



Large-Capacity Zero-Discharge Toilets for Islands

The Rock Islands, Palau

Background

The western Pacific island nation of Palau is renowned for its beautiful reefs and underwater life that draw divers and snorkelers from around the world. Most diving excursions include a stop at Palau's Rock Islands, small limestone islands surrounded by plentiful aquatic life. Sometimes hundreds of divers may stop any of the Rock Islands in one day. In the mid-1990s, it was observed that the pit latrines on the islands were seeping bacteria and nutrients into the surrounding waters, damaging the coral and other aquatic life and posing a health threat. The Republic of Palau contracted the Ecological Engineering Group (EEG) to design a zero-discharge toilet system that would not pollute the waters yet would be easy to maintain for the park staff. Fourteen toilets were installed on seven Rock Islands, and one system was provided to be duplicated by a local fabricator as an enterprise.

Project Description

EEG engineered a large-capacity waterless composting toilet system using Carousel composters. Liquid (leachate) drains to Wastewater Gardens, specially engineered aerobic planted beds that stabilize, treat and use up wastewater.

The contents of the composters are removed every few months with simple tools. The composting toilets were well received by the park staff, who find them easy to maintain, with few disagreeable tasks. Installing the toilets became a public program with which Palau Community College's Environment Club assisted. Local biologists helped choose tropical plants for the Wastewater Garden.



Unique Features

- Recycling composting toilets that stabilize excreta to a state that is inoffensive and hygienic for handling.
- Zero-discharge: all effluents are ultimately used up by plants
- Inexpensive
- Easy maintenance

EEG Services

- Wastewater system design and engineering
- Training of maintenance staff members

Call today to discuss your water and wastewater solution needs: 1-866-4-ECO-ENG



Ecological Engineering Group, Inc.

Ecological Engineers and Designers • where Life informs design®
staff@ecological-engineering.com • www.ecological-engineering.com
50 Beharrell Street, Concord, MA 01742