

Financing Cesspool Conversions in Hawaii

Executive Summary:

There are currently over 88,000 cesspools throughout the State of Hawaii, discharging over 53 million gallons of untreated sewage into the ground each day.

In 2016, the State of Hawaii banned the construction of new cesspools and in 2017 passed a law requiring all cesspools be converted by the year 2050 (Act 125). This paper explores funding sources and financial mechanisms that may be of interest to the Hawaii Cesspool Conversion Working Group. It provides an overview of United States Environmental Protection Agency (EPA), United States Department of Housing and Urban Development (HUD), United States Department of Veterans Affairs and United States Department of Agriculture (USDA) Rural Development federal funding programs which could potentially be used to close/convert cesspools, financial options available to the State of Hawaii and the four counties to utilize these funds and recommended next steps. The list of state financial option examples is not intended to be exhaustive but rather provide a variety of relevant examples for Hawaii to consider. The recommended next steps outline a path forward that could help Hawaii create a financially flexible program to achieve Cesspool Conversion Working Group goals. The recommended next steps are 1. Working with the Environmental Finance Center, and 2. Creating a Hawaii equivalent to the Craft3 Program.

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What are cesspools?

Cesspools are underground holes used throughout Hawaii for the disposal of human waste. Raw, untreated sewage is discharged directly into the ground, where it can contaminate oceans, streams and ground water by releasing disease-causing pathogens and nitrates. They were installed to serve many homes and businesses in Hawaii. Some communities adjacent to beaches are known to have high levels of bacteria and nutrients in the water due to cesspool leakage.

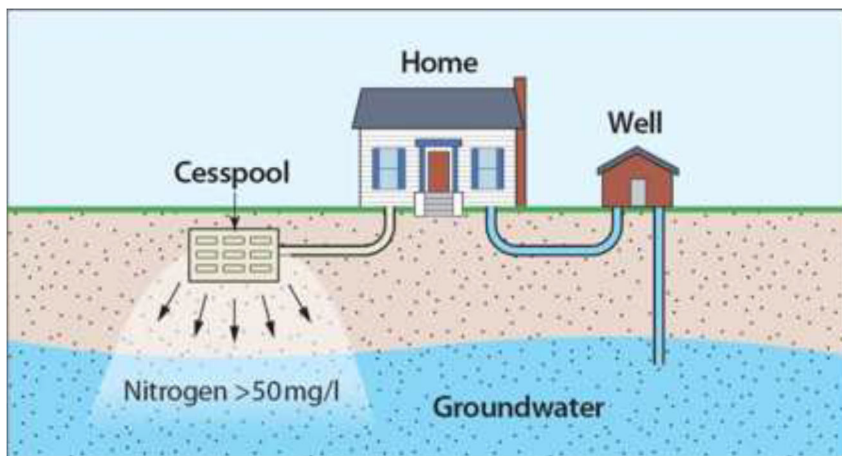


Figure 1: Cesspool Diagram

Why is US EPA Region 9 Involved?

In 1999, EPA promulgated regulations under the Safe Drinking Water Act's Underground Injection Control (UIC) Program, which prohibited the construction of new Large Capacity Cesspools (LCCs) as of April 2000 and required the closure of all existing LCCs by April 5, 2005 (see 40 C.F.R. § 144.88).

Under federal regulations, an LCC is a cesspool which serves multiple dwellings, or for non-residential facilities has the capacity to serve 20 or more persons per day.

Hawaii has one of the highest levels of reliance on groundwater for drinking water as any State (95%) and competes economically on a global scale for tourism by marketing itself as a tropical paradise, making the elimination of cesspools critical to the State's health and welfare. The current Hawaii Water Quality Integrated Report identifies numerous impaired coastal water segments which do not meet state water quality standards for nutrients (nitrogen and phosphorus). These water quality impairments are attributed largely to nonpoint sources of pollution, including cesspools. A study conducted by the State of Hawaii identified 2,500 cesspools located within the capture zones delineated around public water supply wells.

Since 2002, US EPA Region 9 has implemented a LCC outreach, education, enforcement and monitoring program. To date, EPA has identified over 4,900 LCCs in Hawaii and monitored the closure/conversion of about 71%.

State of Hawaii Law and Cesspool Conversion Working Group

The State of Hawaii recently banned new cesspools and created a law that requires all cesspools to be closed by 2050. The State of Hawaii Legislature, through Act 132, established a Cesspool Conversion Working Group. The purpose of this working group is to develop a long-range, comprehensive plan for cesspool conversion statewide for all cesspools by 2050. Act 132 is based on Senate Bill 2567, which reads "The legislature finds that public health and the quality of Hawaii's drinking water, streams, ground waters, and ocean are being harmed by water pollution from cesspools. Hawaii has eighty-eight thousand cesspools that deposit approximately fifty-three million gallons of raw sewage directly into the groundwater every day. Drinking water, public recreation, and the precious coral reefs, on which Hawaii's economy, shoreline, recreation, fisheries, and native species depend, are or may be harmed by such pollution. The purpose of this Act is to establish a cesspool upgrade task force to consider and recommend means by which the department of health can ensure that cesspools on properties that are within priority upgrade areas are converted to more environmentally-responsible waste treatment systems or connected to sewer systems within fifteen years." U.S. EPA Region 9 has a representative on this working group.

Cesspool Alternatives

Options to close/convert cesspools:

- Replace cesspools with innovative septic tank alternatives (approved by the Hawaii Department of Health, see HAR Chapter 11-62) or septic systems/individual wastewater systems.
- Combine or connect properties with cesspools or malfunctioning septic systems into a cluster system
- Connect to a new or existing Wastewater Treatment Facility (WWTF)

Available Federal Funding

EPA's Clean Water State Revolving Fund (CWSRF) may now provide financial assistance for the construction, repair, or replacement of decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage. This is a change from what was previously eligible. Previously, the SRFs could only fund decentralized systems in cases where the project was correcting an existing nonpoint source problem. In effect, it only funded the repair or replacement of existing systems. In addition to what was previously eligible, we can now also fund new, publicly or privately owned decentralized systems. SRF assistance for decentralized systems can be provided to public entities, such as municipalities, county governments, and state agencies, as well as private entities such as homeowners associations, nonprofit organizations, and individual homeowners.

In general, the CWSRF grant program funds up to 80% of project costs and requires a 20% non-federal match. The Water Resources Reform and Development Act of 2014 (WRRDA) includes additional subsidizations such as principal forgiveness, negative interest loans and grants. Among its provisions are amendments to Titles I, II, V, and VI of the Federal Water Pollution Control Act (FWPCA). It also offers up to 30-year loan terms and new eligibilities. As amended, the FWPCA now includes section 603(c)(4), which states that each CWSRF may provide financial assistance: for the construction, repair, or replacement of decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage.

- Publicly and privately owned decentralized wastewater treatment projects are eligible.
- Eligible projects include, but are not limited to, the construction of new decentralized systems (e.g., individual onsite systems and cluster systems), as well as the upgrade, repair, or replacement of existing systems.
- New decentralized eligibilities include: Decentralized projects do not need to address an existing NPS problem.
- Decentralized systems for new construction may now be funded as either individual or cluster onsite systems.
- Decentralized systems may be publicly or privately owned and serve either public or private purposes.

HUD's Community Development Block Grant (CDBG) can be used to fund alternatives to cesspools or connections for septic tanks as long as funding is applied to a low-moderate income family/beneficiary. CDBG could not be used to subsidize upper income households. The key caveat is the County would need to agree to use its CDBG funds towards this purpose.

Veterans Affairs can issue home loans to qualified applicants. In Hawaii, existing cesspools may be acceptable for VA Lending Purposes if the following conditions are met:

1. Lender must verify with the State of Hawaii, Department of Health, Wastewater Branch that the cesspool was properly permitted when installed. The Wastewater Branch keeps and can provide a copy of the Cesspool Registration Card. This Card must be kept in the Lender's loan file.
2. The cesspool must be tested/recertified in the following circumstances:
 - a. There has been an enforcement action due to a failure of the system.
 - b. The Appraiser notes obvious signs of failure of the cesspool during the inspection of the subject property.
 - c. There has been significant building modification (additions to the home, not remodeling) that increases either the living area or number of fixtures disposing waste water into the cesspool.
 - d. The cesspool is located in the groundwater table.
3. If one or more of the conditions listed under Item #2 apply, Lenders are responsible to order cesspool testing by a specialist acceptable to the Department of Health.
 - a. Should the cesspool require testing, the NOV must be conditioned in Block 5. WATER/SEWAGE SYSTEM ACCEPTABILITY: Evidence from the local health authority or other source authorized by VA that the individual sewage disposal systems are acceptable.

USDA's Rural Development Program offers low-income families housing repair loans of up to \$20,000 at 1% interest rate and/or grants to applicants of 62 years or older for up to \$7,500 in eligible rural areas. Loans can be used to improve or repair rural homes and cesspool replacement costs/conversion costs are eligible. Grants must be used to remove health and safety hazards and cesspool replacement costs/conversion costs are eligible. Larger direct home loans are also available to low and very low-income households and cesspool replacement costs/conversions are eligible. Additional USDA Rural Development Program links are listed below in the references section of this document.

All of Kauai, Molokai and Lanai are considered rural areas. The maps below highlight ineligible areas on Oahu, Hawaii and Maui.

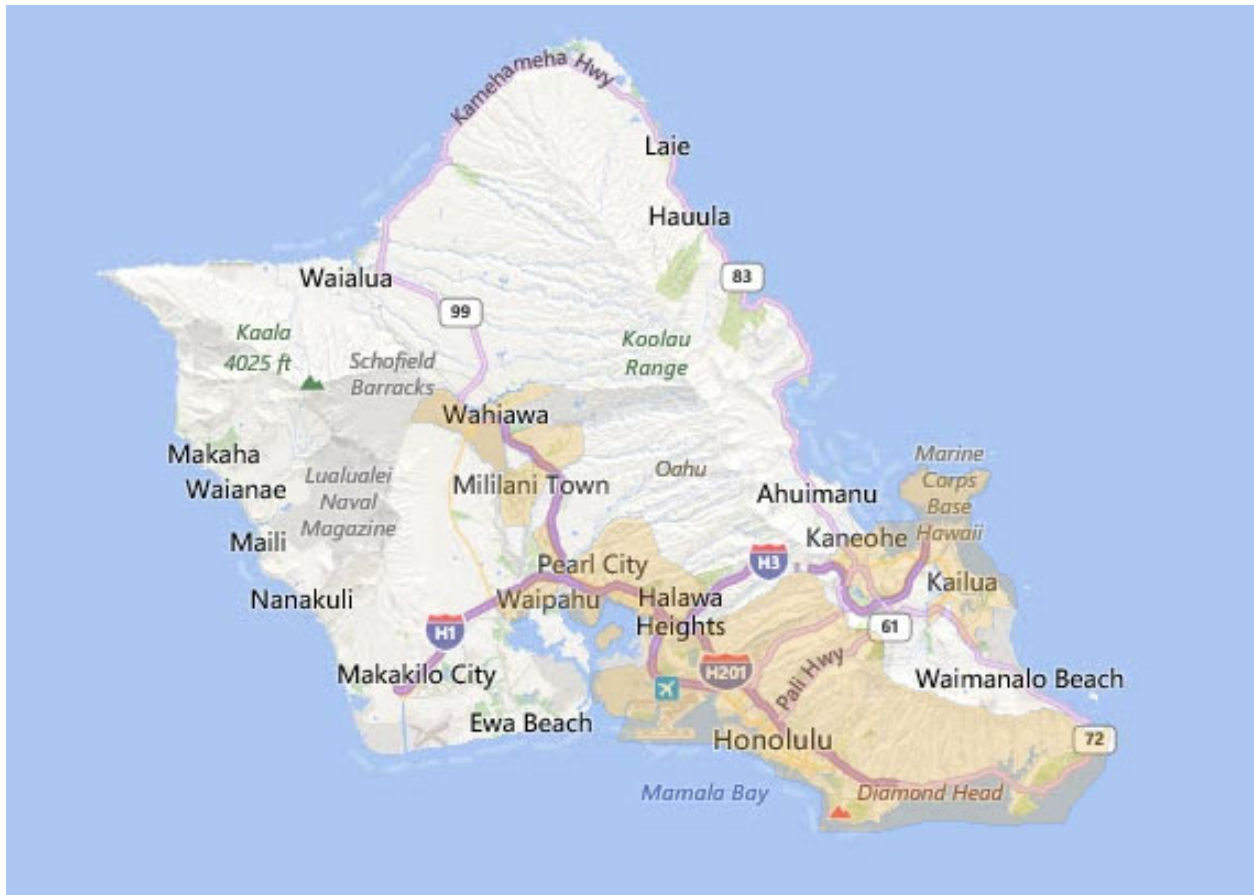


Figure 2. Map of Oahu. All of Oahu is considered rural except for those areas highlighted in pink.



Figure 3. Map of Hawaii. All of Hawaii is considered rural except for those areas highlighted in pink.



Figure 4. Map of Maui. All of Maui is considered rural except for those areas highlighted in pink.

State of Hawaii Wastewater Tax Credit

The Hawaii State Legislature passed a Wastewater Tax Credit that provides credits for homeowners who have cesspools upgrading to septic tanks, aerobic treatment units, sewer lines. Qualifying homeowners can receive up to \$10,000 in income tax credit.

Deadline: December 31, 2020

For more information visit the Department of Health's Website:

<http://health.hawaii.gov/wastewater/home/taxcredit/>

State Examples of Financial Program Options

The State of Hawaii needs to decide how to best utilize available funding. Here are several financial program options the State of Hawaii could create:

Delaware: Loans

The Delaware SRF program makes direct loans to homeowners for septic system repair and replacement. The loans are secured by a mortgage lien on the property being serviced. The program is managed by the Delaware Dept of Natural Resources and Environmental Control Environmental Finance which shares a partnership with First State Community Action Agency (FSCAA) to assist with the application process.

Delaware has 2 options for funding decentralized systems, based on income:

1. **The Septic Rehabilitation Loan Program(SRLP)** provides financial assistance to moderate to low income homeowners to replace failing septic systems.
 - On the financing side, up to \$35k for individual homeowners is available. The average loan is \$15k, and the minimum loan is \$1k
 - \$250k can be made available for mobile home parks
 - Interest rates are based on income
 - Loans have a 20 year term
 - Eligible loan costs include: Site evaluation, design, permits, construction costs, and closing and recording charges

- Applicants that are in bankruptcy are not eligible, and applicants must pass a basic credit check.
 - Poor credit and a high debt-to-income ratio can disqualify an applicant, however they may be eligible for the Septic Extended Funding Option.
 - The Septic Extended Funding Option, as described in the previous slide, provides 0% interest and no monthly payments. Loans are to be repaid if and when the property is sold.
2. **The Septic System Extended Funding Option (SEFO)** is used when an applicant is denied a SRLP loan due to the underwriting criteria. These are given a 0 percent loan with no monthly payments. The loans are forgiven after 20 years; however, principal must be repaid immediately if the property is sold or the mortgage loan is refinanced. This program is funded by an annual allocation of \$500,000 that comes from a 1 percent fee charged on CWSRF municipal wastewater loans.

Washington: Pass-Through Entities/ Regional On-Site Sewage System Loan Program (RLP)/Craft3

- Provides financing to individual residents for repair of septic systems
- County or health department (pass-through entity) is responsible for loan servicing
- \$15 million in CWSRF loans has been provided for the program since 1990, and over 600 homeowners have participated since 2007.
- Since 1994, Craft3 has conserved or treated 1.4 billion cumulative gallons of wastewater.
- CWSRF loans are signed with several Washington counties and conservation districts to address nonpoint water quality problems. These counties/ conservations districts act as “pass-through entities”. The pass-through entities then provide sub-loans to local homeowners for repair and replacement of septic systems.
- Additionally, the Washington CWSRF funds a pass-through program with 15 counties or local health departments in the Puget Sound and marine counties, as well as the Spokane Conservation District, that provides financing to individual residents to repair failing septic systems.
- The loans may also pay for abandonment of septic systems and connection to sewer. The county or health department is responsible for local loan servicing, collecting payments, and payment tracking (but may contract these services to a lending institution).
- Through Craft3, the loan fund provides loan assistance to eligible property owners across a multi-county region to repair, upgrade, or replace failing or malfunctioning septic systems to protect public health and water quality. Craft3 works with the local authorities to ensure that every repair and replacement they fund is appropriate and approved. Craft3 assumes the financial risk associated with lending, and is obligated to repay the SRF funds. Structuring the RLP with a revolving loan fund component leverages grant-funded resources for reinvestment in local communities.
- This program is fiscally innovative. It directs more funds into the actual repair and replacement of failing septic systems than the individual county programs, and less money is spent on administration of the program.

Current Eligibility:

- Residential properties throughout Oregon and in many Washington counties.
- Loan-to-value and loan amount maximums apply to repayment types.
- One of the following must apply:
 - your septic system is at least 25 years old;
 - your system is failing;
 - you've been contacted by Health Officials; or
 - you are under orders to fix your septic system.
- Counties currently served by Craft3:
 - Residential Oregon: All

- Residential Washington: Clallam, Clark, Cowlitz, Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pacific, Pierce, Snohomish, Thurston, Wahkiakum and Whatcom
- Commercial septic systems: All in Oregon or Washington

CRAFT3 MAKES REPLACING SEPTIC SYSTEMS EASY

1. Apply Online. Receive pre-approval in as soon as three business days.
2. Work with the contractor to design the system, receive permits and finalize project cost.
3. Sign loan documents electronically.
4. Begin the project. Make sure work is completed to the customer's satisfaction.
5. Authorize final payment to the contractor once the project gets final approval from local officials.
6. Loan payments, if required, will be automatically withdrawn from the customer's bank account.

Minnesota: Conduit Lending

Minnesota has a Small Community Wastewater Treatment Program.

Funds for the program have been appropriated by the legislature from the Clean Water Fund via the Clean Water, Land and Legacy Amendment.

Administered by the Minnesota Public Facilities Authority, the program provides technical assistance grants and construction grants and loans for public subsurface sewage treatment systems.

Technical assistance grants up to \$60,000 may be used by communities to contract with licensed SSTS professionals, counties, the University of Minnesota on-site sewage treatment program, or qualified nonprofit organization to conduct preliminary site evaluations and prepare feasibility reports, provide advice on possible SSTS alternatives, and help develop the technical, managerial, and financial capacity to build, operate, and maintain SSTS systems.

The PFA provides construction financing up to \$2 million per year at 1 percent interest and grants up to 80 percent, based on affordability criteria. Disadvantaged communities may receive 50% grant/principal forgiveness. There are specific scoring protocol for projects in unsewered areas require applicants to establish a user charge system to pay for operation and maintenance costs. All unsewered communities seeking CWSRF funding for decentralized systems must create:

- Financing plan that provides a dedicated source of revenue for debt service and operation and maintenance (typically special assessments or user charges)
- Management Plan with a schedule for inspections, pumping, repair and replacement
- Alternatives analysis using the Wastewater Treatment Hierarchy "Wastewater Hierarchy". This Hierarchy encourages communities to focus on small, acute problem areas before deferring to a larger infrastructure solution to correct environmental or public health issues.

Rhode Island: Loans

Through the Rhode Island Community Septic System Loan Program (CSSLP), loans are made to communities who then distribute to individual homeowners.

- Rhode Island Housing and Mortgage Financing Corporation (RI Housing) acts as the loan servicing agent and loan administrator
- RI Housing accepts applications from homeowners, coordinates payments to septic system installers; collects repayments from homeowners, credits repayments to the principal payment of the local government unit; makes monthly reports to both the CWSRF and the local government unit.
- Communities may only qualify for funding after completing an Onsite Wastewater Management Plan

- No income limits for program participants
- Can be used for residential properties with up to 4 units
- Financing up to \$25,000 at 2% for 10 years
- \$300 origination fee
- 1% service fee on outstanding loan balance

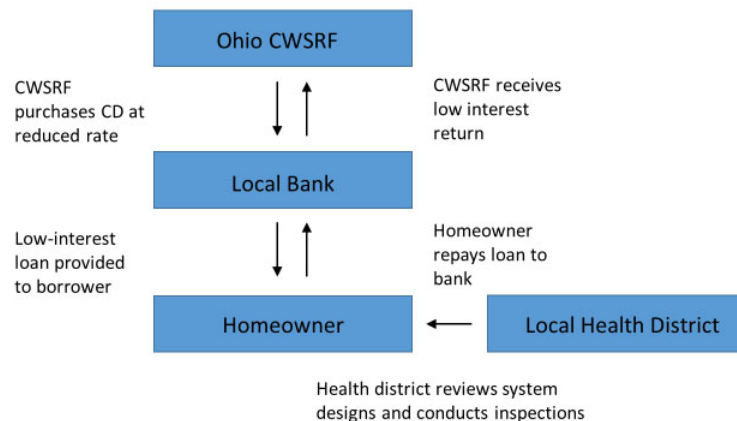
Rhode Island Sewer Tie-In Loan Fund (STILF)

- Loans for homeowners to tie into the local sewer system and abandon individual septic systems
- Financing up to \$150,000 to sewer system owner
- Owner then directs funds to individual homeowners via RI Housing (as above)

Ohio: Linked Deposit

- The Ohio CWSRF uses a linked deposit program to make low-interest loans available to individual homeowners in need of upgrading or replacing their decentralized systems.
- Under a linked deposit approach, a state works with their local banks at a reduced rate to provide assistance. This allows the borrower to receive a loan at under market rate. The CWSRF investment (deposit) is linked to a low-interest loan, hence the term “linked deposit”.
- This type of program benefits CWSRF programs, local banks, and borrowers.
 - CWSRF: high priority projects are supported, risk and financial management is placed on banks
 - Local banks: earn profits from linked deposit agreements and add an additional service for their customers
 - Borrowers: save money with low-interest loans, and they find comfort in working with local banks
- The Ohio CWSRF partners with local counties, health districts, and banks to offer this program.
- The homeowner obtains a permit from the local health district, which contains specifications on the proper installations, operation, and maintenance of the onsite system.
- The homeowner is then issued a certificate that he or she can take to any bank that participates in the Linked Deposit Program.
- The bank, using its own criteria, decides whether or not to offer the applicant a loan and at what interest rate and term.
- The lending institution then notifies the Ohio CWSRF, which then deposits the loan amount in the institution at a reduced interest rate. The savings from the reduced interest rate are then passed on to the loan applicant.

Linked Deposit in Ohio



Ohio: Special Purpose Grants

- Ohio Water Development Authority's Un-Sewered Area Assistance Program
 - Grants for the construction of a POTW for un-sewered areas that have failing on-lot systems. To assist local gov't agencies who are responsible for un-sewered areas to construct a POTW as affordably as possible.
 - To Qualify:
- Documented failing on-lot system (septic or cesspool)
- MHI < statewide average
- Permit-to-install for proposed improvements issued by OEPA
 - Eligible costs include
- Engineering
- Permit fees
- Land acquisition
- Construction Costs
 - Grant award amount:
- Grant award amount MHI < \$20,000 MHI \$20,001 - \$35,000 MHI \$35,001 to State
- < 100 customers \$1,000,000 \$750,000 \$500,000
- 100-200 customers \$750,000 \$500,000 \$250,000
 - 200 customers \$500,000 \$250,000 \$250,000

Massachusetts: Property Tax

- Funding nontraditional eligibilities with the CWSRF often involves identifying unconventional repayment sources. While "traditional" pipe and plant infrastructure projects often have a stable revenue source, many nontraditional projects lack these options. The property tax is a creative revenue source for funding nontraditional projects.

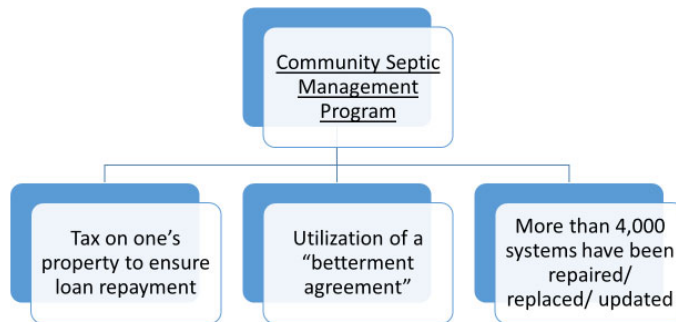
The Community Septic Management Program:

- was created in 1996 after the Massachusetts DEP recognized failing cesspools and septic systems as a leading cause of water pollution and drinking water contamination.
- allows municipalities to borrow funds at a below market rate (the Massachusetts Clean Water Trust provides up to \$5 million a year from the CWSRF program assets to fund municipalities' needs). Municipalities in turn lend money to homeowners at a low interest rate for septic system repair or replacement.
- utilizes a "betterment agreement" that channels loans through a municipality to individuals for septic system improvements and allows the municipality to ensure that the loan is repaid as part of a property tax bill. The municipality can place a municipal lien on property if the homeowner defaults on the loan.

A Betterment is a Financial Agreement between a homeowner and the community. The "Betterment Agreement" outlines the rights and responsibilities of the community and the homeowner for the repair, replacement or upgrade of the homeowner's septic system. A Betterment Agreement between the community and a homeowner may be used for all costs necessary to repair or replace a failed septic system including:

- renovating the existing system
- hooking up to existing sewer lines
- replacing traditional septic systems with an approved Title 5 innovative/alternative system
- Since the implementation of the Community Septic Management Program, more than 4,000 systems have been replaced, repaired, or upgraded. Over \$22 million in low interest loans have been approved by the MA Clean Water Trust and the MA CWSRF program to communities.

Property Tax in Massachusetts



Recommended Next Step 1: Work with the Environmental Finance Center

The Environmental Finance Center is dedicated to enhancing the ability of governments and other organizations to provide environmental programs and services in fair, effective, and financially sustainable ways. In addition to direct community outreach, the EFC at UNC works with decision-makers to assess the effectiveness of environmental finance policies at a regional or state level, and to improve those policies as a way of supporting local efforts.

In Hawaii, the Environmental Finance Center could:

- Evaluate funding and financing strategies for decentralized wastewater system repair, replacement, and on-going management.
- Work with local entities to assess, develop and market local programs.
- Work with federal, state and county entities (HDOH, SRF programs, HUD, USDA Rural Development, regulators, DBEDT) to utilize existing programs such as CWSRF funding to be used to support decentralized wastewater improvements. This has been done by a few states and there are several approaches that could be considered.
- Provide a range of finance modeling and legal framework analysis. In other words, EFC can develop multiyear finance models as well as review local and state laws related to local finance to understand options. The later task can be important when public funds are going to benefit private property owners. It is important to identify obstacles early in the process so there is sufficient time to develop solutions.

The EFC competed for and won an agreement to operate a US EPA funded Finance Center. Work related to supporting finance strategies and programs for decentralized wastewater treatment in Hawaii could be completed as part of this scope of work, if state funds are available. EFC also has an on-going EPA project that allows EFC to work directly with states and local utilities on small system management issues. For this project, EFC typically does at least one state event and carries out a combination of in-person and remote assistance activities relating to small water systems.

In the past, EFC worked directly for the Hawaii Department of Health to prepare a statewide water finance and benchmarking system: <https://efc.sog.unc.edu/resource/hawaii-water-rates-dashboard>. EFC also analyzed onsite wastewater financing options and examples for North Carolina. While dated, this paper describes what continue to be viable options in NC and other states:

https://efc.sog.unc.edu/sites/default/files/FinancingOnsiteWastewater_0.pdf

Recommended Next Step 2: Create a Hawaii equivalent to the Craft3 Program, using the financial program options best suited for Hawaii. I am not recommending any particular financial option, but rather a program similar to Craft3 that provides maximum financial flexibility and accomplishes the Cesspool Conversion Working Group goals.

For more than ten years, Craft3 has been financing replacement of failing septic systems for families in the Northwest with their unique Clean Water Loan program, a customer-friendly, easy-to-use, one-stop-shop portal. This is not a traditional program, just like they are not a traditional financial institution, but rather a collaboration between public and private funding institutions, coming together to provide critical financial support so the state can meet their overarching environmental goals. The program is designed to work for each applicant's unique situation.

Please visit EPA's Water Infrastructure and Resiliency Finance Center Water Finance Clearinghouse to learn more about funding, financing, and other resources for the water infrastructure sector. Please watch the in-depth, step-by-step water finance guides that provide information on funding and financing options to support communities' water infrastructure decision-making. The first modules focus on the drinking water and clean water state revolving funds (SRFs), the Water Infrastructure Finance and Innovation Act (WIFIA), and Financing Septic Systems.

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Research Methodology:

This paper is written as a compendium of key information about financing cesspool conversions in Hawaii. Resources and content come from government programs and websites. Recommendations come from my own personal experience and interviews. All information in this paper is public information and may be shared.

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Other U.S. Department of Agriculture Rural Development resources include:
<https://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program>
<https://www.rd.usda.gov/programs-services/emergency-community-water-assistance-grants>
<https://www.rd.usda.gov/programs-services/individual-water-wastewater-grants>
<https://www.rd.usda.gov/programs-services/search-special-evaluation-assistance-rural-communities-and-households>
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Additional State Examples include:

New York: <https://nylcv.org/news/suffolk-county-legislature-approves-septic-replacement-grant-program/>

<https://www.epa.gov/septic/webcasts-about-onsite-wastewater-treatment#suffolk>

Florida: <https://www.flchamber.com/securing-floridas-water-future-a-series-featuring-fau-harbor-branch-research-professor-dr-brian-lapointe/>