

Ecolab's Carson, California Plant Certified as Water Stewardship Leader

Recertification of Alliance for Water Stewardship (AWS) Standard Version 2.0



BACKGROUND

Ecolab's manufacturing facility located in Carson, California, is a blend plant that primarily produces water treatment chemical blends, polymers, oil blends, antimony and paper additives. Located in Southern California, the Carson plant relies on water from the California Water Service Company, which sources water from Northern California and the Colorado River. Other water sources include local groundwater and recycled water from the manufacturing plant itself. Ecolab's Carson plant location resides in the Greater Los Angeles County Watershed, specifically in the South Bay basin.

In alignment with Ecolab's commitment to a holistic approach to water management across its manufacturing facilities, the company decided to implement the Alliance for Water Stewardship (AWS) International Water Standard at its Carson plant in 2016, and re-certified the facility to Version 2.0 in 2020.

SITUATION

The team at Ecolab's Carson plant assessed the facility for opportunities to reduce water use across its operations by 10 percent per ton of product by 2020, from a 2016 baseline. Building on previous improvement projects, the plant prioritized installation of volumetric flow meters, optimization of the washout water program, reduction of landscaping water, review and relaunch of the on-site water safety plan and implementation of a dry floor policy.

Feasibility studies were performed to chart the water reduction impact, capital and operating cost of solutions. Ecolab's [Water Risk Monetizer](#) was also utilized to understand the water risk at the plant and implementation of water reduction projects was prioritized throughout the plant to achieve savings. Of the five water outcomes of the AWS Standard, the Carson facility concentrated on sustainable water balance and good water quality status, and will be ramping up focus on safe water, sanitation and hygiene (WASH) practices.

ANNUAL SAVINGS



WATER

559,000

gallons of water saved
(2,116 m³ water)

VALUE DELIVERED



TOTAL VALUE DELIVERED

\$13,500 USD

Risk-adjusted cost savings

Ecolab is a founding partner of the Alliance for Water Stewardship's (AWS) International Water Stewardship Standard.



**ALLIANCE FOR
WATER STEWARDSHIP**

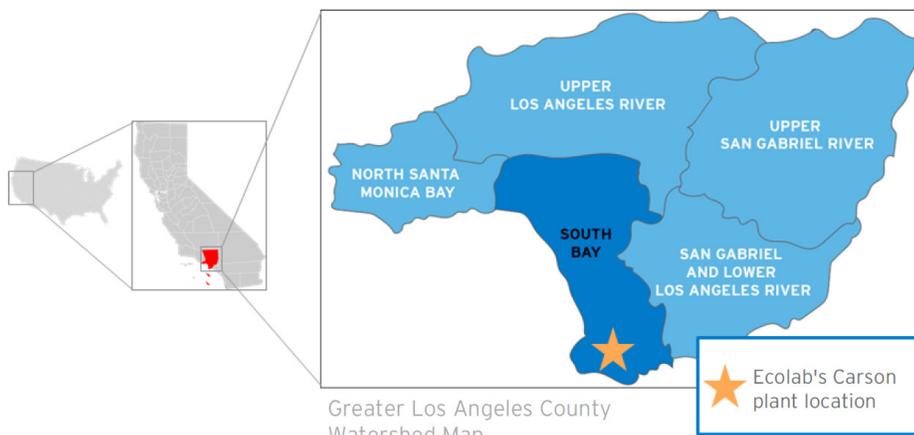
SOLUTIONS

The following projects help improve the facility's water balance and have been completed to reduce overall water use:

- Installation of volumetric flow meters on the boiler feedwater tank, reverse osmosis unit, cooling tower and deionized water system to better track on-site water use. Additional flow meters will be installed in 2021.
- Implementation of an idea collection system to gather water-saving ideas from all plant employees. This encourages all associates to view water as a shared resource and drives collective action that feeds into water-savings discussions during monthly business reviews.
- Continuous improvement of the washout water program to capture and reuse the first rinse for 75% of manufactured products, resulting in water savings of 131,000 gallons (496 m³) per year.
- Reduction of water for landscaping use by 50%.
- Launch of a steam leak identification program, resulting in replacement of multiple steam pumps and steam traps to reduce water and energy use.
- Review and relaunch of the on-site water safety plan.
- Optimization of production scheduling to minimize washouts between batches, which saves approximately 13,000 gallons (49 m³) of water annually and over 130 hours of labor.
- Enactment of a dry floor policy to reduce the amount of washdown that occurs during filling, which results in 15,000 (57 m³) gallons of water savings every year.
- Management of hot box usage by adding a manual valve to close the inlet steam line during the summer, saving energy, water and associated costs.

PERFORMANCE

- Total annual water reduction of 559,000 gallons (2,116 m³), equivalent to \$13,500 USD in risk-adjusted cost savings
- 8.8% reduction of water use per ton of product realized in 2020 from a 2016 baseline



WATER GOVERNANCE

At the plant level, Safety, Health and Environmental (SHE) manager, Walter Chang, is responsible for overall wastewater compliance and compliance with wastewater permits, and accountable for wastewater discharge and PH monitoring. Maintenance Supervisor, Justin Gillman, is responsible for wastewater testing, wastewater discharge and PH monitoring. Plant manager, Fred Casey, is ultimately accountable for overall wastewater compliance, wastewater testing, regulation updates, wastewater discharge and PH monitoring.

At a corporate level, 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 publicly available and serve as commitments to and guidance on water-related issues and compliance.

In 2020, Ecolab announced its membership in the Water Resilience Coalition, an industry-driven initiative of the United Nations Global Compact's CEO Water Mandate. The Coalition aims to elevate global water stress to the top of the corporate agenda and preserve the world's freshwater resources through collective action in water-stressed basins and by making ambitious, quantifiable commitments.

WATER STEWARDSHIP JOURNEY

In addition to internal operational improvements, Ecolab's Carson plant's water stewardship activities are ongoing. Shared challenges between the plant and relevant, local stakeholders include water scarcity due to reduced snowpack from existing water sources, aging water infrastructure, urban water runoff, saline intrusion into groundwater and loss of wetlands and species. To address these shared issues, Ecolab collaborates with other water users in the basin, one of which is an Ecolab AWS-certified plant in City of Industry (COI) California.

Local water stewardship activities outside of the plant include continued engagement with the water utility company, Calwater, to maintain alignment on catchment water goals. Additionally, the Carson plant manager is a member of the Chemical Industry Council of California (CICC) which provides a forum to communicate and learn about shared industry challenges. Ecolab is involved in the California Water Action

Collaborative (CWAC) and is also part of the South Coast working group (within CWAC). The Ecolab team participates in monthly meetings to keep pace on shared water challenges and efforts in California. Ecolab is actively seeking collective action projects in the region that align with corporate replenishment goals.

Ecolab is a member of a public policy water resources group in Washington D.C. that advocates for water resource policy with a heavy focus in California. In 2020, Ecolab continued to engage with and support the Alliance for Water Stewardship's global work by sharing the company's water stewardship strategy through multiple speaking engagements, AWS webinars and encouraging other large multinational corporations to join AWS. Ecolab's Global Supply Chain Sustainability Program Manager, Laura Kowalski, also sits on the AWS technical committee and uses the platform to share best practices and learn from others along similar water stewardship journeys.

This case study was created to comply with AWS indicators 5.1.1 5.3.1, 5.4.1, 5.5.1, 5.5.2, 5.5.3
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