

IPSDC



2018 GROUP A PUBLIC COMMENT AGENDA

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GREATER RICHMOND CONVENTION CENTER
RICHMOND, VA

2018 Public Comment Agenda

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by

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PSD1-18

IPSDC: 101.2, 101.3, 107.2, 107.2.1, 107.2.2, 1 (New), 304, 304.1, 304.1.1, 304.2, 304.3, 304.4, 304.5, 304.6, 504.5, 802.1, 802.4, 802.5, 802.10, 805.3, 805.6, Chapter 11, 1101.1, 1101.2, 1202.4, Chapter 14

Proposed Change as Submitted

Proponent: Dennis Hallahan, Infiltrator Water Technologies, representing National Onsite Wastewater Recycling Association (dhallahan@infiltratorwater.com)

2018 International Private Sewage Disposal Code

Revise as follows

[A] 101.2 Scope. Septic tank and effluent absorption systems or other treatment tank and effluent disposal systems shall be permitted where a public sewer is not available to the property served. ~~Unless specifically approved, the private sewage disposal system of each building shall be entirely separate from and independent of any other building.~~ The use of a common system or a system on a parcel other than the parcel where the structure is located shall be subject to the full requirements of this code as for systems serving public buildings.

[A] 101.3 Public sewer connection. Where public sewers become available to the premises served, the use of the *private sewage disposal system* shall be discontinued within that period of time required by law, but such period shall not exceed one year. The building sewer shall be disconnected from the *private sewage disposal system* and connected to the public sewer.

Exception: Where approved by the code official for such reasons as excessive cost or project difficulty, or where the existing system does not pose a health threat or is code compliant, then connection to the public sewer shall not be required.

[A] 107.2 Special inspections. Special inspections of alternative ~~engineered~~ design *private sewage disposal systems* shall be conducted in accordance with Sections 107.2.1 and 107.2.2.

[A] 107.2.1 Periodic inspection. The registered design professional or designated inspector shall periodically inspect and observe the alternative ~~engineered~~ design to determine that the installation is in accordance with the approved plans. Discrepancies shall be brought to the immediate attention of the *private sewage disposal system* contractor for correction. Records shall be kept of all inspections.

[A] 107.2.2 Written report. The registered design professional shall submit a final report in writing to the code official upon completion of the installation, certifying that the alternative ~~engineered~~ design conforms to the approved construction documents. A notice of approval for the *private sewage disposal system* shall not be issued until a written certification has been submitted.

SECTION 304 ALTERNATIVE ENGINEERED DESIGN

304.1 Alternative engineered design. The design, documentation, inspection, testing and approval of an alternative ~~engineered~~ design *private sewage disposal system* shall comply with Sections 304.1.1 through 304.6.

304.1.1 Design criteria. An alternative ~~engineered~~ design shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Material, equipment or components shall be designed and installed in accordance with the manufacturer's instructions.

304.2 Submittal. The registered design professional shall indicate on the permit application that the *private sewage disposal system* is an alternative ~~engineered~~ design. The permit and permanent permit records shall indicate that an alternative ~~engineered~~ design was part of the approved installation.

304.3 Technical data. The registered design professional shall submit sufficient technical data to substantiate the proposed alternative ~~engineered~~ design and to prove that the performance meets the intent of this code.

304.4 Construction documents. The registered design professional shall submit to the code official two complete sets of signed and sealed construction documents for the alternative ~~engineered~~ design.

304.5 Design approval. Where the code official determines that the alternative ~~engineered~~ design conforms to the intent of this code, the *private sewage disposal system* shall be approved. If the alternative ~~engineered~~ design is not approved, the code official shall notify the registered design professional in writing, stating the reasons therefor.

304.6 Inspection and test. The alternative ~~engineered~~ design shall be inspected in accordance with the requirements of Section 107.

Add new text as follows

504.5 Thermoplastic Tanks. Thermoplastic tanks shall conform to IAPMO Z1000, IAPMO IGC 262-2013 or CSA B66-16.

Revise as follows

504.5 ~~6~~ Manholes. Manhole ~~collars and extensions shall be of the same material as the tank.~~ Manhole covers shall be of concrete, steel, cast iron, thermoplastic or other approved material.

802.1 General. Septic tanks shall be fabricated or constructed of welded steel, monolithic concrete, fiberglass, thermoplastic or an approved material. Tanks shall be water tight and fabricated to constitute an individual structure, and shall be designed and constructed to withstand anticipated loads. The design of prefabricated septic tanks shall be approved. Plans for site-constructed concrete tanks shall be approved prior to construction.

805.3 Construction. Holding tanks shall be constructed of welded steel, monolithic concrete, glass-fiber-reinforced polyester, thermoplastic or other approved materials.

802.4 Manholes. Each compartment of a tank shall be provided with not fewer than one manhole opening located over the inlet or outlet opening, and such opening shall be not less than 24 inches (610 mm) square or 24 inches (610 mm) in diameter. Where the inlet compartment of a septic tank exceeds 12 feet (3658 mm) in length, an additional manhole shall be provided over the baffle wall. Manholes shall terminate not greater than 6 inches (152 mm) below the ground surface. ~~Manholes shall be of the same material as the tank. Steel tanks shall have not less than a 2-inch (51 mm) collar for the manhole extensions permanently welded to the tank. The manhole extension on fiberglass tanks shall be of the same material as the tank and an integral part of the tank. The collar shall be not less than 2 inches (51 mm) high.~~

802.5 Manhole covers. Manhole risers shall be provided with a fitted, water-tight cover of concrete, steel, cast iron, thermoplastic or other approved material capable of withstanding all anticipated loads. Manhole covers terminating above grade shall have an approved locking device.

805.6 Manholes. Each tank shall be provided with either a manhole not less than 24 inches (610 mm) square or with a manhole having a 24-inch (610 mm) inside diameter extending not less than 4 inches (102 mm) above ground. Finished grade shall be sloped away from the manhole to divert surface water from the manhole. Each manhole cover shall have an effective locking device or tamper resistant screw fastener. Service ports in manhole covers shall be not less than 8 inches (203 mm) in diameter and shall be 4 inches (102 mm) above finished grade level. The service port shall have an effective locking cover or a brass cleanout plug.

802.10 Manhole riser joints. Joints on concrete risers and manhole covers shall be tongue-and-groove or shiplap type and sealed water tight using neat cement, mortar or bituminous compound. Joints on steel risers shall be welded or flanged and bolted and water tight. Steel manhole extensions shall be bituminous coated both inside and outside. Methods of attaching fiberglass and thermoplastic risers shall be water tight and approved.

CHAPTER **11 RESIDENTIAL-ADVANCED WASTE-WATER TREATMENT SYSTEMS**

1101.1 Scope. The provisions of this chapter shall govern ~~residential-advanced wastewater treatment~~ systems.

1101.2 Residential-Advanced waste-water treatment systems. The regulations for materials, design, construction and performance shall comply with NSF 40, NSF 245 or NSF 350, as applicable.

1202.4 Other inspections. In addition to the required inspection prior to backfilling, the code official shall conduct any other inspections deemed necessary to determine compliance with this code. Including inspections to verify adequate ongoing performance of the system as required.

Add new standard(s) follows

NSF/ANSI 245 - 2013:

Wastewater Treatment Systems - Nitrogen Reduction
NSF/ANSI 350-2014:

Onsite Residential and Commercial Water-Reuse Treatment Systems

B66-16:

Design, material, and manufacturing requirements for prefabricated septic tanks and sewage holding tanks

IAPMO IAPMO/ANSI Z1000-2013 Prefabricated Septic Tanks

IAPMO IAPMO IGC 262-2013 Corrugated Thermoplastic Tanks

Reason: 101.1 Cluster system designs are very common, can serve more than one building, and allow additional solutions to protect public health.

101.3 A private sewage treatment system can provide wastewater treatment similar to a public sewer.

107.2, 107.2.1, 304, 304.1, 304.1.1, 304.2, 304.3, 304.4, 304.5, 304.6:

In the 2015 International Private Sewage Disposal Code, the phrase Alternative Engineered Design is stated 16 times, including the table of contents and the index, therefore there are additional locations to remove this term. The Code does not define an "Alternative Engineered Design", nor does it provide guidance as to what constitutes an Alternative Engineered Design. Many states, provinces, and international programs allow registered sanitarians or environmental specialists to design sewage treatment systems, hence NOWRA requests that the term "engineered" be removed from this section and others.

New Section 504.5 Thermoplastic tanks are approved by all 50 states and provinces and are common internationally.

504.5 (this section number should be moved up to 504.6) Thermoplastic collars and extensions are approved by all 50 states. It is common practice to have materials differing than the tank. For example, thermoplastic extensions are cast into concrete tanks.

802.1 Thermoplastic tanks are approved by all 50 states and provinces and are common internationally.

802.4 Thermoplastic collars and manhole extensions are approved by all 50 states and provinces. It is common practice to have materials differing than the tank.

802.5, 802.10, & 805.3 Thermoplastic materials have been in use for many years and are approved in all states and provinces.

805.6 Tamper resistant screws are standard practice are approved in many state and provincial codes.

11 The title is proposed to change to Advanced Waste-Water Treatment Systems because this is the most common industry term. The term "Residential" is removed because the facilities served can be residential or commercial.

1101.1 Change consistent with Section 11 above.

1101.2 The term Residential is removed to be consistent with Section 11 above. Available new standards are NSF 245 and NSF 350 to address nutrient removal and reuse.

1202.4 As the decentralized wastewater industry progresses, many states, provinces, and counties require operational permits for private sewage treatment systems, both conventional and/or advanced waste-water treatment systems.

Cost Impact: The code change proposal will decrease the cost of construction

101.1 By allowing other solutions to be considered the cost may be lowered.

101.3 The private sewage treatment system option may have a lower cost.

107.2, 107.2.1, 304, 304.1, 304.1.1, 304.2, 304.3, 304.4, 304.5, & 304.6:

Allowing other certified professionals to design systems will increase choices and may lower costs.

New Section 504.5 The inclusion of Thermoplastic tanks will increase choices and may offer cost savings in materials and labor.

504.5 The inclusion of thermoplastic collars and extensions will increase choices and may offer cost savings.

802.1 The inclusion of thermoplastic materials will increase choices and may offer cost savings.

802.4 The inclusion of thermoplastic materials will increase choices and may offer cost savings.

802.5 The inclusion of thermoplastic materials will increase choices and may offer cost savings.

802.10 The inclusion of thermoplastic materials will increase choices and may offer cost savings.

805.3 The inclusion of thermoplastic materials will increase choices and may offer cost savings.

805.6 The inclusion of tamper resistant screws will increase choices and may offer cost savings.

11 The code change proposal will have no impact on the cost of construction.

1101.1 The code change proposal will have no impact on the cost of construction.

1101.2 For the jurisdictions that require treatment in accordance with these standards, the code change proposal will have no impact on the cost of construction.

1202.4 For the jurisdictions that require operational permits, the code change proposal will have no impact on the cost of construction.

Analysis: A review of the standard proposed for inclusion in the code, NSF 245-2013, IAPMO Z1000-2013, IAPMO IGC 262-2013 and CSA B66-16 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2018. The referenced standard, NSF 350-2014, is currently referenced in other 2018 I-codes.

PSD1-18

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Evaluation of site and system by an arbitrary person seems too open. Removal of "engineered" is inappropriate as these systems require engineering input. (Vote:13-1)

Assembly Action:

None

PSD1-18

Individual Consideration Agenda

Public Comment 1:

Proponent: Pennie Feehan, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (pmgcac@iccsafe.org) requests As Modified by This Public Comment.

Modify as follows:

2018 International Private Sewage Disposal Code

101.3 Public sewer connection. Where public sewers become available to the premises served, the use of the *private sewage disposal system* shall be discontinued within that period of time required by law, but such period shall not exceed one year. The building sewer shall be disconnected from the *private sewage disposal system* and connected to the public sewer.

~~**Exception:** Where approved by the code official for such reasons as excessive cost or project difficulty, or where the existing system does not pose a health threat or is code compliant, then connection to the public sewer shall not be required. Existing private sewage disposal systems in accordance with Section 102.4.~~

304.1 Alternative ~~engineered~~ design. The design, documentation, inspection, testing and approval of an alternative design *private sewage disposal system* shall comply with Sections 304.1.1 through 304.6.

802.5 Manhole covers. Manhole risers shall be provided with a fitted, water-tight cover of concrete, steel, cast iron, thermoplastic or other approved material capable of withstanding all anticipated loads. Manhole covers terminating above grade shall have an approved locking ~~device~~ device or tamper resistant screw fasteners.

1202.4 Other inspections. In addition to the required inspection prior to backfilling, the code official shall conduct any other inspections deemed necessary to determine compliance with this ~~code, including code.~~ Such inspections to verify adequate ongoing performance of the system as required shall verify that the installation will perform in a safe and sanitary condition.

Commenter's Reason: The National Onsite Wastewater Recycling Association (NOWRA) is the largest organization within the United States dedicated to educating and representing members within the onsite and decentralized wastewater treatment industry. Their members include educators, regulators, engineers, contractors, manufacturers, suppliers, service providers, and other parties.

The original proposal is the result of NOWRA members working together to advise regulatory bodies of issues hindering the acceptance of decentralized advanced wastewater treatment systems. These systems can provide optimal wastewater management for homes, businesses and industrial centers where water recycling is encouraged or necessary to reduce the demand on municipal potable water systems and wastewater treatment infrastructures. Because many locations in North America are already restricting potable water use because of the lack of raw water supplies caused by climate changes, population growth, or the exorbitant cost of treatment of poor quality raw water; decentralized, onsite advanced wastewater treatment systems offer one solution to these problems.

Technical Support for the Public Comment

The following are the committee's two reasons for disapproval and the remedy provided for each in this public comment:

Section 101.3 : "Evaluation of site and system by an arbitrary person seems too open". It is agreed that cost can be a subjective assessment. Accordingly it has been removed in the exception and replaced by a reference to Section 102.4 which explicitly permits existing installations to remain in service provided they are properly maintained. Section 102.4

reads as follows:

102.4 Existing installations. *Private sewage disposal systems* lawfully in existence at the time of the adoption of this code shall be permitted to have their use and maintenance continued if the use, maintenance or repair is in accordance with the original design and no hazard to life, health or property is created by the system.

This is and should be the key consideration - does the existing private sewage disposal system perform in a safe and sanitary condition? If it does, the code allows it to remain operational. Further, Section 102.5 Maintenance requires both existing and new systems to be maintained in proper operating condition and empowers the code official to require reinspection at any time.

Sections 107 and 304: "Removal of "engineered" is inappropriate as these systems require engineering input." The removal of term "engineered" is not an indication that a responsible design professional is not involved in alternative designs. Section 304.2 specifically requires that a "registered design professional" perform these designs. The Chapter 2 definition of "registered design professional" does not require the "registered design professional" to be an engineer. There are other types of design professionals who are registered or licensed to practice their respective design profession. Many states, provinces, and international programs allow registered or licensed sanitarians or environmental specialists to design sewage treatment systems. Becoming registered or licensed requires significant education and training to satisfy the statutory requirements of the entities that issue such registrations and licenses. Removal of term "engineered" is simply to avoid misunderstandings about who the registered design professional can be. The deletion of the term "engineered" in the title to Section 304.1 was overlooked in the original proposal and has been corrected in this public comment.

Two additional changes are included in this public comment, Sections 802.5 and 1202.4.

Section 802.5: The revision to Section 802.5 provides an alternative to manhole cover locking devices and was actually a modification that was suggested by the floor, ruled in order by the Chair and testified upon at the hearing. There was no opposition to this modification at the hearing.

Section 1202.4: The change is intended to clarify the proposed additional sentence, resulting in an inspection which ensures a safe and sanitary installation.

The remainder of the original proposal is retained unchanged. It was noted at the CAH that the proposal includes requirements that are appropriate for "Advanced Waste Water Treatment Systems" by virtue of the addition of the noted additional NSF standards.

This public comment is submitted by the ICC PMGCAC. CAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2017 and 2018 the PMGCAC has held one face-to-face meeting and 11 conference call meetings which included members of the committee as well as any interested party to discuss and debate the proposed changes and public comments. Related documentation and reports are posted on the PMGCAC website at: <https://www.iccsafe.org/codes-tech-support/codes/code-development-process/pmg-code-action-committee-pmgcac/>.

Cost Impact: The net effect of the public comment and code change proposal will decrease the cost of construction. The proposal along with this public comment offers alternative methods for providing for wastewater disposal for building. Options offer designers a choice of the most cost effective method for solving construction challenges.

PSD1-18

PSD3-18

IPSDC: 802.1

Proposed Change as Submitted

Proponent: William Hall, Portland Cement Association, representing Alliance For Concrete Codes and Standards (jhall@cement.org); Eric Carleton, National Precast Concrete Association, representing National Precast Concrete Association (ecarleton@precast.org); Stephen Szoke, representing American Concrete Institute (steve.szoke@concrete.org)

2018 International Private Sewage Disposal Code

Revise as follows

802.1 General. Septic tanks shall be fabricated or constructed of welded steel, monolithic concrete, fiberglass or an approved material. Tanks shall be water tight and fabricated to constitute an individual structure, and shall be designed and constructed to withstand anticipated ~~loads.~~ hydraulic and structural loads including soil, hydrostatic, flotation and traffic when conditions exist. When required by the code official, the design of septic tanks shall be by a registered professional engineer within the state or province of the septic tank installation. The design of prefabricated septic tanks shall be approved. Plans for site-constructed concrete tanks shall be approved prior to construction.

Reason: Section 802.1 General. The current language ignores clarifying that the critical components of septic tank design is both hydraulic for correct sizing and structural for continued function of the tank without failure. The listing of specific loads is for the benefit of the reviewer to be aware that each site is unique and requires the designer to be aware and acknowledge those variable conditions have been analyzed.

Section 802.4 Manholes. The reasoning to strike the existing sentence is the same as describe in section 504.5, the existing language requires the use of the same materials for the extension sections (risers) as that of the lid and tank. Current septic tank fabrication methods have successfully fabricated hybrid systems which utilize precast concrete for the tank chamber for the attributes it possesses and other materials for the risers which are directly cast into the flattop lid to make a watertight seal.

Cost Impact: The code change proposal will not increase or decrease the cost of construction
Provides clarification

PSD3-18

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: It is too specific to require a register professional engineer from the specific state of province to design the tank. (Vote:11-3)

Assembly Action:

None

PSD3-18

Individual Consideration Agenda

Public Comment 1:

Proponent: William Hall, Portland Cement Association, representing Alliance for Concrete Codes and Standards (jhall@cement.org) requests As Modified by This Public Comment.

Modify as follows:

2018 International Private Sewage Disposal Code

802.1 General. Septic tanks shall be fabricated or constructed of welded steel, monolithic concrete, fiberglass or an approved material. Tanks shall be water tight and fabricated to constitute an individual structure, and shall be designed and constructed to withstand anticipated hydraulic and structural loads including soil, hydrostatic, flotation and traffic when conditions exist. When required by the code official, the design of septic tanks shall be by a registered professional engineer ~~within the state or province of the septic tank installation~~. The design of prefabricated septic tanks shall be approved. Plans for site-constructed concrete tanks shall be approved prior to construction.

Commenter's Reason: Section 802.1 General. The current language ignores clarifying that the critical components of septic tank design are both hydraulic loading for correct sizing and structural for continued tank function without failure. The listing of specific loads is for the benefit of the reviewer to be aware that each site is unique and requires the designer of record to be aware and acknowledge those variable conditions have been analyzed. The committee did not like the proposed language dealing with design professional. While the engineer should be aware of local soil properties, the committee felt it should not be limited to engineers within the state or province.

Cost Impact: The net effect of the public comment and code change proposal will not increase or decrease the cost of construction

The public comment only clarifies responsibility and does not affect materials or labor costs of construction.

PSD3-18
