

1 ARTICLE 6. SANITARY ENGINEERING

2
3 Rule 8.3. Residential On-Site Sewage Systems

4
5 **410 IAC 6-8.3-1 Definitions**

6 **Authority: IC 16-19-3-4**

7 **Affected: IC 16-19-3-4**

8
9 Sec. 1. The definitions in this rule apply throughout this rule.

10
11 *(Indiana Department of Health; 410 IAC 6-8.3-1; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
12 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

13
14 **410 IAC 6-8.3-2 "AASHTO" defined**

15 **Authority: IC 16-19-3-4**

16 **Affected: IC 16-19-3-4**

17
18 Sec. 2. "AASHTO" means the American Association of State Highway and Transportation Officials.

19
20 *(Indiana Department of Health; 410 IAC 6-8.3-2; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
21 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

22
23 **410 IAC 6-8.3-3 "ABS" defined**

24 **Authority: IC 16-19-3-4**

25 **Affected: IC 16-19-3-4**

26
27 Sec. 3. "ABS" means acrylonitrile-butadiene-styrene.

28
29 *(Indiana Department of Health; 410 IAC 6-8.3-3; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
30 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

31
32 **410 IAC 6-8.3-4 "ANSI" defined**

33 **Authority: IC 16-19-3-4**

34 **Affected: IC 16-19-3-4**

35
36 Sec. 4. "ANSI" means the American National Standards Institute.

37
38 *(Indiana Department of Health; 410 IAC 6-8.3-4; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
39 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

40
41 **410 IAC 6-8.3-5 "ASTM" defined**

42 **Authority: IC 16-19-3-4**

43 **Affected: IC 16-19-3-4**

44
45 Sec. 5. "ASTM" means the American Society for Testing and Materials.

46
47 *(Indiana Department of Health; 410 IAC 6-8.3-5; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
48 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

1
2 **410 IAC 6-8.3-5.1 "Base flood elevation" or "BFE" defined**

3 **Authority: IC 16-19-3-4**

4 **Affected: IC 16-19-3-4**

5
6 **Sec. 5.1. "Base flood elevation" or "BFE" means the elevation of surface water resulting from a flood for which**
7 **there is a one percent (1%) probability of equaling or exceeding that level in any given year as calculated by a method and**
8 **procedure that is approved by the Indiana natural resources commission. The base flood elevation is also referred to as the**
9 **regulatory flood elevation or 100-year flood elevation.**

10
11 *(Indiana Department of Health; 410 IAC 6-8.3-5.1)*

12
13 **410 IAC 6-8.3-6 "Bedroom" defined**

14 **Authority: IC 16-19-3-4**

15 **Affected: IC 16-19-3-4**

16
17 Sec. 6. "Bedroom" means either any room:

18 (1) in a residence that the local health department and the owner agree could be occupied for the purpose of sleeping and
19 contains:

20 (A) an area of seventy (70) square feet or more;

21 (B) at least one (1) operable window or exterior door for emergency egress or rescue; and

22 (C) for new construction, a closet; or

23 (2) declared by the owner, by recorded affidavit supplied to the local health department, that will be occupied for sleeping,
24 and that the owner further agrees within the affidavit not to occupy any additional rooms for the purpose of sleeping or
25 otherwise represent to others that any room, beyond the number specified in the affidavit, may be utilized for sleeping
26 without approval of the local health department.

27
28 *(Indiana Department of Health; 410 IAC 6-8.3-6; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
29 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

30
31 **410 IAC 6-8.3-7 "Bedroom equivalent" defined**

32 **Authority: IC 16-19-3-4**

33 **Affected: IC 16-19-3-4**

34
35 Sec. 7. "Bedroom equivalent" means any jetted bathtub with a capacity of greater than one hundred twenty-five (125)
36 gallons.

37
38 *(Indiana Department of Health; 410 IAC 6-8.3-7; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
39 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

40
41 **410 IAC 6-8.3-7.1 "Best judgment" defined**

42 **Authority: IC 16-19-3-4**

43 **Affected: IC 16-19-3-4**

44
45 **Sec. 7.1. "Best judgment" means the process by which a local health department reviews the site and soil evaluation**
46 **report and site characteristics in a situation where a residential on-site sewage system has failed and a replacement soil**
47 **absorption system cannot meet the requirements of this rule for new construction. The local health department uses their**
48 **best judgment to determine the optimal approach to soil absorption system replacement that comes as close to meeting the**
49 **requirements of this rule as possible.**

50
51 *(Indiana Department of Health; 410 IAC 6-8.3-7.1)*

1 **410 IAC 6-8.3-7.2 “Cesspool”**

2 **Authority: IC 16-19-3-4**

3 **Affected: IC 16-19-3-4**

4
5 **Sec. 7.2. “Cesspool” means a relatively shallow underground reservoir from which effluent seeps out of the**
6 **sidewalls. A cesspool is typically not preceded by a septic tank.**

7
8 *(Indiana Department of Health; 410 IAC 6-8.3-7.2)*

9
10 **410 IAC 6-8.3-8 "Commissioner" defined**

11 **Authority: IC 16-19-3-4**

12 **Affected: IC 16-19-3-4**

13
14 **Sec. 8. "Commissioner" means the commissioner of the department or his or her legally authorized representative.**

15
16 *(Indiana Department of Health; 410 IAC 6-8.3-8; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
17 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

18
19 **410 IAC 6-8.3-8.1 “Construction, New” defined**

20 **Authority: IC 16-19-3-4**

21 **Affected: IC 16-19-3-4**

22
23 **Sec. 8.1. “Construction, New” means either:**

24 **(1) construction of a new residence or residential outbuilding where there previously was no residence or**
25 **residential outbuilding; or**

26 **(2) replacing, rebuilding, or remodeling an existing home or residential outbuilding when the design daily flow of**
27 **the new structure(s) exceeds what was previously at the site.**

28 **Best judgment, as described in this rule for replacement of failed soil absorption systems, shall not be used for new**
29 **construction.**

30
31 *(Indiana Department of Health; 410 IAC 6-8.3-8.1)*

32
33 **410 IAC 6-8.3-8.2 “Construction, Repair/Replacement” defined**

34 **Authority: IC 16-19-3-4**

35 **Affected: IC 16-19-3-4**

36
37 **Sec. 8.2. “Construction, Repair/Replacement” means either:**

38 **(1) repair or replacement of a residential on-site sewage system for an existing home or residential outbuilding; or**

39 **(2) rebuilding or remodeling of an existing home or residential outbuilding without an increase in the design daily**
40 **flow of the project.**

41 **In accordance with this rule, the best judgment of the local health department may be used, when necessary and**
42 **appropriate, for the repair or replacement of a soil absorption system in a failing residential on-site sewage system.**

43
44 *(Indiana Department of Health; 410 IAC 6-8.3-8.2)*

45
46 **410 IAC 6-8.3-9 "Construction permit" defined**

47 **Authority: IC 16-19-3-4**

48 **Affected: IC 16-19-3-4**

49
50 **Sec. 9. "Construction permit" means written approval by a local health department for the installation, repair, or**
51 **replacement of a residential on-site sewage system.**

1 (Indiana Department of Health; 410 IAC 6-8.3-9; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep
2 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)
3

4 **410 IAC 6-8.3-10 "Densic material" defined**

5 **Authority: IC 16-19-3-4**

6 **Affected: IC 16-19-3-4**
7

8 Sec. 10. "Densic material" means relatively unaltered materials (do not meet requirements for any other named diagnostic
9 horizons or any other diagnostic soil characteristic) that have a noncemented rupture resistance class. The bulk density or the
10 organization is such that roots cannot enter, except in cracks. These are mostly earthy materials, such as till, volcanic mudflows,
11 and some mechanically compacted materials. Some noncemented rock can be densic materials if they are dense or resistant enough
12 to keep roots from entering, except in cracks. Densic materials are noncemented and thus differ from paralithic materials and the
13 material below a lithic contact, both of which are cemented. Densic materials have, at their upper boundary, a densic contact if they
14 have no cracks or if the spacing of cracks that roots can enter is ten (10) centimeters (cm) or more. These materials can be used to
15 differentiate soil series if the materials are within the series control section.
16

17 (Indiana Department of Health; 410 IAC 6-8.3-10; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed
18 Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)
19

20 **410 IAC 6-8.3-11 "Department" defined**

21 **Authority: IC 16-19-3-4**

22 **Affected: IC 16-19-3-4**
23

24 Sec. 11. "Department" means the Indiana department of health.
25

26 (Indiana Department of Health; 410 IAC 6-8.3-11; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed
27 Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; errata filed Jul 28, 2021, 9:20 a.m.: 20210811-IR-410210312ACA;
28 readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)
29

30 **410 IAC 6-8.3-12 "Design daily flow" or "DDF" defined**

31 **Authority: IC 16-19-3-4**

32 **Affected: IC 16-19-3-4**
33

34 Sec. 12. "Design daily flow" or "DDF" means the calculated peak daily sewage flow from a residence used to design a
35 residential on-site sewage system. It is ~~one hundred fifty (150) gallons per day times the number of bedrooms and bedroom-~~
36 ~~equivalents.~~

37 (a) For dwellings that are not tiny houses or recreational vehicles, DDF is one hundred fifty (150) gallons per day times
38 the number of bedrooms and bedroom equivalents.

39 (b) For tiny houses, DDF is a minimum of three hundred (300) gallons per day.

40 (c) For recreational vehicles used as dwellings, DDF is seventy-five (75) gallons per day times the maximum occupancy
41 number as indicated by the recreational vehicle manufacturer.
42

43 (Indiana Department of Health; 410 IAC 6-8.3-12; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed
44 Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)
45

46 **410 IAC 6-8.3-12.1 "Designer" defined**

47 **Authority: IC 16-19-3-4**

48 **Affected: IC 16-19-3-4**
49

50 Sec. 12.1. "Designer" means an individual who designs and submits detailed on-site sewage system construction
51 plans to the local health department for review as part of a construction permit application.
52

53 (Indiana Department of Health; 410 IAC 6-8.3-12.1)

1
2 **410 IAC 6-8.3-13 "Distribution box" defined**

3 **Authority: IC 16-19-3-4**

4 **Affected: IC 16-19-3-4**

5
6 Sec. 13. "Distribution box" means a structure designed to distribute effluent by gravity from a septic tank equally into the
7 trenches of the soil absorption system connected thereto.

8
9 *(Indiana Department of Health; 410 IAC 6-8.3-13; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
10 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

11
12 **410 IAC 6-8.3-14 "Drainageway" defined**

13 **Authority: IC 16-19-3-4**

14 **Affected: IC 16-19-3-4**

15
16 Sec. 14. "Drainageway" means the channel portion of the landscape in which surface water or rainwater runoff ~~gathers~~
17 ~~intermittently to flow~~ flows to a lower elevation.

18
19 *(Indiana Department of Health; 410 IAC 6-8.3-14; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
20 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

21
22 **410 IAC 6-8.3-14.1 "Drywell" defined**

23 **Authority: IC 16-19-3-4**

24 **Affected: IC 16-19-3-4**

25
26 Sec. 14.1. "Drywell" means a subsurface excavation, typically reinforced along the outer walls with brick, blocks,
27 metal, or precast concrete and may contain aggregate in the interior of the lining. A drywell is often bottomless. A drywell
28 may or may not be preceded by a septic tank and is usually deeper than thirty-six (36) inches. Sewage seeps out of the
29 sidewalls and bottom of the drywell.

30
31 *(Indiana Department of Health; 410 IAC 6-8.3-14.1)*

32
33 **410 IAC 6-8.3-15 "Dwelling" or "residence" defined**

34 **Authority: IC 16-19-3-4**

35 **Affected: IC 16-19-3-4**

36
37 Sec. 15. "Dwelling" or "residence" means any house or place used or intended to be used as a place of seasonal or
38 permanent human habitation or for sleeping for one (1) or two (2) families, and any associated outbuildings that are for the private
39 use of the owner.

40
41 *(Indiana Department of Health; 410 IAC 6-8.3-15; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
42 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

43
44 **410 IAC 6-8.3-16 "Fill" defined**

45 **Authority: IC 16-19-3-4**

46 **Affected: IC 16-19-3-4**

47
48 Sec. 16. "Fill" means soil transported and deposited by man, as well as soil recently transported and deposited by natural
49 erosion forces. Fill is evidenced by one (1) or more of the following:

- 50 (1) No soil horizons or indistinct soil horizons.
51 (2) Depositional stratification.
52 (3) Presence of a soil horizon that has been covered.
53 (4) Materials in a horizon such as cinders or construction debris.

1 (5) Position in the landscape.
2

3 *(Indiana Department of Health; 410 IAC 6-8.3-16; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
4 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
5

6 **410 IAC 6-8.3-16.1 “Fixed reference point” defined**

7 **Authority: IC 16-19-3-4**

8 **Affected: IC 16-19-3-4**
9

10 **Sec. 16.1. “Fixed reference point” means a location that is readily identifiable from which measurements can be**
11 **taken in order to describe the location of soil borings, soil pits, and system components and shall be in place until the**
12 **completion of the project.**
13

14 *(Indiana Department of Health; 410 IAC 6-8.3-16.1)*
15

16 **410 IAC 6-8.3-17 "Foundation drain" defined**

17 **Authority: IC 16-19-3-4**

18 **Affected: IC 16-19-3-4**
19

20 **Sec. 17. "Foundation drain" means that portion of a residential drainage system provided to drain only groundwater from**
21 **outside of the foundation of the house or from under the basement floor.**
22

23 *(Indiana Department of Health; 410 IAC 6-8.3-17; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
24 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
25

26 **410 IAC 6-8.3-17.1 “Fragic soil properties” defined**

27 **Authority: IC 16-19-3-4**

28 **Affected: IC 16-19-3-4**
29

30 **Sec. 17.1. “Fragic properties” means a diagnostic soil characteristic associated with some soil aggregates in subsoil**
31 **horizons of mineral soils. Aggregates with fragic properties are firm (or firmer) and brittle when the moisture content is at**
32 **or near field capacity. Air-dry fragments slake when submerged in water, but are weakly cemented, or are not cemented. In**
33 **addition, the aggregates show evidence of pedogenesis and are restrictive to roots. In effect, fragic soil properties are**
34 **recognized in materials exhibiting all the characteristics of a fragipan except for continuity or thickness. Fragic soil**
35 **properties are diagnostic for fragic subgroups (intergrades to other soil classes having a fragipan). Soil horizons that exhibit**
36 **fragic properties (including those that qualify as fragipans) are designated by the suffix “x” (e.g., Bx or Btx).**
37

38 **410 IAC 6-8.3-17.2 “Fragipan” defined**

39 **Authority: IC 16-19-3-4**

40 **Affected: IC 16-19-3-4**
41

42 **Sec. 17.2. “Fragipan” means a natural, diagnostic subsurface horizon with very low organic matter, high bulk**
43 **density, or high mechanical strength relative to overlying and underlying horizons; has hard or very hard consistence**
44 **(seemingly cemented) when dry but showing a moderate to weak brittleness when moist. The layer typically has**
45 **redoximorphic features, is slowly or very slowly permeable to water, is considered to be root restricting, and usually has few**
46 **to many bleached, roughly vertical planes that are faces of coarse or very coarse polyhedrons or prisms. (as per Soil**
47 **Taxonomy [USDA,1999]).**
48

49 *(Indiana Department of Health; 410 IAC 6-8.3-17.1)*
50

51 **410 IAC 6-8.3-18 "Health officer" defined**

52 **Authority: IC 16-19-3-4**

1 **Affected: IC 16-19-3-4**

2
3 Sec. 18. "Health officer" means the health officer of a local ~~board of health~~ **department**.

4
5 *(Indiana Department of Health; 410 IAC 6-8.3-18; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
6 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

7
8 **410 IAC 6-8.3-18.1 "High Strength Waste" defined**

9 **Authority: IC 16-19-3-4**

10 **Affected: IC 16-19-3-4**

11
12 **Sec. 18.1. "High Strength Waste" means either of the following:**

13 **(1) Influent to a septic tank or other pretreatment component having any of the following:**

14 **(A) A five (5) day biochemical oxygen demand (BOD₅) greater than three hundred (300) mg/L.**

15 **(B) Total suspended solids (TSS) greater than two hundred (200) mg/L.**

16 **(C) Fats, oils, and grease (FOGs) greater than fifty (50) mg/L.**

17 **(2) Effluent from a septic tank or other pretreatment component discharged to a soil absorption field having any of**
18 **the following:**

19 **(A) A BOD₅ greater than one hundred seventy (170) mg/L.**

20 **(B) TSS greater than sixty (60) mg/L.**

21 **(C) FOGs greater than twenty-five (25) mg/L.**

22
23 *(Indiana Department of Health; 410 IAC 6-8.3-18.1)*

24
25 **410 IAC 6-8.3-18.2 "IAPMO" defined**

26 **Authority: IC 16-19-3-4**

27 **Affected: IC 16-19-3-4**

28
29 **Sec. 18.2. "IAPMO" means the International Association of Plumbing and Mechanical Officials.**

30
31 *(Indiana Department of Health; 410 IAC 6-8.3-18.2)*

32
33 **410 IAC 6-8.3-19 "INDOT" defined**

34 **Authority: IC 16-19-3-4**

35 **Affected: IC 16-19-3-4**

36
37 **Sec. 19. "INDOT" means the Indiana department of transportation.**

38
39 *(Indiana Department of Health; 410 IAC 6-8.3-19; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
40 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

41
42 **410 IAC 6-8.3-19.1 "Inspector" defined**

43 **Authority: IC 16-19-3-4**

44 **Affected: IC 16-19-3-4**

45
46 **Sec. 19.1. "Inspector" means any individual who performs inspections of an existing on-site sewage system(s) in**
47 **compliance with subsection 54.1 for determination of system compliance with this rule.**

48
49 *(Indiana Department of Health; 410 IAC 6-8.3-19.1)*

50
51 **410 IAC 6-8.3-19.2 "Installer" defined**

52 **Authority: IC 16-19-3-4**

1 Affected: IC 16-19-3-4

2
3 Sec. 19.2. "Installer" means any individual who performs any work in furtherance of construction, installation,
4 replacement, alteration, repair, expansion, or abandonment of any residential on-site sewage system that is subject to the
5 provisions of this rule.

6
7 *(Department of Health; 410 IAC 6-8.3-19.2)*

8
9 **410 IAC 6-8.3-20 "Interceptor drain" defined**

10 Authority: IC 16-19-3-4

11 Affected: IC 16-19-3-4

12
13 Sec. 20. "Interceptor drain" means a subsurface drainage system constructed only on the upslope side or sides of a soil
14 absorption system for the purpose of **lowering a seasonal high water table and** diverting subsurface water around the soil
15 absorption system site.

16
17 *(Indiana Department of Health; 410 IAC 6-8.3-20; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
18 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

19
20 **410 IAC 6-8.3-20.1 "Involuntary" defined**

21 Authority: IC 16-19-3-4

22 Affected: IC 16-19-3-4

23
24 Sec. 20.1. "Involuntary" means a need to modify or improve a dwelling or residential outbuilding due to factors
25 outside of the owner's control, such as destruction by wind, fire, flood, or other natural disaster, or due to condemnation of
26 a dwelling.

27
28 *(Indiana Department of Health; 410 IAC 6-8.3-20.1)*

29
30 **410 IAC 6-8.3-20.2 "Limiting layer" defined**

31 Authority: IC 16-19-3-4

32 Affected: IC 16-19-3-4

33
34 Sec. 20.2. (a) "Limiting layer" means a soil horizon that restricts suitability of a site for a soil absorption system or
35 restricts the depth of installation of a soil absorption system. A limiting layer can be a restrictive soil horizon or a poor
36 filter.

37 (b) A restrictive limiting layer is a soil horizon:

38 (1) with a soil loading rate less than twenty-five hundredths (0.25) gpd/ft² as assigned in Table IV or Table V of this
39 rule; or

40 (2) transitional to dense till, developed from Wisconsinan glacial till, that shows effervescence when treated with a
41 ten percent (10%) hydrochloric acid solution, unless:

42 (A) the on-site soils evaluation report shows that the presence of the soil horizon is not detrimental to the
43 proper functioning of an on-site sewage system as determined by a registered professional soil scientist;
44 and

45 (B) the determination in clause (A) of this subdivision is made using the guidelines as set forth in the soil
46 manuals, technical bulletins, and handbooks of the NRCS guidelines.

47 (c) A poor filter limiting layer is a soil horizon with:

48 (1) a soil loading rate greater than seventy-five hundredths (0.75) gpd/ft², as assigned in Table IV or Table V of this
49 rule, for a gravity fed or flood dosed subsurface trench on-site sewage systems;

50 (2) a soil loading rate greater than one and twenty-hundredths (1.20) gpd/ft², as assigned in Table IV or Table V of
51 this rule, for any type of on-site sewage system;

52 (3) less than twenty percent (20%) clay by volume and greater than thirty-five percent (35%) coarse fragments by

1 volume; or
2 (4) greater than or equal to twenty percent (20%) clay by volume and greater than sixty percent (60%) coarse
3 fragments by volume.
4

5 *(Indiana Department of Health; 410 IAC 6-8.3-20.2)*

6
7 **410 IAC 6-8.3-21 "Local health department" defined**

8 **Authority: IC 16-19-3-4**

9 **Affected: IC 16-20**

10 Sec. 21. "Local health department" means a local health department created pursuant to IC 16-20, or its duly authorized
11 representative.
12

13
14 *(Indiana Department of Health; 410 IAC 6-8.3-21; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
15 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
16

17 **410 IAC 6-8.3-22 "NEMA" defined**

18 **Authority: IC 16-19-3-4**

19 **Affected: IC 16-19-3-4**

20
21 Sec. 22. "NEMA" means the National Electrical Manufacturers Association.
22

23 *(Indiana Department of Health; 410 IAC 6-8.3-22; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
24 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
25

26 **410 IAC 6-8.3-23 "NRCS" defined**

27 **Authority: IC 16-19-3-4**

28 **Affected: IC 16-19-3-4**

29
30 Sec. 23. "NRCS" means the United States Department of Agriculture, Natural Resources Conservation Service.
31

32 *(Indiana Department of Health; 410 IAC 6-8.3-23; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
33 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
34

35 **410 IAC 6-8.3-24 "NSF" defined**

36 **Authority: IC 16-19-3-4**

37 **Affected: IC 16-19-3-4**

38
39 Sec. 24. "NSF" means the National Sanitation Foundation International.
40

41 *(Indiana Department of Health; 410 IAC 6-8.3-24; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
42 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
43

44 **410 IAC 6-8.3-25 "Operating permit" defined**

45 **Authority: IC 16-19-3-4**

46 **Affected: IC 16-19-3-4**

47
48 Sec. 25. "Operating permit" means written approval by a local health department for the continued use and maintenance of
49 an on-site sewage system.
50

51 *(Indiana Department of Health; 410 IAC 6-8.3-25; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
52 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
53

1 **410 IAC 6-8.3-26 "Owner" defined**

2 **Authority: IC 16-19-3-4**

3 **Affected: IC 16-19-3-4**

4
5 Sec. 26. "Owner" means the owner of a dwelling or his or her agent.

6
7 *(Indiana Department of Health; 410 IAC 6-8.3-26; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
8 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

9
10 **410 IAC 6-8.3-27 "Perimeter drain" defined**

11 **Authority: IC 16-19-3-4**

12 **Affected: IC 16-19-3-4**

13
14 Sec. 27. "Perimeter drain" means a subsurface drainage system that completely surrounds a soil absorption system for the
15 purpose of lowering a seasonal high water table ~~or~~ **and** preventing movement of subsurface water into a soil absorption system site.

16
17 *(Indiana Department of Health; 410 IAC 6-8.3-27; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
18 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

19
20 **410 IAC 6-8.3-28 "Person" defined**

21 **Authority: IC 16-19-3-4**

22 **Affected: IC 16-19-3-4**

23
24 Sec. 28. "Person" means any:

- 25 (1) individual;
26 (2) partnership;
27 (3) copartnership;
28 (4) firm;
29 (5) company;
30 (6) corporation;
31 (7) association;
32 (8) trust;
33 (9) estate; or
34 (10) other legal entity, its or their successors, assigns, or agents.

35
36 *(Indiana Department of Health; 410 IAC 6-8.3-28; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
37 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

38
39 **410 IAC 6-8.3-29 "PVC" defined**

40 **Authority: IC 16-19-3-4**

41 **Affected: IC 16-19-3-4**

42
43 Sec. 29. "PVC" means polyvinyl chloride.

44
45 *(Indiana Department of Health; 410 IAC 6-8.3-29; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
46 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

47
48 ~~**410 IAC 6-8.3-30 "Regulatory flood elevation" or "RFE" defined (Repealed)**~~

49 ~~**Authority: IC 16-19-3-4**~~

50 ~~**Affected: IC 16-19-3-4**~~

51
52 Sec. 30. ~~"Regulatory flood elevation" or "RFE" means the elevation of surface water resulting from a flood for which there~~

1 is a one percent (1%) probability of equaling or exceeding that level in any given year as calculated by a method and procedure that
2 is approved by the Indiana natural resources commission. The regulatory flood elevation is also referred to as the base flood
3 elevation.
4

5 *(Indiana Department of Health; 410 IAC 6-8.3-30; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA;*
6 *readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA) (Repealed by Indiana Department of Health;)*
7

8 **410 IAC 6-8.3-30.1 "Recreational vehicle"**

9 **Authority: IC 16-19-3-4**

10 **Affected: IC 16-19-3-4**

11
12 **Sec. 30.1. "Recreational vehicle" means a travel trailer, park model, collapsible trailer, truck-mounted camper, or**
13 **motor home.**

14
15 *(Indiana Department of Health; 410 IAC 6-8.3-30)*
16

17 **410 IAC 6-8.3-31 "Residential drain" defined**

18 **Authority: IC 16-19-3-4**

19 **Affected: IC 16-19-3-4**

20
21 **Sec. 31. "Residential drain" means the horizontal piping in a house drainage system that receives the discharge from soil,**
22 **waste, and drainage pipes inside the walls of the house and conveys the same to the residential sewer.**

23
24 *(Indiana Department of Health; 410 IAC 6-8.3-31; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
25 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
26

27 **410 IAC 6-8.3-32 "Residential on-site sewage system" or "on-site sewage system" defined**

28 **Authority: IC 16-19-3-4**

29 **Affected: IC 16-19-3-4**

30
31 **Sec. 32. "Residential on-site sewage system" or "on-site sewage system" means all equipment and devices necessary for**
32 **proper conduction, collection, storage, treatment, and on-site disposal of sewage from:**

33 (1) a one (1) or two (2) family dwelling;

34 (2) a residential outbuilding; or

35 (3) two (2) single-family dwellings on the same property with a combined DDF of less than or equal to seven hundred fifty
36 (750) gallons per day.

37 The term includes, but is not limited to, residential sewers, **grease traps, septic tanks, secondary treatment units, dosing tanks,**
38 **effluent pumps, distribution boxes, soil absorption systems, subsurface drainage systems, dispersal areas, temporary sewage holding**
39 **tanks, and sanitary vault privies. The term also includes any miscellaneous components as may be required to ensure proper**
40 **operation and function of the system as described in this rule.**

41
42 *(Indiana Department of Health; 410 IAC 6-8.3-32; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
43 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*
44

45 **410 IAC 6-8.3-32.1 "Residential on-site sewage system expansion" defined**

46 **Authority: IC 16-19-3-4**

47 **Affected: IC 16-19-3-4**

48
49 **Sec. 32.1. "Residential on-site sewage system expansion" means the addition of any system component(s) or an**
50 **increase in the size of a soil absorption system intended to expand the system's capacity to treat an increased design daily**
51 **flow or in an attempt to prevent, stop, or abate a residential on-site sewage system failure.**

1 *(Indiana Department of Health; 410 IAC 6-8.3-32.1)*

2
3 **410 IAC 6-8.3-33 "Residential on-site sewage system failure" defined**

4 **Authority: IC 16-19-3-4**

5 **Affected: IC 16-19-3-4**

6
7 Sec. 33. "Residential on-site sewage system failure" means a residential on-site sewage system that exhibits one (1) or more
8 of the following:

9 (1) The on-site sewage system refuses to accept sewage at the rate of design application thereby interfering with the normal
10 use of residential plumbing fixtures.

11 (2) Effluent discharge exceeds the absorptive capacity of the soil, resulting in ponding, seepage, or other discharge of the
12 effluent to the ground surface or to surface waters.

13 (3) Effluent is discharged from the on-site sewage system causing contamination of a potable water supply, groundwater,
14 ~~or~~ surface waters, **or to something other than a soil absorption field.**

15 **(4) A dwelling or residential outbuilding with plumbing which is not connected to a sanitary sewer and which does**
16 **not have a residential on-site sewage system as defined herein or an onsite residential sewage discharging disposal**
17 **system in compliance with IC 13-18-12-9(d).**

18 **(5) Sewage or effluent discharged to a drywell or cesspool.**

19 A failed residential on-site sewage system is a **public and environmental** health hazard.

20
21 *(Indiana Department of Health; 410 IAC 6-8.3-33; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
22 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*

23
24 **410 IAC 6-8.3-33.1 "Residential on-site sewage system malfunction" or "malfunction" defined**

25 **Authority: IC 16-19-3-4**

26 **Affected: IC 16-19-3-4**

27
28 Sec. 33.1. "Residential on-site sewage system malfunction" or "malfunction" means a residential on-site sewage
29 system component that is not functioning in accordance with this rule or per manufacturers' requirements. Residential on-
30 site sewage system malfunction does not have to meet the definition of residential on-site sewage system failure, but there
31 may also be failure. Malfunction may include, but is not limited to, one (1) or more of the following:

32 (1) The backup of sewage into an upstream on-site sewage system component;

33 (2) The liquid level in a septic tank above the invert of the septic tank outlet;

34 (3) An outlet filter that is plugged sufficiently to cause backup in the septic tank;

35 (4) The liquid level in a dosing tank above the level of the pump on float;

36 (5) The liquid level in a treatment unit above that recommended by the manufacturer;

37 (6) The liquid level in a distribution box consistently above the invert of the outlets;

38 (7) A distribution box that does not provide equal distribution;

39 (8) Structural failure of a septic tank, dosing tank, treatment unit, distribution box or other required component;

40 (9) Electrical failure of any electrical component of an on-site sewage system, or

41 (10) Removal of any system component required in the construction or operating permit.

42
43 *(Indiana Department of Health; 410 IAC 6-8.3-33.1)*

44
45 **410 IAC 6-8.3-33.2 "Residential on-site sewage system repair" defined**

46 **Authority: IC 16-19-3-4**

47 **Affected: IC 16-19-3-4**

48
49 Sec. 33.2. "Residential on-site sewage system repair" means any activity undertaken to replace or modify an
50 existing component(s) of an existing on-site sewage system including any component of the existing soil absorption system,
51 such as a pipe, a chamber, or a distribution box. Residential on-site sewage system repair does not include routine
52 maintenance of the system.

1
2 *(Indiana Department of Health; 410 IAC 6-8.3-33.2)*
3

4 **410 IAC 6-8.3-33.3 “Residential on-site sewage system replacement” defined**

5 **Authority: IC 16-19-3-4**

6 **Affected: IC 16-19-3-4**
7

8 **Sec. 33.3. “Residential on-site sewage system replacement” means any activity undertaken to replace a soil**
9 **absorption system. Residential on-site sewage system replacement may also include the addition, the replacement, or the**
10 **repair of any other system component(s).**

11
12 *(Indiana Department of Health; 410 IAC 6-8.3-33.3)*
13

14 **410 IAC 6-8.3-34 "Residential outbuilding" defined**

15 **Authority: IC 16-19-3-4**

16 **Affected: IC 16-19-3-4**
17

18 **Sec. 34. "Residential outbuilding" means a building for the private use of the owner not intended to be used for permanent**
19 **or seasonal human habitation or sleeping.**

20
21 *(Indiana Department of Health; 410 IAC 6-8.3-34; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
22 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
23

24 **410 IAC 6-8.3-35 "Residential sewer" defined**

25 **Authority: IC 16-19-3-4**

26 **Affected: IC 16-19-3-4**
27

28 **Sec. 35. "Residential sewer" means the horizontal sewer pipe beginning five (5) feet outside the foundation of the**
29 **residence or other structure.**

30
31 *(Indiana Department of Health; 410 IAC 6-8.3-35; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; filed Apr 9, 2014,*
32 *9:51 a.m.: 20140507-IR-410130350FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed*
33 *Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
34

35 **410 IAC 6-8.3-35.1 "Responsible charge of installers” defined**

36 **Authority: IC 16-19-3-4**

37 **Affected: IC 16-19-3-4**
38

39 **Sec. 35.1. “Responsible charge of installers” means the direct control and personal supervision by a registered**
40 **installer of the work being performed at a job site for the installation of an on-site sewage system including, but not limited**
41 **to site preparation work, tilling, construction, finish grading, and soil stabilization for all components of the on-site sewage**
42 **system being installed.**

43
44 *(Indiana Department of Health; 410 IAC 6-8.3-33.1)*
45

46 **410 IAC 6-8.3-36 "Sanitary sewerage system" defined**

47 **Authority: IC 16-19-3-4**

48 **Affected: IC 16-19-3-4**
49

50 **Sec. 36. "Sanitary sewerage system" means a sewer or a system of sewers that conveys sewage away from the lot on**
51 **which it originates to a wastewater treatment facility owned and operated by:**

52 **(1) an incorporated city or town;**

- (2) a conservancy district;
- (3) a regional sewer district; or
- (4) a private utility.

(Indiana Department of Health; 410 IAC 6-8.3-36; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-37 "SDR" defined

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 37. "SDR" means standard dimension ratio.

(Indiana Department of Health; 410 IAC 6-8.3-37; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-38 "Seasonal high water table" defined

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 38. "Seasonal high water table" means the upper limit of soil saturated with water for periods long enough for anaerobic conditions to affect soil color.

(Indiana Department of Health; 410 IAC 6-8.3-38; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-39 "Segment drain" defined

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 39. "Segment drain" means a subsurface drainage system constructed between two (2) soil absorption fields in the same on-site sewage system for the purpose of **lowering a seasonal high water table and** intercepting and diverting subsurface water away from the downslope soil absorption field.

(Indiana Department of Health; 410 IAC 6-8.3-39; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)

410 IAC 6-8.3-40 "Septic tank" defined

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 40. "Septic tank" means a watertight structure into which sewage is discharged for settling and solids digestion.

(Indiana Department of Health; 410 IAC 6-8.3-40; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-41 "Sewage" defined

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 41. "Sewage" means all water-carried waste derived from ordinary living processes.

1 (Indiana Department of Health; 410 IAC 6-8.3-41; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed
2 Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

3
4 **410 IAC 6-8.3-41.1 “Sewage Holding tank” defined**

5 **Authority: IC 16-19-3-4**

6 **Affected: IC 16-19-3-4**

7
8 **Sec. 41.1 “Sewage Holding tank” means a septic tank(s) or a combination of septic and dosing tanks, for which the**
9 **outlet of the last tank in series has been sealed off to prevent sewage or effluent discharge from the tank(s).**

10
11 *(Indiana Department of Health; 410 IAC 6-8.3-41.1)*

12
13 **410 IAC 6-8.3-42 "Soil absorption" defined**

14 **Authority: IC 16-19-3-4**

15 **Affected: IC 16-19-3-4**

16
17 **Sec. 42. "Soil absorption" means a process that utilizes the soil to treat and disperse effluent from a septic tank.**

18
19 *(Indiana Department of Health; 410 IAC 6-8.3-42; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
20 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

21
22 **410 IAC 6-8.3-43 "Soil absorption system" or "soil absorption field" defined**

23 **Authority: IC 16-19-3-4**

24 **Affected: IC 16-19-3-4**

25
26 **Sec. 43. "Soil absorption system" or "soil absorption field" means pipes or chambers laid in a system of subsurface**
27 **trenches or pipes laid in elevated beds into which the effluent from the septic tank is discharged into the soil for treatment and**
28 **dispersal. The soil absorption system also includes the distribution box and the effluent sewers after the distribution box, or**
29 **the pressure manifold.**

30
31 *(Indiana Department of Health; 410 IAC 6-8.3-43; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
32 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

33
34
35 **410 IAC 6-8.3-43.1 “Soil boring”**

36 **Authority: IC 16-19-3-4**

37 **Affected: IC 16-19-3-4**

38
39 **Sec. 43.1. “Soil boring” means an excavation made by a soil auger, probe, or similar small diameter soil sampling**
40 **equipment used to pull soil samples out of the ground which are used to provide a description and characterization of the**
41 **soil.**

42
43 *(Indiana Department of Health; 410 IAC 6-8.3-43.1)*

44
45 **410 IAC 6-8.3-44 "Soil horizon" defined**

46 **Authority: IC 16-19-3-4**

47 **Affected: IC 16-19-3-4**

48
49 **Sec. 44. "Soil horizon" means a layer of soil or soil material approximately parallel to the land surface and differing from**
50 **adjacent genetically related layers in physical, chemical, and biological properties or characteristics such as:**

51 (1) color;

52 (2) structure, including grade, shape, and size;

- 1 (3) texture;
- 2 (4) consistence;
- 3 (5) kinds and numbers of organisms present; and
- 4 (6) ~~degree of~~ acidity or alkalinity.

5
6 *(Indiana Department of Health; 410 IAC 6-8.3-44; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
7 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*

8
9 **410 IAC 6-8.3-45 "Soil loading rate" defined**

10 **Authority: IC 16-19-3-4**

11 **Affected: IC 16-19-3-4**

12
13 Sec. 45. "Soil loading rate" means the ~~allowable~~ rate of application of septic tank effluent to the soil. It is expressed in
14 gallons per day per square foot.

15
16 *(Indiana Department of Health; 410 IAC 6-8.3-45; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
17 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

18
19 **410 IAC 6-8.3-45.1 "Soil pit" defined**

20 **Authority: IC 16-19-3-4**

21 **Affected: IC 16-19-3-4**

22
23 Sec. 45.1. "Soil pit" means an excavation that is sufficiently wide, deep, and long enough for the soil scientist to
24 enter the soil pit safely, according to the federal Occupational Safety and Health Administration (OSHA) and any other
25 federal, state, or local requirements, to directly observe, characterize, and describe the soil profile.

26
27 *(Indiana Department of Health; 410 IAC 6-8.3-45.1)*

28
29
30 **410 IAC 6-8.3-46 "Soil profile analysis" defined**

31 **Authority: IC 16-19-3-4**

32 **Affected: IC 16-19-3-4**

33
34 Sec. 46. "Soil profile analysis" means the observation and evaluation of the physical, **chemical, and biological**
35 characteristics of the soil horizons or layers to:

- 36 (1) a depth of at least five (5) feet; or
- 37 (2) if shallower, a layer that cannot be readily penetrated.

38
39 *(Indiana Department of Health; 410 IAC 6-8.3-46; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
40 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

41
42 **410 IAC 6-8.3-47 "Soil scientist" defined**

43 **Authority: IC 16-19-3-4**

44 **Affected: IC 16-19-3-4; IC 25-31.5**

45
46 Sec. 47. "Soil scientist" means an individual registered as a professional soil scientist with the Indiana Registry of Soil
47 Scientists (IRSS) as provided for under IC 25-31.5.

48
49 *(Indiana Department of Health; 410 IAC 6-8.3-47; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
50 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

51
52 **410 IAC 6-8.3-48 "Start of construction" defined**

1 **Authority: IC 16-19-3-4**

2 **Affected: IC 16-19-3-4**

3
4 Sec. 48. "Start of construction" means, but is not limited to, any site activity undertaken for the erection of the structure to
5 be served by a residential on-site sewage system or the delivery of manufactured housing.

6
7 *(Indiana Department of Health; 410 IAC 6-8.3-48; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
8 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

9
10 **410 IAC 6-8.3-49 "Subsurface drainage system" defined**

11 **Authority: IC 16-19-3-4**

12 **Affected: IC 16-19-3-4**

13
14 Sec. 49. "Subsurface drainage system" means any pipe with or without a layer of gravel, stone, or coarse sand, placed
15 below the surface of the ground and designed or constructed in such a manner as to:

- 16 (1) effectively lower a seasonal high water table; ~~or~~ **and**
17 (2) prevent movement of subsurface water into a soil absorption system site.

18 Interceptor drains, perimeter drains, and segment drains are types of subsurface drainage systems.

19
20 *(Indiana Department of Health; 410 IAC 6-8.3-49; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
21 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

22
23 **410 IAC 6-8.3-50 "Technology new to Indiana" or "TNI" defined**

24 **Authority: IC 16-19-3-4**

25 **Affected: IC 16-19-3-4**

26
27 Sec. 50. "Technology new to Indiana" or "TNI" means on-site sewage treatment or disposal methods, processes, or
28 equipment not described in this rule that have been approved by the department in accordance with ~~section 52(h) of this rule~~ **IC 16-**
29 **19-3-27.5.**

30
31 *(Indiana Department of Health; 410 IAC 6-8.3-50; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
32 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

33
34 **410 IAC 6-8.3-50.1 "Temporary Benchmark" defined**

35 **Authority: IC 16-19-3-4**

36 **Affected: IC 16-19-3-4**

37
38 Sec. 50.1. "Temporary Benchmark" means any object whose actual elevation, or an arbitrarily assumed elevation
39 of said object, is used as a point of reference until completion of the project.

40
41 *(Indiana Department of Health; 410 IAC 6-8.3-50.1)*

42
43 **410 IAC 6-8.3-50.2 "Tiny House" defined**

44 **Authority: IC 16-19-3-4**

45 **Affected: IC 16-19-3-4**

46
47 Sec. 50.2. "Tiny House" means a structure used as a dwelling that is four hundred (400) square feet or less in floor
48 area, not including lofts.

49
50 *(Indiana Department of Health; 410 IAC 6-8.3-50.2)*

51
52 **410 IAC 6-8.3-50.3- "Upgraded Piping" defined**

1 Authority: IC 16-19-3-4

2 Affected: IC 16-19-3-4

3
4 Sec. 50.3. “Upgraded Piping” means:

5 (1) Waterworks grade ductile iron pipe with tyton or mechanical joints; or

6 (2) PVC pressure sewer pipe with an SDR rating of twenty-six (26) or less with compression gasket joints.

7
8 *(Indiana Department of Health; 410 IAC 6-8.3-50.3)*

9
10 410 IAC 6-8.3-50.4 “Voluntary” defined

11 Authority: IC 16-19-3-4

12 Affected: IC 16-19-3-4

13
14 Sec. 50.4. “Voluntary” means an owner’s intentional or deliberate action to modify or improve a dwelling or
15 residential outbuilding.

16
17 *(Indiana Department of Health; 410 IAC 6-8.3-50.5)*

18
19 410 IAC 6-8.3-50.5 “Watertight” defined

20 Authority: IC 16-19-3-4

21 Affected: IC 16-19-3-4

22
23 Sec. 50.5. “Watertight” means that water or effluent cannot leak into or out of the structure except through piping
24 in the designated pipe penetration ports or connectors. Pipe penetrations or connections shall result in a connection which
25 does not allow liquid to flow around the pipe penetration. Results of watertightness testing, as specified in IAPMO/ANSI
26 Z1000-2019 9.1 may be provided to confirm watertightness of new tanks. For existing tanks, the water test procedure as
27 outlined in IAPMO/ANSI Z1000-2019 9.1.3 may be used for watertightness testing. For new or existing distribution boxes, a
28 visual examination should be completed.

29
30 *(Indiana Department of Health; 410 IAC 6-8.3-50.4)*

31
32 410 IAC 6-8.3-51 Administrative authority

33 Authority: IC 16-19-3-4

34 Affected: IC 16-19-3-4; IC 16-19-3-27.8; IC 16-41-25-10; IC 16-41-25-11

35
36 Sec. 51. (a) This rule shall be administered by the local boards of health a local health department through their health
37 officer and the health officer's authorized representatives.

38 (b) Each local health department residential on-site sewage system permit program is subject to review by the department.
39 A review may include, but not be limited to, a review of the permits issued, supporting documentation, and a review of on-site
40 sewage system installations.

41 (c) In accordance with IC 16-41-25-10 and IC 16-41-25-11, the department or its agent, or the health officer or the health
42 officer's agent, shall be permitted to enter upon all properties at the proper time for the following purposes necessary to achieve
43 compliance with this rule:

44 (1) Inspection.

45 (2) Observation.

46 (3) Measurement.

47 (4) Sampling.

48 (5) Testing.

49 (d) A local ordinance is not considered more stringent than this rule if it is in accordance with IC 16-19-3-27.8.

50
51 *(Indiana Department of Health; 410 IAC 6-8.3-51; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
52 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; filed Feb 27, 2024, 10:34 a.m.: 20240327-IR-410220395FRA; readopted*
53 *filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

1
2 **410 IAC 6-8.3-52 General sewage disposal requirements**

3 **Authority: IC 16-19-3-4**

4 **Affected: IC 16-19-3-4; IC 16-41-25**

5
6 Sec. 52. (a) No person shall throw, run, drain, seep, or otherwise dispose into any of the surface waters or groundwaters of
7 this state, or cause, permit, or suffer to be thrown, run, drained, allowed to seep, or otherwise disposed into those waters, organic or
8 inorganic matter from a dwelling or residential on-site sewage system that would cause or contribute to a health hazard or water
9 pollution.

10 **(b) In the event of a residential on-site sewage system failure the local health officer may require the residence and**
11 **the residential outbuilding, if applicable, to make a direct connection to a sanitary sewer, if the sanitary sewer is available**
12 **within three hundred (300) feet of the affected property line and is available for connection at a construction cost and**
13 **connection fee estimated not to exceed one hundred fifty percent (150%) of the cost estimated for installing an on-site**
14 **sewage system to serve the residence or residential outbuilding.**

15 ~~(b)~~ (c) The:

- 16 (1) design;
17 (2) construction;
18 (3) installation;
19 (4) location;
20 (5) maintenance; and
21 (6) operation;

22 of residential on-site sewage systems shall comply with the provisions of this rule.

23 ~~(c)~~ (d) All residential on-site sewage systems utilizing sanitary privies shall conform to department bulletin SE 11, "The
24 Sanitary
25 Vault Privy", 2021 Edition.

26 ~~(d)~~ (e) A dwelling that is not connected, or cannot be connected, to a sanitary sewerage system shall be provided with: a
27 ~~residential on-site sewage system that includes a septic tank and a soil absorption system that has not failed.~~

28 **(1) Residential on-site sewage system in compliance with this rule that includes:**

29 **(A) A septic tank and a soil absorption system that is not in failure; or**

30 **(B) A sewage holding tank in compliance with IC 16-41-25-9 and this rule; or**

31 **(C) A sanitary vault privy installed in compliance with Bulletin S.E. 11, 2021. A sanitary vault privy may**
32 **be used as the sole method of sewage disposal only if the dwelling or residential outbuilding does not have**
33 **interior plumbing, including fixtures, water lines, waste collection piping, or residential drains. A**
34 **sanitary vault privy may also be used in conjunction with another type of on-site sewage system; or**

35 **(2) An onsite residential sewage discharging disposal system in compliance with IC 13-18-12-9(d).**

36 **(f) A cesspool or a drywell, with or without a septic tank, is not a suitable means of residential sewage disposal.**

37 ~~(e)~~ A temporary sewage holding tank is an alternative method of sewage disposal subject to the written approval of the
38 department, except as provided in subsection (f). A temporary sewage holding tank shall not be used as a primary means of
39 residential sewage disposal except:

40 (1) where necessary to prevent continued discharge of sewage from a failed existing residential on-site sewage system;

41 (2) when soil conditions exist that preclude the prompt construction of a soil absorption system on a site that has already
42 received a construction permit; or

43 (3) where the holding tank is operated by a conservancy district, sewer district, private utility, or municipality as part of its
44 sewage disposal plan, or for not more than one (1) year while connection to a sanitary sewer is being secured. This one (1)-
45 year time frame may be extended upon documentation of satisfactory operation of the holding tank.

46 ~~(f)~~ A temporary sewage holding tank may be approved by the local health department:

47 (1) as a temporary storage facility where occupancy of the home must continue while an existing residential on-site sewage
48 system is being replaced or renovated; or

49 (2) until soil conditions permit the installation of a soil absorption system for which a construction permit has been issued.

50 (g) If any conditions preclude the installation of a residential on-site sewage system as described in this rule, the local board
51 of health **health department** may not approve the use of other residential on-site sewage system technology unless written approval
52 from the department is:

- 1 (1) issued, under subsection (h), for local health departments to issue construction permits for the use of the technology;
2 or
3 (2) obtained for specific applications.

4 (h) In order to permit development of new or more efficient sewage treatment or disposal processes, ~~the department may~~
5 ~~approve the installation of experimental and TNI equipment, facilities, or pollution control devices for which extensive experience~~
6 ~~or records of use have not been developed in Indiana. The applicant for the approval must submit evidence of sufficient clarity and~~
7 ~~conclusiveness to convince the department that the proposal has a reasonable and substantial probability of satisfactory operation~~
8 ~~without failure~~ **TNI may be approved in accordance with IC 16-19-3-27.5.**

9 (i) No portion of ~~the any~~ residential on-site sewage system or its associated drainage system, **a sewage holding tank, or a**
10 **sanitary vault privy** shall be constructed upon property other than that from which the sewage originates unless ~~easements an~~
11 **easement, or a declaration of an on-site sewage system easement if both properties are owned by the same person**, which ~~grant~~
12 **grants** permission for the construction and access for system maintenance, ~~have has~~ been obtained for that property and ~~have has~~
13 been legally approved and recorded by the proper authority or commission.

14 (j) Residential on-site sewage systems shall not be used for the disposal of water from:

- 15 (1) roof drains;
16 (2) foundation drains;
17 (3) swimming pool main drains;
18 (4) hot tub drains; or
19 (5) area drains.

20 These sewage systems shall also not be used for the disposal of chemical wastes in quantities that would pollute groundwater or
21 inhibit solids settling or digestion in the septic tank.

22 (k) A jetted bathtub with a capacity of greater than one hundred twenty-five (125) gallons shall be treated as an extra
23 bedroom for the on-site sewage system sizing requirements of this rule.

24 **(l) An existing residential on-site sewage system may be considered for connection or reconnection to a new or**
25 **replacement dwelling or residential outbuilding if:**

26 **(1) The system is inspected as described in section 54.1 and found to consist minimally of an on-site sewage system**
27 **as described in this rule that is not in failure and is not malfunctioning;**

28 **(2) Either:**

29 **(A) the original system installation was permitted through the local health department and the permit file**
30 **contains sufficient information to verify system location, system design, and system sizing are compliant**
31 **with the rule in place at the time of the system installation; or**

32 **(B) an installer or inspector develops a plan of the site and system, a soil scientist completes an on-site soil**
33 **evaluation, and the system is shown to be compliant with the rule in place at the time of the system**
34 **installation; and**

35 **(3) The existing system is appropriately sized for the structure to be served.**

36 **(A) If the connection or reconnection is due to involuntary events, the local health department may utilize**
37 **their best judgment for the soil absorption field when approving a connection or reconnection to an**
38 **existing system; or**

39 **(B) If the connection or reconnection is due to voluntary events, the system being connected to shall meet**
40 **the requirements of this rule; and**

41 **(4) A construction permit for connection or reconnection to an existing on-site sewage system shall be obtained**
42 **prior to the start of construction of the residence or residential outbuilding.**

43
44 *(Indiana Department of Health; 410 IAC 6-8.3-52; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; filed Apr 9,*
45 *2014, 9:51 a.m.: 20140507-IR-410130350FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; filed*
46 *Feb 27, 2024, 10:34 a.m.: 20240327-IR-410220395FRA)*

47
48 **410 IAC 6-8.3-52.1 Professional standards for on-site sewage system installers**

49 **Authority: IC 16-19-3-4**

50 **Affected: IC 16-19-3-4**

1 **Sec. 52.1 (a) All on-site sewage system installers shall abide by all associated requirements in state statutes, rules,**
2 **and local ordinances regarding on-site sewage systems.**

3 **(b) An installer shall register with the local health department if they wish to install, expand, replace, alter, repair,**
4 **or abandon any residential on-site sewage system. Registration requires:**

5 **(1) Applying for installer registration on a form provided by the local health department; and**

6 **(2) If the local health department requires competency testing,**

7 **(A) Passing an examination offered by the department or the local health department; or**

8 **(B) Passing an examination offered by another entity approved by the department or the local health**
9 **department; or**

10 **(C) Providing proof of registration in another Indiana county and a certificate issued by the Indiana**
11 **Onsite Wastewater Professional Association (IOWPA) in accordance with IC 16-41-25-12(b).**

12 **(c) A registered installer has responsible charge for the work being performed on the on-site sewage system.**

13 **(d) An installer who only abandons on-site sewage systems is exempt from all competency testing.**

14 **(e) A lapse of certification or registration or repeated violation of any state statute, rules, or an ordinance**
15 **pertaining to on-site sewage systems may result in revocation of registration or denial of registration renewal by the local**
16 **health officer.**

17
18 **410 IAC 6-8.3-53 Construction permits**

19 **Authority: IC 16-19-3-4; IC 16-41-25-1**

20 **Affected: IC 16-19-3-4; IC 16-41-25-1**

21
22 **Sec. 53. (a) For a dwelling or place of residence that will not be connected to a sanitary sewerage system, the owner, or agent of**
23 **the owner, shall obtain a written construction permit, signed by the health officer, for construction of a residential on-site sewage**
24 **system prior to the:**

25 **(1) start of construction of a residence;**

26 **(2) placement of a manufactured home, modular home, or mobile home;**

27 **(3) construction or placement of a residential outbuilding that will include plumbing, or the addition of plumbing to an**
28 **existing residential outbuilding;**

29 **(4) replacement of a dwelling, place of residence, or residential outbuilding that includes plumbing;**

30 **(5) reconstruction of a dwelling, place of residence, or residential outbuilding that includes plumbing;**

31 **(6) expansion or remodeling of a residence that may increase the number of bedrooms or the DDF;**

32 **(7) ~~installation of any component of an on-site sewage system or the~~ addition to, alteration of, **expansion of,****
33 **replacement of, or repair of an existing residential on-site sewage system; ~~or~~**

34 **(8) installation of an on-site sewage system for an existing residence that did not previously have a residential on-site sewage**
35 **system as defined in section 32 of this rule; or**

36 **(9) abandonment of an on-site sewage system or a septic tank.**

37 **(b) A local health department shall not issue a construction permit for a new on-site sewage system, the repair of an on-site**
38 **sewage system, or the replacement of a soil absorption system using TNI without the written approval of the department, except for**
39 **the provisions of section 52(g) of this rule.**

40 **(c) The approval of a site by the local plan commission or the county recorder does not constitute approval by the local**
41 **health officer.**

42 **(d) ~~The application for~~ **Prior to the issuance of a permit, an application for** a construction permit shall be made to ~~on~~**
43 **a form provided by the local health department. ~~The~~ **A complete** application shall contain, or include as attachments, the**
44 **following:**

45 **(1) ~~A completed form provided by the local health department containing information on~~ the following:**

46 **(A) The name, ~~and~~ address, and contact information of the of the property owner and agent, if applicable.**

47 **(B) The address, if available, or the specific location of the property.**

48 **(C) The number of bedrooms and bedroom equivalents ~~or the manufacturer's occupancy rating for a~~**
49 **recreational vehicle.**

50 **(D) The inclusion of pumps, garbage grinders, water softeners, self-cleaning toilets, or other water using**
51 **appliances that affect the waste strength characteristics or volume from the dwelling or residential**

1 **outbuilding in the residential plumbing.**

2 **(2) A floor plan of the residence showing all rooms and all levels.**

3 **(3) A plat or legal description of the property.**

4 ~~(4)~~ **(4)** The on-site soils evaluation, as outlined in section 56 of this rule, for the site where the residential soil absorption system
5 is to be constructed.

6 ~~(5)~~ **(5)** Written plans of **the site and residential on-site sewage system created by a designer with sufficient clarity** that it
7 can be verified that the design of the residential on-site sewage system shall comply with the provisions of this rule,
8 **including, but not limited to:**

9 **(A) The location and type of water supply source to serve the dwelling or residential outbuilding.**

10 **(B) A detailed list of components and materials to be included in the on-site sewage system.**

11 **(C) The location and elevation assigned to the temporary benchmark.**

12 **(D) The location of all soil borings and pits and the location of the minimum two (2) fixed reference
13 points.**

14 **(E) Sufficient elevations to determine and confirm:**

15 **(i) the slope of all sewers;**

16 **(ii) the total dynamic head for effluent pump sizing;**

17 **(iii) the soil absorption field is placed along the contour of the site;**

18 **(iv) the maximum installation depth of the soil absorption field;**

19 **(v) the depth of surface drainage from grade and from the invert of the adjacent trench bottom
20 elevation; and**

21 **(vi) the slope of the subsurface drainage tile throughout the subsurface drain and the outlet.**

22 **(F) All applicable separation distances to items listed in Table I of section 57 from any on-site sewage
23 system component.**

24 **(G) Landscape features in the general vicinity of the proposed on-site sewage system that would impact
25 the system layout, installation or function.**

26 ~~(6)~~ **(6)** Any ~~Other~~ **other** information deemed necessary by the health officer **in order to verify compliance with this rule
27 for the on-site sewage system.**

28 (e) When site limitations and soil information for the site have been determined, the owner is responsible for the residential
29 on-site sewage system design that:

30 (1) addresses the demands of the site in accordance with this rule; and

31 (2) will meet local health department approval.

32 (f) The local health department may require scaled drawings of the site and residential on-site sewage system as part of the
33 application process.

34 (g) In accordance with IC 16-41-25-1(a), the local health department shall issue or deny, in writing to the owner, a residential
35 on-site sewage system construction permit within thirty (30) days of receipt of an application and plan submittal.

36 (h) No construction on the residential on-site sewage system may take place if the residential on-site sewage system site is
37 disturbed or altered after the on-site evaluation by the addition of fill material, other than construction necessary for the residential
38 on-site sewage system, or by cutting, scraping, ~~compaction~~ **compacting**, or the ~~removal~~ **removing** of soil, until a new on-site
39 evaluation has been conducted and a modified construction permit has been issued.

40 (i) A soil absorption system replacement for a residential on-site sewage system shall meet or exceed the minimum
41 provisions of this rule. When a replacement **soil absorption field** is necessary due to on-site sewage system failure, and if the
42 replacement soil absorption system cannot meet all of the provisions of this rule, deviations to this rule for a soil absorption system
43 replacement may be made in accordance with the best judgment of the local ~~department of health~~ **department**, ~~based on the
44 following:~~

45 **(1) Best judgment of the local health department shall be based on the following:**

46 ~~(1)~~ **(A)** Limitations of the site.

47 ~~(2)~~ **(B)** Written results of an ~~evaluation of the operational status of all of the~~ **inspection of the existing** on-site
48 sewage system ~~components as described in section 54.1 and which identifies the probable reasons for system
49 failure.~~

50 ~~(3)~~ **(C)** Written results of an on-site soils evaluation.

51 ~~(2)~~ **(2)** Soil absorption system replacements for a residential on-site sewage system ~~shall not be:~~ **utilizing best judgment may
52 have trenches constructed to a maximum depth of forty-eight (48) inches below final grade, if necessary, and if the site and**

1 soil conditions allow.

2 ~~(1) (3) Soil absorption system replacement shall not be~~ contrary to sections 52(a) and 60(h) of this rule; ~~and~~
3 ~~(2) constructed to a depth greater than forty eight (48) inches below final grade in any portion of a subsurface soil~~
4 ~~absorption system.~~

5 **(4) Deviations to this rule for soil absorption system replacement shall be identified and recorded on the construction**
6 **permit issued for the replacement soil absorption system.**

7 **(j) In the case of a residential on-site sewage system failure, the local health department may require an approved**
8 **aeration unit, in compliance with section 60(h), for aerobic digestion after the septic tank and prior to the soil absorption**
9 **field, if high strength waste is confirmed to be a contributing factor to the failure. The aeration unit manufacturer shall**
10 **confirm that the specified unit will reduce the waste strength below that of high strength waste. No sizing reduction for the**
11 **septic tank or soil absorption field shall be allowed for the use of an aeration unit in this manner. The aeration unit may not**
12 **be required if the homeowner agrees to an appropriate plan approved by the local health officer to reduce the waste**
13 **strength in another manner.**

14 (k) If it is determined that the proposed on-site sewage system design does not meet the minimum requirements of this rule,
15 the permit may be denied in accordance with section 55(e) of this rule.

16 (l) The permittee shall notify the health officer or the health officer's designee when the work is ready for final inspection:

17 (1) using the procedure published by the local ~~board of health~~ **health department**; or

18 (2) at least forty-eight (48) hours or two (2) working days before any subsurface portions are to be covered if the local ~~health~~
19 ~~board~~ **health department** has not published inspection procedures.

20 (m) The construction permit for a residential on-site sewage system in violation of this section may be revoked by the health
21 officer in accordance with section 55(e) of this rule. Requirements of permits issued for the construction of residential on-site sewage
22 systems shall not be considered fulfilled until the installation is completed **in compliance with this rule and with the approved**
23 **construction plan and approved by** ~~to the satisfaction of~~ the health officer or the health officer's duly authorized representative.

24 (n) Individual lots in subdivisions designed to utilize residential on-site sewage systems, for which the plats were approved
25 by the local plan commission, county health department, or county recorder, and recorded prior to December 21, 1990, are exempt
26 from the provisions of sections 70(b)(~~8~~) **(7)** and 72(b)(~~7~~) **(6)** of this rule if the soils on the individual lot have characteristics that would
27 allow the soil to be rated as slight or moderate in accordance with guidelines as set forth in the soils manuals and handbooks of the
28 NRCS. The soil absorption system to serve each lot that is exempted by this section shall meet the sizing criteria as follows:

29

30 Permeability Rating	Square Feet Needed in Trench Bottom per Bedroom
31 2 in. to 6 in. per hour	250 square feet per bedroom
32 1 in. to 2 in. per hour	330 square feet per bedroom

33
34 (o) Individual lots in subdivisions designed to utilize residential on-site sewage systems, the plats for which were approved
35 by the local plan commission and recorded prior to December 21, 1990, will be granted an exemption by the department from the
36 provisions of section 70(b)(~~8~~) **(7)** of this rule if the health officer of the county in which the development is located certifies to the
37 department, in writing, that:

38 (1) the health department has reviewed and recommended approval to the local plan commission, either verbally, in writing,
39 or by other locally acceptable routine procedure, when the subdivision plat was being considered by that agency; and

40 (2) no lots in the subdivision currently have on-site sewage system failures as defined in section 33 of this rule.

41 The certification must be accompanied by a brief description of the on-site sewage system approved for each lot for which
42 exemption is requested, including information on the design of the on-site sewage system, as well as information on the type of soil
43 on the site. An affirmative response to subdivisions (1) and (2) must be included in the certification for the exemption to the provisions
44 of section 70(b)(~~8~~) **(7)** of this rule to be granted.

45
46 *(Indiana Department of Health; 410 IAC 6-8.3-53; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR- 410120156FRA; readopted filed*
47 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; filed Feb 27, 2024, 10:34 a.m.: 20240327- IR-410220395FRA)*

48
49 **410 IAC 6-8.3-54 Operating permits**

50 **Authority: IC 16-19-3-27**

51 **Affected: IC 16-19-3-4**

1
2 Sec. 54. (a) Local health departments may require written operating permits ~~in accordance with IC 16-19-3-27(b)(2)~~ for
3 **any on-site sewage system for which a construction permit is issued** as follows:

4 (1) A written operating permit issued by a local health department shall be signed by the health officer.

5 (2) An operating permit shall be renewed as follows:

6 (A) At least once every three (3) years for on-site sewage systems having **mechanical components in addition**
7 **to a septic tank and a soil absorption field. Mechanical components include, but are not limited to,**
8 **effluent pumps, floats, control panels, control sensors, blowers and flush valves,** ~~other than a septic tank,~~
9 ~~requiring scheduled inspection and maintenance.~~

10 (B) At least once every five (5) years for ~~all gravity fed~~ **other** on-site sewage systems **that consist of only a septic**
11 **tank and a soil absorption field with no mechanical components.**

12 (C) **At least once every two (2) years for a sewage holding tank or sanitary vault privy.**

13 (b) An operating permit shall identify all components of an on-site sewage system requiring inspection and maintenance.

14 (c) The records for an operating permit requiring scheduled inspection and maintenance shall contain the following:

15 (1) The name, address, and telephone number of the service company contracted to perform inspection and maintenance.

16 (2) A description of the operation and maintenance document or documents used for scheduled inspection and maintenance.

17 (d) The owner shall provide the local health department with the following:

18 (1) Written documentation of all scheduled and unscheduled inspection and maintenance within one (1) month of the date
19 performed.

20 (2) A copy of the inspection and maintenance contract.

21 (e) **The local health department may require the system to be inspected as described in section 54.1 detailing the**
22 **functionality of the system components and maintenance concerns prior to operating permit renewal.**

23 (f) **If a service contract is discontinued for any reason, the owner or the service provider shall contact the local**
24 **health department and a new service contract for operation and maintenance shall be provided to the local health**
25 **department within one (1) month of lapse in contract.**

26 (g) ~~(e)~~ The operating permit for a residential on-site sewage system in violation of subsection (d) may be revoked by the health
27 officer in accordance with section 55(e) of this rule.

28
29 *(Indiana Department of Health; 410 IAC 6-8.3-54; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep*
30 *26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*

31
32 **401 IAC 6-8.3-54.1 Requirements for inspection of existing on-site sewage systems**

33 **Authority: IC 16-19-3-4**

34 **Affected: IC 16-19-3-4**

35
36 **Sec. 54.1. (a) When an on-site sewage system is to be inspected for determinations made in subsection 52(l) for**
37 **connection or reconnection to an existing on-site sewage system, for use of best judgment as described in subsection 53(i),**
38 **for operating permit renewal as described in subsection 54(e), or for other inspections that will be submitted to the local**
39 **health department for inclusion in the property file, the requirements of this section shall apply.**

40 (b) **Prior to inspection of an existing on-site sewage system, the inspector shall obtain a copy of the on-site sewage**
41 **system construction permit and operating permit files, if available, including, but not limited to the permit(s), construction**
42 **plan, final inspection documentation, and any complaint information related to the on-site sewage system being inspected**
43 **from the local health department.**

44 (c) **The system must minimally include a residential on-site sewage system as defined in this rule.**

45 (1) **If the system being inspected does not contain, at a minimum, a residential on-site sewage system as specified**
46 **in section 52(e)(1), the inspector shall document that the system does not meet the minimum requirements of this**
47 **rule.**

48 (2) **The system being inspected shall be evaluated with respect to the appropriate on-site sewage system rule that**
49 **was in place at the time of the system permitting and installation.**

50 (3) **If the system was installed prior to May 26, 1978, there is no rule with which to comply, but the system shall**
51 **minimally consist of a system as described in section 52(e)(1) of this section.**

52 (d) **Each component of the on-site sewage system shall be thoroughly inspected and documented, including but**

1 not limited to:

- 2 (1) The septic tank, holding tank, or privy vault shall be pumped by a licensed waste hauler and inspected for:
- 3 (A) working capacity;
- 4 (B) watertightness and root intrusion;
- 5 (C) concrete corrosion or tank deformation;
- 6 (D) functional, intact inlet baffle;
- 7 (E) functional, intact outlet baffle or outlet filter assembly;
- 8 (F) functional and safe high water alarm and electrical box in a holding tank; and
- 9 (G) riser to grade, securely fastened lid, and secondary childproof plug, if applicable.
- 10 (2) The dosing tank, if present, should be pumped if needed, and shall be thoroughly inspected and documented,
- 11 including but not limited to:
- 12 (A) working capacity;
- 13 (B) watertightness and root intrusion;
- 14 (C) concrete corrosion or tank deformation;
- 15 (D) riser to grade, securely fastened lid, and secondary childproof plug, if applicable; and
- 16 (E) functional and safe effluent pump, pump controls, high water alarm and electrical box. If the pump
- 17 is removed during the inspection, the manufacturer and model of the pump should be documented.
- 18 (3) If there is a distribution box, the box should be opened for inspection. The box should be visually inspected
- 19 and documented, including but not limited to:
- 20 (A) watertightness and root intrusion;
- 21 (B) concrete corrosion, box deformation or cracking;
- 22 (C) functional, intact inlet baffle, with vent hole, if needed;
- 23 (D) the number of outlets in use;
- 24 (E) invert of the outlets all at the same level; and
- 25 (F) the presence of solids or soil in the distribution box.
- 26 (4) The soil absorption system shall be thoroughly observed and traversed. The following, at a minimum, shall be
- 27 documented:
- 28 (A) soft or wet areas;
- 29 (B) lush vegetation or areas lacking vegetation;
- 30 (C) depth of soil cover over the soil absorption system and final grading to promote surface water runoff;
- 31 (D) approximate maximum depth of installation from grade;
- 32 (E) signs of disturbance, construction, or compaction in the soil absorption system or dispersal area; and
- 33 (F) sources of water directed toward the soil absorption system area such as downspouts, sump pump
- 34 discharge, or hard surface runoff.
- 35 (5) Drainage including surface diversion and subsurface drainage shall be inspected, including but not limited to:
- 36 (A) The need for surface diversion and the presence or absence of sufficient diversion of surface water;
- 37 (B) The presence or absence of subsurface drainage; and
- 38 (C) Observation of the subsurface drainage outlet, if accessible.
- 39 (6) Areas of solid piping should be observed for any evidence of crushed piping and wet areas which could
- 40 indicate a broken pipe.
- 41 (7) All applicable separation distances shall be confirmed.
- 42 (8) Information obtained from the owner or owner's agent or from interior inspection of the structure of any
- 43 sump pump, condensate drain, or other non-wastewater source of water discharging to the on-site sewage system.
- 44 (e) Within thirty (30) days of a completed inspection, a written report of the system evaluation shall be submitted
- 45 to the local health department including, but not limited to:
- 46 (1) A sketch of the site and system indicating any changes to the system design from the construction plan in the
- 47 permit file, areas of concern, inadequate separation distances, and other information as necessary to confirm
- 48 compliance with this rule. A copy of the original construction plan may be used if it is accurate.
- 49 (2) Indication of system failure, as defined in this rule, or malfunction of any component, if observed.
- 50

51 *(Indiana Department of Health; 410 IAC 6-8.3-54.1)*

52

1 **410 IAC 6-8.3-55 Violations; permit denial and revocation**

2 **Authority: IC 16-19-3-4**

3 **Affected: IC 4-21.5**

4
5 Sec. 55. (a) Should a residential on-site sewage system fail, the failure shall be corrected by the owner within the time
6 limit set by the health officer.

7 (b) If any component of a residential on-site sewage system is found to be:

- 8 (1) defective;
9 (2) malfunctioning; or
10 (3) in need of service;

11 the health officer may require the repair, replacement, or service of that component. The repair, replacement, or service
12 shall be conducted within the time limit set by the health officer.

13 (c) Any person found to be violating this rule may be served by the health officer with a written order stating the nature
14 of the violation and providing a time limit for satisfactory correction thereof.

15 (d) After receiving an order in writing from the local ~~board of health~~ **health department** or the health officer, the owner
16 of the property shall comply with the provisions of this rule as set forth in the order and within the time limit specified therein.
17 The order shall be served on the owner or the agent of the owner, but may be served on any person who, by contract with the
18 owner, has assumed the duty of complying with the provisions of an order.

19 (e) The health officer may deny an application for a construction or operating permit, or may revoke a permit previously
20 issued, for reasons including, but not limited to, any of the following:

21 (1) An on-site sewage system design does not meet the minimum requirements of this rule or local sewage ordinances, or
22 both.

23 (2) Failure to comply with any provisions of this rule or local sewage ordinances, or both.

24 (3) Failure to comply with limitations, terms, or conditions of a permit that has been issued.

25 (4) Failure to disclose all the facts relevant to the construction and use of an on-site sewage system.

26 (5) Misrepresentation.

27 (6) Any change relating to the design, construction, or use of the on-site sewage system not approved, in writing, by the
28 local health department.

29 (f) The written denial or revocation shall state the following:

- 30 (1) The basis for the denial or revocation.
31 (2) The method or methods available for compliance, if applicable.
32 (3) The time frame for compliance, if applicable.
33 (4) That the owner has the right to appeal the denial or revocation.
34 (5) The procedure for registering any such appeal.

35 (g) The parties involved may agree to use the appeal procedures set forth in IC 4-21.5, the Administrative Orders and
36 Procedures Act.

37
38 *(Indiana Department of Health; 410 IAC 6-8.3-55; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; errata filed Dec*
39 *12, 2012, 2:16 p.m.: 20121226-IR-410120156ACA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA;*
40 *readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

41
42 **410 IAC 6-8.3-56 On-site evaluation**

43 **Authority: IC 16-19-3-4**

44 **Affected: IC 16-19-3-4**

45
46 Sec. 56. (a) Before issuance of any permit for construction of a residential on-site sewage system or the replacement or
47 alteration of a soil absorption system, an on-site evaluation, which shall include a description of the soil profile, shall be conducted.

48 (b) Properties of the soil at each site shall be described by a **registered professional** soil scientist using the guidelines set
49 forth in the soil manuals, technical bulletins, and handbooks of the NRCS.

50 **(c) A minimum of three (3) soil profile descriptions shall be completed in the area of the soil absorption field and**
51 **shall provide good coverage of the entire soil absorption field area.**

52 ~~(c)~~ **(d)** Soil profile information shall be recorded:

- 1 (1) to a depth of five (5) feet; or
 2 (2) until a layer is encountered that cannot be readily penetrated;
 3 whichever is shallower.
 4 ~~(d)~~ (e) The on-site evaluation shall be conducted before application and plan submittal.
 5 ~~(e)~~ (f) The information in the written on-site soils evaluation report shall include the following:
 6 (1) For topographic information, the following:
 7 (A) The slope and slope aspect.
 8 (B) Surface drainage characteristics and patterns including swales, ditches, and streams.
 9 (C) The proposed or existing location of house and well or other water supply.
 10 (D) The location of other major features or structures.
 11 (E) The location of soil evaluation sites **in relation to a minimum of two (2) fixed reference points** and
 12 appropriate soil type boundaries.
 13 (F) The topographic position of the site.
 14 (2) For soil characteristics, the following:
 15 (A) Parent material.
 16 (B) The approximate depths of soil horizons.
 17 (C) The soil color, structure, and texture at each horizon.
 18 (D) The horizon designation for each horizon.
 19 (E) The depth to any layer that has a soil loading rate greater than seventy-five hundredths (0.75) gallons per day
 20 per square foot or less than twenty-five hundredths (0.25) gallons per day per square foot.
 21 (F) The depth to seasonal high groundwater as indicated by soil wetness characteristics.
 22 (G) The depth to bedrock.
 23 (H) The soil consistence at each horizon.
 24 (I) The soil effervescence at each horizon.
 25 (J) The percent coarse fragments at each horizon.
 26 (K) The percent clay at each horizon, by field estimation, for any horizon where the percent coarse fragments is
 27 greater than thirty-five percent (35%) by volume.
 28 (L) The presence or absence of roots.
 29 (M) Frost penetration depth, if applicable.
 30 ~~(f)~~ (g) When soil characteristics are to be used for calculations for the depth of a subsurface drainage system, the
 31 following information shall be recorded to a depth of eighty (80) inches:
 32 (1) The information required in ~~subsection~~ **subdivision** ~~(e)~~(f)(2).
 33 (2) Particle size family.
 34 **(h) All on-site soil evaluation reports created from the evaluation of the soil profiles that are to be used for**
 35 **obtaining an on-site sewage system construction permit shall be signed by the registered professional soil scientist and**
 36 **submitted directly to the local health department by the soil scientist.**

37
 38 *(Indiana Department of Health; 410 IAC 6-8.3-56; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
 39 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*

40
 41 **410 IAC 6-8.3-57 Separation distances**

42 **Authority: IC 16-19-3-4**

43 **Affected: IC 16-19-3-4; IC 16-41-25**

44
 45 Sec. 57. (a) All septic tanks, dosing tanks, lift stations, and soil absorption systems shall be located in accordance with Table I
 46 as follows:
 47

Table I Separation Distances		
Minimum Distance in Feet from	Septic Tank and Other Treatment Units, Dosing Tank, Lift Station, Sewage	Soil Absorption System

	Holding Tank	
Private water supply well ^{1,2} , subsurface cistern ¹	50	50
Private geothermal well ^{1,2}	50	50
Commercial water supply well ¹	100	100
Commercial geothermal well ¹	100	100
Public water supply well, lake, ^{1, 3, 4} or reservoir ^{1,3,4}	200	200
Other pond, retention pond, lake, or reservoir ³	50	50
Stormwater detention area ^{3, 5}	25	25
River, stream, ditch, or drainage tile ⁶	25	25
Buildings, foundations, slabs, garages, patios, barns, aboveground and belowground swimming pools, retaining walls, closed loop geothermal systems, roads, driveways, parking areas, or paved sidewalks	10 ⁷	10 ⁸
Front, side, or rear lot lines	5	5
Water lines continually under pressure	10	10
Suction water lines	50	50
Sinkhole	25	25
¹ The distances enumerated shall be doubled for soil absorption systems constructed where there exist horizons, layers, or strata within thirty-four (34) inches of the ground surface with a soil loading rate greater than seventy-five hundredths (0.75) gallons per day per square foot as determined from Table IV of section 70(b)(8) (7) of this rule, unless that hazard can be overcome through on-site sewage system design.		
² The separation distance to a private water supply well abandoned in accordance with 312 IAC 13-10-2(e) may be reduced to ten (10) feet.		
³ Measured from the normal or ordinary high water mark.		
⁴ See subsections (b) and (c).		
⁵ Stormwater detention area: area designated for the temporary detention of stormwater, with the outlet located at the lowest elevation of the depression.		
⁶ See section 59(f) of this rule for subsurface drainage system separation.		
⁷ Patios without footers, aboveground swimming pools, and sidewalks may be located within ten (10) feet of a septic tank, as long as no required access points are obstructed.		
⁸ A minimum separation of ten (10) feet is required on all sites.		

(b) A residential on-site sewage system shall not be located within two hundred (200) feet of a public water supply lake or reservoir. However, a residential on-site sewage system that includes secondary treatment may be less than two hundred (200) feet, but not less than fifty (50) feet, from the normal or ordinary high water mark of the lake or reservoir if it:

- (1) meets the minimum requirements of section 60(h)(1) through 60(h)(3) of this rule; or
- (2) is a system component independent of the soil absorption field that meets the effluent quality requirements of NSF/ANSI for certification under Standard 40 as a Class I plant, and that is approved by the department under the provisions of section 52(h) of this rule.

(c) A residential on-site sewage system approved under the provisions of subsection (b) must be maintained for the life of the system through an operating permit issued under the provisions of section 54 of this rule.

(d) Sewers shall not be located within fifty (50) feet of a water supply well or subsurface pump suction line, except as follows:

- (1) Sewers constructed of ~~waterworks grade ductile iron pipe with tyton or mechanical joints, or PVC pressure sewer pipe with an SDR rating of twenty-six (26) or less with compression gasket joints,~~ **upgraded piping** may be located within the fifty (50) foot distance.
- (2) In no case shall sewers be located closer than twenty (20) feet to dug and bored water supply wells, or closer than ten

- (10) feet to drilled and driven water supply wells or subsurface pump suction lines.
- (e) Water lines and sewers shall not be laid in the same trench, as follows:
- (1) A horizontal separation of ten (10) feet shall be maintained between water lines and sewers.
 - (2) Where crossings are necessary, a minimum of eighteen (18) inches vertical clearance must be maintained with the water line positioned above the sewer line when possible.
 - (3) When it is impossible to maintain proper horizontal and vertical separation, the sewer shall be constructed of **upgraded piping** of ductile iron pipe with mechanical joints or PVC pressure sewer pipe with an SDR rating of twenty-six (26) or less, having mechanical or compression gasket joints within ten (10) feet of the water line with the water line positioned above the sewer line when possible. The sewer shall be pressure tested to assure watertightness prior to back filling.

410 IAC 6-8.3-58 Dispersal area

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 58. (a) A dispersal area is required for a soil absorption system when:

- (1) the soil loading rate used to determine the size of the soil absorption system is five-tenths (0.5) gallons per day per square foot (gpd/ft²) or less; or
- (2) there is a horizon in the upper sixty (60) inches of the profile description with a **restrictive limiting layer**:

- (A) bedrock;
- (B) dense material;
- (C) dense till;
- (D) fragipan or soil with fragile properties; or
- (E) layers transitional to dense till (horizons in a soil developed from Wisconsin glacial till that shows effervescence when treated with a ten percent (10%) hydrochloric acid solution), unless:
 - (i) the on site soils evaluation report shows that the presence of the horizon is not detrimental to the proper functioning of an on site sewage system; and
 - (ii) the determination in item (i) is made using the guidelines as set forth in the soil manuals, technical bulletins, and handbooks of the NRCS guidelines and as approved by the department.

(b) When the conditions in subsection (a) apply, the following requirements shall be met:

- (1) For soil absorption system sites with a slope of one-half percent (1/2%) or less, a minimum dispersal area as described in Table II in subsection (c) shall be maintained on each side of the outside edge of the:
 - (A) outer trench parallel to the length of the trench; or
 - (B) INDOT Specification 23 sand and parallel to the long axis of the elevated sand mound.
- (2) For soil absorption system sites with a slope of greater than one-half percent (1/2%), a minimum dispersal area as described in Table II in subsection (c) shall be maintained on the downslope side of the soil absorption system from the outside edge of the:
 - (A) downslope trench parallel to the length of the trench; or
 - (B) INDOT Specification 23 sand downslope and parallel to the long axis of the elevated sand mound.
- (c) For sites that do not meet the conditions of subsection (a), the minimum dispersal area shall be ten (10) feet. For sites that meet the conditions of subsection (a), the dispersal area shall be as indicated in Table II, as follows:

Table II - Minimum Dispersal Areas ¹ for Soil Absorption Systems	
Slope ≤ 1/2 % ² : On-site sewage system without perimeter drain	One-fourth (1/4) width of soil absorption system ⁵
Slope 1/2 % ³ : On-site sewage system without perimeter drain	One-half (1/2) width of soil absorption system ⁵
Any slope: On-site sewage system with perimeter drain ⁴	Ten (10) feet or the distance to the perimeter drain
¹ No buildings, foundations, slabs, garages, patios, barns, aboveground and belowground swimming pools, retaining walls, roads, driveways, parking areas, or paved sidewalks are allowed in the dispersal area.	

²Dispersal area is located on each side of the outside edge of the outer trench parallel to the length of the trench, or on each side of the outside edge of the sand area and parallel to the long axis of an elevated sand mound.

³Dispersal area is located on the downslope side of the soil absorption system.

⁴For on-site sewage systems with a subsurface perimeter drain without a seasonal high water table, the design and construction of the drain shall meet the requirements of section 59 of this rule.

⁵Dispersal area width shall not be less than ten (10) feet. A dispersal area width of more than twenty-five (25) feet is not required.

(d) Any disturbance within a dispersal area shall not create compacted soil material.

(e) The location of the dispersal area shall meet the following requirements:

(1) A dispersal area shall be located on the property, or adjoining property with easement, except that the easement is not required for lots platted prior to January 1, 2011.

(2) Nothing that would impede the flow of water shall be allowed in a dispersal area. This includes, but is not limited to, the following:

(A) buildings;

(B) foundations;

(C) slabs;

(D) garages;

(E) patios;

(F) barns;

(G) aboveground and belowground swimming pools;

(H) retaining walls;

(I) roads;

(J) driveways;

(K) parking areas;

(L) paved sidewalks;

(M) closed loop geothermal systems; or

(N) other structures.

(3) A dispersal area shall not be located in a closed depression where surface runoff or subsurface water movement will have an adverse effect on on-site soil absorption system performance or in areas subject to ponding.

(4) For soil absorption system sites with a slope of greater than one-half percent (1/2%), no part of the dispersal area may slope toward the soil absorption system.

(Indiana Department of Health; 410 IAC 6-8.3-58; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-59 Drainage

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 59. (a) A surface diversion:

(1) shall be constructed if drainage from an adjoining upslope landscape affects the soil absorption system site;

(2) shall have a positive grade of at least two and four-tenths (2.4) inches per one hundred (100) feet, or a grade of two-tenths percent (0.2%);

(3) shall be of sufficient depth and width to move surface water away from the soil absorption system;

(4) shall be located:

(A) for subsurface trench on-site sewage systems that do not require additional soil cover, at least ten (10) feet from the soil absorption system, as measured from the downslope edge of the surface diversion to the outside edge of the nearest soil absorption system trench;

(B) for subsurface trench on-site sewage systems that require additional soil cover, at least ten (10) feet from the

1 soil absorption system, as measured from the downslope edge of the surface diversion to the upslope edge of the
2 additional soil cover; or

3 (C) for elevated sand mound on-site sewage systems, at least ten (10) feet from the soil absorption system, as
4 measured from the downslope edge of the surface diversion to the upslope edge of the soil cover; and

5 (5) may be used in combination with an on-site subsurface drainage system.

6 (b) When a subsurface drainage system is constructed, it shall be sufficiently deep to lower a seasonal high water table as
7 required in subsection (d) or (e).

8 (c) If the site has a slope of equal to or less than two percent (2%), the subsurface drain shall surround the on-site sewage
9 system. If the site slope exceeds two percent (2%), the subsurface drain may be constructed only on the upslope side of the on-site
10 sewage system.

11 (d) If the seasonal high water table is perched, the subsurface drain trench shall be constructed at least two (2) inches into
12 structureless massive compact clay with firm or very firm consistence, glacial till, or fragipan whenever site and soil conditions
13 permit. When the drain cannot be constructed at least two (2) inches into the structureless massive compact clay with firm or very
14 firm consistence, glacial till, or fragipan, the depth of the drain shall be the following unless calculations are used to determine
15 drain depth:

16 (1) For trench on-site sewage systems, the invert elevation of the subsurface perimeter, interceptor, or segment drain
17 shall be at least thirty-six (36) inches below the invert elevation of any adjacent soil absorption trench bottom.

18 (2) For elevated sand mound on-site sewage systems, the invert elevation of the subsurface perimeter or interceptor drain
19 shall be at least thirty-two (32) inches below existing grade.

20 (e) If drainage calculations are used to determine drain depth, drainage formulas and calculations shall be submitted to
21 the local health department as part of the plan submittal, showing a lowering of the seasonal high water table:

22 (1) for subsurface trench on-site sewage systems, at least twenty-four (24) inches below the trench bottoms in the center
23 of the soil absorption field; or

24 (2) for elevated sand mound on-site sewage systems, at least twenty (20) inches below original grade.

25 (f) Subsurface drainage systems shall be located at soil absorption system sites as follows:

26 (1) All portions of a subsurface drainage system shall be installed at least ten (10) feet from the outside edge of any soil
27 absorption trench.

28 (2) All portions of a subsurface drainage system shall be installed at least ten (10) feet from the outside edge of the
29 INDOT Specification 23 sand.

30 (3) Spacing of subsurface perimeter drains and segment drains installed parallel to the trench lengths along the contour of
31 the site for a subsurface trench system or parallel to the long axis of an elevated sand mound must be less than or equal to
32 sixty-five (65) feet, unless a greater spacing is determined through calculations.

33 (4) The subsurface drain shall not cross any portion of the soil absorption system.

34 (g) The subsurface drain pipe shall be:

35 (1) at least four (4) inches in diameter;

36 (2) slotted; and

37 (3) wrapped with a geotextile fabric with an effective opening size not smaller than two-tenths (0.2) millimeter and not
38 larger than eighty-five hundredths (0.85) millimeter when installed in:

39 (A) sands;

40 (B) loamy sands;

41 (C) sandy loams;

42 (D) fine sandy loams;

43 (E) loams;

44 (F) silt loams; or

45 (G) silts.

46 (h) The subsurface drain trench shall:

47 (1) have a positive slope of at least two-tenths (0.2) foot per one hundred (100) feet when a four (4) inch drain pipe is
48 used;

49 (2) have a positive slope of at least one-tenth (0.1) foot per one hundred (100) feet when a six (6) inch drain pipe is used;
50 and

51 (3) be constructed with no sags **or high points** in the line.

52 (i) A subsurface drain trench installed upslope from a residential on-site sewage system shall be:

- 1 (1) backfilled to final grade with aggregate that meets the minimum requirements of subsection (k); or
 2 (2) filled to within six (6) inches of final grade with aggregate that meets subsection (k) and the final six (6) inches to
 3 final grade with cover soil material.
 4 (j) A subsurface drain trench installed on sides or downslope, and segment drain trenches may be:
 5 (1) backfilled to final grade with aggregate that meets the minimum requirements of subsection (k); or
 6 (2) filled to within six (6) inches of final grade with aggregate that meets the minimum requirements of subsection (k)
 7 and the final six (6) inches to final grade with cover soil material.
 8 (k) The aggregate backfill for subsurface drain trenches shall meet the minimum requirements of:
 9 (1) section 68 of this rule;
 10 (2) washed aggregate with a gradation in the range of INDOT Specification 8 through 11; or
 11 (3) INDOT Specification 23 sand or equivalent.
 12 (l) When INDOT Specification 23 sand is used for backfill, the drainpipe shall be wrapped with a geotextile fabric.
 13 (m) The aggregate used as backfill in the perimeter, interceptor, or segment drain trenches described in subsections (i)(2)
 14 and (j)(2) shall be covered with a geotextile fabric barrier that meets the minimum requirements in section 69 of this rule in such a
 15 manner as to prevent the aggregate from becoming clogged with the earth fill.
 16 (n) The subsurface drain trench and the associated discharge piping shall be constructed to permit water to flow by
 17 gravity throughout its length. No pumps or siphons shall be utilized to effect the movement of the collected water.
 18 (o) Tile outlets shall be provided with rodent guards.

19
 20 *(Indiana Department of Health; 410 IAC 6-8.3-59; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
 21 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
 22

23 **410 IAC 6-8.3-60 Septic tanks: general requirements**

24 **Authority: IC 16-19-3-4**

25 **Affected: IC 16-19-3-4**

26
 27 Sec. 60. (a) Septic tanks shall be:

- 28 (1) watertight and constructed of ~~durable material such as~~ **pre-cast concrete, fiber-reinforced polyester, or**
 29 **thermoplastic material as described in IAPMO Z1000 2019 sections 5, 6 or 7,** ~~fiberglass, polyethylene, or~~
 30 ~~polypropylene;~~ and
 31 (2) protected from corrosion.
 32 (b) Cast in place, concrete block, wood, or metal septic tanks are prohibited.
 33 (c) Every septic tank shall have a minimum capacity below the water line as specified in Table III as follows:
 34

Table III – Required Minimum Capacities for Septic Tanks	
Number of Bedrooms in Dwelling	Capacity of Septic Tank in Gallons
2 or less	750
3	1,000
4	1,250
5	1,500
5+	1,500 plus 300 multiplied by the number of bedrooms over 5

- 35
 36 (d) All septic tank effluent including effluent from tanks fitted with aeration units for aerobic digestion shall discharge
 37 into a soil absorption system or other treatment system as approved in accordance with section 52(h) of this rule.
 38 (e) Two-compartment tanks shall meet the following requirements:
 39 (1) The liquid volume of the first compartment shall be between one-half (1/2) and two-thirds (2/3) of the total tank
 40 volume.
 41 (2) The divider wall shall be:
 42 (A) monolithically cast in the tank; or
 43 (B) permanently secured within the tank body using noncorrosive fasteners or fittings.
 44 (3) The transfer port or ports between the compartments shall consist of two (2) or more openings with a combined area

of at least fifty (50) square inches. A continuous port across the width of the divider wall is also acceptable.

(4) The transfer port or ports shall be located in the middle twenty-five percent (25%) of the liquid depth.

(5) An access opening meeting the requirements of section 61(o) of this rule must be provided above each compartment, including riser meeting the requirements of section 61(p) of this rule, for maintenance pumping.

(f) When multiple tanks are used in series, no single tank may be less than seven hundred fifty (750) gallons. The larger of the two (2) tanks must be upstream of the other.

(g) When sewage is pumped into a septic tank using a grinder pump:

(1) a two-compartment tank must be used with the sewage pumped into the first compartment; or

(2) two (2) tanks in series must be used, with the sewage pumped into the first tank.

(h) Tanks fitted with aeration units for aerobic digestion shall:

(1) conform to NSF/ANSI Standard 40-2010~~2023~~, Residential Wastewater Treatment Systems, for Class I plants or to standards of an equivalent third party product testing laboratory acceptable to the department that meet or exceed the NSF/ANSI standards;

(2) bear a current registered certification mark;

(3) provide a minimum aerobic treatment capacity of one hundred fifty (150) gallons per bedroom per day;

(4) be preceded by a septic tank that meets all of the requirements of this section and sections 61 and 63 of this rule; and

(5) discharge into a soil absorption system or other treatment system as approved in accordance with section 52(h) of this rule.

(i) Water softener backwash shall be discharged to:

(1) the building sewer;

(2) a secondary treatment device;

(3) the effluent sewer on the downstream side of either the septic tank or the secondary treatment device;

(4) the dosing tank serving the soil absorption system; or

(5) a separate soil absorption system constructed specifically for the water softener backwash.

(Indiana Department of Health; 410 IAC 6-8.3-60; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-61 Septic tanks: construction details

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 61. (a) The minimum water depth in any compartment shall be thirty (30) inches.

(b) The maximum water depth for calculating septic tank capacity shall not exceed six and one-half (6 1/2) feet.

(c) The inlet baffle or sanitary tee shall extend at least:

(1) eight (8) inches below the liquid level; and

(2) to the top of the inlet sewer.

(d) All new septic tanks must be provided with an outlet filter that meets or exceeds the requirements of section 64 of this rule.

(e) Any septic tank not provided with an outlet filter in the interior of the tank shall be provided with:

(1) an outlet baffle or sanitary tee that extends below the liquid level at least ten (10) inches, but not more than forty percent (40%) of the tank liquid depth; and

(2) a gas deflection baffle that is:

(A) constructed of durable materials not subject to corrosion or decay; and

(B) configured to deflect rising gas bubbles toward the interior of the tank.

(f) There shall be at least one (1) inch clear space between the underside of the septic tank lid and the top of the inlet and outlet baffles or tees.

(g) Scum storage capacity (space between the liquid level and the top of the outlet baffle or tees) shall be not less than twelve and one-half percent (12.5%) of the liquid depth of the septic tank.

(h) The inlet baffle shall not be more than twelve (12) inches nor less than four (4) inches from the inside of the inlet end

1 of the tank. The outlet baffle shall not be more than twelve (12) inches nor less than four (4) inches from the outlet end of the septic
2 tank. Baffles shall be constructed of durable materials not subject to corrosion or decay.

3 (i) The bottom of the septic tank inlet shall not be less than two (2) inches nor more than four (4) inches above the liquid
4 level.

5 (j) Reinforced concrete septic tanks shall be constructed of concrete **designed to withstand all structural, hydraulic,
6 hydrostatic, earth loads, and any anticipated traffic loads, and** with a compressive strength of four thousand (4,000) pounds per
7 square inch or greater.

8 (k) Concrete septic tank walls shall be at least two and one-half (2 1/2) inches or greater in thickness. The design must
9 allow at least one (1) inch cover over reinforcing steel or welded wire fabric.

10 (l) Concrete septic tank bottoms shall conform to the specifications set forth for septic tank walls.

11 (m) Concrete septic tank tops shall be a minimum of four (4) inches in thickness and reinforced with three-eighths (3/8)
12 inch reinforcing rods in a twelve (12) inch grid or equivalent.

13 (n) Type III fibers, **meeting ASTM C 1116-10a(2015)**, are permitted only as a secondary reinforcing material. Fiber
14 additions will be considered only for the purpose of resisting temperature and shrinkage efforts, and not as primary reinforcing
15 material.

16 (o) All access openings shall meet the following requirements:

17 (1) At least one (1) opening eighteen (18) inches in minimum dimension per compartment for pumping access.

18 (2) An access opening shall be located over each of the following:

19 (A) The inlet.

20 (B) The outlet.

21 (C) The sanitary tee or baffle, if present, on the partition or divider wall of a two-compartment septic tank.

22 (3) All access openings shall be sized and positioned in such a way as to allow for maintenance, cleaning, and servicing of
23 septic tanks and outlet filters.

24 (p) All risers shall meet the following requirements:

25 (1) Risers and riser covers shall be made of corrosion resistant materials and withstand design external loads.

26 (2) The lower section of the riser assembly shall be:

27 (A) cast into the tank lid; or

28 (B) sealed to the top of the tank with butyl sealant meeting ASTM C 990-~~0924~~ to provide a watertight seal.

29 (3) All risers shall be fitted with watertight, securely fastened covers.

30 (q) Pipe connectors shall be provided that meet the following requirements:

31 (1) Each pipe penetration shall be sealed with a resilient rubber pipe connector that uses an expansion ring, tension band,
32 or a take-up device for mechanically compressing the resilient portion of the connector against the pipe.

33 (2) All metallic mechanical devices, including expansion rings, tension bands, take-up devices, and screws, shall be
34 constructed of series 300 stainless steel.

35 (3) Connectors shall conform to:

36 (A) ASTM C 1644-~~0624~~, Standard Specification for Resilient Connectors Between Reinforced Concrete On-Site
37 Wastewater Tanks and Pipes; or

38 (B) ASTM C 923-~~0820~~, Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections
39 Using Preformed Flexible Joint Sealants.

40
41 *(Indiana Department of Health; 410 IAC 6-8.3-61; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; filed Apr 9, 2014,*
42 *9:51 a.m.: 20140507-IR-410130350FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed*
43 *Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

44 **410 IAC 6-8.3-62 Dosing tanks**

45 **Authority: IC 16-19-3-4**

46 **Affected: IC 16-19-3-4**

47
48 Sec. 62. (a) Dosing tanks:

1 (1) must be watertight and constructed of durable material such as **pre-cast concrete, fiber-reinforced polyester, or**
2 **thermoplastic material, fiberglass, polyethylene, or polypropylene;** and

3 (2) shall be protected from corrosion.

4 (b) Cast in place, concrete block, wood, or metal dosing tanks are prohibited.

5 (c) Reinforced concrete dosing tanks shall be constructed of concrete **designed to withstand all structural, hydraulic,**
6 **hydrostatic, earth loads, and any anticipated traffic loads, and** with a **minimum** compressive strength of four thousand (4,000)
7 pounds per square inch or greater.

8 (d) Concrete dosing tank walls shall be at least two and one-half (2 1/2) inches or greater in thickness. The design shall
9 allow at least one (1) inch cover over reinforcing steel or welded wire fabric.

10 (e) The required liquid holding capacity of the dosing tank shall not be considered as any portion of the required liquid
11 volume of the septic tank.

12 (f) The liquid holding capacity of a dosing tank must equal the dose volume required by this rule for each type of soil
13 absorption system, in addition to the volume of liquid that will drain back from any effluent force main when pumping ceases.

14 Additional capacity must be provided to:

15 (1) keep the dosing tank effluent pump submerged at all times; and

16 (2) provide sufficient freeboard for a high water alarm.

17 (g) Dosing tanks shall be provided with pipe connectors that meet the following requirements:

18 (1) Each pipe penetration shall be sealed with a flexible, resilient rubber pipe connector that uses an expansion ring,
19 tension band, or a take-up device for mechanically compressing the resilient portion of the connector against the pipe.

20 (2) All metallic mechanical devices, including expansion rings, tension bands, take-up devices, and screws, shall be
21 constructed of series 300 stainless steel.

22 (3) Conform to:

23 (A) ASTM C 1644-~~06~~**24**, Standard Specification for Resilient Connectors Between Reinforced Concrete On-Site
24 Wastewater Tanks and Pipes; or

25 (B) ASTM C 923-~~08~~**20**, Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections
26 Using Preformed Flexible Joint Sealants.

27 (h) Each dosing tank shall be fitted with an effluent pump sized in conformance with section 65 and section 76(b), 78(d),
28 78(q), 82(b), or 82(j) of this rule, whichever is applicable, with controls, and with a high water alarm switch set at a level above the
29 design high water mark. The alarm shall:

30 (1) be on a separate circuit from the effluent pump; and

31 (2) include an audible and visible alarm.

32 (i) Switches or sensors that are comparable to mercury float level switches shall be used for dosing tank effluent pump
33 start and stop controls and for high water alarms.

34
35 *(Indiana Department of Health; 410 IAC 6-8.3-62; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
36 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

37 **410 IAC 6-8.3-62.1 Sewage Holding Tanks**

38 **Authority: IC 16-19-3-4**

39 **Affected: IC 16-19-3-4**

40 **Sec. 62.1. (a) A sewage holding tank is an alternative method of sewage disposal in accordance with IC 16-41-25-9.**

41 **(b) Sewage holding tanks:**

42 **(1) must be watertight and constructed of pre-cast concrete, fiber-reinforced polyester, or thermoplastic material;**
43 **and**

44 **(2) shall be protected from corrosion.**

45 **(c) A temporary sewage holding tank may be used:**

46 **(1) where necessary to prevent continued discharge of sewage from a failed existing residential on-site sewage**
47 **system;**

48 **(2) as a temporary storage facility where occupancy of the home must continue while an existing residential on-site**

1 sewage system is being replaced or renovated

2 (3) when soil conditions exist that preclude the prompt construction of a soil absorption system on a site that has
3 already received a construction permit.

4 (d) All sewage holding tanks shall have a minimum capacity of:

5 (1) A septic tank or a septic tank and a dosing tank as required by this rule for tanks that will eventually precede a
6 soil absorption field; or

7 (2) For permanent sewage holding tanks, the greater of

8 (A) one thousand (1,000) gallons; or

9 (B) at least three (3) times the design daily flow of the residence or residential outbuilding as determined
10 by this rule.

11 (e) Reinforced concrete sewage holding tanks shall be constructed of concrete designed to withstand all structural,
12 hydraulic, hydrostatic, earth loads, and any anticipated traffic loads, and with a compressive strength of four thousand
13 (4,000) pounds per square inch or greater.

14 (f) Concrete sewage holding tank walls and bottoms shall be at least two and one-half (2 1/2) inches or greater in
15 thickness. The design shall allow at least one (1) inch cover over reinforcing steel or welded wire fabric.

16 (g) Concrete sewage holding tank tops shall be a minimum of four (4) inches in thickness and reinforced with three-
17 eighths (3/8) inch reinforcing rods in a twelve (12) inch grid or equivalent.

18 (h) ASTM C 1116-10a(2015) type III fibers are permitted only as a secondary reinforcing material. Fiber additions
19 will be considered only for the purpose of resisting temperature and shrinkage efforts, and not as primary reinforcing
20 material.

21 (i) All sewage holding tanks shall have at least one (1) opening eighteen (18) inches in minimum diameter for
22 pumping access positioned in a way as to allow for maintenance, cleaning and servicing.

23 (j) All holding tanks shall be required to have an operating permit issued by the local health department.

24 (k) All receipts from pumping and maintenance of a sewage holding tank and other documents for repair or
25 modification of a sewage holding tank shall be submitted to the local health department within thirty (30) days of the
26 service provided or in a timeframe approved by the local health department.

27 (l) In the event that a sewage holding tank is not operated in a safe and sanitary manner and in accordance with IC
28 16-41-25-9 and this rule, the local health department may require the residence or residential outbuilding to:

29 (1) Connect to sanitary sewer if the sanitary sewer is available within three hundred (300) feet of the affected
30 property line and is available for connection at a construction cost and connection fee estimated not to exceed one
31 hundred fifty percent (150%) of the cost estimated for installing an on-site sewage system to serve the residence or
32 residential outbuilding; or

33 (2) Install an on-site sewage system with a soil absorption field in compliance with this rule or connect to an existing
34 soil absorption system that has not failed.

35
36 *(Indiana Department of Health; 410 IAC 6-8.3-62.1)*

37 **410 IAC 6-8.3-63 Septic tanks, and dosing tanks, and sewage holding tanks: installation and maintenance**

38 **Authority: IC 16-19-3-4**

39 **Affected: IC 16-41-25-3**

40
41 Sec. 63. (a) Septic tanks, ~~and~~ dosing tanks **and sewage holding tanks** shall be installed level on:

42 (1) undisturbed soil;

43 (2) sand;

44 (3) aggregate not larger than one and one-half (1 1/2) inches in diameter; or

45 (4) an engineered base.

46 (b) All drain holes in septic tanks, ~~and~~ dosing tanks **and sewage holding tanks** shall be:

47 (1) fitted with a threaded fitting, cast in place, and plugged with a threaded plug; or

48 (2) plugged with an expandable pipe plug with a wing nut.

49 (c) When the top of the septic tank, ~~or~~ dosing tank **or sewage holding tank** is installed at or above grade, all access

1 openings shall be fitted with watertight, securely fastened covers.

2 (d) When the top of the septic tank, ~~or~~ dosing tank **or sewage holding tank** is installed below grade, risers shall:

3 (1) be installed over access openings used for pumping and for maintenance of the outlet filter in the septic tank;

4 be large enough for access to the tank through the access opening in the top of the septic tank, ~~or~~ dosing tank **or sewage**

5 **holding tank** to clean the tanks and to maintain floats, sensors, filters, and pumps;

6 (2) have the lower section sealed to the top of the tank with butyl sealant meeting ASTM C 990-~~0924~~ to provide a

7 watertight seal, if the riser assembly is not cast into the tank lid;

8 (3) have joints between riser sections sealed in accordance with the manufacturer's instructions so as to be watertight;

9 (4) extend to or above final grade;

10 (5) be fitted with a watertight cover securely fastened to the riser; and

11 (6) comply with the requirements of IC 16-41-25-3.

12 ~~(e) Septic tanks, and dosing tanks shall not be installed with the top of the riser below the RFE.~~

13 ~~(f)~~ (e) All joints in the sewer connecting septic tanks in series or septic tanks to dosing tanks shall be sealed in accordance

14 with the manufacturer's instructions in order to be watertight and to withstand the pressures exerted on them.

15
16 *(Indiana Department of Health; 410 IAC 6-8.3-63; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*

17 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*

18
19 **410 IAC 6-8.3-64 Outlet filters**

20 **Authority: IC 16-19-3-4**

21 **Affected: IC 16-19-3-4**

22
23 Sec. 64. (a) An outlet filter shall be installed in the septic tank of new on-site sewage systems and existing on-site sewage

24 systems requiring a new septic tank.
25 (b) For on-site sewage systems requiring repair, or soil absorption systems requiring replacement, the local health

26 department may require an outlet filter. The outlet filter, if required by the local health department, must meet the requirements of

27 this section.
28 (c) Outlet filters shall be located in the outlet end of:

29 (1) a single septic tank when not used in series;

30 (2) the second compartment of two-compartment septic tanks;

31 (3) the last septic tank when two (2) or more tanks are used in series; or

32 (4) a secondary watertight structure located after the last septic tank prior to a dosing tank, distribution box, or secondary

33 treatment unit.

34 (d) An access opening of eighteen (18) inches in minimum dimension shall be:

35 (1) located over the outlet filter; and

36 (2) provided with a riser to grade that meets the minimum requirements of section 63(d) of this rule.

37 (e) Outlet filters shall:

38 (1) conform to NSF/ANSI Standard 46-~~2010a~~**2023**, Evaluation of Components and Devices Used in Wastewater

39 Treatment Systems, maintain a current product listing with an ANSI accredited third-party certifier, and bear a listing

40 mark;

41 (2) be rated by the manufacturer for a daily flow equal to or greater than the liquid capacity of the septic tank;

42 (3) prevent the passage of solids larger than one-eighth (1/8) of an inch;

43 (4) have inlets and outlets of at least four (4) inches in diameter;

44 (5) function without a bypass of unfiltered sewage, sludge, or scum, during normal use;

45 (6) be made of a noncorrosive material designed for use in sewage applications;

46 (7) maintain structural integrity, not tearing or distorting so as to make it inoperable during normal operation, throughout

47 the life of the device; and

48 (8) have removable outlet filter cartridges.

49 (f) The outlet filter housing shall:

50 (1) connect to the outlet pipe or structure wall with noncorrosive fasteners;

51 (2) extend at least five (5) inches above the liquid level of the tank;

- 1 (3) be installed so the bottom of the filter inlet extends below the liquid level at least ten (10) inches, but not more than
2 forty percent (40%) of the septic tank liquid depth;
3 (4) include a gas deflection device that remains in place when the filter cartridge is removed; and
4 (5) be solvent welded to a PVC Schedule 40 outlet pipe that meets the minimum requirements of section 67(a)(1) or
5 67(a)(2) of this rule, creating a watertight and mechanically sound joint.
6 (g) A filter alarm may be installed in the septic tank to indicate when the outlet filter is in need of service.
7 (h) An outlet filter with cartridge shall remain in service for the life of the septic tank.
8 (i) Outlet filter manufacturers shall provide installation and maintenance instructions with each outlet filter. Outlet filters

9 shall be:

- 10 (1) installed according to manufacturer's recommendations;
11 (2) located so they do not interfere with pumping and cleaning of the septic tank; and
12 (3) placed to allow accessibility for routine maintenance without entering the septic tank or outlet structure if separate
13 from the septic tank.
14 (j) Outlet filters shall be serviced according to the manufacturer's service recommendations, but no less frequently than
15 each time the septic tank is cleaned, as follows:
16 (1) The outlet filter shall be:
17 (A) cleaned and washed so that the filter waste enters the septic tank; or
18 (B) exchanged with a clean filter.
19 (2) All contaminated effluent filters shall be treated as untreated sewage and handled properly during the cleaning or
20 exchange process.

21
22 *(Indiana Department of Health; 410 IAC 6-8.3-64; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; filed Apr 9, 2014,*
23 *9:51 a.m.: 20140507-IR-410130350FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed*
24 *Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

25 26 **410 IAC 6-8.3-65 Effluent pumps**

27 **Authority: IC 16-19-3-4**

28 **Affected: IC 16-19-3-4**

29
30 Sec. 65. (a) All effluent pumps shall be:

- 31 (1) submersible pumps suitable for use in a corrosive atmosphere;
32 (2) sized to deliver the total design flow rate while meeting the total dynamic head requirements of the on-site sewage
33 system;
34 (3) connected to pump discharge piping that is adequately secured; and
35 (4) installed in such a manner as to allow for removal without entering the dosing tank or dewatering the dosing tank.

36 (b) Effluent pumps shall be provided with a suitable means of quick, convenient disconnection from the discharge piping,
37 as follows:

- 38 (1) Fittings and valves shall be of compatible corrosion resistant material.
39 (2) A quick disconnect coupling, breakaway flange, or similar disconnect device shall be provided for each pump
40 discharge pipe.
41 (3) Quick disconnect couplings and valves shall be readily accessible from the ground surface without entering the dosing
42 tank.
43 (4) Submersible pumps shall be provided with a corrosion resistant lifting apparatus such as a rope or chain to facilitate
44 removal of the pump.

45 (c) All floats for pump operation shall be mounted according to manufacturer's specifications using fasteners manufactured
46 for that purpose.

47 (d) Controls other than liquid level sensors shall not be located within the dosing tank.

48 (e) Junction boxes shall be rated as a NEMA 4X, National Electrical Manufacturers Association, NEMA 250-~~2008~~2020.

49 All connectors to the junction box shall form a watertight seal:

- 50 (1) to the junction box; and
51 (2) between connector openings and incoming wires.

1 (f) Any connector not used for wiring shall be fitted with a watertight plug.
2

3 *(Indiana Department of Health; 410 IAC 6-8.3-65; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
4 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
5

6 **410 IAC 6-8.3-66 Distribution box specifications**

7 **Authority: IC 16-19-3-4**

8 **Affected: IC 16-19-3-4**
9

10 Sec. 66. (a) Concrete distribution boxes shall be constructed of concrete with a compressive strength of four
11 thousand (4,000) pounds per square inch or greater. Other materials may be considered on a case-by-case basis. ~~All~~
12 ~~materials must-~~

13 **(b) The distribution box material shall:**

14 **(1) Be watertight;**

15 ~~(1)~~ **(2)** be resistant to corrosion and decay; and

16 ~~(2)~~ **(3)** have sufficient structural strength to contain sewage and resist lateral compressive and bearing loads.

17 ~~(3)~~ **(c)** The minimum interior dimension of a distribution box shall be twelve (12) inches.

18 ~~(4)~~ **(d)** The distribution box **or the top of the distribution box riser** shall be fitted with a watertight, **securely fastened**
19 ~~removable lid for access. The distribution box may be fitted with a riser to the ground surface. The riser joints and the lid~~
20 ~~connection to the riser must be watertight~~ **When the top of the distribution box is installed below final grade, a riser shall be**
21 **installed over the box and extend to or above final grade. The joints between riser sections shall be watertight.**

22 **(e) Distribution boxes shall be stabilized so as to prevent movement during installation and operation.**

23 ~~(5)~~ **(f)** The interior bottom of the distribution box shall be at least four (4) inches below the invert elevation of the effluent
24 ports. A minimum of eight (8) inches freeboard above the invert elevation of the effluent port shall be provided.

25 ~~(6)~~ **(g)** The influent port shall be located or baffled to prevent unequal distribution of effluent to the distribution system.

26 **(1) If baffles are provided, the baffles and their mounts or retainers shall:**

27 ~~(1)~~ **(A)** provide a passageway for effluent between the box bottom and the bottom edge of the baffle of not more
28 than two (2) inches; and

29 ~~(2)~~ **(B)** extend to one (1) inch above the top of the inlet.

30 ~~(3)~~ **(2)** An elbow or sanitary tee in the vertical position may be used in place of a baffle, as follows:

31 ~~(4)~~ **(A)** If an elbow is used, the elbow must:

32 ~~(A)~~ **(i)** be a ninety (90) degree elbow;

33 ~~(B)~~ **(ii)** be turned down into the distribution box with the end of the elbow not more than two (2) inches
34 above the bottom of the distribution box; and

35 ~~(C)~~ **(iii)** include a ~~weep vent~~ hole in the upper part of the elbow.

36 ~~(5)~~ **(B)** If a sanitary tee is used, the bottom of the sanitary tee must be not more than two (2) inches above the
37 bottom of the distribution box and the top of the sanitary tee at least one (1) inch below the lid.

38 ~~(6)~~ **(h)** Each distribution box shall be designed to split the effluent flow equally among the effluent ports. All effluent ports shall
39 be:

40 (1) at the same elevation;

41 (2) of the same diameter; and

42 (3) located at an elevation at least one (1) inch lower than the influent port.
43

44 *(Indiana Department of Health; 410 IAC 6-8.3-66; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
45 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*
46

47 **410 IAC 6-8.3-67 Pipe specifications**

48 **Authority: IC 16-19-3-4**

49 **Affected: IC 16-19-3-4; IC 16-41-25**
50

51 Sec. 67. (a) Piping used in a residential on-site sewage system shall meet or exceed the following applicable standards:

- 1 (1) Gravity sewer pipe and gravity effluent sewer pipe shall meet the following standards:
 2 (A) For PVC pipe, the following:
 3 (i) ASTM D 2665-~~2024~~ for four (4) inch and six (6) inch pipe only.
 4 (ii) ASTM D 3034-~~242024~~ for SDR 26 and SDR 35 for four (4) inch through fifteen (15) inch pipe.
 5 (B) For ABS pipe, the following:
 6 (i) ASTM D 2661-~~24~~ for four (4) inch and six (6) inch pipe only.
 7 (ii) ASTM D 2680-20 for eight (8) inch through fifteen (15) inch pipe.
 8 (C) ASTM F 480-14 (2022), Schedule 40 and 80.
 9 (D) Waterworks grade ductile iron pipe with mechanical or tyton joints.
 10 (2) Pressure sewer, effluent force main, manifold, and pressure distribution lateral pipe shall meet the following standards:
 11 (A) For PVC pipe, the following:
 12 (i) ASTM D 2241-~~2420~~ SDR 13.5, SDR 17, SDR 21, or SDR 26.
 13 (ii) ASTM D 1785-21a Schedule 40, 80, or 120.
 14 (B) ASTM D 3035-22 DR 7, 9, 11, 13.5, 17, or 21 with the required heat fusion joints being made in accordance
 15 with ASTM F2620-20ae2.
 16 (b) ~~Gasketed compression-type joints~~ **Upgraded piping must shall** be used on pressure sewers when they ~~are located ten-~~
 17 ~~(10) feet or less from a water line~~ **do not meet the required horizontal and vertical separations required in subsection 57(e).**
 18 (c) Soil absorption system gravity distribution laterals shall meet one (1) of the following standards:
 19 (1) Four (4) inch diameter sewer pipe listed in subsection (a)(1) and (a)(2).
 20 (2) Four (4) inch diameter PVC pipe meeting ASTM D 2729-~~20~~ **21**.
 21 (3) Four (4) inch diameter smooth interior wall polyethylene pipe meeting ASTM F 810-12 (2018) or AASHTO M 252-23
 22 Type SP.
 23 (d) Gravity distribution laterals shall have two (2) or three (3) rows of holes separated by one hundred twenty (120)
 24 degrees with a five-eighths (5/8) inch or three-quarters (3/4) inch hole diameter with holes spaced at five (5) inches or less.
 25 (e) Pipe for subsurface drainage systems shall meet the following standards for polyethylene pipe:
 26 ~~(1) ASTM F 405-05.~~
 27 ~~(2)~~ **(1)** ASTM F 667-16 (2021).
 28 ~~(3)~~ **(2)** NRCS 606, July 2022.

29
 30 *(Indiana Department of Health; 410 IAC 6-8.3-67; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
 31 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; filed Feb 27, 2024, 10:34 a.m.: 20240327-IR-410220395FRA; readopted*
 32 *filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

33
 34 **410 IAC 6-8.3-68 Aggregate specifications**

35 **Authority: IC 16-19-3-4**

36 **Affected: IC 16-19-3-4**

37
 38 Sec. 68. (a) Aggregate to be used in soil absorption systems shall be gravel, stone, or other materials listed by the
 39 department. Crushed limestone aggregate, if used, shall be rated as forty percent (40%) or less on the Los Angeles abrasion quality
 40 requirement of the INDOT ~~2012~~ **2024** Standard Specifications, Section 904, Aggregates.

41 (b) Aggregate:

42 (1) shall be a mixture with no aggregate smaller in size than one-half (1/2) inch in diameter nor any aggregate larger than
 43 two and one-half (2 1/2) inches in diameter; and

44 (2) must be larger than the openings in the gravity distribution laterals.

45 (c) Tire chips may be used in place of stone for soil absorption systems on a one-for-one basis, volumetrically. Tire chips
 46 used for soil absorption systems must have a nominal size of two (2) inches with chip dimensions being not less than one-half (1/2)
 47 inch and not greater than four (4) inches.

48 (d) Fines, sand, and clay shall be removed from the aggregate prior to its placement in the trench.
 49

50 *(Indiana Department of Health; 410 IAC 6-8.3-68; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
 51 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*

1
2
3 **410 IAC 6-8.3-69 Barrier materials**

4 **Authority: IC 16-19-3-4**

5 **Affected: IC 16-19-3-4; IC 16-41-25**

6
7 Sec. 69. (a) The physical characteristics of barrier materials shall have the following minimum average roll values:

- 8 (1) A grab tensile strength equal to or greater than eighty (80) pounds in machine direction (MD) and cross-machine
9 direction (CD) in accordance with ASTM D 4632-15a (2023).
10 (2) A grab tensile elongation at break of equal to or greater than fifty percent (50%) in MD and CD in accordance with
11 ASTM D 4632-15a (2023).
12 (3) A trapezoidal tear strength equal to or greater than thirty (30) pounds in MD and CD in accordance with ASTM D 4533-
13 15(2023).
14 (4) A CBR puncture resistance equal to or greater than one hundred seventy-five (175) pounds in accordance with ASTM
15 D 6241-22a.
16 (5) A permittivity of equal to or greater than 0.5 sec⁻¹ in accordance with ASTM D 4491-22.
17 (6) A water flow rate equal to or greater than one hundred fifty (150) gallons per minute per square foot in accordance with
18 ASTM D 4355-21.
19 (7) A UV resistance at five hundred (500) hours equal to or greater than seventy percent (70%) strength retained in
20 accordance with ASTM D 4491-22.
21 (8) An apparent opening size (U.S. Sieve) equal to or greater than forty (40), and equal to or less than seventy (70) sieve
22 in accordance with ASTM D 4751-21a.
23 (b) The chemical characteristics of barrier materials shall be:
24 (1) nonbiodegradable;
25 (2) resistant to acids and alkalies within a pH range of four (4) to ten (10); and
26 (3) resistant to common solvents.
27

28 *(Indiana Department of Health; 410 IAC 6-8.3-69; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
29 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; filed Feb 27, 2024, 10:34 a.m.: 20240327-IR-410220395FRA)*
30

31 **410 IAC 6-8.3-70 Subsurface trench on-site sewage system site suitability**

32 **Authority: IC 16-19-3-4**

33 **Affected: IC 16-19-3-4**

34
35 Sec. 70. (a) On-site sewage system feasibility, location, and selection shall be based on the:

- 36 (1) site evaluation;
37 (2) information obtained from the on-site soils evaluation; and
38 (3) DDF.

39 If site conditions are acceptable, subsurface trench soil absorption systems are the systems of choice.

40 (b) All of the following site conditions in this section must be met if subsurface trench on-site sewage systems are to be
41 constructed:

- 42 (1) Sufficient area exists on the lot for an appropriately sized subsurface trench on-site sewage system, while meeting the:
43 (A) separation distances of section 57 of this rule; and
44 (B) dispersal area requirements of section 58 of this rule.
45 (2) The topographic position of the site on which the on-site sewage system is to be built is convex, hill slope, or flat. If
46 surface and subsurface drainage can be diverted around the site, a toe slope position can be used.
47 (3) The site has a slope of fifteen percent (15%) or less.
48 (4) Site conditions permit distribution of effluent to each trench of the subsurface soil absorption system so that each trench
49 can be loaded with a proportionate volume of effluent.
50 (5) Site conditions permit any seasonal high water table at the site of the proposed subsurface trench soil absorption system
51 to be lowered to at least thirty-four (34) inches below original grade, in accordance with section 59 of this rule.
52 (6) When there are no **limiting layer** horizons from original grade to thirty-four (34) inches below original grade. ~~in a soil~~

developed from Wisconsin glacial till that shows effervescence when treated with a ten percent (10%) hydrochloric acid solution, unless:

(A) the on-site soils evaluation report shows that the presence of the horizon is not detrimental to the proper functioning of an on-site sewage system; and

(B) the determination in clause (A) is made using the guidelines as set forth in the soil manuals, technical bulletins, and handbooks of the NRCS guidelines and as approved by the department.

(7) When there are no limiting layer soil horizons at the site from the original grade to thirty-four (34) inches below the original grade, with:

(A) less than twenty percent (20%) clay by volume and greater than thirty-five percent (35%) coarse fragments by volume; or

(B) greater than or equal to twenty percent (20%) clay by volume and greater than sixty percent (60%) coarse fragments by volume.

(8) (7) All soil horizons at the site from the original grade to thirty-four (34) inches below the original grade have a soil loading rate of not less than twenty-five hundredths (0.25) and not more than one and twenty-hundredths (1.20) gallons per der square foot as determined from Table IV, as follows:

Table IV - Soil Loading Rates for Subsurface Trench On-Site Sewage Systems (in gpd/ft²)

SOIL STRUCTURE CLASSES								
SOIL TEXTURE CLASSES	Single Grain	Granular	Strong: Angular, Sub-Angular Blocky, Prismatic	Moderate: Angular, Sub-Angular Blocky, Prismatic	Weak: Angular, Sub-Angular Blocky, Prismatic; Platy ¹	Fragic Characteristics: Very Coarse Prismatic	Structureless, Massive, Friable, V. Friable	Structureless, Massive, Compact, Firm, V. Firm; Platy ²
Gravel, Coarse Sand	1.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Loamy Coarse Sand, Medium Sand	1.20	1.20	N/A	N/A	1.20	N/A	N/A	N/A
Fine Sand, Loamy Sand, Loamy Fine Sand	0.75	0.60	N/A	0.75	0.75	N/A	0.75	N/A
Very Fine Sand, Loamy V. Fine Sand	0.50	0.50	N/A	0.75	0.60	N/A	0.60	N/A
Sandy Loam, Coarse Sandy Loam	N/A	0.75	N/A	0.60	0.60	0.00	0.60	0.00
Fine Sandy Loam, V. Fine Sandy Loam	N/A	0.75	N/A	0.60	0.60	0.00	0.60	0.00

Loam	N/A	0.75	0.75	0.50	0.50	0.00	0.50	0.00
Silt Loam, Silt	N/A	0.75	0.75	0.50	0.30	0.00	0.30	0.00
Sandy Clay Loam	N/A	0.60	0.60	0.50	0.30	0.00	0.30	0.00
Silty Clay Loam, Clay Loam, Sandy Clay	N/A	0.60	0.60	0.30	0.25	0.00	0.25	0.00
Silty Clay, Clay	N/A	0.60	0.50	0.30	0.25	N/A	0.25	0.00
Organic Soil Materials	N/A	N/A	N/A	N/A	N/A	N/A	0.00	N/A
Limnic Soil Materials	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00
Bedrock	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A NOT APPLICABLE								
¹ Naturally occurring platy structure.								
² Platy structure caused by mechanical compaction has a soil loading rate of 0.00 gpd/ft ² unless broken up by methods approved by the department.								

(c) Subsurface trench soil absorption systems shall not be constructed as follows:

- (1) In areas where surface runoff or subsurface drainage will have an adverse effect on the on-site sewage system, unless the surface runoff or subsurface drainage can be effectively diverted around the system.
- (2) With the bottom of any of the trenches below the BFE.
- (3) In areas subject to ponding.
- (4) Wholly or partly located in a drainage way.
- (5) Where compacted soil material is identified in the soil at a depth greater than twelve (12) inches, unless the compaction is broken up by a method approved by the department.

(Indiana Department of Health; 410 IAC 6-8-3-70; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)

410 IAC 6-8.3-71 Subsurface trench on-site sewage system type selection criteria

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 71. (a) On-site sewage system feasibility, location, and selection shall be based on the:

- (1) site evaluation;
- (2) information obtained from the on-site soils evaluation; and
- (3) DDF.

(b) A subsurface trench gravity system may be constructed if the:

- (1) DDF of the project is equal to or greater than four hundred fifty (450) gallons per day;
- (2) soil loading rate of the site is equal to or greater than twenty-five hundredths (0.25) gallons per day per square foot and equal to or less than seventy-five hundredths (0.75) gallons per day per square foot, as determined from Table IV in section 70(b)(8) (7) of this rule;
- (3) trench bottoms will be at least thirty (30) inches above any **limiting layer horizon with:**

~~(A) a soil loading rate less than twenty-five hundredths (0.25) gallons per day per square foot or greater than seventy-five hundredths (0.75) gallons per day per square foot;~~

1 ~~(B) any soil horizon in a soil developed from Wisconsin glacial till that shows effervescence when treated with a ten~~
2 ~~percent (10%) hydrochloric acid solution, unless:~~

3 ~~(i) the on-site soils evaluation report shows that the presence of the horizon is not detrimental to the~~
4 ~~proper functioning of an on-site sewage system; and~~

5 ~~(ii) the determination in item (i) is made using the guidelines as set forth in the soil manuals, technical~~
6 ~~bulletins, and handbooks of the NRCS guidelines and as approved by the department;~~

7 ~~(C) less than twenty percent (20%) clay by volume and greater than thirty-five percent (35%) coarse fragments by~~
8 ~~volume; or~~

9 ~~(D) greater than or equal to twenty percent (20%) clay by volume and greater than sixty percent (60%) coarse~~
10 ~~fragments by volume; and~~

11 (4) soil absorption system, including either half of a subsurface trench alternating field on-site sewage system, is designed
12 with a total absorption trench length that does not exceed five hundred (500) lineal feet.

13 (c) A subsurface trench gravity on-site sewage system may also be constructed if the:

14 (1) DDF of the proposed on-site sewage system is less than four hundred fifty (450) gallons per day;

15 (2) site has a soil loading rate of equal to or greater than twenty-five hundredths (0.25) gallons per day per square foot and
16 equal to or less than seventy-five hundredths (0.75) gallons per day per square foot, as determined from Table IV in section
17 70(b)(8) (7) of this rule;

18 (3) trench bottoms will be at least twenty-four (24) inches above any **limiting layer**; ~~horizon with:~~

- 1 (A) a soil loading rate less than twenty five hundredths (0.25) gallons per day per square foot or greater than
2 seventy five hundredths (0.75) gallons per day per square foot;
3 (B) any soil horizon in a soil developed from Wisconsin glacial till that shows effervescence when treated with a
4 ten percent (10%) hydrochloric acid solution, unless:
5 (i) the on-site soils evaluation report shows that the presence of the horizon is not detrimental to the
6 proper functioning of an on-site sewage system; and
7 (ii) the determination in item (i) is made using the guidelines as set forth in the soil manuals, technical
8 bulletins, and handbooks of the NRCS guidelines and as approved by the department;
9 (C) less than twenty percent (20%) clay by volume and greater than thirty five percent (35%) coarse fragments
10 by volume; or
11 (D) greater than or equal to twenty percent (20%) clay by volume and greater than sixty percent (60%) coarse
12 fragments by volume; and

13 (4) soil absorption system, including either half of a subsurface trench alternating field on-site sewage system, is designed
14 with a total absorption system trench length that does not exceed five hundred (500) lineal feet.

15 (d) A subsurface trench on-site sewage system that utilizes alternating fields or is dosed using pump assisted distribution
16 may be constructed if the:

17 (1) soil loading rate of the site is equal to or greater than twenty-five hundredths (0.25) gallons per day per square foot and
18 equal to or less than seventy-five hundredths (0.75) gallons per day per square foot, as determined from Table IV in section
19 70(b)(8) (7) of this rule; and

20 (2) trench bottoms will be at least twenty-four (24) inches above any **limiting layer horizon with:**

- 21 (A) a soil loading rate less than twenty five hundredths (0.25) gallons per day per square foot;
22 (B) any soil horizon in a soil developed from Wisconsin glacial till that shows effervescence when treated with a
23 ten percent (10%) hydrochloric acid solution, unless:
24 (i) the on-site soils evaluation report shows that the presence of the horizon is not detrimental to the
25 proper functioning of an on-site sewage system; and
26 (ii) the determination in item (i) is made using the guidelines as set forth in the soil manuals, technical
27 bulletins, and handbooks of the NRCS guidelines and as approved by the department;
28 (C) less than twenty percent (20%) clay by volume and greater than thirty five percent (35%) coarse fragments
29 by volume; or
30 (D) greater than or equal to twenty percent (20%) clay by volume and greater than sixty percent (60%) coarse
31 fragments by volume.

32 (e) If any soil absorption system, including either half of an alternating field on-site sewage system, is designed with a total
33 absorption trench length greater than five hundred (500) lineal feet, the absorption system shall be dosed using pump assisted
34 distribution.

35 (f) If any soil horizon within twenty-four (24) inches of the proposed trench bottom has a soil loading rate of one and twenty-
36 hundredths (1.20) gallons per day per square foot as determined from Table IV in section 70(b)(8) (7) of this rule, the on-site
37 sewage system shall utilize pressure distribution.

38
39 *(Indiana Department of Health; 410 IAC 6-8.3-71; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
40 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*

41 42 **410 IAC 6-8.3-72 Elevated sand mound on-site sewage system site suitability**

43 **Authority: IC 16-19-3-4**

44 **Affected: IC 16-19-3-4**

45
46 Sec. 72. (a) On-site sewage system feasibility, location, selection, and design shall be based on the:

- 47 (1) site evaluation;
48 (2) information obtained from the on-site soils evaluation; and
49 (3) DDF.

50 (b) Elevated sand mound on-site sewage systems may be constructed if the following site conditions are met:

- 51 (1) Sufficient area exists on the lot for an appropriately sized elevated sand mound on-site sewage system, while meeting
52 the:

- (A) separation distances of section 57 of this rule; and
 (B) dispersal area requirements of section 58 of this rule.
- (2) The topographic position of the site on which the elevated sand mound on-site sewage system is to be built is convex, hill slope, or flat. If surface and subsurface drainage can be diverted around the site, a toe slope position can be utilized.
- (3) The site on which the elevated sand mound on-site sewage system is to be built has a slope of six percent (6%) or less.
- (4) Site conditions permit any seasonal high water table at the site of the proposed elevated sand mound on-site sewage system to be lowered to at least twenty (20) inches below original grade, in accordance with section 59 of this rule.
- (5) When ~~there is no soil horizon limiting layer~~ from the ground surface to twenty (20) inches below the ground surface. ~~in a soil developed from Wisconsin glacial till shows effervescence when treated with a ten percent (10%) hydrochloric acid solution, unless:~~
 (A) ~~the on-site soils evaluation report shows that the presence of the horizon is not detrimental to the proper functioning of an on-site sewage system; and~~
 (B) ~~the determination in clause (A) is made using the guidelines as set forth in the soil manuals, technical bulletins, and handbooks of the NRCS guidelines and as approved by the department.~~
- (6) ~~When there are no soil horizons from the ground surface to twenty (20) inches below the ground surface with:~~
 (A) ~~less than twenty percent (20%) clay by volume and greater than thirty five percent (35%) coarse fragments by volume; or~~
 (B) ~~greater than or equal to twenty percent (20%) clay by volume and greater than sixty percent (60%) coarse fragments by volume.~~
- (7) **(6)** All soil horizons from the original grade to twenty (20) inches below the original grade have a soil loading rate of not less than twenty-five hundredths (0.25) gallons per day per square foot and not more than one and twenty-hundredths (1.20) gallons per day per square foot as determined from Table V as follows:

Table V - Soil Loading Rates for Elevated Sand Mound On-Site Sewage Systems (in gpd/ft ²)								
SOIL STRUCTURE CLASSES								
SOIL TEXTURE CLASSES	Single Grain	Granular	Strong: Angular, Sub-Angular Blocky, Prismatic	Moderate: Angular, Sub-Angular Blocky, Prismatic	Weak: Angular, Sub-Angular Blocky, Prismatic; Platy ¹	Fragic Characteristics: Very Coarse Prismatic	Structureless, Massive, Friable, V. Friable	Structureless, Massive, Compact, Firm, V. Firm; Platy ²
Gravel, Coarse Sand	>1.20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Loamy Coarse Sand, Medium Sand	1.20	1.20	N/A	N/A	1.20	N/A	N/A	N/A
Fine Sand, Loamy Sand, Loamy Fine Sand	0.60	0.60	N/A	0.60	0.60	N/A	0.60	N/A
Very Fine Sand, Loamy V. Fine Sand	0.50	0.50	N/A	0.50	0.50	N/A	0.50	N/A

Sandy Loam, Coarse Sandy Loam	N/A	0.60	N/A	0.60	0.60	0.00	0.60	0.00
Fine Sandy Loam, V. Fine Sandy Loam	N/A	0.60	N/A	0.60	0.60	0.00	0.60	0.00
Loam	N/A	0.50	0.50	0.50	0.50	0.00	0.50	0.00
Silt Loam, Silt	N/A	0.50	0.50	0.50	0.50	0.00	0.50	0.00
Sandy Clay Loam	N/A	0.50	0.50	0.50	0.50	0.00	0.50	0.00
Silty Clay Loam, Clay Loam, Sandy Clay	N/A	0.25	0.25	0.25	0.25	0.00	0.25	0.00
Silty Clay, Clay	N/A	0.25	0.25	0.25	0.25	N/A	0.25	0.00
Organic Soil Materials	N/A	N/A	N/A	N/A	N/A	N/A	0.00	N/A
Limnic Soil Materials	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00
Bedrock	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A NOT APPLICABLE

¹ Naturally occurring platy structure.

² Platy structure caused by compaction has a soil loading rate of 0.00 gpd/ft² unless broken up by methods approved by the department.

(c) Elevated sand mound soil absorption systems shall not be constructed as follows:

- (1) In areas where surface runoff or subsurface drainage will have an adverse effect on the on-site sewage system, unless the surface runoff or subsurface drainage can be effectively diverted around the system.
- (2) Where the original grade is below the BFE.
- (3) In areas subject to ponding.
- (4) Wholly or partly located in a drainage way.
- (5) Where compacted soil material is identified in the soil at a depth greater than twelve (12) inches, unless the compaction is broken up by a method approved by the department.

(Indiana Department of Health; 410 IAC 6-8.3-72; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)

410 IAC 6-8.3-73 Table for on-site sewage system selection

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 73. On-site sewage system selection may be summarized in Table VI as follows:

Table VI - Table for On-Site Sewage System Selection Based on Requirements of 410 IAC 6-8.3						
Site Requirements	Subsurface Trench On-Site Sewage Systems				Elevated Sand Mound On-Site Sewage Systems (Sec. 72)	
	Gravity Flow ¹ (Sec. 70, 71)	Flood Dosing or Alt. Fields ¹ (Sec. 70, 71)	Flood Dosing ¹ (Sec. 70, 71)	Pressure Dist. (Sec. 70, 71)		
Slope	≤ 15%	≤ 15%	≤ 15%	≤ 15%	≤ 6%	
Design Daily Flow	≥ 450	> 450	Any	Any	Any	
Acceptable Loading Rate Range for Determining System Size	≥ 0.25	≥ 0.25	≥ 0.25	≥ 0.25	≥ 0.25	
	≤ 0.75	≤ 0.75	≤ 0.75	≤ 1.20	≤ 1.20	
Distance from Trench Bottom (Ground Surface for Mounds) to Layer with a Soil Loading Rate > 0.25 gpd/ft ²	≥ 30	≥ 24	≥ 24	≥ 24	≥ 20	
Distance from Trench Bottom (Ground Surface for Mounds) to Layer with a Soil Loading Rate 1.20 gpd/ft ²	≥ 24 30	≥ 24	≥ 24	≥ 24	≥ 20	
Distance from Trench Bottom (Ground Surface for Mounds) to Layer with a Soil Loading Rate = 1.20 gpd/ft ²	≥ 24 30	≥ 24	≥ 24	≥ 24	Press. Dist. required for SLR = 1.20 ≥ 0	
Distance from Trench Bottom (Ground Surface for Mounds) to a Soil Horizon Developed from Wisconsin Glacial Till That Shows Effervescence ³	≥ 30	≥ 24	≥ 24	≥ 24	≥ 20	
Distance from Trench Bottom (Ground Surface for Mounds) to Soil Horizon with > 20% Clay and 35% Coarse Fragments by Volume	≥ 30	≥ 24	≥ 24	≥ 24	≥ 20	
Distance from Trench Bottom (Ground Surface for Mounds) to Soil Horizon with	≥ 30	≥ 24	≥ 24	≥ 24	≥ 20	

20% Clay and 60% Coarse Fragments by Volume						
Distance from Trench Bottom (Ground Surface for Mounds) to Seasonal High Water Table ²	≥ 24	≥ 24	≥ 24	≥ 24	≥ 24	≥ 20
Total Lineal Feet of Trench	≤ 500	≤ 500	≤ 500 for Alt. Fields	Any	Any	N/A

¹These conditions are also suitable for subsurface trench pressure distribution on-site sewage systems.

²For subsurface trench systems, if the distance from trench bottom to seasonal high water table is less than twenty-four (24) inches, drainage must be installed in accordance with section 59 of this rule. For elevated sand mound systems, if the depth of the seasonal high water table is less than twenty (20) inches below the ground surface, drainage must be installed in accordance with section 59 of this rule.

³See Sections 58(a)(2)(E), 70(b)(6), 71(b)(3)(B), 71(c)(3)(~~B~~), 71(d)(2)(~~B~~) and 72(b)(5).

This chart does not include considerations such as the specific landscape features that must be met, the size of the soil absorption system, the size of the area necessary for construction of the soil absorption system on the contour with necessary setback and separation distances, dispersal area, the diversion of surface drainage, the feasibility of subsurface drainage, the ability to obtain easements, etc.

This chart does not take into consideration the necessity to pump the effluent to overcome differences in elevation (when a subsurface trench gravity system might otherwise be constructed).

(Indiana Department of Health; 410 IAC 6-8.3-73; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; errata filed Dec 12, 2012, 2:16 p.m.: 20121226-IR-410120156ACA; readopted filed Sep 26, 2018, 2:48 p.m.20181024-IR-410180328R

DRAFT

1 **410 IAC 6-8.3-74 Subsurface trench on-site sewage systems: general design and construction requirements**

2 **Authority: IC 16-19-3-4**

3 **Affected: IC 16-19-3-4**

4
5 Sec. 74. (a) The minimum absorption area (in square feet) required for each subsurface trench soil absorption system shall
6 be based on the following:

- 7 (1) The number of bedrooms and bedroom equivalents in the dwelling.
8 (2) The appropriate soil loading rate (in gallons per day per square foot) determined from Table IV in section 70(b)(8) (7)
9 of this rule. The soil loading rate used for this computation shall be the soil loading rate of the most restrictive horizon in
10 the first twenty-four (24) inches below the trench bottom.
11 (3) The absorption area shall be computed using the following formula:

12
13
$$\text{Area} = \frac{\cancel{150 \text{ g} \times \text{number of bedrooms and bedroom equivalents}} \text{ Design Daily Flow (in gpd)}}{\text{Soil loading rate in gpd/sq. ft.}}$$

14
15
16 **(b) The area of the on-site sewage system and dispersal area shall be protected from disturbance before, during and**
17 **after construction of the system. The local health department may require:**

- 18 **(1) a site visit and evaluation prior to issuing a construction permit; and**
19 **(2) the system components to be marked and identified at the site prior to the site visit.**

20 ~~(b)~~ (c) Subsurface trench soil absorption systems shall be as long and narrow as the site permits while not exceeding
21 maximum trench length.

22 ~~(c)~~ (d) All subsurface trench on-site sewage systems shall be located in accordance with the separation distances shown in
23 Table I in section 57(a) of this rule.

24 ~~(d)~~ (e) Special caution shall be taken to prevent wheeled and tracked vehicles from compacting the area selected for
25 placement of the soil absorption system before, during, and after construction of the trenches, especially during wet weather.
26 Alteration of soil structure by movement of vehicles may be grounds for rejection of the site or the soil absorption system, or both.

27 ~~(e)~~ (f) Subsurface soil absorption systems shall not be constructed during periods of wet weather when the soil is
28 sufficiently wet at the depth of installation to exceed its plastic limit, as follows:

- 29 (1) This applies to soils classified as the following:

- 30 (A) Sandy loam.
31 (B) Silt loam.
32 (C) Loam.
33 (D) Clay loam.
34 (E) Silty clay loam.
35 (F) Sandy clay.
36 (G) Silty clay.
37 (H) Clay.

38 (2) Sufficient samples shall be evaluated throughout the soil absorption system site, from the soil surface to the proposed
39 depth of the soil absorption system trench bottoms, to assure that the plastic limit of the soil is not exceeded.

40 (3) The plastic limit of a soil shall be considered to have been exceeded when the soil can be rolled between the palms of
41 the hands to produce threads one-eighth (1/8) inch in diameter without breaking apart and crumbling.

42 ~~(f)~~ (g) Vegetation at the soil absorption system site that would interfere with the soils evaluation, system layout, or
43 system construction shall be cut and removed prior to installation without causing compacted soil material.

44 ~~(g)~~ (h) If trees are present within the proposed soil absorption system:

- 45 (1) soil absorption trenches may be routed around trees provided the trenches follow the contour of the site; or
46 (2) tree stumps and root balls may be removed provided the resulting excavation will not exceed the permit requirements
47 for width and depth of the soil absorption trench.

48 ~~(h)~~ (i) Excessive smearing of the usable absorption trench sidewalls or bottom during construction may:

- 49 (1) result in irreversible damage to the soil infiltrative surface; and
50 (2) be grounds for rejection of the site or the on-site sewage system, or both.

51 ~~(i)~~ (j) The residential sewer shall be a minimum of four (4) inches in diameter. Four (4) inch sewers shall be installed with
52 a positive slope of:

- 1 (1) not less than four (4) inches in twenty-five (25) feet; and
- 2 (2) not more than thirty-six (36) inches in twenty-five (25) feet.
- 3 ~~(j)~~ **(k)** A six (6) inch residential sewer, if utilized, shall be installed with a positive slope of:

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- 1 (1) not less than two (2) inches in twenty-five (25) feet; and
2 (2) not more than thirty-six (36) inches in twenty-five (25) feet.
3 ~~(k)~~ (l) A vertical drop may be installed in a residential sewer. Each vertical drop shall have a cleanout located immediately
4 upslope.
5 ~~(j)~~ (m) Effluent sewers shall meet the following requirements:
6 (1) Effluent sewers shall be a minimum of four (4) inches in diameter.
7 (2) Effluent sewer pipe shall have a positive grade of at least two and four-tenths (2.4) inches per one hundred (100) feet
8 or a grade of two-tenths percent (0.2%).
9 ~~(h)~~ (n) All sewer and effluent sewer joints shall be sealed according to the manufacturer's recommendations in order to be
10 watertight and to withstand the pressures exerted on them.
11 ~~(i)~~ (o) The absorption trenches of a subsurface trench soil absorption system shall be constructed along the contour.
12 ~~(g)~~ (p) The minimum depth from original grade to the bottom of a trench of a subsurface trench soil absorption system
13 shall not be less than ten (10) inches, and the maximum depth from final grade to the bottom of a trench of a subsurface trench
14 soil absorption system shall not be more than thirty-six (36) inches.
15 ~~(f)~~ (q) All subsurface trench soil absorption systems shall be designed to utilize trenches with a minimum width of eighteen
16 (18) inches and a maximum trench width of thirty-six (36) inches.
17 ~~(e)~~ (r) There shall be a minimum separation of seven and one-half (7 1/2) feet, on center, between soil absorption system
18 trenches, measured perpendicular to the trenches.
19 ~~(d)~~ (s) No single absorption trench in a subsurface trench soil absorption system shall exceed one hundred (100) feet in
20 length, except for subsurface trench pressure distribution on-site sewage systems.
21 ~~(c)~~ (t) Each trench and distribution lateral in a subsurface trench soil absorption system shall be uniformly level throughout
22 its length and width.
23 ~~(b)~~ (u) The distal ends of distribution laterals and trenches shall not be tied together.
24 ~~(a)~~ (v) The distal end of each distribution lateral shall be capped, with the cap joint sealed according to the
25 manufacturer's recommendations in order to be watertight and to withstand the pressures exerted on it.
26 ~~(w)~~ (w) Perforated pipe distribution laterals in the absorption trench of a subsurface trench soil absorption system shall be
27 completely surrounded by aggregate that meets the specifications in section 68 of this rule. There shall be at least six (6) inches of
28 aggregate below the pipe.
29 ~~(x)~~ (x) The minimum depth of aggregate above the distribution laterals shall be:
30 (1) two (2) inches throughout the entire length and width of trenches having a depth of twelve (12) inches or greater; or
31 (2) two (2) inches above the distribution lateral for the entire length of trenches having a depth of ten (10) inches to twelve
32 (12) inches.
33 ~~(y)~~ (y) The aggregate used in a subsurface trench soil absorption system shall be covered with a geotextile fabric barrier in
34 such a manner as to prevent the aggregate from becoming clogged with the earth fill. The barrier material shall:
35 (1) meet the minimum requirements in section 69 of this rule;
36 (2) be placed on the aggregate to prevent soil particle movement into the aggregate; and
37 (3) cover the aggregate from side to side and from end to end.
38 ~~(z)~~ (z) A minimum of twelve (12) inches of cover shall be provided over the aggregate in the trenches, and any fill
39 required to provide cover shall be crowned over the entire soil absorption system to promote surface runoff.
40 ~~(aa)~~ (aa) Tire chips, if used for aggregate, will have protruding wires and shall be removed from the ground surface during
41 site cleanup.
42

43 *(Indiana Department of Health; 410 IAC 6-8.3-74; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted*
44 *filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA)*
45

46 **410 IAC 6-8.3-75 Subsurface trench gravity on-site sewage systems: design and construction requirements**

47 **Authority: IC 16-19-3-4**

48 **Affected: IC 16-19-3-4**

49
50 Sec. 75. (a) Subsurface trench gravity on-site sewage systems shall meet all of the requirements of:

- 51 (1) section 74 of this rule; and

1 (2) this section.

2 (b) A distribution box or series of distribution boxes shall be installed between the septic tank and the subsurface soil
3 absorption system, and each absorption system trench shall be connected directly to a distribution box using an effluent sewer.

4 (c) Distribution boxes shall be installed level on either undisturbed soil, sand, sand mix, aggregate not larger than one-half
5 (1/2) inch in diameter, or engineered base, and the outlets shall be checked to assure that they are at a uniform elevation.

6 (d) Effluent sewer pipe in a subsurface trench gravity on-site sewage system shall meet the following requirements:

7 (1) For installation prior to a distribution box, effluent sewer pipe shall be bedded according to manufacturer requirements
8 and backfilled with debris-free soil material or aggregate without damaging the pipe.

9 (2) For installation after a distribution box, effluent sewer pipe shall be stabilized, bedded, and backfilled without
10 damaging the pipe with debris-free soil material to prevent the movement of effluent along the outside of the pipe.

11 (e) The invert elevation of the end of each effluent sewer pipe connected to a distribution box shall be at the same
12 elevation so that each gravity distribution lateral receives an equal volume of effluent.

13 (f) Each effluent sewer from an outlet of a distribution box that directly serves a trench shall extend into the aggregate in
14 the trench.

15 (g) All soil absorption system gravity distribution laterals shall have an internal diameter of four (4) inches.

16 (h) Gravity distribution laterals in the aggregate trenches shall be installed level along their length:

17 (1) for two (2) hole gravity distribution laterals, the laterals shall be placed in the aggregate with the rows of holes located
18 at one hundred twenty (120) and two hundred forty (240) degrees from vertical (rows of holes at four (4) o'clock and eight
19 (8) o'clock); and

20 (2) for three (3) hole gravity distribution laterals, the laterals shall be placed in the aggregate with the rows of holes
21 located at one hundred twenty (120), two hundred forty (240), and three hundred sixty (360) degrees from vertical (rows
22 of holes at four (4) o'clock, eight (8) o'clock, and twelve (12) o'clock).

23 (i) In order to provide equal flow distribution in gravity feed subsurface soil absorption systems, each absorption field
24 trench must be individually connected to a distribution box. The distribution box shall be at least five (5) feet from the proximal end
25 of each soil absorption field trench and shall be connected to the absorption field trench by unperforated pipe that is laid with a
26 gravel free backfill to the point where the unperforated pipe enters the aggregate in the trench. All absorption trenches served by a
27 common distribution box must be constructed so that each trench served by the distribution box is loaded with an equal volume of
28 effluent.

29
30 *(Indiana Department of Health; 410 IAC 6-8.3-75; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
31 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

32
33 **410 IAC 6-8.3-76 Subsurface trench flood dosed on-site sewage systems: design and construction requirements**

34 **Authority: IC 16-19-3-4**

35 **Affected: IC 16-19-3-4**

36
37 Sec. 76. (a) Subsurface trench flood dosed on-site sewage systems shall meet all of the requirements of:

38 (1) sections 74 and 75 of this rule; and

39 (2) this section.

40 (b) When a subsurface trench flood dosed soil absorption system is used, the dosing effluent pump shall be sized, and its
41 controls set to deliver the DDF to the soil absorption field in each dose. Effluent pump selection shall be based on manufacturer's
42 pump curves for the required discharge rate from Table VII, as follows, at the total head imposed on the pump:

43

Number of Bedrooms	Discharge Rate in Gallons per Minute
1	30-35
2	30-35
3	30-45
4	30-60

5	38-75
6	45-90

(c) The total head for a subsurface trench flood dosed soil absorption system shall be the elevation difference between the effluent pump off and the highest point in the force main or the outlet of the effluent force main in the distribution box, whichever is the highest elevation, in addition to the friction loss in the effluent force main expressed in feet.

(d) The effluent force main shall drain unless it is installed below the frost line, as listed in Table VIII, as follows, and designed so that no effluent remains in any portion of the effluent force main located above the frost line:

Adams	60	Franklin	48	Lawrence	48	Rush	54
Allen	60	Fulton	60	Madison	60	St. Joseph	60
Bartholomew	48	Gibson	42	Marion	54	Scott	36
Benton	60	Grant	54	Marshall	60	Shelby	54
Blackford	60	Greene	54	Martin	48	Spencer	36
Boone	54	Hamilton	54	Miami	60	Starke	60
Brown	48	Hancock	54	Monroe	48	Steuben	60
Carroll	60	Harrison	36	Montgomery	60	Sullivan	54
Cass	60	Hendricks	54	Morgan	48	Switzerland	42
Clark	36	Henry	54	Newton	60	Tippecanoe	60
Clay	54	Howard	60	Noble	60	Tipton	60
Clinton	54	Huntington	60	Ohio	42	Union	48
Crawford	36	Jackson	48	Orange	42	Vanderburgh	36
Daviess	48	Jasper	60	Owen	54	Vermillion	60
Dearborn	48	Jay	60	Parke	60	Vigo	60
Decatur	48	Jefferson	42	Perry	36	Wabash	60
Dekalb	60	Jennings	48	Pike	42	Warren	60
Delaware	60	Johnson	54	Porter	60	Warrick	36
Dubois	42	Knox	48	Posey	42	Washington	36
Elkhart	60	Kosciusko	60	Pulaski	60	Wayne	54
Fayette	54	LaGrange	60	Putnam	54	Wells	60
Floyd	36	Lake	60	Randolph	54	White	60
Fountain	60	LaPorte	60	Ripley	48	Whitley	60

(e) In addition to the liquid holding capacity of a dosing tank stated in section 62(f) of this rule the following shall apply:

(1) If the effluent force main drains to the soil absorption system, or if it does not drain between doses, the dose volume shall be the DDF.

(2) If the effluent force main drains back to the dosing tank, the dose volume shall be the DDF plus the volume contained in the effluent force main.

(f) The distal end of the effluent force main in the distribution box must be fitted with an elbow turned down or a sanitary tee, or else the distribution box must be baffled.

(g) The minimum inside diameter of the effluent force main shall be one (1) inch. The maximum inside diameter of the effluent force main shall be four (4) inches.

(h) Tables IX and X, as follows, shall be used in determining friction losses in the effluent force mains and manifold when plastic pipe is used:

Table IX – Friction Losses in Plastic Pipe (per 100 feet of pipe)

Pipe Diameter, Flow (gpm), Velocity (v) ² , and Friction Loss Head (H _f) ¹														
Flow (gpm)	1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"	
	v	H _f	v	H _f	v	H _f	v	H _f	v	H _f	v	H _f	v	H _f
1	0.37	0.11												
2	0.74	0.38	0.43	0.10										
3	1.11	0.78	0.64	0.21	0.47	0.10								
4	1.49	1.31	0.86	0.35	0.63	0.16								
5	1.86	1.92	1.07	0.52	0.79	0.24								
6	2.23	2.70	1.29	0.71	0.95	0.33	0.57	0.10						
8	2.97	4.59	1.72	1.19	1.26	0.56	0.77	0.17						
10	3.71	6.90	2.15	1.78	1.58	0.83	0.96	0.25	0.67	0.11				
15	5.57	14.7	3.22	3.76	2.37	1.74	1.43	0.52	1.01	0.22				
20	7.43	25.2	4.29	6.42	3.16	2.96	1.91	.87	1.34	0.37	0.87	0.13		
25	9.28	38.6	5.37	9.74	3.94	4.46	2.39	1.29	1.68	0.54	1.09	0.19		
30			6.44	13.6	4.73	6.27	2.87	1.81	2.01	0.76	1.30	0.26		
35			7.51	18.2	5.52	8.40	3.35	2.42	2.35	1.01	1.52	0.35	0.88	0.10
40			8.59	23.6	6.30	10.7	3.83	3.12	2.68	1.28	1.74	0.44	1.01	0.12
45					7.09	13.5	4.30	3.85	3.02	1.54	1.95	0.55	1.13	0.15
50					7.88	16.5	4.78	4.68	3.35	1.93	2.17	0.67	1.26	0.18
60					9.47	23.6	5.74	6.62	4.02	2.72	2.60	0.94	1.51	0.25
70							6.70	8.86	4.69	3.67	3.04	1.25	1.76	0.33
80							7.65	11.5	5.36	4.69	3.47	1.59	2.02	0.42
90							8.60	14.3	6.03	5.83	3.91	1.99	2.27	0.52
100									6.70	7.13	4.34	2.42	2.52	0.63
125									8.38	10.9	5.43	3.72	3.15	0.96
150											6.51	5.16	3.78	1.34
175											7.60	6.90	4.41	1.79
200											8.68	8.93	5.04	2.27
225													5.67	2.84
250													6.30	3.37
275													6.93	4.13
300													7.56	4.87
325													8.19	5.70

¹ This figure is based on flows for PVC Schedule 40 pipe (flow coefficient: C-150). Other values for friction loss may be used if documentation from the pipe manufacturer is provided with the plan submittal. Calculations using the Hazen-Williams equation may be used if provided with the plan submittal.

² Flow velocity must be at least 2 fps; flow velocities above 5 fps should be avoided.

Table X - Plastic Pipe Fittings: Friction Loss - Equivalent Length of Straight Pipe (ft.)*

Fitting:	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
90° elbow, standard sharp, inside radius	5.3	6.7	7.5	8.6	9.3	11.1	13.1
90° elbow, long sweep radius	2.5	3.8	4.0	5.7	6.9	7.9	12.0
45° elbow, standard	1.4	1.8	2.1	2.6	3.1	4.0	5.1
Tee Flow (run flow)	1.7	2.3	2.7	4.3	5.1	6.2	8.3
Tee Flow (branch flow)	6.0	7.0	8.0	12.0	15.0	16.0	22.0
Gate Valve	0.6	0.8	1.0	1.5	1.6	2.0	3.0
Male/Female adapter	2.0	2.8	3.5	4.5	5.5	6.5	9.0

*Assigned values. Other values for friction loss may be used if documentation from the pipe manufacturer is provided with the plan submittal.

(Indiana Department of Health; 410 IAC 6-8.3-76; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; filed Apr 9, 2014, 9:51 a.m.: 20140507-IR-410130350FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-77 Subsurface trench alternating field on-site sewage systems: design and construction requirements

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 77. (a) Subsurface trench alternating field on-site sewage systems shall meet all of the requirements of:

- (1) sections 74 and 75 of this rule; and
- (2) this section.

(b) Each side of the soil absorption system shall contain the total square footage of soil absorption area calculated from section 74(a) of this rule.

(c) A diversion valve shall be installed between the septic tank and the distribution boxes. An access riser, extending to the ground surface, shall be installed over the diversion valve.

(Indiana Department of Health; 410 IAC 6-8.3-77; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-78 Subsurface trench pressure distribution on-site sewage systems: design and construction requirements

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 78. (a) Subsurface trench pressure distribution on-site sewage systems shall meet all of the requirements of:

- (1) section 74 of this rule; and
- (2) this section.

(b) Each pipe connected to an outlet in the manifold of a subsurface pressure distribution on-site sewage system shall be counted as a separate distribution lateral.

(c) An inline residual pressure of two and five-tenths (2.5) to three (3) feet of head shall be maintained in the pressure distribution lateral at the highest elevation in the soil absorption system during pumping.

(d) The effluent pump shall be sized and its controls set as follows:

(1) When a subsurface pressure distribution on-site sewage system is designed using a soil loading rate of less than one and two-tenths (1.2) gallons per day per square foot, the pump shall deliver the DDF to the soil absorption field in each dose.

(2) When a subsurface pressure distribution on-site sewage system is designed using a soil loading rate of one and two-tenths (1.2) gallons per day per square foot, the pump shall deliver four (4) doses each day, each dose being approximately one-fourth (1/4) of the DDF.

(k) The minimum inside diameter of the pressure distribution laterals from the manifold shall be one (1) inch. The maximum inside diameter of the pressure distribution laterals shall be three (3) inches.

(l) Table XII, as follows, may be used to calculate pipe volumes:

Table XII - Pipe Volume for Various Diameter Pipes (gal/ft)						
Pipe Diameter (in)	1	1 1/4	1 1/2	2*	3*	4*
Volume (gal/ft)	.045	.078	.106	.174	.384	.650
*These diameters and pipe volumes are for calculating the total volume of the effluent force main. They are not used for calculating volumes of pressure distribution laterals.						

(m) The pressure distribution laterals shall have one (1) row of holes spaced in accordance with Table XIII as follows:

Table XIII - Soil Loading Rates Versus Pressure Distribution Lateral Hole Spacing for Subsurface Trench Pressure Distribution Systems	
Soil Loading Rates: Gallons per Day per Square Foot	Lateral Hole Spacing Feet Between Holes
1.2	3
0.75	3 to 5
0.5 and 0.6	3 to 6
0.25 and 0.3	3 to 7

(n) The holes in the pressure distribution laterals shall be placed in the trenches facing down, and all burrs shall be removed from the edges of the holes.

(o) The hole size in the pressure distribution laterals shall be one-fourth (1/4) inch.

(p) The perforation discharge rate shall be determined in accordance with the formula used to compute the flow from a hole in the pressure distribution lateral at inline head as follows:

$$Q = 11.78(d^2)(\sqrt{H})$$

Where:

- Q = the volume of the flow from the hole.
- d = the diameter of the hole in the pipe.
- H = the inline head at the hole.

Table XIV, as follows, gives the discharge rates at varying heads that would be obtained using the formula above in which "d" equals one-fourth (1/4) inch diameter holes:

Table XIV - Perforation Discharge Rates in GPM at Varying Inline Heads for 1/4 Inch Diameter Hole Size	
Inline Head (feet)	Perforation Discharge Rate (gallons per minute)
2.5	1.17
3.0	1.28
3.5	1.38
4.0	1.47
4.5	1.56
5.0	1.65
5.5	1.73

(q) Effluent pump selection for soil absorption systems using pressure distribution shall be based on the manufacturer's pump curves for the required pump discharge rate at the total head imposed on the pump. The pump discharge rate for level on-site sewage systems is calculated by using the following formula:

$$\text{Pump discharge rate} = \text{Perforation discharge rate} \times \text{total number of perforations}$$

To obtain the pump discharge rate required for sloping sites, the rate must be calculated individually for each pressure distribution lateral using the pump discharge rate formula based on the pressure on that line, and the sum of the calculated discharge rates determined for each individual line.

(r) The end of each pressure distribution lateral shall be capped, and a one-fourth (1/4) inch hole shall be drilled in the upper half of the end cap.

(s) All joints, including the end cap, shall withstand the pressures exerted on them.

(Indiana Department of Health; 410 IAC 6-8.3-78; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-79 Elevated sand mound on-site sewage systems: design of the aggregate bed

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 79. (a) The size of the aggregate bed shall be determined from the following:

(1) The minimum area of the aggregate bed shall be calculated as:

$$\text{minimum aggregate bed area (ft}^2\text{) (AB)} = \frac{\text{DDF (150 gal. x number of bedrooms and bedroom equivalents)(in gpd)}}{\text{Design Daily Flow (in gpd)}} \times 1.2 \text{ gpd/ft}^2$$

(2) The dimensions of the aggregate bed shall be as long and narrow as the site allows, while not exceeding the maximum bed width calculated in subdivision (3)(A).

(3) The maximum width of the aggregate bed shall meet the following requirements:

(A) ~~The maximum aggregate bed width (ft.) (ABW) = 0.83-
ft²/gpd-~~

~~where: 0.83 is a conversion factor (ft²/gpd) - DDF (gpd)~~

~~SLR is soil loading rate, and~~

~~where: DDF is design daily flow, and~~

~~n is determined by the DDF in this chart~~

~~This number may be rounded down to the nearest whole number.~~

(A) **The maximum aggregate bed width (ft.) (ABW) =**

$$0.83 \text{ ft}^2/\text{gpd} \sqrt{\frac{\text{DDF (gpd)} \times \text{SLR (gpd/ft}^2\text{)}}{n}}$$

(i) where: 0.83 is a conversion factor (ft²/gpd) SLR is soil loading rate, and

(ii) where: DDF is design daily flow, and n is determined by the DDF in this chart:

$\sqrt{\frac{\text{DDF (gpd)} \times \text{SLR (gpd/ft}^2\text{)}}{n}}$	
DDF (gpd)	n
≤ 1500	3
1501-3000	4
3001-4000	5

DDF (gpd)	n
≤ 1500	3
1501-3000	4
3001-4000	5

(iii) This number may be rounded down to the nearest whole number.

1 (B) For on-site sewage systems with a DDF of seven hundred fifty (750) gallons per day or less, the width of the
2 aggregate bed shall be at least four (4) feet and not greater than ten (10) feet. The aggregate bed width shall not
3 exceed the maximum bed width calculated in clause (A).

4 (C) For on-site sewage systems with a DDF of greater than seven hundred fifty (750) gallons per day, the
5 following apply:

6 (i) If the soil loading rate is fifty-hundredths (0.50) gallons per day per square foot (gpd/ft²) or less, the
7 width of the aggregate bed shall be not greater than fifteen (15) feet, and shall not exceed the maximum
8 bed width calculated in clause (A).

9 (ii) If the soil loading rate is greater than fifty-hundredths (0.50) gallons per day per square foot
10 (gpd/ft²), the width of the aggregate bed shall be not greater than twenty (20) feet, and shall not exceed
11 the maximum bed width calculated in clause (A).

12 (4) The minimum length of the aggregate bed shall be calculated as:

$$\text{Minimum length of the aggregate bed (ABL)} = \frac{\text{Minimum aggregate bed area (AB)}}{\text{Maximum aggregate bed width (ABw)}}$$

13 (5) The depth of the aggregate bed shall be at least the sum of:

14 (A) at least six (6) inches of aggregate below the pressure distribution lateral;

15 (B) the outside diameter of the pressure distribution lateral; and

16 (C) at least two (2) inches of aggregate above the pressure distribution lateral.

17 (b) The aggregate bed shall be installed on the INDOT Specification 23 sand in the basal area, as listed in Table XV in
18 section 80(j) of this rule.

19 (c) The location of the aggregate bed shall be:

20 (1) for sites with slopes of one-half percent (1/2%) or less, with its length positioned along the long axis in the center of
21 the basal area; and

22 (2) for sites with slopes greater than one-half percent (1/2%) and less than or equal to six percent (6%), with its length
23 positioned along the long axis at the upslope side of the basal area.

24 (d) The design of the aggregate bed shall comply with the following:

25 (1) The long axis of the aggregate bed shall be constructed along the contours of the absorption system site.

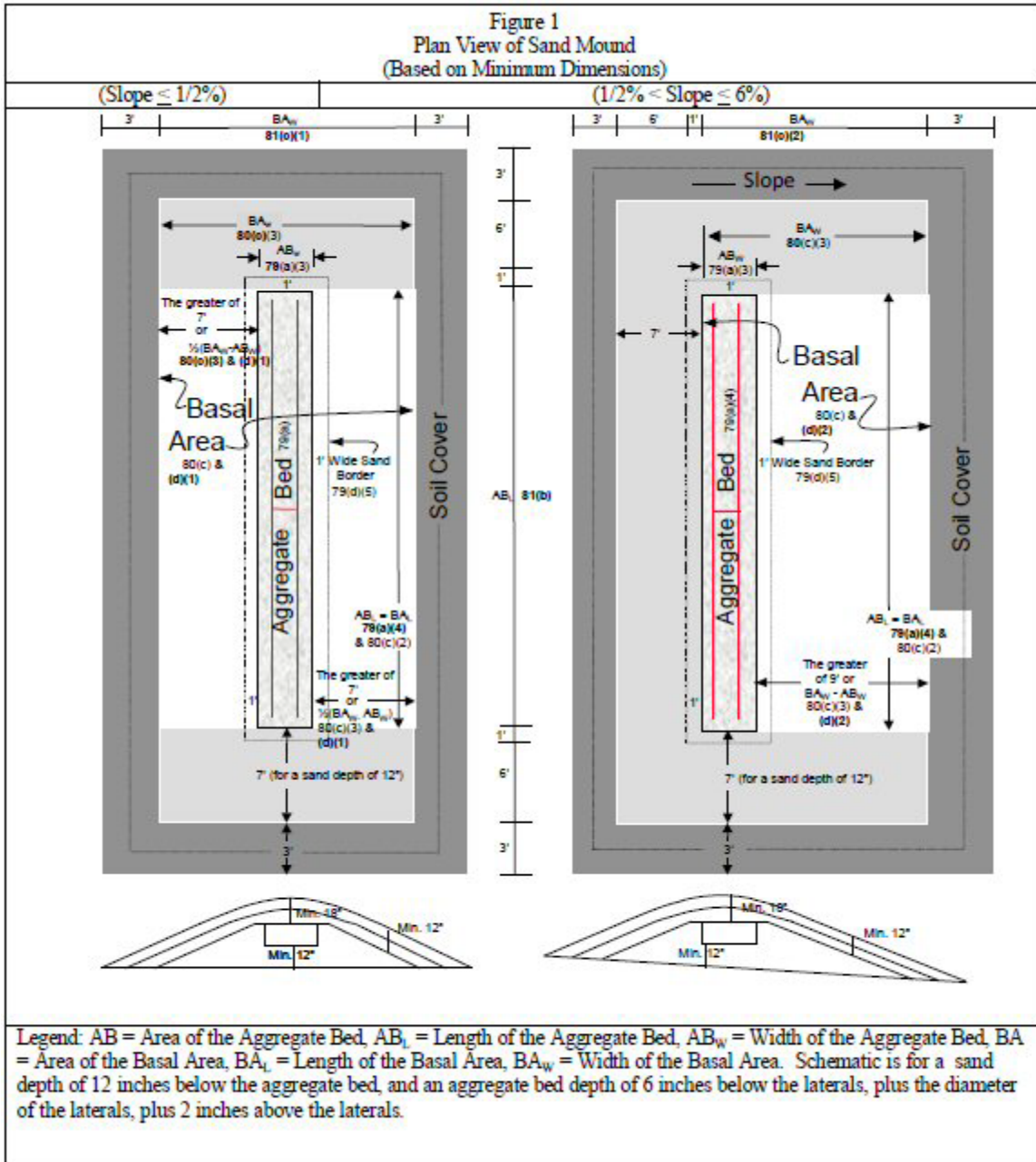
26 (2) The bottom of the aggregate bed shall be level along its length and width.

27 (3) Aggregate used in the aggregate bed shall comply with the requirements of section 68 of this rule.

28 (4) If more than one (1) aggregate bed is constructed, each of the aggregate beds shall be equal in area.

29 (5) A one (1) foot wide border of INDOT Specification 23 sand, level with the top of the aggregate bed, shall surround the
30 aggregate bed.

31 Figure 1, as follows, presents a visual depiction of the location of the aggregate bed within the basal area:



2 (Indiana Department of Health; 410 IAC 6-8.3-79; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; errata filed Apr
 3 23, 2013, 11:44 a.m.: 20130508-IR-410130165ACA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA;
 4 readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

5
 6 **410 IAC 6-8.3-80 Elevated sand mound on-site sewage systems: design of basal area**

7 **Authority: IC 16-19-3-4**

8 **Affected: IC 16-19-3-4**

1 Sec. 80. (a) The dimensions of the basal area shall be as long and narrow as the site allows, in compliance with the
 2 requirements of subsection (c).

3 (b) Numerical dimensions provided in this section for basal area and elevated sand mound size are rounded up to the
 4 nearest whole number.

5 (c) The size of the basal area shall be determined from the following:

6 (1) The minimum size of the basal area shall be calculated as:

$$\text{Minimum basal area (ft}^2\text{)(BA)} = \frac{\text{DDF (150 gal.} \times \text{number of bedrooms and bedroom equivalents)(in gpd)}}{\text{Design Daily Flow}} \times \text{soil loading rate (SLR)}$$

8 using the soil loading rates from Table V in section 72(b)(7) (6) of this rule. The soil loading rate used for this
 9 computation shall be the soil loading rate of the most restrictive horizon in the first twenty (20) inches below the ground
 10 surface.

11 (2) The minimum length for the basal area (BA_L) shall equal the length of the aggregate bed (AB_L).

12 (3) The minimum width of the basal area (BA_w) shall be calculated as the greater of:

(A) Minimum basal area width = $\frac{\text{minimum basal area (ft.}^2\text{) (BA)}}{\text{length of aggregate bed (ft) (AB}_L\text{)}}$; or

(B) Slope	Minimum Basal Area Width (BA _w)
0% ≤ slope ≤ 1/2%	Aggregate bed width + 14 ft.
1/2% > slope ≤ 6%	Aggregate bed width + 9 ft.

(C) The dimensions determined from clause (A) or (B) for the INDOT Specification 23 sand shall maintain a minimum sideslope grade of three-to-one (3:1).

13 (d) The location of the basal area within the elevated sand mound shall be:

14 (1) on sites with slopes of one-half percent (1/2%) or less, the area under the aggregate bed and extending an equal
 15 distance from each side along the length of the aggregate bed; and

16 (2) on sites with slopes greater than one-half percent (1/2%) and less than or equal to six percent (6%), the area under the
 17 aggregate bed and extending directly downslope from the aggregate bed.

18 (e) The design of the basal area shall be for:

19 (1) sites with slopes one-half percent (1/2%) or less; or

20 (2) sites with slopes greater than one-half percent (1/2%) and less than or equal to six percent (6%).

21 (f) The basal area shall be constructed on the tilled surface of the soil absorption system site in accordance with the
 22 provisions of section 87 of this rule.

23 (g) The long axis of the basal area and elevated sand mound shall be constructed along the contour of the soil absorption
 24 system site.

25 (h) The minimum depth of the INDOT Specification 23 sand under the aggregate bed shall be twelve (12) inches.

26 (i) The INDOT Specification 23 sand shall have a minimum final grade on all sides of three-to-one (3:1).

27 (j) The INDOT Specification 23 sand used in the elevated sand mound shall meet the following standard:

Table XV - INDOT Specification 23 Sand*	
Sieve Sizes	Percent (%) Passing Sieve (by Weight)
3/8 in (9.50 mm)	100
No. 4 (4.75 mm)	95 – 100

No. 8 (2.36 mm)	80 – 100
No. 16 (1.18 mm)	50 – 85
No. 30 (600 µm)	25 – 60
No. 50 (300 µm)	5 – 30
No. 100 (150 µm)	0 – 10
No. 200 (75 µm)	0 – 3
*The sand shall not have more than forty-five percent (45%) retained between any two (2) consecutive sieves.	

(k) Figure 1 in section 79(d) of this rule presents a visual depiction of the location of the basal area within the elevated sand mound.

(Indiana Department of Health; 410 IAC 6-8.3-80; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-81 Elevated sand mound on-site sewage systems: dimensions of the elevated sand mound

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 81. (a) Numerical dimensions for the soil material cover from the edge of the basal area to the edge of the elevated sand mound are based on a final grade of three-to-one (3:1) (on level sites). The plan views and numerical dimensions are for a simple slope (a slope that forms a plane). Elevated sand mounds sited on complex slopes are more difficult to design and construct on contour.

(b) The minimum length of an elevated sand mound shall be the sum of the following:

(1) The length of the aggregate bed (ABL).

(2) Plus fourteen (14) feet, representing the two sideslopes of INDOT Specification 23 sand at both ends of the aggregate bed (including the one (1) foot level borders). A minimum endslope grade of three-to-one (3:1) shall be maintained on the INDOT Specification 23 sand.

(3) Plus six (6) feet, representing the soil material cover at both ends of the aggregate bed. A minimum endslope grade of three-to-one (3:1) shall be maintained on the soil cover material.

(c) The minimum width of the elevated sand mound shall be determined from the following:

(1) On sites with slopes one-half percent (1/2%) or less, the minimum width of an elevated sand mound is the sum of the following:

(A) The basal area width (BAW) as determined in section 80(c)(3) of this rule.

(B) Plus six (6) feet, representing the soil material cover on both sides of the aggregate bed.

(2) On sites with slopes greater than one-half percent (1/2%) and less than or equal to six percent (6%), the minimum width of an elevated sand mound shall be the sum of the following:

(A) The basal area width (BAW) as determined in section 80(c)(~~3~~) (4) of this rule.

(B) Plus seven (7) feet, representing the sideslope of INDOT Specification 23 sand on the upslope side of the aggregate bed (including the one (1) foot level border), and shall maintain a minimum sideslope grade of three-to-one (3:1).

(C) Plus six (6) feet, representing the soil material cover on both sides of the aggregate bed. A minimum sideslope grade of three-to-one (3:1) shall be maintained on the soil cover material.

(Indiana Department of Health; 410 IAC 6-8.3-81; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-82 Elevated sand mound on-site sewage systems: pressure distribution network

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

- 1
2 Sec. 82. (a) The effluent force main shall drain unless it is installed below the frost line, as listed in Table VIII in section
3 76(d) of this rule, and designed so that no effluent remains in any portion of the effluent force main located above the frost line.
4 (b) The effluent pump shall be sized, and its controls set, to deliver approximately one-fourth (1/4) of the DDF per dose.
5 (c) The liquid holding capacity of the dosing tank shall be determined as follows:
6 (1) If the effluent force main and manifold do not drain to the dosing tank, the dosing tank volume shall be one-fourth
7 (1/4) of the DDF.
8 (2) If the effluent force main and manifold drain to the dosing tank, the dosing tank volume shall be one-fourth (1/4) of the
9 DDF plus the volume of the effluent force main.
10 (3) Additional dosing tank capacity must be provided to:
11 (A) keep the dosing tank effluent pump submerged at all times; and
12 (B) provide sufficient freeboard for a high water alarm.
13 (d) The minimum inside diameter of the effluent force main shall be one and one-half (1 1/2) inches. The maximum inside
14 diameter of the effluent force main shall be four (4) inches.
15 (e) Tables IX and X in section 76(h) of this rule, or equivalent tables provided by the pipe manufacturer, shall be used in
16 determining friction losses in the effluent force main and manifold when plastic pipe is used. The Hazen-Williams equation may
17 also be used to determine friction loss in the effluent force main and manifold.
18 (f) The design of the pressure distribution network shall meet the following requirements:
19 (1) The effluent force main shall approach the elevated sand mound as follows:
20 (A) On sites with slopes of one-half percent (1/2%) or less, from either end.
21 (B) On sites with slopes greater than one-half percent (1/2%) and less than or equal to six percent (6%), from the
22 upslope side. If approach from the upslope side of the elevated sand mound is not possible due to site limitations,
23 the effluent force main may approach from either end.
24 (2) The design (location) of the effluent force main shall provide for minimal disturbance of the basal area during
25 installation.
26 (g) Manifolds shall be installed between the effluent force main and the pressure distribution laterals as follows:
27 (1) The manifold shall be located in the aggregate bed.
28 (2) The manifold pipe shall:
29 (A) for on-site sewage systems with a DDF of seven hundred fifty (750) gallons per day or less, have a diameter
30 of two (2) inches; or
31 (B) for on-site sewage systems with a DDF of greater than seven hundred fifty (750) gallons per day, have the
32 same diameter as the effluent force main or a diameter of two (2) inches, whichever is greater, but no greater than
33 four (4) inches.
34 (h) The pressure distribution laterals shall meet the following requirements:
35 (1) Each pressure distribution lateral shall connect directly to the manifold.
36 (2) The length of each lateral shall be calculated as: Lateral length (LLat) = (ABL - 3)/2
37 (3) No single pressure distribution lateral (from the manifold to the end cap) shall exceed fifty-five (55) feet in length.
38 (4) The diameter of the pressure distribution laterals shall be determined from Table XVI, as follows:
39

Table XVI - Pressure Distribution Lateral Diameter for Elevated Sand Mounds*

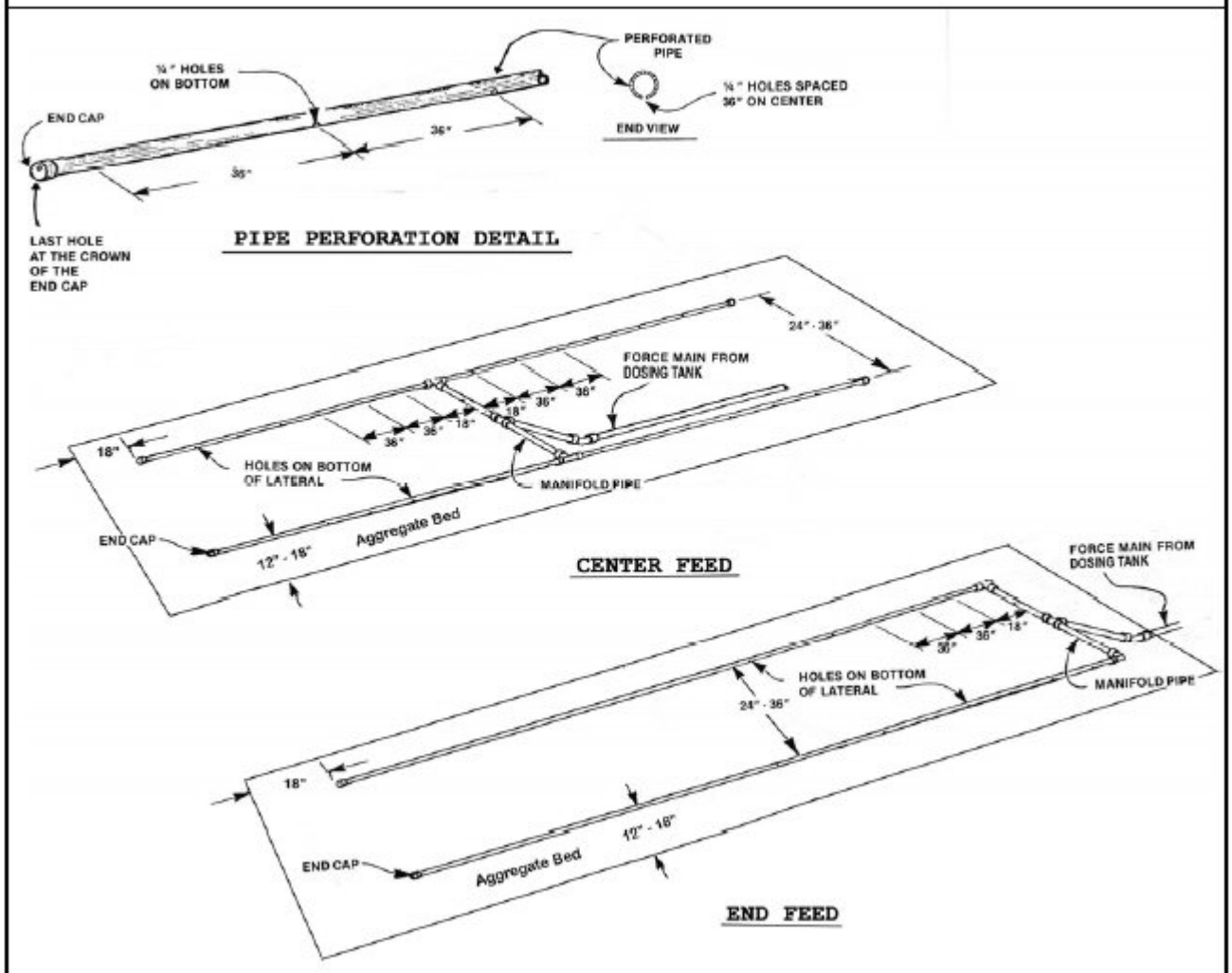
Lateral Length, L (ft.)	$L \leq 25$ ft.	$25 \text{ ft.} > L \leq 40$ ft.	$40 \text{ ft.} > L \leq 55$ ft.
Diameter (in.)	1 in.	1 1/4 in.	1 1/2 in.

*Pressure distribution lateral diameters for one-quarter (1/4) in. holes spaced at three (3) ft. on centers.

- 40
41 (5) Pressure distribution laterals shall have one (1) row of holes with three (3) feet on center spacing.
42 (6) The holes in the pressure distribution laterals shall be one-quarter (1/4) inch in diameter.
43 (7) The number of holes per lateral, including the hole in the end cap, shall be calculated as:
44 Number of holes per lateral = $(LLat - 1.50/3) + X$;
45 where: $X = 1$ if $R > 0.5$; and $X = 2$ if $R > 0.5$; and
46 $R =$ the remainder from the mathematical equation.

- 1 (8) The first hole in each lateral shall be eighteen (18) inches from the center of the manifold.
2 (9) The last hole in the pressure distribution lateral before the end cap shall be at not less than eighteen (18) inches and not
3 more than thirty-six (36) inches from the end cap.
4 (10) The end of each lateral shall be capped, and a one-fourth (1/4) inch hole shall be drilled in the upper half of the end
5 cap.
6 (11) Burrs shall be removed from the edges of all holes and from the interiors of all laterals.
7 (12) All pressure distribution laterals shall be:
8 (A) at the same elevation; and
9 (B) level throughout their lengths.
10 (13) The pressure distribution laterals shall be placed in the aggregate bed with all holes, except the end cap holes, facing
11 down.
12 (i) Pressure distribution laterals shall be laid out as shown in Figure 2, as follows:
13 (1) The separation distance between pressure distribution laterals shall be not less than twenty-four (24) inches and not
14 more than thirty-six (36) inches.
15 (2) Pressure distribution laterals shall be located not less than twelve (12) inches and not more than eighteen (18) inches
16 from the sides of the aggregate bed along the length of the lateral.
17 (3) Pressure distribution laterals shall be attached to the manifold using nondirectional fittings designed to withstand the
18 required pressures exerted on them.
19 (4) The end of each pressure distribution lateral with the hole in the end cap of the lateral shall be eighteen (18) inches
20 from the end of the aggregate bed.

Figure 2 – Plan View of Pressure Distribution Laterals in an Aggregate Bed of an Elevated Sand Mound



(5) All joints, including the end caps, shall withstand the pressures exerted on them.

(j) Effluent pump selection for elevated sand mound on-site sewage systems shall be based on the manufacturer's pump curves for the required pump discharge rate at the total dynamic head imposed on the pump, as follows:

(1) The total discharge rate of the effluent pump shall be the total number of one-quarter (1/4) inch holes in all laterals (including the holes in the end caps) times one and twenty-eight hundredths (1.28) gallons per minute (gpm).

(2) The total dynamic head imposed on the pump shall be the sum of the following:

(A) The design head shall be three (3) feet.

(B) Plus friction loss in the effluent force main and manifold as determined by Tables IX and X in section 76(h) of this rule when plastic pipe is used.

(C) Plus the static head which is the difference in elevation from the effluent pump and the highest point in the effluent force main or the connection to the manifold, whichever is the highest elevation.

(Indiana Department of Health; 410 IAC 6-8.3-82; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

1 **410 IAC 6-8.3-83 Elevated sand mound on-site sewage systems: protection of the site**

2 **Authority: IC 16-19-3-4**

3 **Affected: IC 16-19-3-4**

4
5 Sec 83. (a) Before the start of any construction on the property, the following areas must be staked out and protected from
6 disturbance:

- 7 (1) The soil absorption system area.
8 (2) The dispersal area.
9 (3) The subsurface drainage system area.
10 (4) The set-aside area (if required in the approved plan).
11 (5) Areas designated for future expansion (if required in the approved plan).

12 (b) Special caution shall be taken to prevent wheeled and tracked vehicles from compacting the area selected for
13 placement of the elevated sand mound soil absorption system before, during, and after construction, especially during wet weather.
14 Alteration of soil structure by movement of vehicles may be grounds for rejection of the site or the on-site sewage system, or both.

15
16 *(Indiana Department of Health; 410 IAC 6-8.3-83; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
17 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

18
19 **410 IAC 6-8.3-84 Elevated sand mound on-site sewage systems: requirements for system construction**

20 **Authority: IC 16-19-3-4**

21 **Affected: IC 16-19-3-4**

22
23 Sec. 84. (a) Site preparation, tilling, construction, finish grading, and soil stabilization shall:

- 24 (1) be performed in accordance with the approved plans; and
25 (2) not be performed when the soil is frozen.

26 (b) Elevated sand mound soil absorption systems shall not be constructed during periods of wet weather when the soil is
27 sufficiently wet at the depth of installation to exceed its plastic limit, as follows:

28 (1) This applies to soils classified as the following:

- 29 (A) Sandy loam.
30 (B) Silt loam.
31 (C) Loam.
32 (D) Clay loam.
33 (E) Silty clay loam.
34 (F) Sandy clay.
35 (G) Silty clay.
36 (H) Clay.

37 (2) Sufficient samples shall be evaluated throughout the soil absorption system site, from the soil surface to the depth of
38 tilling, to assure that the plastic limit of the soil is not exceeded.

39 (3) The plastic limit of a soil shall be considered to have been exceeded when the soil can be rolled between the palms of
40 the hands to produce threads one-eighth (1/8) inch in diameter without breaking apart and crumbling.

41
42 *(Indiana Department of Health; 410 IAC 6-8.3-84; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
43 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

44
45 **410 IAC 6-8.3-85 Elevated sand mound on-site sewage systems: installation of the effluent force main**

46 **Authority: IC 16-19-3-4**

47 **Affected: IC 16-19-3-4**

48
49 Sec. 85. (a) To minimize disturbance of the basal area, the effluent force main must be brought above grade prior to
50 entering the basal area and it must be extended upward through the INDOT Specification 23 sand to the point where it will enter the
51 aggregate bed. The effluent force main shall be laid in the aggregate bed to the point of connection to the manifold.

52 (b) If the effluent force main is installed prior to tilling the elevated sand mound site, the following apply:

- 1 (1) The effluent force main must be installed a minimum of sixteen (16) inches below existing grade from the outlet of the
2 dosing tank to the point where it comes up through the INDOT Specification 23 sand, outside of the basal area.
3 (2) The end of the effluent force main shall be fitted with a temporary vertical pipe extending at least three (3) feet above
4 grade and temporarily capped during the construction process.
5 (3) The portion of the effluent force main which comes above existing grade must be bedded and stabilized properly as the
6 sand is applied.
7 (c) If the effluent force main is installed after tilling of the site and placement of the INDOT Specification 23 sand, the
8 following apply:
9 (1) The excavation must be hand dug through the INDOT Specification 23 sand.
10 (2) Dirt, sand, and debris must be prevented from entering the effluent force main during installation.
11 (3) The portion of the effluent force main that is installed in the INDOT Specification 23 sand must be properly bedded
12 and stabilized.
13

14 *(Indiana Department of Health; 410 IAC 6-8.3-85; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
15 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
16

17 **410 IAC 6-8.3-86 Elevated sand mound on-site sewage systems: preparation of the site**

18 **Authority: IC 16-19-3-4**

19 **Affected: IC 16-19-3-4**
20

21 Sec. 86. (a) For all elevated sand mound sites, the following requirements shall be met for site preparation:

- 22 (1) Vegetation that would interfere with the soils evaluation, system layout, or system construction shall be cut and
23 removed (not scraped) prior to installation without causing compaction.
24 (2) Trees shall be cut off at the ground surface and removed, with only stumps left in place. The local health department
25 may require scarring of the tree stumps.
26 (3) Tree roots that protrude above the tilled surface shall be cut off and removed without causing compacted soil material.
27 (4) The portion of the elevated sand mound site receiving INDOT Specification 23 sand shall be tilled along the contour of
28 the site to a depth of seven (7) inches to fourteen (14) inches with a moldboard or chisel plow, or a bulldozer with a ripper.
29 A backhoe may be used to till sites with special considerations as noted in subsection (b). The department or local health
30 department may require field supervision of tilling operations, as follows:

31 (A) If a chisel plow or a bulldozer with a ripper is used, tillage shall be across the site along the contour of the
32 site.

33 (B) If a moldboard plow is used:

- 34 (i) it shall have at least two (2) bottoms and make only one (1) pass across the area, along the contour of
35 the site; and
36 (ii) on sites with slopes greater than one-half percent (1/2%), the furrows shall be turned upslope.

37 (b) For wooded sites, and sites that limit the use of larger equipment, a backhoe may be used to till the site if the following
38 requirements are met:

- 39 (1) The use of a backhoe shall be approved, in writing, by the department or local health department.
40 (2) Tilling shall be performed along the contour of the site.
41 (3) The surface of the ground shall be tilled with the chisel teeth fitted onto the backhoe bucket.
42 (4) The backhoe shall remain on untilled soil.
43 (5) If a moldboard plow, chisel plow, or bulldozer with a ripper is used to till the site, the provisions of subsection (a)(4)
44 must be utilized.

45 (c) If compacted soil material is identified in the soil from the surface to a depth of twelve (12) inches, tilling of the soil
46 shall be to a depth of at least two (2) inches below the bottom of the compacted soil material. If compacted soil material is
47 identified in the soil at a depth greater than twelve (12) inches, the site is unsuitable for elevated sand mound construction, unless
48 the compaction is broken up by a method approved by the department.
49

50 *(Indiana Department of Health; 410 IAC 6-8.3-86; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; filed Aug 28,*
51 *2013, 10:23 a.m.: 20130925-IR-410120615FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA;*
52 *readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*

1
2 **410 IAC 6-8.3-87 Elevated sand mound on-site sewage systems: placement of the sand on the basal area**

3 **Authority: IC 16-19-3-4**

4 **Affected: IC 16-19-3-4**

5
6 Sec. 87. (a) The basal area shall be covered using sand that meets the requirements listed in Table XV in section 80(j) of
7 this rule.

8 (b) INDOT Specification 23 sand shall be placed on the tilled area immediately after tilling the site to protect the tilled
9 surfaces from damage by precipitation.

10 (c) The depth of the INDOT Specification 23 sand under the aggregate bed shall be at least twelve (12) inches (on sites
11 with slopes greater than one-half percent (1/2%), the depth of INDOT Specification 23 sand beneath the downslope side of the
12 aggregate bed will be greater than twelve (12) inches).

13 (d) INDOT Specification 23 sand shall be placed on the tilled surface as follows:

14 (1) On sites with slopes one-half percent (1/2%) or less, from the ends of the elevated sand mound.

15 (2) On sites with slopes greater than one-half percent (1/2%) and less than or equal to six percent (6%), from the ends or
16 upslope edge of the elevated sand mound.

17 (e) At least six (6) inches of INDOT Specification 23 sand shall be kept between the vehicle tracks or tires and the tilled
18 soil of the site.

19 (f) The depth of INDOT Specification 23 sand around the aggregate bed shall be the sum of:

20 (1) the depth of the sand under the aggregate bed; and

21 (2) the depth of the aggregate bed.

22 (g) A one (1) foot wide border of INDOT Specification 23 sand shall surround the aggregate bed, level with the top of the
23 aggregate bed.

24
25 *(Indiana Department of Health; 410 IAC 6-8.3-87; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
26 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
27

28 **410 IAC 6-8.3-88 Elevated sand mound on-site sewage systems: construction of the aggregate bed**

29 **Authority: IC 16-19-3-4**

30 **Affected: IC 16-19-3-4**

31
32 Sec. 88. (a) The surface of the INDOT Specification 23 sand at the sand/aggregate interface shall be smooth and free of
33 ruts and depressions before the placement of the aggregate.

34 (b) The depth of aggregate in the aggregate bed from side to side and end to end shall be at least:

35 (1) six (6) inches below the pressure distribution laterals;

36 (2) plus the outside diameter of the pressure distribution laterals; and

37 (3) plus two (2) inches above the pressure distribution laterals.

38 (c) The aggregate bed shall be covered with a barrier material which meets the minimum requirements of section 69 of this
39 rule. The barrier material shall cover the aggregate bed from side to side and from end to end.

40
41 *(Indiana Department of Health; 410 IAC 6-8.3-88; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed*
42 *Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)*
43

44 **410 IAC 6-8.3-89 Elevated sand mound on-site sewage systems: placement of the soil material and final grade**

45 **Authority: IC 16-19-3-4**

46 **Affected: IC 16-19-3-4**

47
48 Sec. 89. (a) If the ground surface along the perimeter of the INDOT Specification 23 sand was not tilled during
49 preparation of the elevated sand mound site, the perimeter shall be prepared by tilling in accordance with the requirements of
50 section 86 of this rule.

51 (b) The soil material cover shall:

52 (1) have a texture other than sand or loamy sand;

- (2) be capable of sustaining plant growth; and
- (3) be placed on the INDOT Specification 23 sand without causing compacted soil material.
- (c) Prior to placement of the soil cover material, the surface of the INDOT Specification 23 sand shall be prepared by:
 - (1) maintaining a minimum grade of at least three-to-one (3:1); and
 - (2) preparing the surface of the INDOT Specification 23 sand so that it is smooth and free of ruts and depressions.
- (d) The aggregate and sand of the elevated sand mound shall be covered with a minimum of twelve (12) inches of soil material. An additional six (6) inches of that soil material, for a total of eighteen (18) inches, shall be placed over the center line of the long axis of the aggregate bed and crowned to promote surface runoff away from the elevated sand mound.
- (e) Soil material shall be placed on the tilled portion of the sand perimeter and graded according to the requirements of subsection (f).
- (f) The soil material cover shall have a minimum final grade on all sides of three-to-one (3:1).
- (g) The elevated sand mound shall be seeded or sodded with grasses adapted to the area. If seeded, the elevated sand mound shall be protected by a cover of straw, burlap, or some other biodegradable material that will protect it against erosion.

(Indiana Department of Health; 410 IAC 6-8.3-89; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; readopted filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)

410 IAC 6-8.3-90 Abandonment of an on-site sewage system

Authority: IC 16-19-3-4

Affected: IC 16-19-3-4

Sec. 90. **(a) The local health department shall issue a permit and require an inspection for the abandonment of an on-site sewage system in accordance with subdivision 53(a)(9) of this rule.**

~~(a)~~ **(b)** When the use of an on-site sewage system is discontinued, the following procedure ~~must~~ **shall** be followed for all tanks and electrical service:

- (1) Electrical power must be disconnected at the source. All controls and panels must be removed.
- (2) All above ground electrical lines that will not be used for other purposes must be removed.
- (3) A licensed ~~septic tank cleaner-wastehauler~~ **must shall** pump all contents from all tanks **and distribution boxes** in the on-site sewage system.
- (4) The tanks must ~~either be:~~
 - (A) be removed and disposed of at a licensed landfill;**
 - ~~(A) (B) removed or the~~ **have their** lids crushed into the tanks and the holes or tanks backfilled with debris-free sand or other granular material, concrete, or soil material that is compacted to prevent settling (if a sand mound is being abandoned, sand, aggregate and soil cover from the sand mound may be used for filling the tank or tanks);
 - or
 - ~~(B)~~ **(C) be filled with flowable fill.**

(5) Properly grade and establish vegetative cover.

~~(b)~~ **(c) If there are no plans to use the area for other purposes, the** ~~The~~ components of the soil absorption system may be left intact, ~~if there are no plans to use the area for other purposes~~. Vegetative cover must be maintained.

~~(c)~~ **(d)** If effluent has surfaced, those areas must be covered with hydrated lime followed by top soil and a vegetative cover.

~~(d)~~ **(e)** If components of the soil absorption system are to be removed, the following procedure must be used:

- ~~(1)~~ **(1)** A licensed ~~septic tank cleaner~~ **must pump all contents from all distribution boxes in the on-site sewage system.**
- ~~(2)~~ **(1)** Allow sufficient time after the on-site sewage system is taken out of service and the tanks pumped to make sure the entire soil absorption system is completely dry.
- ~~(3)~~ **(2)** A contractor must remove ~~the distribution network, aggregate, and sand (if any) from the site~~ **all piping, chambers, and distribution boxes and dispose of these materials at a licensed landfill.**
- ~~(4)~~ **(3)** Any aggregate, sand, and soil cover material may be used for fill material, including filling of abandoned tanks, after it has been allowed to sufficiently dry.

~~(5)~~ **(4)** The site must be properly graded and a vegetative cover established.

~~(e)~~ **(f)** Written documentation of tank **pumping and system** abandonment must be provided to the local health department by the homeowner in the form of a receipt from the contractor **and landfill, if used.**

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2 (Indiana Department of Health; 410 IAC 6-8.3-90; filed Oct 19, 2012, 2:06 p.m.: 20121114- IR-410120156FRA; filed Apr 9, 2014,
3 9:51 a.m.: 20140507-IR-410130350FRA; readopted filed Sep 26, 2018, 2:48 p.m.: 20181024- IR-410180328RFA)
4

5 **410 IAC 6-8.3-91 Matters incorporated by reference**

6 **Authority: IC 16-19-3-4**

7 **Affected: IC 16-19-3-4; IC 16-41-25**
8

9 Sec. 91. (a) Bulletin SE 11, "The Sanitary Vault Privy", 2021 Edition, is incorporated by reference as part of this rule. It is
10 available at the department at 2 North Meridian Street, Indianapolis, IN 46204.

11 (b) NSF/ANSI Standard 40-~~2010~~**2023** and Standard 46-~~2010a~~**2020** are incorporated by reference as part of this rule. Two
12 (2) copies of each standard are available for reference in the files of the department. Copies of the standards may be
13 obtained by mailing a request to the National Sanitation Foundation, 789 North Dixboro Road, P.O. Box 130140, Ann
14 Arbor, MI 48113-0140, or at www.techstreet.com/cgi-bin/joint.cgi/nsf.

15 (c) ASTM Standards C 923-~~08~~**20**, C 990-~~09~~**24**, C 1644-~~06~~**24**, D 1785-21a, D 2241-~~24~~**2020**, D 2661-~~24~~**2024**, D 2665-
16 ~~24~~**2020**, D 2680-~~20~~**20**, D 2729-~~20~~**21**, D 3034-~~24~~**2024**, D 4355-21, D 4491-2022, D 4533-15(**2023**), D 4632-2023, D 4751-21a, D
17 6241-22a, , F 480-14 (2022), F 667-16 (2021), and F 810-12 (~~2024~~**2018**), and C **1116-10a(2015)** are incorporated by reference as
18 part of this rule. Two (2) copies of each standard are available for reference in the files of the department. ASTM standards may be
19 obtained at <http://www.astm.org/Standard/index.shtml>.

20 (d) AASHTO Standard M252-23 is incorporated by reference as part of this rule. Two (2) copies of the standard are
21 available for reference in the files of the department. This standard may be obtained at
22 <https://store.transportation.org/Item/PublicationDetail?ID=5093>.

23 (e) NRCS Standard 606, July 2022, is incorporated by reference as part of this rule. Two (2) copies of the standard are
24 available for reference in the files of the department. This standard may be obtained at [https://www.nrcs.usda.gov/resources/guides-](https://www.nrcs.usda.gov/resources/guides-and-instructions/subsurface-drain-ft-606-conservation-practice-standard)
25 [and-instructions/subsurface-drain-ft-606-conservation-practice-standard](https://www.nrcs.usda.gov/resources/guides-and-instructions/subsurface-drain-ft-606-conservation-practice-standard).

26 (f) INDOT ~~2012~~**2024** Standard Specifications, Section 904, Aggregates is incorporated by reference as part of this rule.
27 Two(2) copies of the standard are available for reference in the files of the department. The standard may be obtained at
28 <https://www.in.gov/indot/files/2012Master.pdf>.

29 (g) NEMA 250-~~2008~~**2020** is incorporated by reference as part of this rule. Two (2) copies of the standard are available
30 for reference in the files of the department. The standard may be obtained at
31 <https://webstore.ansi.org/standards/nema/nema2502008>.

32 (h) IAPMO **Z1000-2019, Prefabricated Septic Tanks** is incorporated by reference as part of this rule. Two (2)
33 copies of the standard are available for reference in the files of the department. The standard may be obtained at:
34 [https://webstore.ansi.org/SDO/IAPMO?gclid=EAIaIQobChMI-8P-vZLJ-](https://webstore.ansi.org/SDO/IAPMO?gclid=EAIaIQobChMI-8P-vZLJ-QIVn8mUCR2xTQxTEAAYASAAEgJ9K_D_BwE)
35 [QIVn8mUCR2xTQxTEAAYASAAEgJ9K_D_BwE](https://webstore.ansi.org/SDO/IAPMO?gclid=EAIaIQobChMI-8P-vZLJ-QIVn8mUCR2xTQxTEAAYASAAEgJ9K_D_BwE).

36 (i) **Soil Taxonomy: A Basic System of Soil Classification for Making and Interpreting Soil Surveys, Second Edition,**
37 **USDA, 1999. Document may be obtained at: <https://nrspad.sc.egov.usda.gov/DistributionCenter/pdf.aspx?productID=703>.**
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39 (Indiana Department of Health; 410 IAC 6-8.3-91; filed Oct 19, 2012, 2:06 p.m.: 20121114-IR-410120156FRA; readopted filed
40 Sep 26, 2018, 2:48 p.m.: 20181024-IR-410180328RFA; filed Feb 27, 2024, 10:34 a.m.: 20240327-IR-410220395FRA; readopted
41 filed Nov 14, 2024, 1:24 p.m.: 20241211-IR-410230798RFA)