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# A BILL FOR AN ACT

RELATING TO WASTEWATER SYSTEMS.

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:**

1           SECTION 1. The legislature finds that cesspools are  
2     contaminating the State's ground water, streams, drinking water,  
3     and coastal ecosystems. Maintaining the cleanliness of the  
4     State's waters is a matter of statewide concern that falls under  
5     the legislature's power to enact laws pursuant to article X,  
6     section 6, of the Hawaii State Constitution. To address the  
7     State's cesspool pollution, Act 125, Session Laws of Hawaii  
8     2017, required all cesspools to be upgraded or converted to a  
9     septic system or aerobic treatment unit system, or connected to  
10    a sewerage system before January 1, 2050, and directed the  
11    department of health to develop a system to prioritize their  
12    upgrade, conversion, or connection based on their impact on  
13    public health. Additionally, Act 132, Session Laws of Hawaii  
14    2018, established the cesspool conversion working group to  
15    develop a long-range, comprehensive plan for conversion of  
16    cesspools statewide by 2050 and commissioned a statewide study  
17    of sewage contamination in nearshore marine areas to further



1 supplement studies and reports conducted by the department of  
2 health on cesspools. The cesspool conversion working group's  
3 2021 Hawaii cesspool hazard assessment and prioritization tool  
4 report identified three prioritization categories: priority  
5 levels 1, 2, and 3. Priority level 1 includes areas in the  
6 State where cesspools pose the greatest contamination hazard;  
7 priority level 2 includes areas where cesspools pose a  
8 significant contamination hazard; and priority level 3 includes  
9 areas where cesspools have a pronounced contamination hazard.

10 The 2021 Hawaii cesspool hazard assessment and  
11 prioritization tool report also noted that the geographic  
12 coverage of their evaluation only extended across the four main  
13 Hawaiian Islands. It further noted that even though the islands  
14 of Molokai, Lanai, and Niihau were also impacted by cesspool  
15 concerns, these islands were not included in several key  
16 datasets necessary to its analysis. Thus, the authors of the  
17 2021 Hawaii cesspool hazard assessment and prioritization tool  
18 report recommended that a ranking system for these islands also  
19 be established.

20 The legislature further finds that the following  
21 communities were labeled as priority level 1 areas by the 2021



1 Hawaii cesspool hazard assessment and prioritization tool  
2 report: Haleiwa, Waimanalo Beach-Homesteads, Hauula-Kaaawa,  
3 Makua Valley, Judd Hillside-Lowery Avenue, Waimea-Kahuku, Laie,  
4 Kawaiiloa, Campbell High School, Kaena Point, Kalaheo Avenue,  
5 Waianae Kai, and Nanakuli on Oahu; Halama, Kamaole, Kahoma,  
6 Keawakapu, Kapalua, Launiupoko, and Spreckelsville on Maui;  
7 Holualoa, Kailua, and Kawaihae-Waikoloa on Hawaii; and Haena-  
8 Hanalei, Kekaha-Waimea, and Wailua Homesteads on Kauai. In  
9 these areas where homes are not connected to wastewater systems  
10 or are too remote to be connected to existing infrastructure,  
11 new wastewater technologies and solutions are necessary to  
12 transition away from environmentally hazardous cesspools.

13 The legislature additionally finds that, according to  
14 recent shoreline erosion management plans, south Molokai has the  
15 highest concentration of Hawaiian homestead residential lots  
16 located directly on the coast, with approximately fifty lots  
17 within two and a half miles of discontinuous shoreline. For  
18 Molokai as a whole, the Molokai Health Center reports that forty  
19 per cent of the population relies on subsistence farming,  
20 hunting, and fishing, which means that having a clean and  
21 healthy reef and nearshore environment is crucial for the health



1 of the community, especially the Native Hawaiian community. The  
2 coastal plain of south Molokai is underlain by underground  
3 rivers of fresh water flowing mauka to makai that affect the  
4 fringing reef, an important food source for Molokai Native  
5 Hawaiians. A United States Geological Survey report concluded  
6 that further inquiry into the range of nutrient sources to  
7 groundwater and nutrient concentrations reaching the coast in  
8 groundwater discharge will aid in future planning and resource  
9 management. Molokai coastal homesteaders will be financially  
10 challenged to convert from cesspools to more modern individual  
11 wastewater systems, as the median annual household income  
12 averaged over the three department of Hawaiian home lands  
13 coastal communities was \$42,396 in 2019, according to the  
14 American Community Survey of 2019.

15 The legislature additionally finds that new wastewater  
16 management solutions could greatly improve public health.  
17 Technologies that are reaching a commercial scale for the first  
18 time include solutions for individual homes, as well as multi-  
19 unit dwellings, apartment buildings, and entire communities.  
20 Large wastewater management systems can remove sewage from  
21 multi-unit dwellings and apartment buildings. At the municipal



1 scale, these technologies can effectively treat sewage from  
2 entire communities for a small fraction of the cost of existing  
3 technology now employed in Hawaii. Self-contained, self-  
4 powered, and self-cleaning toilets can be used in homes that do  
5 not have the capacity to connect to the existing sewer  
6 infrastructure. For example, the Puu Opa Kuleana Homestead  
7 Settlement Plan, which will offer two hundred fifty homestead  
8 lots in Waimea, Kauai, does not include a centralized wastewater  
9 service or public water system, and the nearest wastewater  
10 treatment plant is over four miles away and thus could benefit  
11 from new wastewater solutions. The Anahola Kuleana Homestead  
12 Settlement Plan, which will offer one hundred fifteen homestead  
13 lots in Kawaihau, Kauai will similarly benefit from new  
14 wastewater solutions.

15 The Legislature further finds that on an annual basis,  
16 approximately one thousand individual wastewater system  
17 applications are processed and reviewed. There are  
18 approximately eighty-two thousand cesspools that will be  
19 required to be upgraded or converted to an approved wastewater  
20 system or connected to a sewer system by 2050 pursuant to Act  
21 125, Session Laws of Hawaii 2017. It is projected that



1 individual wastewater system applications may increase up to an  
2 additional three thousand to five thousand applications per year  
3 to meet this mandate. Accordingly, the purpose of this Act is  
4 to:

- 5 (1) Establish and appropriate funds to implement a three-  
6 year new wastewater system demonstration pilot program  
7 within the University of Hawaii water resources  
8 research center to review, examine, and demonstrate  
9 new wastewater technology systems; implement those  
10 technologies in wastewater system demonstration  
11 projects; and establish a ranking system similar to  
12 the Hawaii cesspool prioritization tool for the  
13 islands of Molokai, Lanai, and Niihau; and
- 14 (2) Appropriate funds for two full-time equivalent (2.0  
15 FTE) positions within the department of health's  
16 wastewater branch.

17 SECTION 2. (a) There is established a three-year new  
18 wastewater system demonstration pilot program within the  
19 University of Hawaii water resources research center.

20 (b) The University of Hawaii water resources research  
21 center shall:



- 1           (1) Examine and demonstrate new wastewater technology  
2                    systems, ranging from individual toilets to  
3                    significantly larger multi-unit systems and options  
4                    for community scale solutions as appropriate, as well  
5                    as review and evaluate the affordability, feasibility,  
6                    and efficiency of the treatment technologies;
- 7           (2) Administer not less than four wastewater system  
8                    demonstration projects implementing new toilet and  
9                    sewage treatment technologies; provided that each  
10                  project shall include a cesspool in an area designated  
11                  as a priority level 1 by the cesspool conversion  
12                  working group's prioritization tool report; provided  
13                  further that there shall be not less than one project  
14                  in each county; provided further that there shall be  
15                  not less than one project on the island of Molokai;
- 16           (3) Document, validate, and summarize the various tests,  
17                    research, and outcomes of each wastewater system  
18                    demonstration project; and
- 19           (4) Establish a ranking system similar to the Hawaii  
20                    cesspool prioritization tool for the islands of  
21                    Molokai, Lanai, and Niihau.



1 (c) The University of Hawaii water resources research  
2 center shall submit an annual report to the legislature no later  
3 than twenty days prior to the convening of each regular session  
4 for the duration of the pilot program. The reports shall  
5 include:

- 6 (1) Information on the new wastewater technology systems  
7 reviewed and implemented;
- 8 (2) Cesspools converted pursuant to the pilot program;
- 9 (3) The costs incurred to convert each cesspool;
- 10 (4) Recommendations on how to improve the efficiency of  
11 the pilot program;
- 12 (5) Whether the pilot program should be made permanent;  
13 and
- 14 (6) Any other recommendations the University of Hawaii  
15 water resources research center deems appropriate.

16 (d) The pilot program shall cease to exist on June 30,  
17 2026.

18 SECTION 3. There is appropriated out of the general  
19 revenues of the State of Hawaii the sum of \$3,025,468 or so much  
20 thereof as may be necessary for fiscal year 2023-2024 to



1 implement the new wastewater system demonstration pilot program  
2 established pursuant to this Act.

3 The sum appropriated shall be expended by the University of  
4 Hawaii water resources research center, in cooperation and  
5 consultation with the department of health, department of  
6 Hawaiian home lands, and the University of Hawaii college of  
7 engineering for the purposes of this Act.

8 SECTION 4. There is appropriated out of the water  
9 pollution control revolving fund the sum of:

10 (1) \$56,304 or so much thereof as may be necessary for  
11 fiscal year 2023-2024 and the same sum or so much  
12 thereof as may be necessary for fiscal year 2024-2025  
13 to fund one full-time equivalent (1.0 FTE) engineer  
14 position within the department of health's wastewater  
15 branch; and

16 (2) \$52,044 or so much thereof as may be necessary for  
17 fiscal year 2023-2024 and the same sum or so much  
18 thereof as may be necessary for fiscal year 2024-2025  
19 to fund one full-time equivalent (1.0 FTE) planner  
20 position within the department of health's wastewater  
21 branch.



1           The sums appropriated shall be expended by the department  
2 of health to support approval of individual wastewater systems  
3 applications.

4           SECTION 5. This Act shall take effect on July 1, 2023.



**Report Title:**

Cesspools; New Wastewater System Demonstration Pilot Project; Report; Appropriation

**Description:**

Establishes a three-year New Wastewater System Demonstration Pilot Program within the University of Hawaii Water Resources Research Center to examine and demonstrate new wastewater technology systems; implement those technologies in demonstration projects in areas across the State that are identified as Priority Level 1 in the 2021 Hawaii Cesspool Hazard Assessment and Prioritization Tool Report; and establish a similar ranking system for prioritization levels for the islands of Molokai, Lanai, and Niihau. Requires the University of Hawaii Water Resources Research Center to submit reports to the Legislature. Appropriates funds for the pilot program. Appropriates funds for one full-time equivalent (1.0 FTE) engineer position and one full-time equivalent (1.0 FTE) planner position within the Department of Health's Wastewater Branch to support approval of individual wastewater systems applications.

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