

Commercial Equipment Retrofit Grant Program Completed Project List

American Linen & Supply Company Commercial Laundry Efficiency Project – 1575 Indiana Street

The American Linen & Supply Company (referred to as ALSCO) worked with the SFPUC to increase the water efficiency of their commercial washing machine water use. ALSCO contracted with Norchem Corporation (www.norchemcorp.com) to install an ultrapure wastewater treatment and recycling system. The Norchem system is a fully automated, modular, chemical free, patented metal oxide filtration system that is engineered specifically for wastewater treatment and energy recovery, which results in reduced water and wastewater costs. Norchem's membrane design maximizes flow rates at the same time reducing oil emulsions from fouling or plugging the membrane channels and treats 100% of the wastewater prior to being discharged to sewer. The system is estimated to save over 35 million gallons over the next 10 years. The project's hardware cost was approximately \$1,200,000 and ALSCO received a SFPUC commercial equipment rebate of \$48,905 based on the projected water savings.



Hotel Nikko San Francisco Dish Machine Replacement Project – 222 Mason Street

The Hotel Nikko San Francisco worked with the SFPUC to increase the water efficiency of their dish washing machines. Due to the high-water consumption of the old equipment, all four were replaced with new dish machines able to wash ware in over 1,300 racks per day with an annual projected water savings of 184,937 gallons per year. Some additional machine upgrades included reductions in detergent and water consumption, energy use, and final rinse of the new machines activating only when are is in the rinse zone. The new dish machines are estimated to provide over 1,849,000 gallons in water savings over a ten-year project life span. The project's hardware cost was \$96,300 and Hotel Nikko SF received a SFPUC commercial equipment rebate of \$2,742 based on the projected water savings.



UCSF Bulk Steam Sterilizer Replacement Project, Helen Diller Building, Mission Bay Campus – 1450 3rd Street

The SFPUC partnered with UCSF to increase the water efficiency of two bulk steam sterilizers. Both sterilizers broke down regularly and were using about 12 million gallons per year. The new sterilizers are connected to the campus chilled water system to temper steam condensate. The condensate from the sterilizer flows to a return system, eliminating the tempering consumption, and returning heat energy to the campus system. In addition, the new equipment is programmed to a sleep cycle while not in use, further reducing consumption. The new sterilizers are estimated to provide 88,000,000 gallons in water savings over a ten-year project life span. The total project hardware cost was \$984,000, and SFPUC issued UCSF a \$117,804 commercial equipment rebate.



Hotel Nikko San Francisco Water Cooled Ice Machine Replacement Project – 222 Mason Street

The Hotel Nikko increased the water efficiency of its ice-making operations by replacing 19 inefficient water-cooled ice machines with air-cooled machines. Once through water-cooled ice machines use cold water to cool the condenser and then the water is dumped down the drain, resulting in significant water waste. Water consumption of once-through water cooled ice machines is 8 times greater than air-cooled machines and water savings is estimated at 129 gal per machine per day for each air-cooled model replaced (an 89% reduction of condenser cooling water use) or 895,000 gallons per year collectively. Based on project cost and water savings, the hotel is slated to receive a SFPUC commercial equipment rebate of \$32,400.



Marriot Marquis Hotel Dish Machine Project – 780 Mission Street

Marriot Marquis Hotel increased the water efficiency of its associate cafeteria dish washing machine by replacing the old one with a new water efficient version, a Hobart Model CLPS66E. Based on the estimated project life span of 10 years, the lifetime water savings in combination with the total project hardware cost were used to calculate the rebate amount. The project resulted in 262,000 gallons per year and received a \$3,510 commercial equipment rebate from the SFPUC.



Davidson Dental Dry Vacuum Project – 2375 Ocean Avenue

Dr. Daniel Davidson found that the vacuum pump supplying suction to his dental office was performing poorly, resulting in problems with the vacuum lines and impacts to daily operations. Davidson Dental worked with Yaeger Dental Supply to specify a new dry vacuum pump that would use no water and reduce water demand by 120,000 gallons per year. The TSV-5 Dry Dental Vacuum by Toppen Solutions, LLC was installed to replace the old, inefficient liquid ring vacuum. The SFPUC provided a \$1,000 rebate.



Sutter Health Refrigeration Efficiency Project – 2333 Buchanan Street

Sutter Health's California Campus converted four compressor-maintained walk-in coolers and freezers that store perishable goods. The original inefficient cooling approach caused water to flow through the condenser section of each unit and then to the drain. The completed project converted the once-through cooling design to a closed loop cooling design. The water-cooled condensers at each unit were connected to the chilled water central plant condenser water loop supply and return lines located directly outside the door to the room where they are located. A small electric circulation pump was installed to supply roughly 2 gallons per minute required by each condenser. Isolation valves were installed for condenser servicing and balancing valves were installed to insure proper flow at each condenser. With a total project cost of \$108,000 and an annual water savings of 4.35 million gallons, the SFPUC provided a \$17,407 commercial equipment rebate.



UCSF Sterilizer Replacement Project, Genentech Hall, Mission Bay Campus – 600 16th Street

UCSF significantly increased water efficiency of its Genentech Hall sterilizers. The project replaced seven old 120 Century sterilizers with new Gentinge 533 LS-E water efficient sterilizers. The new sterilizers were purchased for a hardware cost of \$326,000 with additional installation costs of \$349,000 for a total project cost of \$675,000. Pre and post water metering shows an average water savings of 18,000 gallons per day or 6,489,000 gallons per year. Based on the estimated 10 year project life water savings of 64,388,000 gallons and the project's hardware cost, the SFPUC issued UCSF a \$86,080 commercial equipment rebate.



Marriot Marquis Hotel Dish Machine Project – 780 Mission Street

Marriot Marquis Hotel increased the water efficiency of its associate cafeteria dish washing machine by replacing the old one with a new water efficient version, a Hobart Model CLPS66E. Based on the estimated project life span of 10 years, the lifetime water savings in combination with the total project hardware cost were used to calculate the rebate amount. The project resulted in 262,000 gallons per year and received a \$3,510 commercial equipment rebate from the SFPUC.



UCSF Sterilizer Replacement Project, Hooper Lab, Parnassus Campus – 505 Parnassus Avenue

UCSF increased the water efficiency of the Parnassus Campus Hooper Lab’s equipment sterilization process. The project replaced an old sterilizer used to clean laboratory glassware with a new water efficient sterilizer. The UCSF Parnassus Campus Hooper Lab was equipped with a new Gentige Model 533LS-E Sterilizer. Based on the estimated 10 year project life water savings of 5,387,400 gallons and the project’s hardware cost of \$37,415, the SFPUC issued UCSF a commercial equipment rebate of \$7,202.

