

³ HB-1-3550 (Mar. 19, 2020), available at <https://www.rd.usda.gov/files/hb-1-3550.pdf>.

⁴ U.S. Department of Housing and Urban Development and USDA, Final Affordability Determination-Energy Efficiency Standards, 80 Fed. Reg. 25,901 (May 6, 2015).

⁵ Testimony of Cynthia West, Director, Forest Products Laboratory, USDA, before the U.S. House Committee on Appropriations Subcommittee on Interior, Environmental, and Related Agencies (Mar. 23, 2021).

The ASABE/ICC 802 may be viewed for free through the Code Council's Digital Codes website: <https://codes.iccsafe.org>. The Code Council is working with the CSA Group to implement free view access for the CSA/ICC 805 standard and will keep USDA informed on this work.

In sum, updating the NHCP presents USDA with the opportunity to leverage two voluntary consensus standards that address water reuse and sprinkler systems more comprehensively and integrate the NHCP with the building and plumbing requirements utilized by the federal government and most state and local governments.

Thank you for the opportunity to provide comments. If you have any questions concerning the Code Council's recommendations, please do not hesitate to contact us.

Sincerely,

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