

ACT 282

H.B. NO. 1231

A Bill for an Act Relating to Environmental Quality.

Be It Enacted by the Legislature of the State of Hawaii:

SECTION 1. Section 27-21.6, Hawaii Revised Statutes, is amended to read as follows:

“§27-21.6 Functions reassigned to the counties. The following functions are hereby reassigned to the several counties:

- (1) The medical care of inmates of county jails;
- (2) The rendering of medical investigatory services requested by the police;
- (3) Physical examinations of employees to the extent that such functions had been performed immediately prior to the adoption of Act 97, Session Laws of Hawaii 1965; [and]
- (4) The care and treatment of county workers' compensation cases to the extent that such functions [have] had been performed immediately prior to the adoption of Act 97, Session Laws of Hawaii 1965[.]; and
- (5) The regulation of the design, construction, and operation of individual wastewater systems and private wastewater treatment works, provided that the transfer of this function to each county shall take place on the date that the expenditure of start-up funds is made by the State to such county for this purpose.”

SECTION 2. Chapter 46, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

“§46- Regulation of sewerage and wastewater treatment systems. Effective July 1, 1987, counties may implement programs for the regulation of sewerage and wastewater treatment systems in their respective county jurisdictions; except that a county program shall be implemented by that county immediately upon receipt of state funds pursuant to section 27-21.6(5). Each county is authorized to adopt ordinances and rules on the design, construction, and operation of sewerage and treatment systems and shall submit to the director of health, for approval, a full and complete description of the program it proposes to establish and administer under county laws.”

SECTION 3. Section 342-19, Hawaii Revised Statutes, is amended to read as follows:

"§342-19 Effect of laws, ordinances, and rules[, and regulations]. (a) All laws, ordinances, and rules[, and regulations] inconsistent with this part shall be void and of no effect.

(b) Any county may adopt ordinances[, and rules[, and regulations] governing any matter relating to environmental quality control which is not governed by a rule [or regulation] of the department adopted pursuant to this part; provided that any county ordinance[, or rule[, or regulation] relating to environmental quality control shall be void and of no effect as to any matter regulated by a rule [or regulation] of the department upon the adoption thereof, [except as provided in (c).

(c) Any county desiring to administer its own laws, ordinances, rules and regulations on the design, construction and operation of sewerage and treatment facilities may submit to the director a full and complete description of the program it proposes to establish and administer under county law. In addition, the county shall submit a statement from its corporation counsel or county attorney that the laws of such county provide adequate or more stringent authority to carry out the described program. The director shall approve each such submitted program unless he determines that either adequate authority does not exist or the proposed standards are not equal to or are less stringent than those of the department.]"

SECTION 4. Section 342-31, Hawaii Revised Statutes, is amended by adding the following new definitions to be appropriately inserted and to read as follows:

"Individual Wastewater System" means a facility which dispose of treated or untreated domestic wastewater generated from dwelling units or other sources generating domestic wastewater of similar volume and strength such as: (1) developments of density not greater than one dwelling unit per 5,000 square feet of ultimate development or (2) developments with buildings other than dwellings but involving the generation of domestic wastewater at a rate of less than 400 gallons per day per 5,000 square feet of ultimate development. Individual wastewater systems include, but are not limited to, cesspools, septic tanks and household aerobic units.

"Private wastewater treatment works" means any plant, facility, or equipment that is not owned or operated by a federal, state, or county authority and used in the treatment of wastewater including the necessary pumps, power equipment, blowers, motors, holding tanks, flow splitter, and other process equipment, and its associated collection system and disposal system, excluding individual wastewater systems."

SECTION 5. Section 342-32, Hawaii Revised Statutes, is amended to read as follows:

"§342-32 Powers and duties, specific. (a) In addition to any other power or duty prescribed by law and in this part, the director shall prevent, control, and abate water pollution in the State. In the discharge of this duty, the director may:

- (1) Establish by rule [or regulation] water quality standards, effluent standards, treatment and pretreatment standards, and standards of performance for specific areas and types of discharges in the control of water pollution, thereby allowing for varying local conditions;
- (2) Appoint a master or masters to conduct investigations and hearings;

- (3) Consult with and advise any person engaged or intending to be engaged in any business or undertaking whose waste, sewage, or drainage is polluting or may tend to pollute state waters;
- (4) Conduct and supervise research programs for the purpose of determining the causes, effects, and hazards of water pollution, the purity and potability of water and the means to monitor the quality of water, or to effect the proper disposal of sewage, drainage, and waste;
- (5) Conduct and supervise state educational and training programs on water pollution prevention, control, and abatement, including the preparation and distribution of information relating to water pollution;
- (6) Consult and advise persons intending to alter or to extend any system of drainage, sewage, or water supply;
- (7) Require complete and detailed plans or reports, on existing works, systems, or plants, and of any proposed addition to, modification of or alteration of any such works, system, or plant which contain the information requested by the director in the form prescribed by him; which plans or reports shall be made by a competent person acceptable to the director and at the expense of such applicant or owner;
- (8) With the approval of the governor, cooperate with, and receive money from the federal government, or any political subdivision of the State or from private sources for the study and control of water pollution;
- (9) Receive or initiate complaints of water pollution, hold hearings in connection with water pollution, and institute legal proceedings in the name of the State for the prevention, control, or abatement of water pollution;
- (10) Require the owner or operator of any effluent source or any discharger of effluent to (A) establish and maintain records; (B) make reports; (C) install, use, and maintain monitoring equipment or methods; (D) sample effluent and state waters; and (E) provide such other information as the department may require;
- (11) Require any [permittee] person, operator or holder of a variance or person subject to pretreatment requirements to permit the director or his authorized representative upon the presentation of his credentials:
 - (A) To enter [upon permittee's] the premises of the person, operator or variance [holder's premises] holder or premises of a person subject to pretreatment requirements in which an effluent source is located or in which any records are required to be kept under the terms and conditions of the permit or variance or pretreatment requirements; [and]
 - (B) To inspect any monitoring equipment or method required in the [permit] plans, specifications or variance or by pretreatment requirements; and
 - (C) To sample any discharge of pollutants or effluent; and
- (12) Publish an annual report on the quality of the state waters, which annual reports shall include, but not be limited to:
 - (A) A description of sampling programs and quality control methods procedures;

- (B) Statistical analysis and interpretation of the data on an annual basis by specific points (monitoring stations);
- (C) Discussion of the results of these analyses to the extent that the implications can be understood by the general public;
- (D) Recommendations for the modification of the water quality monitoring program to enhance its effectiveness for maintaining high standards of water quality in the State; and
- (E) A note of any significant changes in the quality of state waters.

(b) In addition, until such time that each county assumes complete administration of the wastewater treatment system program, the director shall regulate individual wastewater systems and private wastewater treatment works in those counties that have not assumed these functions pursuant to section 27-21.6(5) by imposing requirements, including the two following requirements:

- (1) No individual wastewater system or private wastewater treatment work shall be constructed unless the plans and specifications for the system are submitted to and approved in writing by the director; and
- (2) Following its construction, but prior to its operation, individual wastewater systems and private wastewater treatment works shall be inspected and approved by the director.

The department is authorized to exercise its professional judgement as to the appropriateness and adequacy of wastewater treatment systems on a case by case basis."

SECTION 6. Statutory material to be repealed is bracketed. New statutory material is underscored.¹

SECTION 7. Until such time each county shall assume complete administration of the wastewater treatment system program under sections 1 and 2 of this Act, the department of health shall control and administer wastewater treatment systems as follows:

1. Preamble, Purpose, Definitions

1.1 Preamble

The State Department of Health seeks to insure that the disposal of wastewater does not contaminate or pollute any drinking water supply, the waters of any bathing beaches, shorewaters, ponds, lakes, streams, groundwater, or shellfish breeding grounds; does not give rise to nuisances by reason of odor or unsightly appearance; and does not become a hazard or potential hazard to the public health, safety, and welfare; On-site disposal methods that meet health and environmental standards are encouraged wherever they are consistent with state and county planning policies. Regional sewage collection, treatment and disposal system are encouraged for urban areas wherever they are consistent with state and county planning policies and they are demonstrated to be the most cost-effective solution.

If specific information on which to base a decision is lacking, and there is a risk that detrimental environmental effects would be irreversible, uncertainty will be resolved in favor of environmental protection, unless such irreversible environmental effects are clearly outweighed by public health, safety or social and economic benefits.

1.2 Purpose

These rules seek to insure that the disposal of wastewater from private wastewater treatment works and individual wastewater systems:

- A. does not contaminate or pollute any drinking water or potential drinking water supply, or the waters of any beaches, shores, ponds, lakes, streams, groundwater, or shellfish growing waters;
- B. does not encourage the harborage of insects, rodents or other possible vectors;
- C. does not give rise to nuisances by reason of odor, noise, unsightly appearance, or other reasons;
- D. does not become a hazard or a potential hazard to public health, safety and welfare;

- E. contributes to the achievement of wastewater management goals contained in approved county water quality management plans; and
- F. reinforces State and County planning policies.

1.3 Definitions

"Activated Sludge Process" means a biological wastewater treatment process in which a mixture of wastewater and micro-organism is mixed and agitated with induced aeration. Aeration supplies dissolved oxygen and wastewater supplies the organic substrate necessary for microorganism growth. Such process includes sedimentation units which normally follow aeration and where the settled solids are withdrawn and returned to the aeration unit.

"BOD₅" means five (5) days Biochemical Oxygen Demand which is a standard test indicating the quantity of oxygen utilized by wastewater under controlled conditions of temperature and time.

"Building" means a structure, permanent or temporary, built, erected, and framed of component structural parts designed for the housing, shelter, workplace, enclosure or support of persons, animals or property of any kind.

"Cesspool" means an excavation in the ground which receives untreated wastewater and is designed to retain the organic matter and solids discharging therein, but permits the liquid to seep through its bottom or sides to gain access to the underground formation.

"Composite Sample" means sample(s) collected on regular intervals in proportion to the existing flow and then combined to form a sample representative of flow over a period of time. For the purposes of this chapter, a composite sample means at least four (4) equally timed grab samples taken over a twelve (12) consecutive hr/day period and proportioned according to the flow rate.

"County" means any County or City and County of the State of Hawaii.

"Director" means the Director of Health of the State of Hawaii or his duly authorized agent.

"Disposal System" means any outlet, outfall sewer, seepage pit, cesspool, injection well, effluent irrigation system, tile field, disposal trench, or other facility or any combination thereof used in the disposal of wastewater including any wastewater transmission lines, pumps, power, or other equipment associated with the ultimate disposal of wastewater.

"Domestic Wastewater" means the wastewater derived from the ordinary human habitation or human activities including, but not limited to, wastewaters from dwellings, hotels, hospitals, and comfort stations.

"Dwelling" means any building which is wholly or partly used or intended to be used for living or sleeping by human occupants and includes, but is not limited to, hotels, apartment houses, lodging houses, single family houses, duplex houses, cluster houses, townhouses, and planned developments.

"Dwelling Unit" means any habitable room or group of habitable rooms within a dwelling and forming a single habitable unit.

"Engineer" means a professional engineer registered in the State of Hawaii competent in the field of sanitary/environmental engineering.

"Grab Sample" means a single discrete sample of wastewater collected at a particular time and place which represents the composition of the source at that time and place.

"Household Aerobic Unit" means a watertight receptacle which receives domestic wastewater from one dwelling unit or from other sources generating wastewater of a similar volume and strength, and retains solids, aerobically digests organic matter over a period of time, and allows the clarified effluent to discharge outside the tank into a disposal system.

"Individual Wastewater System" means the facilities which dispose of treated or untreated domestic wastewater generated from dwelling units, or other sources generating domestic wastewater of similar volume and strength in accordance with Sections 3.3.A. and 3.3.B. Individual wastewater systems include, but are not limited to, cesspools, septic tanks and household aerobic units.

"Injection Well" means a driven or drilled shaft into the ground which receives treated wastewater and permits such wastewater to seep through its bottom or sides to gain access to the underground formation.

"NPDES" means the National Pollutant Discharge Elimination System and shall have the same meaning as defined in Title 11, Administrative Rules, Chapter 55,

"Water Pollution Control."

"Non-Domestic Wastewater" means all wastewater excluding domestic wastewater.

"Owner" means a person who has legal title to a treatment works or individual wastewater system.

"Person" shall have the same meaning as defined in HRS, Chapter 342-1(6), Environmental Quality.

- "Private" means not owned nor operated by a Federal, State, or County authority.
- "Public" means owned or operated by a Federal, State, or County authority.
- "Seepage Pit" means an excavation in the ground which receives the discharge from treatment units or individual wastewater systems and permits the effluent to seep through its bottom or sides to gain access to the underground formation.
- "Septic Tank" means a watertight receptacle which receives the discharge of domestic sewage, designed and constructed so as to retain solids, digest organic matter through a period of detention and allow the liquids to discharge outside the tank into a subsurface disposal system and to allow the residual solids so retained in the tank to be periodically removed for disposal in a separate system in accordance with these regulations.
- "Standard Methods" means the latest edition of "Standard Methods for the Examination of Water and Wastewater" as published by the American Water Works Association, American Public Health Association and the Water Pollution Control Federation.
- "State Waters" shall have the same meaning as defined in HRS, 342-31(6).
- "Subsurface Disposal System" means a disposal system which permits effluent to reach the underground geologic formation such as a seepage pit, cesspool, injection well, tile field, disposal trench or any combination thereof used in the disposal of wastewater including any wastewater transmission lines, pumps, power or other equipment associated with the disposal of wastewater.
- "Treatment Unit" means any plant, facility, or equipment used in the treatment of wastewater including the necessary pumps, power equipment, blowers, motors, holding tanks, flow splitter, and other process equipment.
- "Treatment Works" means any treatment unit and its associated collection system and disposal system, excluding individual wastewater systems.
- "U.S. EPA" means the United States Environmental Protection Agency.
- "Wastewater" means any liquid waste, whether treated or not, and whether animal, mineral or vegetable including agricultural, industrial and thermal wastes.
- "Wastewater Sludge" means the accumulated solids removed from wastewater by any liquid-solids separation process. Such solids may be part of the raw wastewater or generated by a wastewater treatment process or any combination thereof.
- "Water Pollution" shall have the same meaning as defined in HRS, Chapter 342-31(7).
2. Effects of County Government Ordinances (Delegation)
 - 2.1 When a county government has adopted an ordinance governing the waste disposal management, design, construction, and operation of private wastewater treatment works or individual wastewater systems and the provisions of the ordinance and method of enforcement by the county government are approved in writing by the Director, said ordinance, and not these rules, shall apply in such county. However, the Director shall retain authority over matters of water quality management and effluent limitations.
 3. General Requirements
 - 3.1 All public wastewater treatment works and all wastewater treatment works for which an NPDES permit has been issued, are exempt from the requirements of this rule. Also any public wastewater treatment works utilizing a private reclamation or irrigation system for effluent disposal may be exempted by the Director in writing from any or all of the requirements of this rule provided there is a showing by the applicant for such an exemption that the purpose of this part is met by the alternative requirements.
 - 3.2 A building shall not be constructed, used or occupied as a dwelling, a public building, or a place of assembly, unless sanitary wastewater facilities of such a building are connected to a public or private treatment works or individual wastewater system. No private treatment works or individual wastewater system shall be constructed, used or occupied unless the appropriate requirements of this part are met and such construction for the intended purpose is in the public interest as defined in HRS, Section 342-6(C).
 - A. Treatment works receiving domestic wastewater shall meet the requirements of Sections 4 and 5.
 - B. Individual wastewater systems shall meet the requirements of Section 6.
 - C. Buildings generating non-domestic wastewater shall meet the specific requirements of Sections 4 and 5 as determined to be applicable by the Director and any other requirement deemed to be appropriate to serve the interest and purpose of this chapter. Wherever applicable, the Director shall use the effluent requirements for non-domestic wastewater as set forth by the U.S. Environmental Protection Agency.

- 3.3 No person shall operate a new or existing treatment works unless that person or the owner of the treatment works is authorized by the Director in accordance with the provisions of this part.
- 3.4 Individual Wastewater Systems may be utilized in lieu of treatment works for:
- A. Developments of density not greater than one (1) dwelling unit per 5,000 square feet of ultimate development; or
 - B. Developments with buildings other than dwellings but involving the generation of domestic wastewater at a rate of less than 400 gpd per 5,000 square feet of ultimate development. Whenever applicable, the flow computations of the development shall be based on the "Quantities of Sewage Flows" indicated in Table I.
- 3.5 Any building or facility which is located within the State Agricultural Land Use District, County Agricultural Zoned Districts or Conservation Districts is exempt from the provisions of Sections 4, 5 and 6 provided that such buildings or facilities are incidental to the operation of an agricultural enterprise or are consistent with the conservation district use intent. However, the owner shall submit for the Director's approval plans or engineering reports or both for the wastewater treatment works or individual wastewater systems proposed to accommodate the wastewater generated from any building or facility in this category. Such information submitted shall be sufficient in scope and depth for determining the adequacy of performance of the treatment works or individual wastewater system and for determining the public interest as defined in HRS, Section 342-6(C).

TABLE I
QUANTITIES AS SEWAGE FLOWS

Type of Establishment	Gallons Per Persons Per Day (Unless Otherwise Noted)
Airports (per passenger)	5
Bathhouses and swimming pools	10
Camps:	
Campground with central comfort stations	35
With flush toilets, no showers	25
Factories (gallons per person, per shift, exclusive of industrial wastes)	35
Picnic Parks (toilets waste only) (per picnicker)	5
Picnic Parks with bathhouses, showers, and flush toilets	10
Schools:	
Day, without gyms, cafeterias, or showers	15
Day, with gyms, cafeterias, and showers	25
Day, with cafeterias, but without gyms, or showers	20

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Service Stations (per vehicle served)	10
Swimming pools and bathhouses	10
Theaters:	
Movie (per auditorium seat)	5
Drive-in (per car space)	5
Travel trailer parks without individual water and sewer hook-ups (per space)	50
Travel trailer parks with individual water and sewer hook-ups (per space)	100
Workers:	
Construction (at semi-permanent camps)	50
Day, at schools and offices (per shift)	15
3.6 Whenever the Director finds that any treatment works or individual wastewater system creates or contributes to any nuisances, harborage of vectors, unsanitary conditions including wastewater spills or overflows onto the ground or into surface waters or contaminates or pollutes any state waters, the Director shall initiate enforcement action against the owner of the treatment works or individual wastewater system to have such conditions removed or corrected.	
3.7 No person shall construct or use any treatment works or individual wastewater system involving the subsurface disposal of wastewater in areas where such disposal methods may contaminate an existing or potential potable water source, except as approved in writing or by rule by the respective County Board of Water Supply or Department of Water Supply and as concurred to by the Director. Any person claiming to have approval shall, during the earliest stages of project planning, supply written evidence of such approval and the basis of such approval upon request of the Director.	
3.8 Before abandoning, retiring, or permanently discontinuing use of a treatment works or individual wastewater system, the owner shall render it safe by removing it; filling it completely with earth, sand, gravel, rubble, or other similar material; or both.	
3.9 If the appropriate county does not issue a building permit for a building within twelve (12) months after the Director approves construction of a treatment works to serve said building or if the appropriate county revokes or rescinds a building permit and such a building is to be served by a treatment works, the Director's approval to construct such treatment works is automatically rescinded. Reapproval of any treatment works for which the Director's approval has been rescinded pursuant to this paragraph shall be based on applicable regulations in effect at the time request for reapproval is made.	
4. Treatment Works	
4.1 Intent	
It is the intention of this section to set forth minimum requirements for the following general purposes: (a) to clarify responsibilities of owners, engineers and the Department; (b) to set minimum distance requirements so that minor nuisances are avoided; (c) to set minimum requirements to protect public health, safety, and welfare, and to protect the treatment works from malicious damage or unauthorized entry; (d) to emphasize the need for proper operation and maintenance.	
This section also gives the engineer designing the treatment works flexibility and design responsibility. Choice of equipment, types of treatment processes used, structural integrity, electrical components, disposal system designs, and all other major aspects of treatment works design are the responsibility of the engineer.	
4.2 General Requirements for Treatment Works	
A. No person shall construct or expand a treatment works unless the owner submits the following documents to the Director's satisfaction:	
(1) A statement by the owner that the proposed project is consistent with the respective County wastewater or water quality management plans.	
(2) Construction plans prepared by or under the supervision of the engineer indicating the following:	

- (a) Acreage and tax map key number(s) of the project site.
 - (b) Plot plan drawn to scale showing the location of the treatment works and its distance from existing and/or proposed buildings, structures, legal boundaries, property lines, adjacent surface bodies of water, drinking water sources and existing public sewers within 1,000 feet of the property line.
 - (c) Sufficient details to show compliance with all requirements of Section 4 except Sections 4.2.G. and 4.2.H.
- (3) A written declaration signed and dated by the engineer that the treatment works was designed to meet all applicable effluent requirements of Section 5.
- (4) Certification by the owner of a treatment works that the treatment works shall be operated and maintained in accordance with all of the provisions of the operation and maintenance manual developed pursuant to Section 4.2.G. of this chapter. The owner shall make the said operation and maintenance manual available to the operator of the treatment works and will further certify that, upon sale or transfer of ownership of the treatment works, such sale or transfer will include the appropriate transfer documents and provisions binding the new owner to the said operation and maintenance manual.
- B. The owner shall provide the treatment works with a calibrated facility for measuring and preferably recording the wastewater flow which is treated and disposed of.
- C. The owner shall provide standby power or other provisions for all lift stations to prevent surface overflows of wastewater during a primary power outage.
- D. The owner shall provide measures to control public accessibility to each treatment unit to prevent accidents, drownings, vandalism and interference with the treatment process. At a minimum, such provisions shall include:
 - (1) Fencing or other secured enclosures at least six (6) feet in height for treatment units with exposed water surfaces or equipment, or
 - (2) Completely enclosed treatment units with unexposed water surfaces and equipment. Access openings to completely enclosed treatment unit(s) and equipment must be secured and properly identified, and
 - (3) Enclosures must have sufficient headroom clearance and conform to applicable county building codes.
- E. The following distance requirements apply to treatment works:
 - (1) Treatment units, except as provided in Section 4.2.E.(3), shall not be less than twenty-five (25) feet from any property lines nor less than ten (10) feet from any building and swimming pools.
 - (2) Disposal systems, excluding effluent irrigation systems, shall not be less than five (5) feet from a property line nor less than five (5) feet from any building.
 - (3) Completely enclosed, locked, and ventilated equipment rooms, used to house items such as blowers, motors, pumps, electrical controls, and chemical feeders, shall not be less than five (5) feet from property lines or less than ten (10) feet from dwelling unit(s).
- F. No person shall use the area adjacent to or directly above a treatment works for purposes or activities which may hinder or interfere with the operation and maintenance of the treatment unit. Air space directly above a treatment works shall not be used for dwellings, places of business, or work places.
- G. At least ninety (90) days prior to the date of final inspection of the treatment works pursuant to Section 4.2.H., the owner shall submit the following documents to the Director's satisfaction:
 - (1) A written declaration signed and dated by the engineer responsible for the preparation of the operation and maintenance manual for the treatment works, that said operation and maintenance manual meets the provisions of Section 4.2.G.(2) and that if the treatment works is operated in accordance with the manual, all applicable effluent requirements will be met.
 - (2) An operation and maintenance manual prepared by the engineer pursuant to Section 4.2.G.(1). The engineer shall be responsible for the scope and depth of coverage of the manual. However, the manual must, as a minimum, provide the details on the following:
 - (a) Operation and maintenance instruction for each treatment unit or process under normal and emergency conditions of power outage or malfunction.
 - (b) Operation and maintenance instructions for the disposal system.

- (c) List of required sampling frequencies and analyses to be conducted by the operator.
 - (d) Troubleshooting, corrective, and preventive measures to be taken to maintain process control and treatment performance.
 - (e) Start-up procedures.
 - (f) Applicable state effluent requirement.
 - (g) Instructions on wasting and disposal of wastewater sludge.
 - (h) Manpower requirements needed to operate and maintain the treatment works.
 - H. No person shall operate a new treatment works until the Director has inspected and authorized it.
 - (1) Any discrepancy between the constructed treatment works and information supplied pursuant to this section is sufficient reason to withhold approval to operate the treatment works.
 - (2) Prior to operation of the treatment works the owner shall resolve all discrepancies recorded as a result of the inspections conducted pursuant to Section 4.2.H., of this chapter.
- 4.3 Treatment Unit Requirements
- A. As a minimum, the design of treatment units shall include the following:
 - (1) For treatment units receiving wastewater from dwellings, an average flow of at least 200 gallons per bedroom per day and a raw wastewater BOD₅ loading of at least 0.34 lb. of BOD₅ per bedroom per day.
 - (2) For treatment units receiving domestic wastewater from buildings other than dwellings, an average flow of at least the quantities shown in the "Quantities of Sewage Flows" of Table I shall be utilized whenever applicable.
 - B. For treatment units utilizing the activated sludge process, the "Aeration Tank and Permissible Loadings" as set forth in Chapter 70, Section 72.422 of the Recommended Standards for Sewage Works, Great Lakes-Upper Mississippi River Board of State Sanitary Engineers, 1973, Revised Edition, shall be used as the basis of design.
 - C. For treatment units utilizing non-activated sludge processes, design data and other pertinent data shall be submitted to the Director as a matter of record. The responsibility for providing the proper design remains with the engineer.
 - D. For treatment units utilizing final settling tanks, the detention time and surface overflow rates of final settling tanks following various activated sludge processes shall be designed as set forth in Chapter 70, Section 72.344 of Recommended Standards for Sewage Works, Great Lakes-Upper Mississippi River Board of State Sanitary Engineers, 1973, Revised Edition.
- 4.4 The design details of all wastewater effluent disposal systems shall comply with this section unless otherwise prohibited by other, federal, state or county rules, regulations or ordinances.
- A. Subsurface disposal systems
 - (1) Subsurface disposal systems shall at least consist of a primary disposal component and a 100 percent back-up disposal component.
 - (2) The primary disposal component and the back-up disposal component shall each be designed to handle peak flow at the operating capacity determined to be applicable by the engineer considering the clogging that normally occurs over a period of time, provided the design capacity shall not be less than six (6) times the average flow.
 - (3) The engineer shall submit a written declaration that each disposal component was designed and tested to accommodate the wastewater flow as required in Section 4.4.A.(2) and will not contaminate or pollute the waters of any beaches, shores, ponds, lakes, streams or shellfish growing waters. Such declaration shall be made in coordination with determinations or actions taken relative to Sections 3.2, 3.6, and 4.2.A.(2).
 - B. Effluent irrigations systems
 - (1) The owner of a treatment works utilizing an effluent irrigation system shall submit to the Director information in sufficient detail and scope to enable estimate of public health risks including details of the area to be irrigated, types of vegetation to be irrigated, methods and controls of irrigation, public accessibility to the irrigated area, impact assessment on adjacent areas, and other details to show that the engineer recognizes the public health factors and that the system will comply with Section 4.4.B.(2) to (6).

- (2) The owner(s) of a treatment works utilizing an effluent irrigation system shall provide for public health protection to the maximum extent feasible as prescribed by the Director in the design, construction, and operation of the system.
- (3) No person shall operate an effluent irrigation system in such a manner that results in excessive runoff from the irrigated areas or excessive ponding due to irrigation.
- (4) The owner shall provide positive measures or controls to eliminate direct public contact with the effluent.
- (5) The owner shall provide positive measures to prevent the accidental human consumption of effluent from piping and appurtenances.
- (6) The owner shall provide adequate storage systems or back-up disposal systems to prevent any overflows or discharges from the system when the irrigation is not in operation or when wastewater effluent quantities exceed irrigation requirements.
- C. For treatment works utilizing other disposal systems, design data and other pertinent data shall be submitted to and approved by the Director on a case by case basis. Decisions by the Director shall be guided by the provisions of Section 1.2, 1.3, and other applicable sections of this part.

4.5 Wastewater Sludge Disposal

A. Intent

This section describes the acceptable disposal methods for wastewater sludge. The Director shall approve each wastewater sludge disposal plan including the necessary treatment and transportation of the sludge upon a showing by the owner that the disposal method will not result in the contamination of underground drinking water sources or surface waters, or create public health hazards, nuisances, or vector propagation. The plan will specify the manner of sludge disposal to be used pursuant to Section 4.5.C.

B. No person shall place or dispose of wastewater sludge into pits, subsurface disposal systems, or state waters.

C. Wastewater sludge shall only be disposed of in the following manner:

- (1) By a private, county, or state solid waste disposal facility which has a permit pursuant to Title 11, Administrative Rules, Chapter 58, to accept wastewater sludge, or
- (2) By reclamation or reuse for agricultural purposes except for direct contact with edible food crops, or
- (3) By incineration which meets all applicable requirements of Title 11, Administrative Rules, Chapter 60, or
- (4) By a private, county, or state facility which has specific written authorization to dispose of sludge pursuant to the applicable provisions of HRS, Chapter 342.

5. Effluent Requirements Applicable to Treatment Works

- 5.1 Treatment works utilizing subsurface disposal systems shall at least meet the requirements of this section. Nothing in this section shall be construed to prevent the engineer from applying more stringent requirements if he determines that the particular design and circumstances for which he is responsible warrants the more stringent requirements.

A. Biochemical Oxygen Demand (BOD₅)

The BOD₅ in the effluent from a treatment unit shall not exceed 30 milligrams per liter based on a 30 days arithmetic average of composite samples. However, no effluent grab sample shall exceed 60 milligrams per liter BOD₅ at any instant.

B. Suspended solids The suspended solids in effluent from a treatment unit shall not exceed 30 milligrams per liter based on a 30 day arithmetic average of composite samples. However, no effluent grab sample shall exceed 60 milligrams per liter suspended solids at any instant.

C. The analysis, including the handling and preservation of samples, to determine compliance with effluent requirements shall be performed in accordance with Standard Methods.

D. For the purposes of this section, the 30 day arithmetic average of composite samples shall be based upon no less than four (4) composite measurements made within a 30 consecutive calendar day period. The arithmetic average shall be the sum of all the composite sample values divided by the number of composite samples made during the 30 consecutive calendar day period.

- 5.2 Treatment works utilizing effluent irrigation systems shall meet the following requirements:

A. Section 5.1 shall apply, except as provided for in Section 4.4.B. of this part.

- B. Continuous disinfection The median number of total coliform organisms in the effluent from a treatment unit shall not exceed a monthly average of 23/100-milliliters, unless otherwise specified by the Director on the basis of restrictions to public accessibility and public health considerations. The sampling frequency shall be prescribed by the Director considering the relevant factors identified pursuant to Section 4.4. In no case shall the sampling frequency be less than once/week grab sampling.
 - C. The analysis, including the handling and preservation of samples, to determine compliance with effluent requirements shall be performed in accordance with Standard Methods.
6. Individual Wastewater Systems
- 6.1 General Requirements for Individual Wastewater Systems
- A. Individual wastewater systems shall not be allowed in areas where such systems are prone to failure and where the consequences of failure may be the:
 - (1) contamination of existing or potential drinking water source;
 - (2) contamination of surface water bodies; or
 - (3) creation of public health hazards or public nuisance.In making the determination of whether such systems should be allowed or not, the Director shall consider such factors as the record of performance of such systems in the area, the density of the existing and future development, the nature of the activity, the hydrologic characteristics of the area, and the public interest.
 - B. A single individual wastewater system shall service (a) no more than one (1) dwelling with two (2) or less dwelling units or (b) a building other than a dwelling which involves the generation of domestic wastewater at a rate less than 800 gallons per day. The design flow for individual wastewater systems serving dwellings shall be based on at least 200 gallons per bedroom per day. The design flow for individual wastewater systems serving buildings other than dwellings shall be based on the "Quantities of Sewage Flows," indicated in Table I, where applicable. Otherwise, the design flow shall be determined on the basis of rational extrapolation considering such factors as experience with similar activities, water usage, and number of fixture units, or other factors, as approved by the Director. Such estimates shall be conservative and many include a margin of safety if the Director deems such inclusion to be in the public interest, considering risks of failure or malfunction.
 - C. No individual wastewater system shall be constructed unless the plans and specifications thereof are submitted to and approved in writing by the Director.
 - D. No individual wastewater system shall be placed in operation until it has been inspected and approved in writing by the Director.
- 6.2 Spacing of Individual Wastewater Systems
- A. No individual wastewater system shall be located at any point having less than the minimum distances indicated in Table II unless otherwise approved by the Director.

TABLE II

Minimum Horizontal Distance From	Cesspool (ft)	Septic Tank (ft)	Seepage Pit (ft)	Sub-Surface Disposal Field (ft)	Household Aerobic Unit (ft)	Injection Well (ft)
Wall line of any roof structure or building	10	5	5	5	5	
Property line	9	5	9	5	5	
Stream, the ocean at mean sea level, pond, lake	50	50	50	50	50	50
Large trees	10	5	10	10	5	

Seepage pit	18	12	5
Cesspool	18	18	5

6.3 Minimum Requirements

A. Cesspools

- (1) Each cesspool shall be at least six (6) feet in diameter, clear opening, and should have a minimum sidewall of at least ten (10) feet below the inlet pipe, provided, however, that when a stratum of gravel or equally pervious material of at least four (4) feet thickness is found, or a lava tube is encountered which provides adequate drainage, the depth of such sidewall may be reduced. The ultimate depth required shall be determined by the Director based on actual soil materials encountered on the site and on the record of experience with the performance of cesspools in the area. Multiple cesspools, three (3) diameters apart from outer edges, may be used. Sidewall depth reduction may be allowed when multiple cesspools are utilized.
- (2) Cesspool sidewalls shall be properly protected against cave-in by means of approved types of concrete rings, hollow tile blocks or other approved materials. Where natural geological formations are encountered which are sufficiently stable to prevent caving of sidewalls, such as rock, white coral, clay or other similar composition, the stable material may be used as sidewall lining.
- (3) A structurally sound concrete cover protruding at least six (6) inches beyond the perimeter of the cesspool and resting on firm ground shall be provided. The top of such cover shall be at least twelve (12) inches below the finished ground surface. At least one (1) covered manhole twelve (12) inches in minimum dimension must be provided in the cesspool cover for inspection, rodding or the emptying of the contents when required.

B. Septic Tank System

- (1) Where a septic tank is followed by a subsurface disposal field, the lot size shall be at least 15,000 sq. ft. in area and the lot topography shall permit the construction of an operable subsurface disposal field with the required absorption area.
- (2) Liquid capacity of septic tanks at the time of construction shall conform to Table III.
- (3)
 - (a) Subsurface disposal trenches or fields shall be constructed of clay field tile approximately twelve (12) inches in length and not less than four (4) inches in diameter, laid with one-half (1/2) inch open joints extending around the bottom half of the pipe. Other types of drain lines may be used when acceptable to the Director. All bends used in the disposal field shall have one (1) tight joint to each end of the bend.
 - (b) Before drain lines are laid, crushed stone, gravel, slag or similar filter materials acceptable to the Director and having adequate voids varying in size from three-quarter (3/4) to two and one-half (2-1/2) inches, shall be placed in the trench to the depth and grade required by this section. After drain lines have been placed, the upper half of each open joint shall be covered with roofing felt and the level of the filter material raised no higher than the center line of the drain before inspection. Drain lines shall be completely encased in filter material only after approval by the Director; untreated building paper, straw or similar material then shall be placed over the filter bed to prevent closure of voids with earth backfill.
 - (c) Subsurface disposal trenches or fields shall be constructed as follows:
 - Minimum number of drain lines per field - 1
 - Maximum length of each line - 100 feet
 - Minimum bottom width of trench - 18 inches
 - Maximum bottom width of trench - 36 inches
 - Minimum spacing of lines center to center - 6 feet
 - Minimum depth of each cover over lines - 12 inches
 - Preferred depth of cover lines - 18 inches
 - Maximum grade of lines - 6 inches per 100 feet
 - Minimum grade of lines - 3 inches per 100 feet

- Minimum filter material under drain lines - 12 inches
Minimum filter material over drain lines - 2 inches
Minimum spacing between trenches or leaching beds: shall be four (4) feet plus two (2) feet for each additional foot of depth in excess of one (1) foot below the bottom of the drain line.
- (d) Where not otherwise specified, the construction and design of a septic tank and subsurface tile system shall conform to the Manual of Septic Tank Practice, U.S. Public Health Service, Publication No. 526.
 - (4) A seepage pit whenever approved for use shall not be less than four (4) feet in diameter and not less than ten (10) feet in depth or three (3) times the volume of the septic tank, whichever is greater. Multiple seepage pits, three (3) diameters apart from outer edges, but not less than twelve (12) feet apart, may be used to fulfill the minimum volume required with corresponding adjustment in depth. All seepage pits shall conform to the construction requirements for cesspools as set forth in section 6.3.A.(2) and 6.3.A.(3) of these regulations.
 - (5) Injection well disposal systems shall not be allowed.

TABLE III
LIQUID CAPACITY OF SEPTIC TANKS (GALLONS)

<u>No. of Bedrooms</u>	<u>Minimum Tank Capacity</u> <u>(Gallons)</u>
<u>2 or less</u>	<u>750</u>
<u>3</u>	<u>1,000</u>
<u>4</u>	<u>1,200</u>
<u>5 or more</u>	<u>1,350 gallons + 150 gallons</u> <u>for each additional bedrooms.</u>

C. Household Aerobic Units

- (1) Household aerobic units must be approved by the Director. Such approval shall be based upon the "Criteria for Evaluation and Testing," as set forth in Publication 586 issued by the National Academy of Sciences - National Research Council, Washington, D.C., entitled, "REPORT ON INDIVIDUAL HOUSEHOLD AEROBIC TREATMENT SYSTEM," 1958, and upon the submission of data for an operating unit which is representative of the device. Such performance data shall have been obtained by an agency such as a university or an independent research laboratory acceptable to the Director or from the National Sanitation Foundation (NSF) Testing Laboratory, Ann Arbor, Michigan.
- (2) Each household aerobic unit shall discharge its effluent into a seepage pit or pits, which shall be not less than four (4) feet in diameter and not less than ten (10) feet in depth or three (3) times the volume of the aeration compartment, whichever is greater. Multiple seepage pits, three (3) diameters apart from outer edges may be used to fulfill the minimum volume required with corresponding adjustment in depth. All seepage pits shall conform to the construction requirements for cesspools as set forth in Sections 6.3.A.(2) and 6.3.A.(3) of these regulations. In rocky or other poor drainage area, or in areas with high water tables, subsurface disposal fields may be required in lieu of seepage pits.

7. Penalties

Any person who violates any provision of this section shall be subject to the provisions and remedies for violations provided for in Chapters 321 and 342, Hawaii Revised Statutes.

8. Severability

If any provision of this section or the application to any person or circumstance is held invalid, the application of such provision to other persons or circumstances, and the remainder of this section, shall not be affected thereby.

SECTION 8. This Act shall take effect upon its approval.

(Approved June 7, 1985.)

Note

1. Edited pursuant to HRS §23G-16.5.