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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 for Proposed Revision to the National Handbook of Conservations Practices for the Natural Resources Conservation Service (Docket number NRCS-2020-0001)

The International Code Council (ICC) is nonprofit organization, driven by the engagement of its 65,000 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 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. State and local governments adopt, amend, and enforce model building codes to advance policy goals and to ensure the health, safety, and welfare of their residents.

The I-Codes are widely utilized and supported at the federal, state, and local levels. All 50 states use the International Building Code (IBC) as the basis for commercial and multifamily housing construction and safety regulation. The International Residential Code (IRC) is in use or adopted in 49 states and the International Plumbing Code (IPC) is adopted or in use in 37 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

The Code Council’s comments on the NHCP center on the NRCS Conservation Practice Standard Code 636 for Water Harvesting Catchment and Code 558 covering Roof Runoff Structure. The Code Council proposes NRCS include the ICC 805-2018 Rainwater Harvesting Standard within both Code 636

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).

and Code 558. The ICC 805 can be used to significantly augment the guidance provided by both Codes 636 and 558, improving safety and expanding applications for this technology. 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 ICC 805 is also included and referenced within the latest IPC and IRC, which ensures that it integrates seamlessly with the building and plumbing requirements utilized by the federal government and most states and local governments. The Standard was also 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 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 as 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 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.

Additional technical requirements within the ICC 805 standard that build upon and enhance the information currently found in Code 636 and 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.
- Storage options. The Standard provides additional detail on the storage options Code 636 lists and addresses additional options. The Standard requires storage tanks to be properly supported in accordance with applicable building codes and the manufacturer’s installation instructions. The Standard further addresses storage tank location to limit any potential sources of contamination. The Annex of ICC 805 provides resources for sizing tanks and system capacities to meet the demand of the anticipated use of the harvested water source.

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 ICC 805 standard to NRCS Conservation Practice Standard Codes 636 and 558 will provide a safe, resilient, and detailed framework for implementing rainwater harvesting systems for an even wider range of applications.

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

Sincerely,

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