

**A BILL FOR AN ORDINANCE
TO AMEND CHAPTER 14, KAUA'I COUNTY CODE 1987, AS AMENDED,
RELATING TO THE PLUMBING CODE**

BE IT ORDAINED BY THE COUNCIL OF THE COUNTY OF KAUA'I,
STATE OF HAWAII:

SECTION 1. Chapter 14, Article 2 of the Kaua'i County Code 1987, as amended, is hereby amended as follows, and all other and prior ordinances or parts of ordinances in conflict herewith are hereby repealed:

1. Amend the title of Article 2 as follows:

**“ARTICLE 2. ADOPTION OF THE [2006] 2012 UNIFORM
PLUMBING CODE AND AMENDMENTS THERETO”**

SECTION 2. Chapter 14, Article 2, Section 14-2.1 of the Kaua'i County Code 1987, as amended, is hereby amended as follows, and all other and prior ordinances or parts of ordinances in conflict herewith are hereby repealed:

1. Amend paragraphs one and two only of Section 14-2.1 as follows:

“Sec. 14-2.1 Adoption of the Uniform Plumbing Code. The “Uniform Plumbing Code, [2006] 2012 Edition,” including [all] appendices A, B, C, G, and I, and other portions of the Code only where specifically noted, as copyrighted and published by the International Association of Plumbing and Mechanical Officials, [5001] 4755 East Philadelphia Street, Ontario, CA 91761-2816, is incorporated by reference and made a part of this Chapter. This incorporation by reference includes all above-referenced parts of the Uniform Plumbing Code subject to the amendments hereinafter set forth.

The [2006] 2012 Uniform Plumbing Code Chapter 1, Administration, shall follow the provisions of Chapter 1 of the International Building Code, as amended, in Chapter 12 of the Kaua'i County Code 1987, as amended, except for the following Sections:”

2. Amend Section 14-2.1 by amending the reference to the definitions of “Assistants” and “Authorized Representatives” as follows:

“The following [paragraphs] paragraph of Section 203.0 [are] is added after the definition of “Aspirator.”

“**Assistants** – Whenever the term “assistants” is used in this Code it shall be construed to mean the authorized representatives of the Administrative Authority.”

The following paragraph of Section 203.0 is added after the definition of “Authority Having Jurisdiction.”

“Authorized Representatives – When the term “Authorized Representatives” is used in this Code it shall be construed to mean all plumbing inspectors and their supervisors designated as subordinate officers to the Administrative Authority in the enforcement of this Code.””

3. Amend Section 14-2.1 by amending reference to the definition of “Person” as follows:

“The [~~sixth~~] seventh paragraph of Section 218.0 is amended to read:

“Person – Any individual, firm, partnership, association, corporation, or utility company including each and every owner of any whole or fractional interest in the property concerned, whether in fee, any lesser freehold, or tenancy at will.””

4. Amend Section 14-2.1 by amending reference to the definition of “Single Stack System” as follows:

“The following paragraph is added after the definition of [“Single Family Dwelling.”] “Single-Family Dwelling.”

“Single Stack Vent System – A specially designed plumbing system wherein a common stack serves as a drainage pipe as well as a vent pipe.””

5. Amend Section 14-2.1 by amending reference to the definition of “State” as follows:

“The following paragraph is added after the definition of [“Storm Drain.”] “Standard.”

“State – The State of Hawai‘i.””

6. Amend Section 14-2.1 by deleting all reference to Section 301.3 as follows:

[“Section 301.3 is added to read:

“301.3 International Plumbing Code. The latest edition of the International Plumbing Code (IPC) may be used in lieu of the Uniform Plumbing Code when approved by the Administrative Authority. A written request by a Hawai‘i licensed and registered mechanical engineer with the concurrence of the building or project owner must be made to the Administrative Authority. The details of this approval shall be recorded and entered into the files of the Administrative Authority. Plans submitted shall be stamped by the Hawai‘i licensed and registered mechanical engineer. This section shall apply only to a new building or project and shall not be applied in conjunction with an existing building. Provisions of the Uniform Plumbing Code and the International Plumbing Code shall not be combined or interchanged unless approved by the Administrative Authority. Plans submitted shall clearly certify on the

plumbing and/or mechanical sheets that the International Plumbing Code was used as the basis of design.””]

7. Amend Section 14-2.1 by amending the numbering in the current reference to Section 311.4, from the old 311.4 to the new 310.4, and other edits, as follows:

“Section [311.4] 310.4 is amended by deleting the last sentence: “Also, [single stack] single-stack drainage and venting systems[,] with unvented branch lines are prohibited.””

8. Amend Section 14-2.1 by amending the current reference to Section 311.6 by deleting all references to Section 311.6, as follows:

“[Section 311.6 is deleted.]”

9. Amend Section 14-2.1 by amending the numbering in the current reference to Section 313.2, from the old 313.2 to the new 312.2, and adding a comma, as follows:

“Section [313.2] 312.2 is amended by changing the second sentence to read:

“No piping shall be directly embedded in concrete or masonry unless provisions are made to protect the piping from damage resulting from expansion, contraction, and structural settlement.””

10. Amend Section 14-2.1 by amending the numbering in the current reference to Section 313.4, from the old 313.4 to the new 312.3, as follows:

“Section [313.4] 312.3 is amended to read:

“**[313.4] 312.3** No building sewer or other drainage piping or part thereof, constructed of materials other than those approved for use under or within a building, shall be installed under or within five (5) feet (1.5m) of any building or structure, or less than one (1) foot (.3m) below the surface of the ground or as approved by the Administrative Authority.””

11. Amend Section 14-2.1 by amending the numbering in the current reference to Section 314.8, from the old 314.8 to the new 313.8 as follows:

“Section [314.8] 313.8 is added to read:

“**[314.8] 313.8 Seismic Supports.** Where earthquake loads are applicable in accordance with the Building Code, plumbing piping supports shall be designed and installed for the seismic forces in accordance with the Building Code.””

12. Amend Section 14-2.1 by adding reference to Sections 403, 408.2, and L 402 to be inserted immediately after reference to the new Section 313.8, and immediately before reference to the amended Section 403.5, to read as follows:

“Sections 403.1 through 403.4 Water-Conserving Fixtures and Fittings, and Section 408.2 (Showers) Water Consumption, are deleted in their entirety, and replaced with Section L 402 Water-Conserving Plumbing Fixtures and Fittings from Appendix L.”

13. Amend Section 14-2.1 by adding reference to an amended Section 403.5 to be inserted immediately after reference to Sections 403, 408.2, and L 402, and immediately before reference to the new 422.0 and the new Table 422.1, to read as follows:

“Section 403.5, Pre-Rinse Spray Valve, is amended to read:

“403.5 Commercial Pre-Rinse Spray Valves. The flow rate for a pre-rinse spray valve installed in a commercial kitchen to remove food waste from cookware and dishes prior to cleaning shall not be more than 1.3 gpm (0.08 L/s) at 60 psi (414 kPa). Where pre-rinse spray valves with maximum flow rates of 1.0 gpm (0.06L/s) or less are installed, the static pressure shall be not less than 30 psi (207 kPa). Commercial kitchen pre-rinse spray valves shall be equipped with an integral automatic shutoff.””

14. Amend Section 14-2.1 by amending the numbering in the current reference to Section 412.0, from the old 412.0 to the new 422.0, and in the current reference to Table 4-1 and Table A, from the old Table 4-1 and Table A to the new Table 422.1, as follows:

“[Section 412, Plumbing fixtures and fixture fittings,] Sections 422.0 through 422.5, and Table [4-1, and Table A] 422.1 are deleted in their entirety, and replaced with Section [412.0] 422.0 amended to read as follows:

“[412.0] 422.0 Minimum Number of Required Fixtures. Plumbing fixtures shall be provided for the type of building occupancy and in the minimum number required in Chapter 29 of the International Building Code.””

15. Amend Section 14-2.1 by adding reference to an amended Section 604.11 to be inserted immediately after reference to the new Section 422.0, and immediately before reference to the existing Section 710.1, to read as follows:

“Section 604.11 is amended to read:

“604.11 Lead Content. The maximum allowable lead content in pipes, pipe fittings, plumbing fittings, and fixtures intended to convey or dispense water for human consumption shall be not more than a weighted average of 0.25 percent with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures. For solder and flux, the lead content shall be not more than 0.2 percent where used in piping systems that convey or dispense water for human consumption. Exceptions:

(1) Pipes, pipe fittings, plumbing fittings, fixtures, or backflow preventers used for nonpotable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not used for human consumption.

(2) Water closets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower valves, service saddles, or water distribution main gate valves that are 2 inches (50 mm) in diameter or larger.””

16. Amend Section 14-2.1 by amending reference to Section 713.7 as follows:

“Section 713.7, Installation, is [added to read:] amended to read as follows:

“713.7 Permit Required.

(a) It shall be unlawful for any person to connect to or to aid another in connecting to, or to cause a connection to be made to, or to make use of, the public sewer system of the County of Kaua‘i without first having filed an application in writing and having obtained the written approval of the Division of Wastewater Management, Department of Public Works and the Administrative Authority.[]

(b) Sewer Inspection. All installation of public sewer system connections, control devices or assemblies required by the Division of Wastewater Management shall receive all its certifications, tests, inspections and approvals from that division.”

17. Amend Section 14-2.1 by amending reference to Section 715.1 as follows:

“Section 715.1, [Sanitary drainage,] Materials, is amended to read as follows:

“**715.1** The building sewer, beginning five (5) feet (1,524 mm) from any building or structure shall be of such materials as prescribed in this Code.”

18. Amend Section 14-2.1 by amending the current reference to Section 911.0 by deleting the entire reference as follows:

“[Section 911.0, Vents, is added to read as follows:

“**911.0 Single Stack System.** When approved by the administrative authority, a single-stack system based on engineered studies and tests may be used in lieu of other related provisions in this code. Plans and specifications of such systems shall be prepared and stamped by a Hawai‘i licensed mechanical engineer.”]

19. Amend Section 14-2.1 by amending reference to Section 1101.11.1 as follows:

“Section 1101.11.1, [Storm drainage,] Primary Roof Drainage, is amended to read as follows:

“**1101.11.1 Primary Roof Drainage.** Roof areas of a building shall be drained by roof drains or gutters. The location and sizing of drains and gutters shall be coordinated with the structural design and pitch of the roof. Unless otherwise required by the authority having jurisdiction, roof drains, gutters, vertical conductors or leaders, and horizontal storm drains for primary drainage shall be sized based on a storm of sixty (60) minutes duration and 100 year return period. Refer to the National Weather Service rainfall map for 100-year, 60-minute storms at various locations.”

20. Amend Section 14-2.1 by amending the current reference to Chapter 16 by deleting all references to Chapter 16: 1601.0(A), 1601.0(D), 1601.0(E), 1601.0(G), 1603.0, 1604.0, 1604.0(A), 1607.0, 1608.0, 1611.0, 1612.0(A), Table 16-1, Table 16-3, and 1614.0, from page 5 to page 10 of this Bill, as follows:

“[Section 1601.0, Gray water systems – general, is amended to read as follows:

Section 1601.0(A) is amended to read as follows:

“1601.0(A) The provisions of this chapter shall apply to the construction, alteration, and repair of gray water systems for underground landscape irrigation. Installations shall be allowed only in single-family dwellings or as allowed by the authority having jurisdiction. The system shall have no connection to any potable water system and shall not result in any surfacing of the gray water. Except as otherwise provided for in this chapter, the provisions of this code shall be applicable to gray water installation.”

Section 1601.0(D) is amended to read as follows:

“1601.0(D) No permit or approval for any gray water system shall be issued until a plot plan with appropriate data or design plans satisfactory to the authority having jurisdiction has been submitted and approved for use. When there is insufficient lot area or inappropriate soil conditions for adequate absorption of the gray water, as determined by the authority having jurisdiction, no gray water system shall be permitted.”

Section 1601.0(E) is amended to read as follows:

“1601.0(E) No permit or approval shall be issued for a gray water system on any property in a geologically sensitive area as determined by the authority having jurisdiction.”

Section 1601.0(G) is added as follows:

“1601.0(G) Prior to issuance of the certificate of occupancy, the design professional shall provide a written statement of system completion in accordance with approved plans and requirements of this Chapter 16 as amended.”

Section 1603.0 is amended to read as follows:

“1603.0 Permit or Approval. It shall be unlawful for any person to construct, install, or alter, or cause to be constructed, installed, or altered any gray water system in a building or on a premises without first obtaining a permit or approval to do such work from the authority having jurisdiction.”

Section 1604.0 is amended to read as follows:

“1604.0 Drawings and Specifications. All drawings and specifications shall be prepared, designed, approved, certified, and stamped by a duly registered licensed professional in accordance with Chapter 464 of the Hawai'i Revised Statutes. The authority having jurisdiction may require any or all of the following information to be included with or in the plot plan before a permit or approval is issued for a gray water system, or at any time during the construction thereof.”

Section 1604.0(A) is amended to read as follows:

“1604.0(A) Plot plan drawn to scale and completely dimensioned, showing lot lines and structures, direction and approximate slope of surface, location of all present or proposed retaining walls, drainage channels, water supply lines, wells, paved areas and structures on the plot, number of bedrooms and plumbing fixtures in each structure, location of private sewage disposal system

or building sewer connecting to the public sewer, and location of the proposed gray water system.”

Section 1607.0 is amended to read as follows:

“1607.0 Required Area of Subsurface Irrigation/Disposal Fields. (See Figure 16-5.)

The authority having jurisdiction may require that each valved zone shall have a minimum effective irrigation area in square feet as determined by Table 16-2 for the type of soil found in the excavation, based upon a calculation of estimated gray water discharge pursuant to Section 1606.0 of this chapter, or the size of the holding tank, whichever is larger. The area of the irrigation/disposal field shall be equal to the aggregate length of the perforated pipe sections within the valved zone multiplied the width of the proposed irrigation/ disposal field. Each proposed gray water system shall include at least three (3) valved zones, and each zone shall be in compliance with the provisions of the section. No excavation for an irrigation/disposal field shall extend within three (3) vertical feet of the highest known seasonal groundwater, nor to a depth where gray water may contaminate the groundwater or ocean water. The applicant shall supply evidence of groundwater depth to the satisfaction of the authority having jurisdiction.”

Section 1608.0 is amended to read as follows:

“1608.0 Determination of Maximum Absorption Capacity.

(A) Wherever practicable, irrigation/disposal field size shall be computed from Table 16-2 and Table 16-3, or Water Demand based on Evapotranspiration (ET) data.

(B) In order to determine the absorption quantities of questionable soils other than those listed in Tables 16-2 and 16-3, the proposed site may be subjected to percolation tests acceptable to the authority having jurisdiction.

(C) When a percolation test is required, no gray water system shall be permitted if the test shows the absorption capacity of the soil is not acceptable as determined by the authority having jurisdiction or is less than eighty-three hundredths (0.83) gallons per square foot (33.8 L/m²) or more than five and twelve hundredths (5.12) gallons per square foot (208.5 L/m²) of leaching area per twenty-four hours.

(D) The following formula can be used to estimate the square footage of landscape to be irrigated based on ET data:

$$-LA = GW/(ET \times PF \times 0.62)$$

Where: GW = estimated gray water produced (gallons per week)
LA = landscaped area (ft²)
ET = evapotranspiration (inches per week)
PF = plant factor, based on climate and type of plants
0.62 = conversion factor (from inches of ET to gallons per week)”

Section 1611.0 is amended to read as follows:

“1611.0 Irrigation/Disposal Field Construction. (See Figure 16-5.)

The authority having jurisdiction may permit subsurface drip irrigation, mini-leach field or other equivalent irrigation methods which discharge gray water in a manner which ensures that the gray water does not surface. Design

Standards for subsurface drip irrigation systems and mini-leach field irrigation systems are as follows:

(A) Standards for a subsurface drip irrigation system:

(1) Minimum 140 mesh (115 micron) filter with a capacity of 25 gallons per minute, or equivalent, filtration, sized appropriately to maintain the filtration rate, shall be used. The filter back-wash and flush discharge shall be caught, contained and disposed of to the sewer system, septic tank, or with approval of the authority having jurisdiction, a separate mini-leach field sized to accept all the back-wash and flush discharge water. Filter back-wash water and flush water shall not be used for any purpose. Sanitary procedures shall be followed when handling filter back-wash and flush discharge of gray water.

(2) Emitters shall have a minimum flow path of 1,200 microns and shall have a coefficient of manufacturing variation (Cv) of no more than seven percent. Irrigation system design shall be such that the emitter flow variation shall not exceed plus or minus ten percent. Emitters shall be recommended by the manufacture for subsurface use and gray water use, and shall have demonstrated resistance to root intrusion.

(3) Each irrigation zone shall be designed to include no less than the number of emitters specified in Table 16-3, or through a procedure designated by the authority having jurisdiction. Minimum spacing between emitters is 14 inches in any direction.

(4) The system design shall provide user controls, such as valves, switches, timers, and other controllers as appropriate, to rotate the distribution of gray water between irrigation zones.

(5) All drip irrigation supply lines shall be polyethylene tubing or PVC class 200 pipe or better and schedule 40 fittings. All joints shall be properly solvent-cemented, inspected and pressure tested at 40 psi, and shown to be drip tight for five minutes, before burial. All supply lines will be buried at least eight inches deep. Drip feeder lines can be poly or flexible PVC tubing and shall be covered to a minimum depth of nine inches.

(6) Where pressure at the discharge side of the pump exceeds 20 pounds per square inch (psi), a pressure reducing valve able to maintain downstream pressure no greater than 20 psi shall be installed downstream from the pump and before any emission device.

(7) Each irrigation zone shall include a flush valve/anti-siphon valve to prevent back siphonage of water and soil.

(B) Standards for a mini-leach field system:

(1) Perforated sections shall be a minimum three (3) inch (80 mm) diameter and shall be constructed of perforated high-density polyethylene pipe, perforated ABS pipe, perforated pvc pipe, or other approved materials, provided that sufficient openings are available for distribution of the gray water in to the trench area. Material, construction, and perforation of the pipe shall be in compliance with the appropriate absorption fields drainage piping standards and shall be approved by the authority having jurisdiction.

(2) Filter material, clean stone, gravel, slag, or similar filter material acceptable to the authority having jurisdiction, varying in size from three-quarter (3/4) inch (20 mm) to two and one-half (2-1/2) inch (65 mm) shall be placed in the trench to the depth and grade required by this section. The perforated section shall be laid on the filter material in an approved manner. The perforated section shall then be covered with filter material to the minimum depth required by this section. The filter

material shall then be covered with untreated building paper, straw, or similar porous material to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material cover until after inspection and acceptance.”

Section 1612.0(A) is amended to read as follows:

“**1612.0(A)** Other collection and distribution systems such as laundry only gray water systems may be approved by the local authority having jurisdiction.”

Table 16-1 is amended as follows:

**“Table 16-1
Location of Gray Water Systems**

Minimum Horizontal Distance in Clear Required From:	Holding Tank		Irrigation/ Disposal Field	
	Feet	(mm)	Feet	(mm)
Building structures ¹	5 ²	(1,524 mm)	5	(1,524 mm)
Property line adjoining private property	5	(1,524 mm)	5	(1,524 mm)
Water supply wells ⁴	550	(15,240 mm)	1,000	(304,800 mm)
Streams and lakes ⁴	550	(15,240 mm)	50 ⁵	(15,240 mm)
Sewage pits or cesspools	5	(1,524 mm)	5	(1,524 mm)
Disposal field	5	(1,524 mm)	5	(1,524 mm)
Septic tank	0	(0 mm)	5	(1,524 mm)
On-site domestic waterservice line	5	(1,524 mm)	5	(1,524 mm)
Pressurized public water main	10	(3,048 mm)	10 ⁷	(3,048 mm)”

Table 16-3 is amended as follows:

**“Table 16-3
Subsurface Drip Design Criteria for Six Typical Soils**

Type of Soil	Maximum Emitter Discharge (gal/day)	Minimum Number of Emitters per gpd of Gray Water Production
Sand	1.8	0.6
Sandy loam	1.4	0.7
Loam	1.2	0.9
Clay loam	0.9	1.1
Silty clay	0.6	1.6
Clay	0.5	2.0”

Section 1614.0 is amended to read as follows:

“1614.0 Definitions.

Reclaimed water is water that, as a result of tertiary treatment of domestic wastewater, is at all times oxidized, then filtered, and then exposed, after the filtration process, to:

- (1) A disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least resistant to disinfection as polio virus may be used for purposes of demonstration; and
- (2) A disinfection process that limits the concentration of fecal coliform bacteria to the following criteria:
 - (A) The median density measure in the disinfected effluent does not exceed 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed; and
 - (B) The density does exceed 23 per 100 milliliters in more than one sample in any 30-day period; and
 - (C) No sample shall exceed 200 per 100 milliliters.

The level of treatment and quality of the reclaimed water shall be approved by the department of health.

Specifically excluded from this definition is gray water, which is defined in Part I of this chapter.

For the purposes of this section, the words “reclaimed” and “recycled” may be used interchangeably.”]

- 21. Amend Section 14-2.1 by adding reference to Table 1401.1 (Referenced Standards), to be inserted immediately after the existing reference to Section 1101.11.1 (Primary Roof Drainage), stating that Table 1401.1 be amended by adding the following three rows of information immediately after Standard Number SAE-J1670-2008, and immediately before TCNA A118.10-2011, as follows:

“Table 1401.1 is amended by adding the following three rows of information immediately after Standard Number SAE-J1670-2008, and immediately before TCNA A118.10-2011, as follows:

<u>Standard Number</u>	<u>Standard Title</u>	<u>Application</u>	<u>Referenced Sections</u>
<u>State of Hawai'i</u>	<u>State of Hawai'i PUC Residential Solar Water Heating Systems Standards</u>	<u>Solar Water Heating Systems</u>	<u>Various</u>
<u>State of Hawai'i – 2002</u>	<u>Water System Standards</u>	<u>Various</u>	<u>Various</u>
<u>State of Hawai'i – Rev. Sept. 2000</u>	<u>Standard Details for Public Works Construction</u>	<u>Various</u>	<u>Various</u>

”

22. Amend Section 14-2.1 by amending the current reference to Appendix E by deleting all references to Appendix E, as follows:

“[Appendix E, Mobile Home Parks is deleted.]”

23. Amend Section 14-2.1 by amending the current reference to Appendix K by deleting all references to Appendix K: Section K 1(A), Section K 1(E), Section K 1(J), Section K 2, Section K 3, Section K 4(C), Section K 5(N)(1), Section K 7(C), Table K-1, Table K-2, and Table K-6, from page 11 to page 15 of this Bill, as follows:

“[Appendix K, Private Sewage Disposal Systems, is amended.

Section K 1(A) is amended by adding the following at the end:

“Construction plans for private sewage disposal systems shall be prepared by or under the supervision of a Hawai‘i licensed engineer registered in the State of Hawai‘i.

All private sewage disposal systems shall be constructed or modified by a person meeting the requirements of Chapter 444, Hawai‘i Revised Statutes (HRS), and any pertinent rules promulgated by the department of commerce and consumer affairs, State of Hawai‘i.”

Section K 1(E) is amended to read as follows:

“The lot area shall not be less than 10,000 square feet except for lots created and recorded before August 30, 1991. For lots less than 10,00 square feet which were created and recorded before August 30, 1991, only one private sewage disposal system shall be allowed. The total wastewater flow into one private sewage disposal system shall not exceed one thousand gallons, and one private sewage disposal system shall not serve more than five bedrooms, whether they are in one dwelling unit or two. For buildings, other than dwellings with highly variable wastewater flow rates, such as but not limited to schools, parks, and churches, the private sewage disposal system may exceed a design flow rate of 1,000 gallons per day.”

Section K 1(J) is amended by adding the following at the end:

“Aerobic systems shall be required for the direct disposal of sewage to groundwater.”

Section K 2 is amended to read as follows:

“**Section K 2 Capacity of Septic Tanks.** The liquid capacity of all septic tanks shall conform to Tables K-2 and K-3 as determined by the number of bedrooms in dwelling occupancies and the estimated waste/sewage design flow rate or the number of plumbing fixture units as determined from Table 7-3 of this Code, whichever is greater in other building occupancies. The capacity of any one septic tank and its drainage system shall be limited by the soil structure classification, as specified in Table K-4.”

Section K 3 is amended to read as follows:

“**Section K 3 Area of Disposal Fields and Seepage Pits.** The minimum effective absorption area in disposal fields in square feet (m²) of

sidewall, shall be predicated on the required septic tank capacity in gallons (liters) and/or estimated waste/sewage flow rate, whichever is greater, and shall conform to Table K-4 as determined for the type of soil found in the excavation. The minimum effective absorption area could also be based upon a flow of 200 gallons per bedroom per day in accordance with Table K-6. Soil percolation tests shall be conducted at a minimum depth of three feet.”

Section K 4(C) is amended by amending the first sentence to read as follows:

“**Section K 4 Percolation Tests.** When a percolation test is required, the test shall be conducted at a minimum depth of three feet, and no private disposal system shall be permitted to serve a building if that test shows the absorption capacity of the soil is less than 0.83 gallons per square foot (33.8 L/m²) or more than 5.12 gallons per square foot (208 L/m²) of leaching area per 24 hours.”

Section K 5(N)(1) is amended to read as follows:

“**Section K 5 Septic Tank Construction.** The septic tank shall be certified by IAPMO or a third party certification body accredited in accordance with ISO Guide 65, entitled “General Requirements for bodies operating product certification systems.”

Section K 7(C) is amended by amending the first sentence to read as follows:

“**Section K 7 Seepage Pits.** Each seepage pit shall be circular in shape and shall have an excavated diameter of not less than six (6) feet (1,829 mm).”

Table K-1 Location of Sewage Disposal System, is amended by revising the minimum horizontal distances to be consistent with Chapter 11-62, “Wastewater Systems,” distances.

**“Table K-1
Location of Sewage Disposal System
April 2009**

Min. Horizontal Distance in Clear Required From: Building Sewer	Septic Tank	Disposal Field	Seepage Pit or Cesspool
Buildings or structures ¹	2 feet (610 mm)	5 feet (1,524 mm)	8 feet (2,438 mm)
Property line adjoining private property	Clear ²	5 feet (1,524 mm)	5 feet (1,524 mm)
Water supply wells	50 feet ³ (15,240 mm)	50 feet (15,240 mm)	1,000 feet (304,800 mm)
Streams and other bodies of water	50 feet (15,240 mm)	50 feet (15,240 mm)	100 feet ⁷ (30,480 mm) ⁷
Trees	–	10 feet (3,048 mm)	–
Seepage pits or cesspools	–	5 feet (1,524 mm)	5 feet (1,524 mm)
Disposal field	–	5 feet (1,524 mm)	4 feet ⁴ (1,219 mm)
On-site domestic water service line	1 foot ⁵ (305 mm)	5 feet (1,524 mm)	5 feet (1,524 mm)
Distribution box	–	–	5 feet (1,524 mm)
Pressure public water main	10 feet ⁶ (3,048 mm)	10 feet (3,048 mm)	10 feet (3,048 mm)

Note:

When disposal fields and/or seepage pits are installed in sloping ground, the minimum horizontal distance between any part of the leaching system and ground surface shall be fifteen (15) feet (4,572 mm).

¹ Including porches and steps, whether covered or uncovered, breezeways, roofed porte cocheres, roofed patios, carports, covered walks, covered driveways, and similar structures or appurtenances.

² See also Section 313.3 of the Uniform Plumbing Code.

³ All drainage piping shall clear domestic water supply wells by at least fifty (50) feet (15,240 mm). This distance may be reduced to not less than twenty-five (25) feet (7,620 mm) when the drainage piping is constructed of materials approved for use within a building.

⁴ Plus two (2) feet (610 mm) for each additional one (1) foot (305 mm) of depth in excess of one (1) foot (305 mm) below the bottom of the drain line. (See also Section K 6.)

⁵ See Section 720.0 of the Uniform Plumbing Code.

⁶ For parallel construction – For crossings, approval by the Health Department shall be required.

⁷ These minimum clear horizontal distances shall also apply between disposal fields, seepage pits, and the mean high tide line.

Table K-2 Capacity of Septic Tanks, is amended as follows:

Under column “Single-Family Dwellings-Number of Bedrooms,” delete “1 or 2 and 3” and replace with “4 or less.”

Under column “Multiple Dwelling Units or Apartments-One Bedroom Each,” delete “3 through 10.”

Delete entire column “Other Uses: Maximum Fixture Units Served per Table 7-3.”

Under column “Gallons,” delete “750”; delete “1,200” and replace with “1,250”; delete “1,500 to 3,500.”

Under column “Minimum Septic Tank Capacity in (Liters),” delete “7570 through 13,248”; delete “1,200” and replace with “1,250”; delete “1,500 to 3,500.”

Delete “*Note: Extra Bedroom, 150 gallons (568 liters) each. Extra dwelling units over 10: 250 gallons (946 liters) each. Extra fixture units over 100: 25 gallons (95 liters) per fixture unit.”

**“Table K-2
Capacity of Septic Tanks*
April 2009**

Single-Family Dwellings – Number of Bedrooms	Multiple Dwelling Units or Apartments – One Bedroom Each	Minimum Septic Tank Capacity in Gallons	(Liters)
4 or less	-	1,000	(3,785)
5	2 units	1,250	(4,731)

Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposal units without further volume increase.

Table K-6, Minimum Required Absorption Area, dated April 2009, located at the end of this Chapter is added.

“Table K-6
Minimum Required Absorption Area
April 2009

Percolation Rate (min/inch) Less than or equal to	Required Absorption Area (ft ² /bedroom or 200 gallons)	Percolation Rate (min/inch) Less than or equal to	Required Absorption Area (ft ² /bedroom or 200 gallons)
1	70	31	253
2	85	32	257
3	100	33	260
4	115	34	263
5	125	35	267
6	133	36	270
7	141	37	273
8	149	38	277
9	157	39	280
10	165	40	283
11	170	41	287
12	175	42	290
13	180	43	293
14	185	44	297
15	190	45	300
16	194	46	302
17	198	47	304
18	202	48	306
19	206	49	308
20	210	50	310
21	214	51	312
22	218	52	314
23	222	53	316
24	226	54	318
25	230	55	320
26	234	56	322
27	238	57	324
28	242	58	326
29	246	59	328
30	250	60	330]”

SECTION 3. Chapter 14, Article 2, Section 14-1.2 (Scope) of the Kaua'i County Code 1987, as amended, is hereby amended by amending the definition of "IAPMO" as follows:

"IAPMO" means [the Uniform Plumbing Code as published by] the International Association of Plumbing and Mechanical Officials."

SECTION 4. If any provision of this Ordinance or the application thereof to any person or circumstance is held invalid, the invalidity does not affect other provisions or applications of the Ordinance which can be given effect without the invalid provision or application, and to this end, the provisions of this Ordinance are severable.

SECTION 5. Material to be deleted is bracketed. New material is underscored. When revising, compiling, or printing this Ordinance for inclusion in the Kaua'i County Code 1987, as amended, the brackets, bracketed material, and underscoring need not be included.

SECTION 6. This Ordinance shall take effect 60 days after the date of approval, but nothing in this Ordinance shall be construed to prohibit any person from complying with the provisions of the new code and the amendments thereto adopted hereunder.

Introduced by: /s/ ROSS KAGAWA
(By Request)

DATE OF INTRODUCTION:

January 13, 2016

Līhu'e, Kaua'i, Hawai'i

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JA_dmc.doc

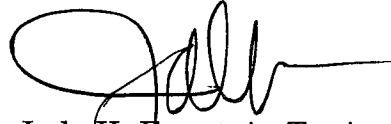
CERTIFICATE OF THE COUNTY CLERK

I hereby certify that heretofore attached is a true and correct copy of Bill No. 2612, Draft 1, which was adopted on second and final reading by the Council of the County of Kaua'i at its meeting held on August 14, 2019 by the following vote:

FOR ADOPTION:	Brun, Cowden, Kagawa, Kualii	TOTAL - 4,
AGAINST ADOPTION:	Chock, Evslin, Kaneshiro	TOTAL - 3,
EXCUSED & NOT VOTING:	None	TOTAL - 0,
RECUSED & NOT VOTING:	None	TOTAL - 0.

and pursuant to Section 4.03 of the Kaua'i County Charter, said bill is in effect as of August 28, 2019 as Ordinance No. 1056 without the mayor's signature.

Lihu'e, Hawai'i
August 28, 2019



Jade K. Fountain-Tanigawa
County Clerk, County of Kaua'i