

# Puako

## Clean Water **REEFS** *for*

Improving Water Quality  
for Reefs and People



# Project Overview

Clean Water for Reefs Puakō is a community-driven project that seeks to address wastewater pollution on the Puakō Reef. Wastewater pollution is found off the entire coast of Puakō and causes serious damage to corals, negatively affects marine wildlife and poses human health risks.

The Coral Reef Alliance (CORAL) facilitates the Clean Water for Reefs Puakō project alongside a formal Advisory Committee, which includes researchers, industry experts and community representatives, to ensure there is a broad and collective voice.

In August of 2015, a formal recommendation was put forth with the most cost-effective solution and best environmental results for the Puakō community and its reef—an onsite treatment facility.

Now we need to determine if the estimated costs are a feasible solution. Please contact CORAL to voice your support or concerns.

## For more information contact:

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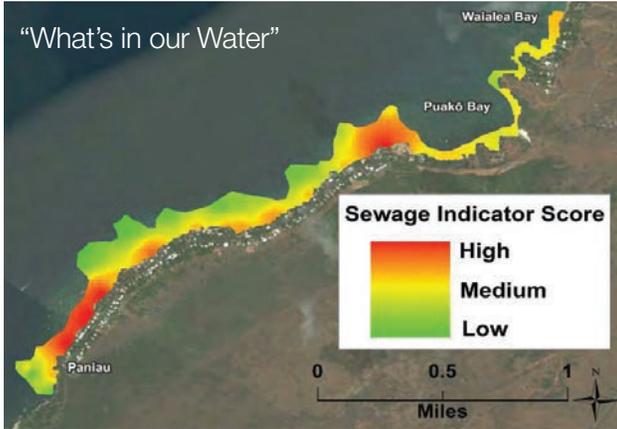
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## The Issue

Puakō's shoreline is polluted. Local impacts such as leaky cesspools and septic tanks release raw sewage along the Puakō shoreline. This effluent contains nutrients and pathogens which can cause human health issues and negatively impacts the Puakō Reef.



Research conducted by University of Hawai‘i and The Nature Conservancy along the Puakō shoreline between 2014-2016 found

**91%** had medium to high pollution scores

**76%** exceeded Hawai‘i DOH standard for bacteria found in sewage

**66%** had high nutrient levels

## The Solution

After an in-depth review of the Preliminary Engineering Report that was publicly released in 2016, the Advisory Committee, AQUA Engineering and CORAL put forth a formal recommendation to pursue an onsite treatment facility.



## The Benefits

- Prevents an estimated 19 million gallons of Puakō and Waialea Bay wastewater from entering the shoreline each year
  - Lowers human health risks from pathogens
  - Eliminates nearly all residential sewage impact to the reef
- Least costly solution over a 40-year lifecycle compared with the other options
- Provides a long-term solution, safeguarding Puakō’s health for future generations

## The Estimated Costs

Following collaboration with industry experts, we identified the ideal financing solution to be a Community Facilities District through Chapter 32. A special tax will be billed annually for each property owner based on two cost components:

- 1. Operation and maintenance (O&M):** Every homeowner will pay the same fee of \$1,200 per year; owners of undeveloped lots will not pay this fee.
- 2. Facility rate:** This special tax rate is based on the square footage of each home, which includes the debt service on a loan or municipal bond issuance, funds for capital replacement costs and a reserve fund.

### Estimated Cost for O&M and Facility Rate

| Square Footage Categories          | Total Annual Cost Range |
|------------------------------------|-------------------------|
| <1,000                             | \$2,800-\$3,200         |
| 1,000-2,250                        | \$3,800-\$4,200         |
| 2,251-3,500                        | \$4,800-\$5,200         |
| 3,501-4,750                        | \$5,800-\$6,200         |
| 4,751-6,000                        | \$6,800-\$7,200         |
| >6,000                             | \$7,800-\$8,200         |
| <b>Undeveloped lot / half acre</b> | <b>\$4,600-\$5,300</b>  |

#### Assumptions:

40-year loan at 3.5 to 4.5 percent interest rate  
Capital and development cost estimates for Puakō and Waialea Bay is \$14.5 million

#### Considerations:

Capital and development costs include 30 percent contingency  
Operation and maintenance rate will increase 3 percent annually due to inflation  
53 homes eligible for \$10,000 tax credit  
Potential tax deduction, consult your tax accountant  
Capital fundraising TBD

# We Need Your Feedback

Please complete the online survey at:

[coral.org/puako](https://coral.org/puako)



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