

PROJECT TITLE: **Cesspool Conversion Technologies and Finance Research Projects**

PROJECT LOCATION: **Statewide, Hawaii**

PROJECT OWNER: **Hawaii State Department of Health**

ENTRANT FIRM: **Carollo Engineers, Inc.**

Throughout the State of Hawaii, there are approximately 88,000 cesspools releasing an estimated 53 million gallons per day of wastewater to the environment. Given that over 90 percent of the State's drinking water supplies are from groundwater sources, cesspools pose a potential environmental and public health risk. In 2020, Carollo was hired by the Hawaii State Department of Health, Wastewater Branch (DOH) to deliver two projects: 1) Cesspool Conversion Technologies Research, and 2) Cesspool Conversion Finance Research. These projects provided critical evaluations and recommendations that advised a diverse stakeholder advisory group (Cesspool Conversion Working Group or Working Group) on conversion technologies, affordability criteria and challenges, and potential conversion funding options.

The Carollo team's unique, combined expertise in onsite and decentralized wastewater treatment and disposal, and affordability and wastewater project funding proved critical to delivering on this complex project. The assembled, diverse team included researchers, civil engineers/process specialists, program managers/owner's advisors, national and local finance experts and analysts, public outreach and education specialists, and wastewater project funding experts.

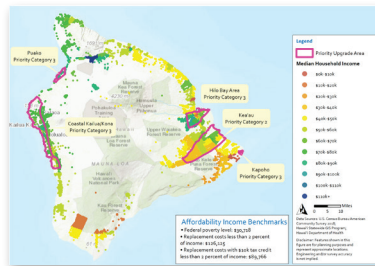
The summary reports, key deliverables, and evaluations provided a road map to help the Working Group continue to progress the cesspool conversion program development, as well as financial methodologies and tools, and public outreach and education material. The products of these projects will serve as valuable references for the Working Group and other stakeholders as the State continues to work towards converting cesspools over the next decades.



Fact sheet example developed to explain each onsite wastewater treatment and disposal and decentralized cluster system collection/treatment/disposal technology that was evaluated.

“The Carollo team provided the Hawaii Department of Health with exactly what we needed—comprehensive evaluations of onsite and decentralized wastewater treatment and disposal technologies, an eye-opening affordability analysis, and thorough funding opportunity review. Their evaluations and recommendations have prompted progressive debate of complex social, economic, and technical topics. Their work is foundational as we continue to develop and progress the State’s Cesspool Conversion Program in coordination with the counties, local communities, non-government organizations, and other stakeholders.”

— Sina Pruder, State of Hawaii Department of Health, Wastewater Branch



Hawaii County has the greatest affordability challenges, the most cesspools of all counties, and a large proportion with potential impacts to drinking water and sensitive coastal waters.



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The Carollo Team developed public outreach and education material, including this information packet on cesspool conversions.