

AWS COI Case Study – Ecolab Implementation of AWS International Water Stewardship Standard

To comply with AWS indicators 5.1.1, 6.1.1, 6.2.1, 6.3.1

Background

Ecolab's manufacturing facility located in City of Industry (COI), California, is a blend plant that primarily produces industrial cleaning and sanitizing chemicals. Located in Southern California, the COI plant relies on water from the Rowland Water District which sources water from northern California and the Colorado River. In alignment with Ecolab's commitment to a holistic approach to water management approach across its manufacturing facilities, the company decided to implement the Alliance for Water Stewardship International Water Standard at its COI plant.

Situation

The team at Ecolab's COI plant assessed the facility for opportunities to reduce water use across its operations to meet the team's objective to reduce potable water use per ton of product at the plant by 10 percent by 2014 from a 2013 baseline. Water reduction opportunities identified included pack line washouts, cleaning mix and hold tanks, cleaning lines and restrooms.

Based on these findings, the plant prioritized reducing water used in washouts of pack equipment, hold tanks, mix tanks and bulk unloading, and set a goal to reduce water effluent by 20 percent. To improve water efficiency and achieve this goal, the team formalized washout processes, established clear operating procedures to optimize water use and set standard timers for washout cycles.

Ecolab's Water Risk Monetizer was also utilized to understand the water risk at the plant.

Solutions

Implementation of water reduction projects was prioritized throughout the plant to achieve desired savings.

- Timers were implemented to automate hold tank and line washout processes and improve water use efficiency.
- The washout matrix was optimized based on clarity of specifications on cycle requirements per product to reduce water use without affecting quality.
- Additional water reduction projects included xeriscaping, optimizing RO units and restroom upgrades.

These efforts resulted in a 31 percent effluent intensity reduction between 2013 and 2015. The plant also was able to increase production through improved efficiency, resulting in a seven percent reduction in water use per ton of product since 2014, equivalent to 17 gallons of water per ton of product and resulting in total water savings of 1.8 million gallons in 2016.

Water Governance

At the plant level, the Safety, Health and Environmental (SHE) department is responsible for wastewater compliance, with the SHE manager, Simone Vu, ultimately responsible and plant manager, Steve Olson, ultimately accountable. The site's production supervisors are responsible for wastewater discharge and PH

monitoring. The Sustainability Team is guided and advised by the Sustainability Executive Advisory Team, which is made up of the company’s most senior business and divisional leaders.


In addition, Ecolab’s Water Stewardship position and Global SHE position are publically available and serve as commitments to and guidance on water-related issues and compliance. Ecolab’s Water Stewardship Position formalizes Ecolab’s global commitment to responsible water stewardship by identifying opportunities for the company and its customers to use water resources in a manner that benefits business, communities and nature. Ecolab’s SHE position outlines the company’s commitment to excellence in safety, health and environmental practices and performance across global operations.

Water Stewardship Journey

In addition to internal operational improvements, Ecolab’s COI plant’s water stewardship activities include beach cleanups, trash pickups and charitable giving. Cleanup activities include Huntington Beach for Coastal Cleanup Day (2013), Seal Beach for Surfrider (2014), Canyon Cleanup at Puente Hills Wilderness Authority (2015), Seal Beach for Orange County Coastkeeper (2015) and California Trails Day (2017). In addition, the company donated \$4,000 to the Orange County Coastkeeper’s WHALES program, which offers junior high and high school students throughout Orange County field-based science curriculum at no charge to schools. Water stewardship activities outside of the plant are ongoing and include continued involvement with California’s water governance, Rowland City Council and California Water Action Collaborative (CWAC). In addition to local water stewardship efforts, Ecolab’s global giving program, Solutions for Life (SFL), enhances the company’s mission to conserve and protect fresh water through partnership with two global NGOs: The Nature Conservancy (TNC) and Project WET Foundation (PW).

Shared challenges between the plant and relevant stakeholders include water scarcity due to reduced snow pack from existing water sources, aging water infrastructure, urban water runoff, vulnerability to earthquakes and flood events, and loss of wetlands and species. To address these shared issues, Ecolab collaborates with other water users in the basin. In October 2014, best practices for water management were shared with World Wildlife Fund. During April 2015, drought related issues, compliance with the state-wide mandate, and current practices regarding water efficiency were discussed with the Rowland Water Board. Water stewardship in the Los Angeles area basin was explored with General Mills in August 2016. In October 2016, water stewardship in the San Gabriel basin, current projects underway and the CWAC were discussed with MillerCoors. Additionally, Ecolab participates in monthly CWAC calls to keep pace on shared water challenges and efforts in California.

Performance

eROI Impact		
1.8 million gallons of water saved in 2016, equivalent to cost savings of \$7,600		7 percent reduction of water use per ton of product realized in 2015 against a 2014 baseline