



HONOLULU WATER RECLAMATION PLANT

Municipal

Reuse / Operation and maintenance (O&M) service provider since 2000 for largest reclamation plant of its type in the Hawaiian Islands, employing state-of-the-art technology to treat secondary effluent previously discharged into the Pacific Ocean.

| The challenge

In 1998, the City and County of Honolulu and Veolia North America entered into a \$140 million, 20-year agreement for Veolia to design/build/operate (DBO) and own and transfer the Honolulu Water Reclamation Facility.

In 2000, the Honolulu Board of Water Supply purchased the facility from Veolia, which continues as the O&M service provider.

The plant treats 49,210 m³/day (13 MGD) of secondary effluent from the City and County's Honouliuli facility to produce some 45,424 m³/day (12 MGD) of reclaimed water for beneficial reuse.

The process generates two types of water: high-purity reverse osmosis water which is sold to industrial users and R1 water used for irrigation.

The project also includes a collection system and reclaimed water distribution system.

| Veolia's solution

Innovative solutions:

- Constructed microfiltration/RO building, R1 product delivery pump station, reuse influent pump station, hydroclear seven-bay sand filtration, UV channel, R1 transfer pump station, three reservoir tanks, operations building and laboratory, yard and distribution piping.
- Veolia led the design/build development of the facility.



Honolulu, Hawaii, USA



Contract Facts:

Duration: since 1998
extended to 2038
Type: DBO & O&M

49,210 m³/day
of wastewater treated

45,424 m³/day
of reclaimed water

7,751 m³/day
for industrial use



- Industrial processes use 7,751 m³/d (2 MGD) of RO water, which frees 13,627 m³/d (3.6 MGD) of valuable potable water for potential residential and domestic uses.
- Backwash water is returned to the Honolulu Wastewater Treatment Plant influent and a new 24 km (15-mile) network distributes the reclaimed product to users.

| The benefits

- Projected \$35 million in cost savings over the contract term.
- Veolia assumes full risks and responsibility for the project.
- Eliminates the need for the community to spend millions of dollars to build treatment facilities necessary to meet a federal consent decree.
- Enables the community preserve its limited potable water resources through stringent treatment and reuse of wastewater — a win-win for rate payers, the city, the environment and a number of businesses that will have a guaranteed supply of quality water.
- Recognized by the WaterReuse Association through its 2003 award for Outstanding Contribution to Sustainable Water Use.
- Recipient of the Regional Operational Excellence Award for Large Municipal Project (2011) from Veolia.



<https://youtu.be/WT3OIJ0D81E>



The Board is proud that it was quick to recognize the benefits of water reclamation. Thinking strategically is critical for communities challenged by limited resources. Water reclamation has become a cornerstone of the state's strategy for water management, broken down into watershed management, conservation and diversification of water supplies.

Barry Usagawa, the Board's water supply program administrator



VEOLIA'S PURPOSE: committing to a multifaceted performance



SOCIAL

- Maximize community resources.
- 92% of treated wastewater is recycled. The reclaimed water is used instead for lawn and golf course maintenance as well as for industrial operations.



COMMERCIAL

- Innovative solutions to sustain growth and preserve fresh water resources.
- Cost savings.
- Energy efficiency improved by 65%.



ENVIRONMENTAL

- Minimize water footprint; The plant has helped save an average of 10 million gallons of fresh water in island aquifers and other reserves each year.



HUMAN RESOURCES

- Zero lost time incidents.