

# EVALUATING CONTEXT BASED WATER TARGETS

## Ecolab's City of Industry Plant

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### WHAT ARE CONTEXT BASED WATER TARGETS?

Today, many corporate water stewardship initiatives are largely focused on operational water use efficiency. Some might include water reuse and recycling strategies. However, as water scarcity becomes increasingly severe, incorporating local level considerations becomes crucial to evaluate and integrate into water stewardship initiatives.

Context Based Water Targeting (CBWT) takes water targets and goals to the next level by accounting for local context. This means considering the current conditions of and impact on the local watershed (availability, quality, value, etc.), needs of the community, and the surrounding environment that a business is operating in. It should also consider how water stewardship initiatives align with relevant stakeholders, Non-Governmental Organizations (NGOs), and global efforts like the United Nation's (UN) Sustainable Development Goals (SDGs).

While many companies have started talking about CBWT, there is a need for a consistent approach and examples of successful water stewardship strategies grounded in CBWT. This case study demonstrates how Ecolab evaluated water stewardship outcomes with CBWT at one of its plants in Southern California.

### ECOLAB'S CITY OF INDUSTRY PLANT

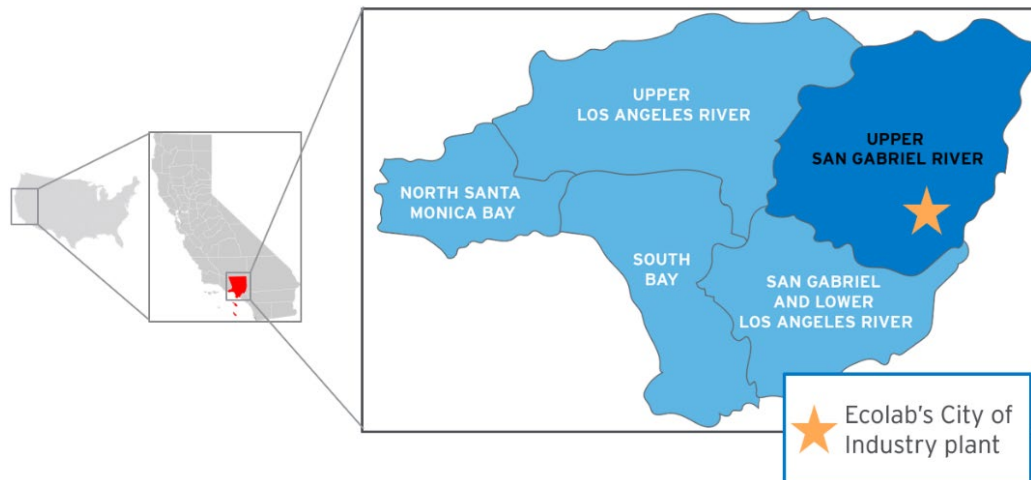
Ecolab identified its City of Industry (COI) plant in Southern California to evaluate based on:

- The plant's size and importance in Ecolab's value chain
- Previous water stewardship initiatives that were completed at the site
- The plant's location in a water-stressed region and watershed where other water-intensive companies are also located

Ecolab's plant in COI is a blend plant that primarily produces industrial cleaning and sanitizing chemicals. In alignment with Ecolab's commitment to a holistic approach to water management approach across its manufacturing facilities, the Alliance for Water Stewardship (AWS) International Water Stewardship Standard was implemented at the COI plant and the plant received certification in 2017.

### SHARED WATER CHALLENGES

Ecolab's COI plant is in the Upper San Gabriel River watershed and receives its water from the Rowland Water District. As a part of the site's efforts to achieve AWS certification, the site identified its shared water challenges and worked to prioritize them. Four areas of shared water challenges were prioritized as most relevant to COI's operational and catchment water risk: **water quantity, water quality, water governance, and water crises**. With the help of Pacific Institute acting as the co-secretariat of the CEO Water Mandate, Ecolab worked to understand context-based water targets that aligned with its key shared water challenges. It was also crucial to understand the baseline conditions in order to work to identify how Ecolab and other stakeholders in the watershed can help to improve conditions.



**WATER CHALLENGE: WATER QUANTITY**

| KEY ISSUES   | BASIN CONTEXT METRIC                           | CURRENT STATE                              | SCOPE   |
|--|--|--|---|
| Reliance on imported water   | Local water supply independence                | 87% imported, 13% local (2015)             | Rowland Water District Service Area             |
| Multiple users, increased demand and declining supply                  | Demand/Supply ratio                            | 1.03 (2015) -> 1.00 (2020) -> 1.00 (2025)  | Rowland Water District Service Area             |
| Declining snowpack leading to changes in timing and quantity of runoff | Snowpack levels                                | April 2018: 49% of average                 | State Water Project (SWP) (Feather River Basin) |
|  |  | August 2018: 61% of average                | Colorado River (Upper Colorado River Basin)     |
| Wasteful/excessive water use   | Per capita water demand in the watershed       | 217 GPCD (gallons per capita daily) (2015) | Rowland Water District Service Area             |
| Sacramento-San Joaquin Delta reliability                               | Percent of total requested SWP water delivered | 20% (2015)                                 | State Water Project (SWP) (Feather River Basin) |

**WATER CHALLENGE: WATER QUALITY**

| KEY ISSUES   | BASIN CONTEXT METRIC   | CURRENT STATE | SCOPE         |
|--|--|---------------|---------------|
| Groundwater quality issues- superfund sites for TCE, PCE and carbon tetrachloride; nitrates, VOCs, TDS | Groundwater ambient quality- public supply wells with MCL (Maximum Contaminant Level) violations | 4%            | Central Basin |

**WATER CHALLENGE: WATER GOVERNANCE**

| KEY ISSUES   | BASIN CONTEXT METRIC   | CURRENT STATE | SCOPE       |
|--|--|---------------|-------------|
| Lack of comprehensive watershed plan; existence of individual planning documents for different jurisdictional boundaries | Effective local water policy and regulation  | Medium        | All/General |
|  | Robust basin management plans with actionable goals  | Low           |             |
|  | Stakeholder engagement   | Low           |             |
|  | Consideration of disadvantaged and/or marginalized communities in water planning             | Low           |             |
|  | Monitoring and data collection   | Low           |             |
|  | Data availability  | Medium        |             |
|  | Effective local water policy and regulation  | Medium        |             |
| Aging/ unreliable infrastructure   | Funding for infrastructure needs as compared to national average                             | 11%           | State-wide  |
|  | Reliability of water supply infrastructure (dams, drinking water, flood control, wastewater) | Grade B       | LA County   |

| WATER CHALLENGE: WATER CRISES |   |               |                                     |
|-------------------------------|---|---------------|-------------------------------------|
| KEY ISSUES                    | BASIN CONTEXT METRIC                        | CURRENT STATE | SCOPE                               |
| Drought risk                  | Existence of drought risk planning document | Yes           | Rowland Water District Service Area |

## DESIRED END STATE

To align relevant local level water risks with global efforts, Ecolab looked at the UN SDGs. These goals encompass 17 focus areas that are meant to bring together and align efforts from governments, the private sector, and civil society to address important issues around the world. One of the goals - SDG Goal 6 - focuses on clean water and sanitation. To take the analysis further, Ecolab looked at how the priority challenges identified for the Upper San Gabriel River Watershed and the desired end state aligned with SDG Goal 6.

| WATER CHALLENGE: WATER QUANTITY  |   |
|--|---|
| KEY ISSUES   | DESIRED END STATE                         |
| Reliance on imported water   | More diverse supply/Increase local supply |
| Multiple users, increased demand and declining supply                  | 0.8 Demand/Supply ratio                   |
| Declining snowpack leading to changes in timing and quantity of runoff | 100% of average                           |
| Wasteful/excessive water use   | 172 GPCD                                  |
| Sacramento-San Joaquin Delta reliability                               | 100%                                      |

| WATER CHALLENGE: WATER QUALITY   |                   |
|--|-------------------|
| KEY ISSUES   | DESIRED END STATE |
| Groundwater quality issues- superfund sites for TCE, PCE and carbon tetrachloride; nitrates, VOCs, TDS | 0%                |

| WATER CHALLENGE: WATER GOVERNANCE  |  |
|--|--|
| KEY ISSUES   | DESIRED END STATE  |
| Lack of comprehensive watershed plan; existence of individual planning documents for different jurisdictional boundaries | High levels of regulation, management, engagement, data collection, and data availability    |
| Aging/unreliable infrastructure  | Funding for infrastructure needs at national average, Grade A on water supply infrastructure |

| WATER CHALLENGE: WATER CRISES |   |
|-------------------------------|---|
| KEY ISSUES                    | DESIRED END STATE   |
| Drought risk                  | Comprehensive drought resistance planning document exists |

## HOW DOES ECOLAB'S COI PLANT CONTRIBUTE?

For each shared water challenge, Ecolab evaluated the actions they could take at the facility level to make a positive contribution towards the desired end state. When considering Ecolab's contribution to meeting the desired end state for the key shared water challenges, operational changes and actions within the facility's own plant should be the starting place. Once that action has been achieved to the greatest extent feasible (at minimum, achieved regulatory compliance), or if there are no meaningful actions to be taken within the facility, Ecolab must look to external efforts (e.g. collective action projects) to contribute to the desired end state of a given shared water challenge.

Example contributions, broken out by in-facility and beyond-facility, are provided for each shared water challenge in the table below.

| FACILITY CONTRIBUTIONS |   |   |
|------------------------|---|---|
| CHALLENGE              | IN-FACILITY   | BEYOND-FACILITY   |
| Water Quantity         | <ul style="list-style-type: none"> <li>– Reduce site water demand through conservation or efficiency, and/or increase water reuse</li> <li>– Reduce GHG emissions, thereby reducing contribution to climate change</li> </ul> | <ul style="list-style-type: none"> <li>– Engage with other commercial/ industrial/ institutional (CII) water users in the basin to increase uptake of water reduction, reuse, and stewardship strategies</li> <li>– Support ecosystem restoration efforts</li> </ul>  |
| Water Quality          | Ensure quality of water discharged from site meets regulatory requirements.   | Support groundwater quality remediation efforts   |
| Water Governance       | <ul style="list-style-type: none"> <li>– Meet all water related regulations</li> <li>– Communicate and share insights with Rowland Water District</li> </ul>  | <ul style="list-style-type: none"> <li>– Support water related policy efforts by local and state authority</li> <li>– Support local watershed planning efforts (e.g. purple pipe for industry water use)</li> <li>– Communicate and share insights with other CII water users in the basin</li> <li>– Support innovative funding mechanisms for repairing and maintaining water infrastructure</li> </ul> |
| Water Crises           | Develop and maintain site level drought contingency plan  | Engage in climate change mitigation and adaptation efforts in local and source watersheds (e.g. support policies that incentivize CII with low-cost on-premise renewables)  |

## ACTION TAKEN

In the process of evaluating key context-based considerations for the COI plant, Ecolab was able to take a more thoughtful approach to its water stewardship activities. This analysis helped Ecolab to determine how to use resources most effectively to make the greatest impact on the highest priority challenges at the plant.

Ecolab’s COI plant has been AWS certified since 2017. With the work already underway to maintain certification, the plant has made many efforts toward the desired end state in the Upper San Gabriel watershed and other source watersheds.

Ecolab is a member of the California Water Action Collaborative (CWAC) which allows for the sharing of best practices and close collaboration with many other CII water users in the Upper San Gabriel watershed and the greater California area. The site is engaged with the local community and has participated in many local volunteer efforts to keep our waterways and ecosystems clean.

As it relates to COI’s water use efficiency, the plant has reduced its water use per ton of product by 11 percent from a 2015 baseline. The plant shares its progress and updates to its water stewardship practices with the Rowland water district on an annual basis.

COI’s water stewardship journey is ongoing, and always will be. The site will continue to look for ways to work with other water users in the Upper San Gabriel watershed and source watersheds to share best practices, implement strategies outlined in this report, and ultimately improve conditions. Ecolab also continues to work with its customers in the California area to help them better understand how they can be water stewards in their local watersheds to further business practices and the environment.