

New SY-001 Wastewater Pump Station, Joint Base Pearl Harbor-Hickam, Hawaii



Fast-tracked replacement of critical aging wastewater pump station (WWPS) minimizes significant public health and environmental impacts

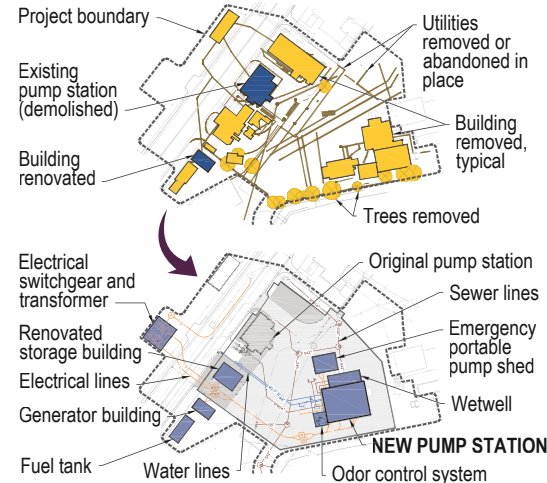
The SY-001 WWPS at Joint Base Pearl Harbor-Hickam is the Navy's most critical WWPS in Hawaii and among the largest in Hawaii. Constructed in 1971, the original WWPS experienced accelerated deterioration due to harsh environmental operating conditions. A new \$67 million, three-story WWPS with a 24 million gallons per day capacity was successfully designed and constructed within stringent budget and time constraints.

The project design team, including client staff from NAVFAC Hawaii, completed the preparation of bid documents in 13 months. With exceptional collaboration between the Navy, consultants and contractor, the new WWPS was constructed in just 2.3 years and with no major delays or cost increases. Operation of the new pumps began four months ahead of the contract deadline.

The project team overcame significant challenges, including severe site space constraints, extensive and difficult excavation work 40 feet below ground and 25 feet below the water table, and significant soil contamination issues. A carefully planned flow bypassing plan allowed continuous operation of the existing WWPS throughout construction.

The new WWPS utilizes four state-of-the-art 385-horsepower horizontal dry-pit submersible pumps to meet challenging, variable operating requirements. The clog-resistant pumps have special "first-of-their-kind" rapid pump access features to quickly clear pump clogging, now a worldwide pandemic aggravated problem from increased use of "flushable" wipes.

Environmental and public health benefits include significantly reduced risk of sewage overflows into the historic waters of Pearl Harbor.



The new WWPS was built on an extremely congested site.

Title: New SY-001 Wastewater Pump Station, Joint Base Pearl Harbor-Hickam, Hawaii
Client/Owner: NAVFAC Hawaii | Honolulu, Hawaii
Entrant: HDR | Honolulu, Hawaii