

Xeriscape Project at Pearl Harbor Navy Exchange Mall Complete

Second Phase Expands Planting to Nearly 200,000 Square Feet

NAVAL FACILITIES ENGINEERING Command (NAVFAC) Hawaii completed the second and final phase of a large-scale, drought-tolerant xeriscape project on 2 August 2010 for the Navy Exchange (NEX) at Pearl Harbor.

Xeriscape is a form of landscaping that conserves water through the

choice of hardy, drought-resistant plants and creative landscaping. The combination of drought-tolerant plants, efficient irrigation, ground cover and balanced soil will produce a landscape that requires half (or less) the amount of water to maintain than traditional landscaping. Over 45,000 plants, ranging from

crown of thorn shrubs to dwarf sugar cane, were planted.

Work officially began on Phase I of this project in April 2008. The first portion of the project included herbicide applications, the demolition of existing shrubs, weeds and ground cover, the replacement and repair of



An overhead view of the elaborately planned green space next to the Pearl Harbor Commissary that allows patrons to walk around and look at the different plants used in the water-saving design.

irrigation system heads, the replacement of a malfunctioning irrigation booster pump and rain sensing shut-off devices, tree pruning, soil preparation, and plant installation.

The second phase began in October 2009, and expands the approximately 96,000 square feet of work done in Phase I to nearly 200,000 square feet. "Phase II incorporates both the planting of a host of new, native plants, synthetic turf, and drought-resistant plants, as well as the removal and treatment of weeds and other undesirables," said Matt Flach, NAVFAC Hawaii landscape architect.

Over the past several years, aggressive federal mandates have been issued requiring federal agencies to reduce energy and water consumption. Beginning in fiscal year 2008, all federal agencies, including the Department of Navy, were required to reduce their water consumption by two percent annually through fiscal year 2015.

"Xeriscape landscaping is a practical water management tool that will help the Region attain federal water consumption goals," states Greg Gebhardt, energy and utilities services manager, NAVFAC Hawaii.

NAVFAC Hawaii awarded the \$470,569 contract to Hawaii-based KN Lawn Service. The project was awarded and completed in two phases to allow the landscaping contractor enough time to gather the large quantity of plants from local nurseries and to repair and prepare areas before any work could begin.

"The contractor completed prep work on the soil prior to December 2009 to ensure that most of the weeds would be germinated for their removal in the summer and to allow time to grow enough plants for the



KN Lawn Service personnel talk with Matt Flach, a landscape architect at NAVFAC Hawaii, about planting Norma Crotons (*Codiaeum Variegatum* "Norma"), which provide instant color and height to the planter beds as well as help conserve water.

To Learn More

TO READ MORE about the initial phases of this project, read our cover story entitled "Pearl Harbor Navy Exchange Employs Practical Landscape Design: Xeriscaping to Help Region Meet Water Reduction Mandates" from the spring 2009 issue of *Currents*. The entire *Currents* archive is available on-line at www.enviro-navair.navy.mil/currents.





Over 20 different species of drought-tolerant plants make up an elaborately designed landscape which includes a walking path allowing patrons to take a closer look at the plants.



Bird of Paradise (*Strelitzia Reginea*).

project,” said Flach. “In addition, 12,000 square feet of synthetic turf was added into the design because it requires little maintenance and virtually no water, while preserving the look of real grass, saving time and money for the customer.”

Native Hawaiian plants account for eight of the 20 different species used throughout the NEX complex, totaling about 22,000 plants. Their role in xeriscaping is essential to the project, because they are naturally accustomed to Hawaii’s temperate climate and unpredictable weather patterns.

After completing the installation project, the contractor entered a mandatory 120-day maintenance period to guarantee the new plants mature and weeds stay at bay. During this time they will be fertilizing, weeding, watering, and maintaining the grounds until the final inspection in January 2011.

After the maintenance period is over, KN Lawn Service will resume its previously standing grounds maintenance contract with NAVFAC Hawaii to perform normal upkeep of the NEX’s landscaping.



One of the 13 completed raised planter beds that fronts the NEX complex contains ground cover and a myriad of plants.



Red Dwarf Crown of Thorns (*Euphorbia mili* 'Red') recently planted at the Radford Drive entrance to the NEX complex provide a vibrant red hue.

As with any new landscaping job, the new plants will require constant watering despite their drought-resistant qualities. However, NEX will begin to see water savings upwards of 50 percent once the plants have matured, contributing to the Navy-wide push to become environmentally responsible and energy efficient.

In addition to this project, design plans are being finalized for similar xeriscaping projects at Camp H.M. Smith and at the main gates to Joint Base Pearl Harbor-Hickam. [↓](#)

Photos by Thomas Obungen

CONTACT

Denise Emsley
 Naval Facilities Engineering Command,
 Hawaii
 808-471-7300
denise.emsley@navy.mil