

Shafter Elementary School Outdoor Classroom

Fort Shafter, HI

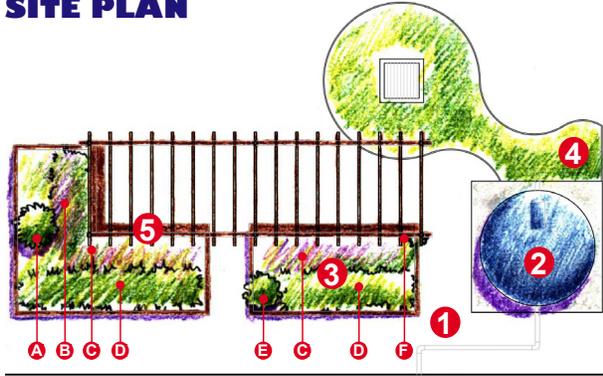
The Shafter Elementary School Outdoor Classroom was completed in September 2012 and includes a 3,000 gallon cistern for rainwater harvesting, raised seat planters with native Hawaiian plants, a rain garden for the cistern overflow, drip irrigation system and wood trellis. The cistern was installed to store rainwater collected from the classroom roof to irrigate nearby plants.

The project was a collaborative effort by US Army Garrison, Hawaii and Island Palm Communities (IPC), partially funded by a \$10,000 grant awarded to IPC. Additional materials and labor were provided by both the Army and IPC as well as donations from several, local businesses, including Delta Construction, K and R Plumbing, Leeward Landscaping, Reef Development, Country Painting, Glidden Paint, Honsador Lumber and Hawaiian Earth Products.

The outdoor classroom demonstrates sustainable landscape practices through the establishment of native Hawaiian plants, installed with a mulch cover and the rainwater harvesting and drip irrigation system. Rainwater harvesting conserves both potable water and the energy it takes to treat and transport the water from an off-site location as well as preventing pollution that may be present in the environment from reaching State Waters. The rain garden will infiltrate excess water from the cistern and includes a 12" layer of 3/4"-diameter, washed gravel under 18" of Hawaiian Earth Products' "Greens Blend" (33% Menehune "MAGIC" compost, 33% Screened Soil and 33% Dune Sand) under mulch.



SITE PLAN



Classroom Building Roof

Plant Legend

- A** Naio (*Myoporum sandwicense*)
Native Hawaiian sweet-scented shrub to small tree. Tiny white to pink flowers.
- B** 'Uki'uki (*Dianella sandwicensis*)
Native Hawaiian Lily. Purple berries traditionally used to make dye.
- C** Annuals
Various, flowering annual plants placed by Shafter Elementary School students and staff.
- D** Carex (*Carex wahuensis*)
Native Hawaiian grass. Leaves can be used in lei making.
- E** Pualoalo (*Hibiscus arnottianus*)
Native Hawaiian shrub. Large, white flowers.
- F** 'Awikiwiki (*Canavalia spp.*)
Native Hawaiian vine.

Legend

- 1** Pipe connected to the classroom building's roof transports rainwater that falls on the roof to the storage tank.
- 2** 3,000 gallon storage tank stores rainwater that falls on the roof. Collected rainwater is used to water nearby plants. Through rainwater harvesting we are conserving drinking water and the energy required to transport the water from its underground source.
- 3** Raised planters provide seating and an area for native Hawaiian plants to grow. Native plants conserve water since the plants are adapted to the local environment. Mulch surrounds the plants to further conserve water by preventing moisture in the soil from evaporating.
- 4** A rain garden receives excess rainwater from the storage tank and filters the water through the plants, local sandy soil blend and gravel layer before reaching the storm drain.
- 5** Wood trellis keeps us cool and supports native vines.

CONSTRUCTION PHOTOS



September 12, 2012 12:51 PM



September 18, 2012 11:30 AM



September 20, 2012 9:41 AM



September 20, 2012 10:16 AM



September 20, 2012 10:36 AM



September 20, 2012 12:27 PM