



About the Site

One America Plaza is a 650,000 square foot Class A Office property in Downtown San Diego. The building is about 35 years old and has a 2765 ton HVAC chiller plant. The building is owned and operated by The Irvine Company. The Irvine Company is a premier real estate company headquartered in Newport Beach, CA. The Irvine Company owns 100% of their office, condo and retail properties and are committed to long term sustainable properties. One America Plaza is one of their flagship properties in the heart of San Diego.

Problem Areas

A traditional liquid chemical bleed and feed system running 4 cycles with two biocides, sulfuric acid and an all in one scale/corrosion inhibitor. Used over 2500 gallons of chemicals per year. The cooling water usage was 4,200,000 gpy with 1,800,000 gpy returning back the sewer as blow down. The chillers and towers had occasionally scaled or had biofilm caused by blow down failures or inconsistent feed of chemicals. The mild steel and copper corrosion rates averaged in the fair range by industry standards. There was no communication or remote monitoring of system.

What Capture H₂O Implemented

The cooling water treatment consists of Dual Alternating High Efficiency Water Softening of 100% of the makeup water. Remote monitor measuring water softener regeneration, water usage and pressure. Remote monitor measuring cooling tower conductivity, pH, steel and copper corrosion rates. Solid silica feed system.

The Results

- Eliminated 2500 gallons per year of hazardous chemicals
- Reduce water usage by 1,800,000 gallons per year (\$16,200)
- Eliminated 1,800,000 gpy discharge to sewer (\$9,000)
- Removed existing scale and biofilm from chiller tubes restoring energy efficiency (\$86,000)
- Reduced steel and copper corrosion rates to world class levels
- Secure several water conservation rebates (\$18,750)
- Simplified water treatment system
- More consistent and predictable water treatment results
- Total first year savings of \$129,950 or 2.1 year simple payback

