

Alliance for Water Stewardship

Audit Report - ECOLAB

Carson, CA

The AWS International Water Stewardship Standard, Version 1.0,

April 8th, 2014

Report Issued on December 18, 2017



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Introduction to the Alliance for Water Stewardship

The AWS Standard (“the Standard”) is intended to drive water stewardship, which is defined as the use of water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site- and catchment-based actions. Good water stewards understand their own water use, catchment context and shared concerns in terms of water governance, water balance, water quality and Important Water-Related Areas, and then engage in meaningful individual and collective actions that benefit people and nature. The Standard outlines a series of actions, criteria and indicators for how one should manage water at the site level and how water management should be stewarded beyond the boundaries of a site. In this Standard, the “site” refers to the implementing entity that is responsible for fulfilling the criteria. The site includes the facility and the property over which the implementer that is using or managing water (i.e., withdrawing, consuming, diverting, managing, treating and/or discharging water or effluent into the environment) has control.

Assessment Information:

Client Name	ECOLAB
AWS Reference Number - Carson	AWS-010-INT-SCS-00-01-0001-0014
Client AWS Representative/Group Manager (Role/Name/Contact info)	Lauren Kowalski, Global Supply Chain Sustainability Directo (630.305.1611/laura.kowalski@ecolab.com
Audit Team (Role/Name)	Lead Auditor: Nicole Munoz, SCS Global Services
	Technical Expert: Isabella Polenghi-Gross, Ph.D. AMEC Foster Wheeler
Audit dates (DD-DD Month YYYY)	28-Sep-17
Audit Location (Carson, CA)	2111 E. Dominguez Street, Carson, CA 90810
Audit Location (City of Industry, CA)	18383 Railroad Street, City of Industry, CA 91748
Date(s) of previous audit (if applicable)	N/A
Findings from previous year	<input type="checkbox"/> YES, see tab 9
SCS Certificate number (if applicable)	
Expiry date of previous certificate (if applicable)	

Scope of Audit (check all applicable boxes)

The AWS International Water Stewardship Standard Version V1.0 April 8th 2014

Initial audit	<input checked="" type="checkbox"/> YES
Surveillance audit	<input type="checkbox"/> YES
Re-certification audit	<input type="checkbox"/> YES
RE-evaluation audit	<input type="checkbox"/> YES
Single-site audit	<input type="checkbox"/> YES
Multi-site audit	<input checked="" type="checkbox"/> YES, see tab 3
Group audit	<input type="checkbox"/> YES, see tab 3
<i>If yes, please description of the group structure and relationships</i>	

Description of Operations

The **ECOLAB/NALCO - Carson** plant is a manufacturing facility producing water treatment chemical blends, polymers, oil blends, antimony and paper additives. The geographic scope of the site is limited to the property boundary of the facility. The facility is located in an urban industrial setting. Water for the facility comes from the municipal water districts, which is sourced from Northern California, Colorado River and local groundwater.

Description of the catchment in which the client operates:

The **Carson** plant is situated on 10 acres. The facility is within the California Water Service, where all potable water supply is imported from the Metropolitan Water District of Southern California (MWDSC), which water is sourced from the Colorado & the State Water Project. Water is sourced from the Colorado River, Sacramento-San Joaquin Delta. Additional water sources include local ground water and recycled water.

Summary of shared water challenges:

Water scarcity, water infrastructure and risk of earthquakes and flooding damages have been identified as the primary water shared water challenge in the catchment. Water scarcity is attributed to the multi-year California drought. California drought emergency conditions were lifted by the Governor in April 2017, but the water scarcity remains the primary catchment concern.

Audit Attendance - Carson, CA

Guidance:

Record in this section the people attending the different parts of the audit. Tick the parts of the audit attended by each person.

Audit Attendance Role/Title	Mark attendance with an 'x' as appropriate				
	Opening meeting	Document review	Interview	Facility Inspection	Closing meeting
Plant Manager	x	x	x	x	x
Production Supervisor	x		x	x	
Quality Assurance	x	x	x	x	x
Maintenance Supervisor	x		x		
Plant Engineer	x	x	x		x

Additional information on audit attendance

The onsite audit portion of the assessment largely focused on the facility production and processes in place. Document review was conducted primarily with Laura Kowalski remotely at later dates between October - December 2017.

The AWS International Water Stewardship Standard, Version 1.0, April 8th, 2014

Criterion #	Standard Provision or Requirement	Major Minor Observation Conforming	Auditor Findings
STEP 1: COMMIT			
Criterion 1.1	<p>1.1 Establish leadership commitment on water stewardship: Have the senior-most manager at the site, and if necessary a suitable individual within the corporate head office, sign and publicly disclose a commitment to:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Uphold the AWS water stewardship outcomes (good water governance, sustainable water balance, good water quality status and healthy status of Important Water- Related Areas); <input checked="" type="checkbox"/> Engage stakeholders in an open and transparent manner; <input checked="" type="checkbox"/> Strive to comply with legal and regulatory requirements <input checked="" type="checkbox"/> Respect water-related rights, including ensuring appropriate access to safe water, sanitation and hygiene for all workers in all premises under the 		
	1.1.1 Signed and publicly disclosed statement that explicitly covers all requirements (see details in Criterion 1.1)	C	Water Stewardship commitment signed by Fred Casey, Plant Manager.
Criterion 1.2	1.2 Develop a water stewardship policy: Develop an internally agreed-upon and communicated and publicly available water stewardship policy that references the concept of water stewardship (as informed by the AWS Standard, outcomes and criteria).		
	1.2.1 Publicly available policy that meets all requirements (see Guidance)	C	During the site audit, the link was not active, thereby not publically available as intended. The link was updated and active following the onsite audit.
STEP 2: GATHER & UNDERSTAND			
Criterion 2.1	2.1 Define the physical scope: Identify the site's operational boundaries, the sources the site draws its water from, the locations where the site returns its discharge to, and the catchment(s) that the site affect(s) and is reliant upon.		
	2.1.1 Documentation or map of the site's boundaries	C	A map of the site was reviewed. The map includes the property boundaries of the facility, and the points of withdrawal and discharge. Water comes in through municipal connections. No other sources.

	2.1.2 Names and location of water sources, including both water service provider (if applicable) and ultimate source water	C	<p>Their water service provider is California Water Service Co. and the ultimate source water includes: Groundwater + Surface water sourced from the Colorado River & the State water project in Northern California. In particular, potable water supply is imported from the Metropolitan Water District of Southern California (MWDSC), which in turn sources from the Colorado & the State Water Project.</p> <p>Their ultimate sources of water (and average percentages) are:</p> <ol style="list-style-type: none"> 1) Colorado River (~75%). Water is delivered from Lake Havasu by means of a 242-mile long aqueduct. The water originates as snowmelt from the mountainous regions in Utah, Wyoming, and Colorado. 2) Northern Ca State Project water (~25%). Water originates in the Sacramento – San Joaquin Delta and is delivered by means of a 441-mile long California Aqueduct. <p>Other sources include:</p> <ol style="list-style-type: none"> 3) Local groundwater & 4) recycled water. <p>Additional information on breakdown of source water for the Dominguez watershed for year 2009-2013, and projections for 2035 were provided.</p>
	2.1.3 Names and location of effluent discharge points, including both water service provider (if applicable) and ultimate receiving water body	C	<p>LA County is responsible for waste water treatment.</p> <p>Ultimate receiving body is the Long Beach Water Reclamation Plant. Water that leaves this site goes to the joint water pollution control plant, is blended with imported water and is pumped into the Alamitos Seawater Barrier to protect the GW basin from seawater intrusion.</p>
	2.1.4 Geographical description or map of the catchment(s)	C	<p>A map of the Dominguez Channel Watershed was provided. The Dominguez Channel Watershed covers approximately 70,000 acres and is located in the southern portion of the Los Angeles Basin. Approximately 43,400 acres of the Watershed drains to the 15.7-mile-long Dominguez Channel which begins in Hawthorne and discharges into the Los Angeles Harbor in the east basin. The remaining approximately 26,600 acres, which includes Wilmington Drain and Machado Lake, drains directly to the Los Angeles Harbor independently of Dominguez Channel.</p> <p>A map of the surface drinking water sources (for cities served by the MWDSC) is also provided.</p>
Criterion 2.2	2.2 Identify stakeholders, their water-related challenges and the site's sphere of influence: Identify stakeholders, document their water-related challenges and explain how the stakeholders are within the site's sphere of influence.		
	2.2.1 List of stakeholders, descriptions of prior engagements and summaries of their water-related challenges (TCW in Guidance)	OBS	<p>Multiple records and documents submitted to verify conformance with the criterion, but a consolidated stakeholder mapping document was submitted on 10/27/17 to clearly identify specific stakeholders, contact information, level of engagement, type of stakeholder, and interest of stakeholder. The level of engagement was found to be primarily led by corporate, with increasing engagement at the facility level more recently. At the facility level the Plant Manager has been engaged more recently with some added support from the Production Supervisor and Plant Engineer. Ecolab has an active engagement with both the California Action Water Collaborative and Rowland Water District. OBS: Ensure that the facility level staff leads and maintains a continuous engagement of key stakeholders.</p>

		C	Ecolab identified its key players with the highest interest and highest influence as their Water/Sewer providers, which has been their focus on engagement activities and has made multiple attempts to connect with California Water Service. Ecolab is located in a highly industrial area of Los Angeles County and amidst a catchment shared with more water intensive/waste intensive manufacturing companies. the Carson facility is relatively smaller in square area versus its neighbor companies.
Criterion 2.3	<p>2.2.2 Description of the site's sphere of influence</p> <p>2.3 Gather water-related data for the catchment: Gather credible and temporally relevant data on the site's catchment's</p> <ul style="list-style-type: none"> x Water governance, including catchment plan(s), water-related public policies, major publicly led initiatives under way, relevant goals, and all water-related legal, regulatory requirements; x Water balance for all sources while considering future supply and demand trends; x Water quality for all sources while considering future physical, chemical and biological quality trends; x Important Water-Related Areas, including their identification and current status, while considering future trends; x Infrastructure's current status and exposure to extreme events while considering expected future needs. <i>(TCW in Guidance)</i> 		
	<p>2.3.1 List of relevant aspects of catchment plan(s), significant publicly led initiatives and/or relevant water-related public policy goals for the site <i>(TCW in Guidance)</i></p>	OBS	<p>A list of regional objectives and Planning Targets that apply to the catchment was provided. These include objectives to optimize local water resources to reduce the reliance on imported water; to improve water quality; to enhance habitat; to enhance open space and recreation; to improve flood management; and to address climate change. The Geosyntec October 2013 GLAC IRWM report and the Dominguez Watershed Action Plan were reviewed. They are regional and watershed plans applicable to the whole regional area and major watersheds (Dominguez, Santa Monica, Los Angeles and Ballona). The goal of the IRWM Plan is to address the water resources needs of the Region in an integrated and collaborative manner and generate local funding, position the Region for future state bonds, and create opportunities for federal funding. The 2004 Dominguez Watershed Management Master Plan lists detailed issues and concerns together with programs, actions, goals, relative costs, and potential action benefits for the Dominguez Watershed. In addition Ecolab provided a list of publicly led initiatives and water related projects including how they have participated/contributed at the company level to these initiatives. A list of "actions to consider" on how to contribute to the Dominguez Watershed Master Plan was prepared and provided by Ecolab.</p> <p>OBS: Ecolab would benefit by specifying how the Integrated Water</p>
	<p>2.3.2 List, and description of relevance, of all applicable water-related legal and regulatory requirements, including legally defined and customary water rights and water-use rights</p>	OBS	<p>The California State Senate Bill 7, the IRWM with a list of the state and regional regulatory requirements, and the 2014 State Water Board emergency regulation on Water Conservation were provided and reviewed. OBS: The link provided for water rights is not working. Also notes on how they apply to the site are not clearly provided.</p>

	2.3.3 Catchment water balance by temporally relevant time unit and commentary on future supply and demand trends <i>(TCW in Guidance)</i>	OBS	<p>References/links to documents with water balance considerations and values related to the water sources were provided. Catchment daily precipitation data and annual channel flows are provided. 2010 annual values are provided for the water balance of that year. OBS: While data on water sources are useful information to track, and some local data catchment data are provided at an appropriate scale, the Standard requires the development of a complete water balance specific to the catchment area and applicable to the audit timeframe, with data on water withdrawn and discharged from the catchment and water gathered and consumed within the catchment. An effort should be made to gather and summarize monthly data in tables or hydrographs. If such data is not available, the site should work with public sector agencies to develop it before the next renewal assessment in three (3) years.</p> <p>Monthly water scarcity data maps were provided for year 2016 for the entire world. Maps show the LA area.</p> <p>A general commentary upon current versus future changes in supply and demand is included.</p>
	2.3.4 Appropriate and credibly measured data to represent the physical, chemical and biological status of the site's water source(s) by temporally relevant time unit, and commentary on any anticipated future changes in water quality	OBS	<p>Existing water quality programs for water bodies in the catchment are listed and described. Several links are also provided to water quality objectives. Links to water quality assessments in the catchment area are provided for periods of records up to 2013.</p> <p>A map with surface drinking water sources (for cities served by the MWDSC) characterized by level of protection is also provided. 2009 salinity concentration values for the Colorado River Basin (one of the water sources for this site) are provided.</p> <p>OBS: monthly representative water quality data (or at the most relevant frequency they are available) for the timeframe relevant to the audit should be gathered and provided.</p> <p>Commentary on water quality sources indicates that no future changes are anticipated.</p>
	2.3.5 Documentation identifying Important Water-Related Areas, including a description of their current status and commentary on future trends <i>(TCW in Guidance)</i>	C	<p>South Bay Sub regional Plan (Appendix K). Wetlands, aquatic habitats, and forest areas are listed and described with their issues and challenges in this report.</p> <p>Ecolab also provided links to protected areas, grasslands ecological areas, biospheres reserves, and other significant ecological areas.</p> <p>IWRAs, outside the site catchment area, but near their water sources are also included.</p> <p>IWRAs have been discussed with stakeholders via Ecolab California Water</p>
	2.3.6 Existing, publicly available reports or plans that assess water-related infrastructure, preferably with content exploring current and projected sufficiency to meet the needs of water uses in the catchment, and exposure to extreme events <i>(TCW in Guidance)</i>	C	<p>Water related infrastructures existing within the catchment are listed and described in documents and/or links provided, including for water supply, recycled water, storage, distribution, flood management, and water conservation. Ecolab's measures to be used in the event of emergency or disaster events are mentioned in their emergency plans.</p>
Criterion 2.4	<p>2.4 Gather water-related data for the site: Gather credible and temporally relevant data on the site's:</p> <ul style="list-style-type: none"> x Governance (including water stewardship and incident response plan); x Water balance (volumetric balance of water inputs and outputs); x Water quality (physical, chemical and biological quality of influent and effluent) and possible sources of water pollution; x Important Water-Related Areas (identification and status); x Water-related costs (including capital investment expenditures, water procurement, water treatment, outsourced water-related services, water-related R&D and water-related energy costs), revenues and shared value creation (including economic value distribution, environmental value and social value). 		

	2.4.1 Copies of existing water stewardship and incident response plans (TCW in Guidance)	C	Copies of the Carson Water Stewardship Strategy, the Emergency Procedures Manual (dated October 2016) and the Contingency Business Plan (dated December 2013 and updated on January 2016), prepared for the site, were provided.
	2.4.2 Site water balance (in Mm3 or m3) by temporally relevant time unit and water-use intensity metric (Mm3 or m3 per unit of production or service) (TCW in Guidance)	C	Site water balance diagrams are provided. Included are 2016 annual inflows and outflows broken down by operational processes and water use categories. They update the water balance on an annual basis because, except for the storm water component, the other rates do not significantly vary throughout the year. Site water intensity measured for 2016 as effluent/influent is 0.34.
	2.4.3 Appropriate and credibly measured data to represent the physical, chemical and biological status of the site's direct and outsourced water effluent by temporally relevant time unit, and possible pollution sources (if noted) (TCW in Guidance)	C	Bi-annual self monitoring reports of effluent are submitted to the Sanitation District of Los Angeles County. A copy of the most recent report for the period of 07/01/2016 - 12/31/16 was provided and reviewed. Test results and permit limits were included. City also performs sampling once or twice a year to verify compliance. They do not test the incoming water.
	2.4.4 Inventory of all material water-related chemicals used or stored on-site that are possible causes of water pollution	C	When an inventory was requested during the site visit, the plant manager indicated that they are in the process of compiling a list. On 11/21/17, a file was provided with amounts in kg and lbs. for over 900 different materials, but with no common names to identify the products used or stored on site. OBS: The materials in the inventory are listed using codes of unknown meaning, therefore it is not possible to determine if any water-related chemicals used or stored on-site could be possible causes of water pollution. Since the site is in compliance with its Industrial Waste Water Discharge permit, and no other potential causes of water pollution were identified, this remains an observation. However, an effort should be made to provide a full valid and clear list of all the water related chemicals used or stored at the site.
	2.4.5 Documentation identifying existing, or historic, on-site Important Water-Related Areas, including a description of their status	C	No on-site IWRA is currently identified at the site. The area currently occupied by the site used to be a wetland area, part of the Domingo Slough until 1940 when it was drained and converted into an industrial area.
	2.4.6 List of annual water-related costs, revenues and description/quantification of social, environmental or economic value generated by the site to the catchment	C	Ecolab does not track revenue per plant, so 2015 Carson Production calculated estimate was provided. Annual water-related costs were provided through copies of utility bills. Costs of effluent water surcharges, waste water permit surcharges, softeners costs, and payroll were provided. Ecolab plans to gather additional cost informational for the site plants to fully comply with the requirements of this indicator. Through the Nalco Water cooling water application technologies, Ecolab helped save their customers in the LA Basin over 65.5 million gallons of water annually and the whole state of California over 2.29 billion gallons of water annually. This resulted in saving \$1.1 MM/year in risk value in the Los Angeles area alone. The social value has been described in terms of a contribution, support and widespread reach to other organizations in California, such as CWAC, that connect among themselves for restoration projects in the region. However the social value is not quantified. OBS: A true cost benefit analysis of the site to the catchment was not completed.

Criterion 2.5	2.5 Improve the site's understanding of its indirect water use: Identify and continually improve the site's understanding of: x Its primary inputs, the water use embedded in the production of those primary inputs and, where their origin can be identified, the status of the waters at the origin of the inputs; x Water used in outsourced water-related services within the catchment. <i>(TCW in Guidance)</i>		
	2.5.1 List of primary inputs with their associated embedded annual (or better) water use and (where known) their country/region/or catchment of origin with its level of water stress	C	Ecolab identified the top 10 raw materials, 6 of which come from internal Nalco plants. They gathered the related water quality data and calculated the associated WWF Water Risk Filter scores. Of the top 10 raw materials they purchase at the Carson plant, all are manufactured in locations with low to average water risk scores. The highest risks come from Ecolab in Sugar Land, TX, Summit in Phoenix, AZ, and Thatcher in Salt Lake City, UT. Summit does not publish a sustainability report, but they do cite a partnership with NSF on their website. Thatcher does not publish a sustainability report but does mention the environment as one of its core business values.
	2.5.2 List of outsourced services that consume water or affect water quality and both (A) estimated annual (or better) water withdrawals listed by outsourced services (Mm3 or m3) and (B) appropriate and credibly measured data to represent the physical, chemical and biological status of the outsourced annual (or better) water effluent	C	Top Outsourced Water are associated to 1) Softener exchange service completed by internal subsidiary of Ecolab in the Placential plant, California & 2) Uses Port-a-feed washouts in South Gate, CA; 1) Since the exchanger service is technically completed internally, and only uses 28,000 gallons per year, this is not a significant risk for the Carson plant. 2) While Qualawash's (in South Gate) risk multiplier for the cost of water is almost 2.5x and it is in a high water scarcity zone, the company does have many water conservation activities in place. There are timers on washouts, low flow/high pressure rinses, and they plan to install low flow washers and they plan to continuously improve their water management. Since the site was quite transparent when Ecolab asked about their water stewardship efforts, Ecolab considers this a low level risk for the Carson plant.
Criterion 2.6	2.6 Understand shared water-related challenges in the catchment: Based upon the status of the catchment and stakeholder input, identify and prioritize the shared water-related challenges that affect the site and that affect the social, environmental and/or economic status of the catchment(s). In considering the challenges, the drivers of future trends and how these issues are currently being addressed by public-sector agencies must all be noted.		
	2.6.1 Prioritized and justified list of shared water challenges that also considers drivers and notes related to public-sector agency efforts <i>(TCW in Guidance)</i>	OBS	Prioritization is a result based on impact multiplied by probability. The prioritized shared water challenges identifies water scarcity and vulnerability to infrastructure due to earthquake/flood events. OBS: The information would be more impactful listing the specific stakeholders impacted by the shared water challenge and what the relevance is for the site or the stakeholder.
Criterion 2.7	2.7 Understand and prioritize the site's water risks and opportunities: Based upon the status of the site, existing risk management plans and/or the issues identified in 2.6, assess and prioritize the water risks and opportunities affecting the site. <i>(TCW in Guidance)</i>		
	2.7.1 Prioritized list of water risks facing the site, noting severity of impact and likelihood within a given time frame	C	Prioritization is a result based on impact multiplied by probability. The prioritized water risk at the site level were identified as water scarcity and vulnerability to infrastructure due to earthquake/flood events.

	2.7.2 Prioritized list of water-related opportunities for the site	OBS	Priorities for opportunities were identified as reducing landscaping and operational processes. Detailed plan on water reduction target goals related to economical savings. OBS: Expanding upon the list of opportunities to include more specific details on how it relates to the catchment. There are assumed connections with decreased water usage and reduced impact on the environment in the water sensitive region of California. The only ongoing opportunity is operational processes, but all others are complete. Conduct annual review of opportunities for the site.
	2.7.3 Estimate of potential savings/value creation	C	Estimated potential savings created for priority opportunities with continued review of opportunities to be assessed on an annual basis.
STEP 3: PLAN			
Criterion 3.1	3.1 Develop a system that promotes and evaluates water-related legal compliance: Develop, or refer to, a system that promotes and periodically evaluates compliance with the legal and regulatory requirements identified in Criterion 2.3.		
	3.1.1 Documented description of system, including the processes to evaluate compliance and the names of those responsible and accountable for legal compliance (<i>TCW in Guidance</i>)	OBS	RACI compliance worksheet indicates the type of compliance required at the site and the responsible, accountable, consulting, informed or backup employee. Compliance documents maintained by the Safety, Health, and Environmental Manager. OBS: A document that summarizes the requirements and how Ecolab meets the regulation would ensure continued conformance to the requirements in the case of employee transitions.
Criterion 3.2	3.2 Create a site water stewardship strategy and plan: Develop an internally available water stewardship strategy and plan for the site that addresses its shared water challenges, risks and opportunities identified in Step 2 and that contains the following components (see Guidance for plan template): x a strategy that considers the shared water challenges within the catchment, water risks for the site (noting in particular where these are connected to existing public-sector agency catchment goals) and the site's general response (from Criteria 2.6 and 2.7) x a plan that contains: o A list of targets (based upon Criterion 2.7) to be achieved, including how these will be measured and monitored. Note: where identified as a shared water challenge, these targets must be continually improving for the four water stewardship outcomes until such time as best practice is achieved; o A list of annual actions that links to the list of targets; o A budget for the proposed actions with cost/benefit financial information (based, in part, upon financial data from 2.7); o An associated list indicating who will undertake the actions (i.e., who is responsible for carrying out the work) and who will ensure that the work is completed (i.e., who is accountable for achieving the target), including actions of other actors in the catchment; o A brief explanation that speaks to how the proposed actions will affect: (A) water-risk mitigation, (B) water stewardship outcomes and (C) shared water challenges.		
	3.2.1 Available water stewardship strategy	C	A water stewardship strategy was created as part of the AWS process. This document is a higher level document briefly indicating the shared water challenges, and water risks to the site and agency initiatives at the state and regional levels.

	3.2.2 Available plan that meets all component requirements and addresses site risks, opportunities and stakeholder shared water challenges <i>(TCW in Guidance)</i>	C	An updated stewardship plan was submitted on 11/21. The plan includes goals, targets, objectives and linked to shared water challenges. The plan was improved with a budget and multi-year targets. OBS: The Water Stewardship Plan could be improved with objectives that clearly indicate a path towards best practice and integrating SMART targets. Timing and budget need further refinement and review. Information is included but many initiatives have been completed but it is unclear how best practice will be achieved within the 4 water stewardship outcome areas.
Criterion 3.3	3.3 Demonstrate responsiveness and resilience to water-related risks into the site's incident response plan: Add to or modify the site's incident response plan to be both responsive and resilient to the water-related risks facing the site.		
	3.3.1 A description of the site's efforts to be responsive and resilient to water-related issues and/or risks in an appropriate plan <i>(TCW in Guidance)</i>	Minor	The site submitted an emergency response plan but did not address the water aspects . Emergency response plan updated on 11/21 to include the Drought Contingency Plan. Additional updates include responsiveness and resilience aspects.
Criterion 3.4	3.4 Notify the relevant (catchment) authority of the site's water stewardship plans: Contact the appropriate catchment authority/agency (if any) and inform them of the site's plans to contribute to the water stewardship objectives of their catchment plan as identified in Criterion 2.3. <i>(TCW in Guidance)</i>		
	3.4.1 Documented evidence of communicating the site's plan to the relevant catchment authority/agency	C	Ecolab has documented attempts to share their site's plan with the relevant catchment authority, but the relevant authority has been unresponsive. Last communication was 12/5/17.
STEP 4: IMPLEMENT			
Criterion 4.1	4.1 Comply with water-related legal and regulatory requirements and respect water rights: Meet all applicable legal and regulatory requirements related to water balance, water management and Important Water-Related Areas as well as water-related rights. As noted in Criteria 1.1 and 3.2, where, through its water use, the site is contributing to an inability to meet the human right to safe drinking water and sanitation, the site must also continually work with relevant public sector agencies until this basic human right to water and sanitation is fulfilled.		
	4.1.1 Documentation demonstrating compliance <i>(TCW in Guidance)</i>	C	Records of permits and acceptable water discharge testing results provided as a record of compliance.
	4.1.2 (Catchments with stakeholders who have an unmet human right to safe drinking water and sanitation) Documentation of efforts to work with relevant public sector agencies to fulfil human right to safe drinking water and sanitation.	C	Access to safe drinking water and sanitation is available within the catchment.

<p>Criterion 4.2</p>	<p>4.2 Maintain or improve site water balance: Meet the site’s water balance targets. As noted in Criterion 3.2., where water scarcity is a shared water challenge, the site must also continually decrease its water withdrawals until best practices are met and work with relevant public sector agencies to address the imbalance and shared water challenge. Note: if a site wishes to increase its water use in a water scarce context, the site must cause no overall increase in water scarcity in the catchment and depletion of the site’s water source(s) and encourage relevant public sector agencies to address the unlawful water use contributing to the imbalance in the catchment. <i>(TCW in Guidance)</i></p>		
	<p>4.2.1 Measurement-based evidence showing that targets have been met</p>	<p>C</p>	<p>Site water influent meter was broken in 2015, so data is unreliable and it is not possible at this point to check that the water reductions of 7% between 2015 and 2016 was met. Other key parameters were provided by the site to show water use improvements: a) site achieved a 17% reduction in effluent intensity between 2015 and 2016; b) Site achieved a 6.6% absolute water reduction between 2014 and 2016.</p>
	<p>4.2.2 (Water scarce catchments only) Evidence of continual decrease or best practice</p>	<p>C</p>	<p>ECOLAB is in a water scarce catchment. Site is implementing several measures to reduce water waste (e.g. recycling 85% of the wash water, aiming to 100%). These efforts resulted in a 6.6 percent reduction between 2014 and 2015. This reduction is equivalent to more than 1.3 million gallons of water and more than \$6,000 in cost savings annually. This is equivalent to a 17 percent reduction in water intensity since 2015. ECOLAB demonstrates best practice in implementing water saving initiatives and continuous monitoring of leaks or opportunities to improve processes.</p>
	<p>4.2.3 (Sites wishing to increase withdrawals in water scarce catchments only) Evidence of no net increase in water scarcity</p>	<p>C</p>	<p>There are no plans to increase their withdrawals. To be reviewed during the surveillance periods.</p>
<p>Criterion 4.3</p>	<p>4.3 Maintain or improve site water quality: Meet the site’s water quality targets. As noted in Criterion 3.2., where water quality stress is a shared water challenge, the site must also continually improve its effluent for the parameters of concern until best practices are met and work with relevant public sector agencies to address the imbalance and shared water challenge. Note: if a site wishes to increase its water use in a water stressed context, the site must cause no overall increase in the degradation of water quality in the catchment and degradation of the site’s water source(s) and encourage relevant public sector agencies to address the unlawful water use contributing to the degradation in the catchment.</p>		
	<p>4.3.1 Measurement-based evidence showing that targets have been met</p>	<p>C</p>	<p>The water quality goal is to meet the waste water permit. All the conditions required by the permit have been met according to notifications to the Sanitation District of Los Angeles signed by the Plant manager. Another goal for this site is to not have any water quality violations. No violation have been found on the EPA's Enforcement and Compliance History Online website.</p>
	<p>4.3.2 (Water quality-stressed catchments only) Evidence of continual improvement or best practice</p>	<p>C</p>	<p>Site does not have a shared water challenge within this context.</p>
	<p>4.3.3 (Sites wishing to increase effluent levels of water quality parameters of concern in water quality-stressed catchments only) Evidence of no net degradation in water quality in the catchment</p>	<p>C</p>	<p>Site did not increase or degrade effluent water quality parameters.</p>

Criterion 4.4	4.4 Maintain or improve the status of the site's Important Water-Related Areas: Meet the site's targets for Important Water-Related Areas at the site. As noted in Criterion 3.2., where Important Water-Related Area degradation is a shared water challenge, the site must also continually improve its Important Water-Related efforts until best practices are met, and the site must not knowingly cause any further degradation of such areas on site. <i>(TCW in Guidance)</i>		
	4.4.1 Documented evidence showing that targets have been met	C	No IWRAs at the site. Catchment IWRAs have been identified together with their status, and future trends. IWRAs have been discussed with stakeholders via Ecolab California Water Action Collaborative (CWAC) connections. There are a number of relevant projects in California that work to protect and restore IWRAs and they have discussed their status and opportunities to get involved in CWAC monthly meetings.
	4.4.2 (Degraded Important Water-Related Area catchments only) Evidence of continual improvement or best practice	C	IWRAs are not identified as a shared water challenge in the catchment.
Criterion 4.5	4.5 Participate positively in catchment governance: Continually coordinate and cooperate with any relevant catchment management authorities' efforts. As noted in Criterion 3.2, where water governance is a shared water challenge, the site must also continually improve its efforts until best practices are met <i>(TCW in Guidance)</i>		
	4.5.1 Documented evidence of the site's ongoing efforts to contribute to good catchment governance	C	Stakeholder interview with CWAC included discussion on how Ecolab, from the corporate level, is working to ensure good water stewardship within the expansive Southern California water catchment. There was not an available contact to conduct a stakeholder interview from the California Water Service serving the Carson region.
	4.5.2 (Weak water governance catchments only) Evidence of continual improvement or best practice	C	Water governance is not a shared water challenge within this context.
Criterion 4.6	4.6 Maintain or improve indirect water use within the catchment: Contact the site's primary product suppliers and water-related service providers located in the catchment and request that they take actions to help contribute to the desired water stewardship outcomes.		
	4.6.1 List of suppliers and service providers, along with the actions they have taken as a result of the site's engagement relating to indirect water use	C	A list of 2016 Top Raw materials providers (with their location of origin) was provided. Three of the top 5 from this site come from internal manufacturing sites, therefore all Ecolab water stewardship goals, principles and policies apply to those sites. Of those top suppliers, none is located within their catchment. However, at least one is located within the broader LA water basin, which gets water from the same source as the site. Ecolab has reached out to their top raw material suppliers and their outsourced water users and have inquired about their water stewardship practices. All suppliers who responded have continuous improvement programs regarding water stewardship and are aware that Ecolab is taking steps to become better water stewards in the basin.
Criterion 4.7	4.7 Provide access to safe drinking water, adequate sanitation and hygiene awareness (WASH) for workers on-site: Ensure appropriate access to safe water, effective sanitation and protective hygiene for all workers in all premises under the site's control.		
	4.7.1 List of actions taken to provide workers access to safe water, effective sanitation and protective hygiene (WASH) on-site <i>(TCW in Guidance)</i>	C	WPS service rep takes bacteria dipslides to determine bacteria control on the cooling towers and chilled loop system. If the bacteria count is above 10 red spots, biocide feed is increased into the water systems to reduce bacteria growth. This reduces the potential for legionella growth in the tower.
Criterion 4.8	4.8 Notify the owners of shared water-related infrastructure of any concerns: Contact the owners of shared water-related infrastructure and actively highlight any concerns the site may have in light of its risks and shared water challenges.		

	4.8.1 List of individuals contacted and key messages relayed (<i>TCW in Guidance</i>)	C	Ecolab contacted the California Department of Water Resources and the California Water Service (their provider) and records of the communication regarding the issue of the broken meter.
STEP 5: EVALUATE			
Criterion 5.1	5.1 Evaluate the site's water stewardship performance, risks and benefits in the catchment context: Periodically review the site's performance in light of its actions and targets from its water stewardship plan to evaluate: x General performance in terms of the water stewardship outcomes (considering context and water risks), positive contributions to the catchment, and water-related costs and benefits to the site. (<i>TCW in Guidance</i>)		
	5.1.1 Post-implementation data and narrative discussion of performance and context (including water risk)	OBS	While opportunities to evaluate post-implementation performance is still limited, Ecolab completed targets over the time since they started the initiative of seeking AWS certification in 2014. Carson completed a review of water reduction efforts as related to water scarcity risk. The review did not clearly relate to the larger site water stewardship plans. OBS: Structure the review on an annual basis so it is clear that it was conducted and was comprehensive to assess if the implementation had strong/weak performance, specifically discussing if the water stewardship efforts are effective, mitigating water risk, decreasing shared water challenge or creating value.
	5.1.2 Total amount of water-related costs, cost savings and value creation for the site based upon the actions outlined in 3.2 (drawn from data gathered in 2.4.6)	C	As the AWS standard is still in its initial implementation phase, this will be reviewed during future assessments.
	5.1.3 Updated data for indicator 2.4.7 on catchment shared value creation based upon the actions outlined in 3.2	C	As the AWS standard is still in its initial implementation phase, this will be reviewed during future assessments.
Criterion 5.2	5.2 Evaluate water-related emergency incidents and extreme events: Evaluate impacts of water-related emergency incidents (including extreme events), if any occurred, and determine effectiveness of corrective and preventive measures. Factor lessons learned into updated plan.		
	5.2.1 Documented evidence (e.g., annual review and proposed measures)	C	A copy of the following documents was provided: Emergency Procedures Manual (dated October 2016), Contingency Business Plan (dated December 2013 and updated on January 2016), The SWPPP annual report is submitted to the California Water Board Storm Water Multi-Application Reporting and Tracking System (SMARTS). The site's internal inspection includes secondary containment areas as well as storm water valves verification (the daily storm water valve verification dated 9/19/2011 was provided). All containers of hazardous material and hazardous waste are stored in a way that provides appropriate secondary containment. The appropriate safety equipment (ex. fire extinguisher, eye wash, etc.) is available in the immediate vicinity, in good condition and properly maintained/inspected. No emergency has happened on site that was water related.
Criterion 5.3	5.3 Consult stakeholders on water-related performance: Request input from the site's stakeholders on the site's water stewardship performance and factor the feedback/lessons learned into the updated plan.		

	5.3.1 Commentary by the identified stakeholders <i>(TCW in Guidance)</i>	OBS	Stakeholder engagement is low due to regional representatives unreponsiveness and the ECOLAB site in Carson is a smaller facility in size and risk in comparison to other larger production facilities in the neighboring area. ECOLAB is encouraged to identify other potential stakeholders within the area that are more receptive to stewardship efforts.
Criterion 5.4	5.4 Update water stewardship and incident response plans: Incorporate the information obtained into the next iteration of the site's water stewardship plan. Note: updating does not apply for initial round of Standard implementation.		
	5.4.1 Modifications to water stewardship and incident response plans incorporating relevant information <i>(TCW in Guidance)</i>	C	Emergency response plan was updated. The water stewardship plan document was used as a working document throughout this process and has been updated several times
STEP 6: COMMUNICATE & DISCLOSE			
Criterion 6.1	6.1 Disclose water-related internal governance: Publicly disclose the general governance structure of the site's management, including the names of those accountable for legal compliance with water-related laws and regulations.		
	6.1.1 Disclosed and publicly available summary of governance at the site, including those accountable for compliance with water-related laws and regulations <i>(TCW in Guidance)</i>	C	An organizational chart listing key personnel is available upon request, but site governance is listed in the Carson case study available on the Ecolab website.
	6.2 Disclose annual site water stewardship performance: Disclose the relevant information about the site's annual water stewardship performance, including results against the site's targets. <i>(TCW in Guidance)</i>		
	6.2.1 Disclosed summary of site's water stewardship results	OBS	The summary of the sites water stewardship results are discussed in the case study. The document is a brief summary of the water stewardship plan. It is publically available for review on the Ecolab website. Data is from 2015-2016. OBS: Site could include more detail on the challenges and opportunities that have occurred and resulted in significant impacts.
	6.3 Disclose efforts to address shared water challenges: Publicly disclose the site's shared water challenges and report on the site's efforts to help address these challenges, including all efforts to engage stakeholders and coordinate and support public-sector agencies. <i>(TCW in Guidance)</i>		
	6.3.1 Disclosed and publicly available description of shared challenges and summary of actions taken to engage stakeholders (including public-sector agencies)	OBS	The case study stated listed several water challenges from water scarcity, failing infrastructure, loss of wetlands, natural disasters. The list of engagement is very brief and general. Further elaboration was requested on the level of engagement for each stakeholder and how it addressed the shared water challenges.
	6.4 Drive transparency in water-related compliance: Make any site water-related compliance violations available upon request as well as any corrective actions the site has taken to prevent future occurrences. Note: any site-based violation that can pose an immediate material threat to human or ecosystem health from use of or exposure to site-related water must be reported immediately to relevant public agencies.		
	6.4.1 Available list of water-related compliance violations with corresponding corrective actions	C	The EPA Enforcement and Compliance online history was reviewed and no violations or compliance issues were identified.

	<p>6.5 Increase awareness of water issues within the site: Strive to raise the understanding of the importance of water issues at the site through active communications.</p>		
	<p>6.5.1 Record of awareness efforts (dates and communication) and, if possible, level of awareness <i>(TCW in Guidance)</i></p>	<p>Minor</p>	<p>Plant manager attended AWS training in San Francisco, CA in October 2014. During the site audit, it was evident that there was not an overall awareness of AWS, however general awareness of water reduction needs. To increase awareness on AWS issues with their team, they have monthly safety meetings when they discuss the importance of water issues. They also have daily meetings with open door policy, during which employee express any ideas. They don't keep records of internal complaints and ideas but they reported that they will have records going forward.</p>

Audit Non-conformities and Observations

Guidance

Disclaimer: auditing is based on a sampling process of the available information and therefore nonconformities may exist which have not been identified.

Observations are defined as an area of concern regarding a process, document, or activity where there is opportunity for improvement.

Major non-conformity is raised if the issue represents a systematic problem of substantial consequence; the issue is a known and recurring problem that the client has failed to resolve; the issue fundamentally undermines the intent of the AWS Standard; or the nature of the problem may jeopardize the credibility of AWS.

Applicants must close* major NCR within Ninety (90) days of the NCR issue date. Failure to meet this deadline will require another conformity assessment.

Certificate Holders must close* major NCR within Thirty (30) days of the NCR issue date. If the Major NCR is not addressed within 30 days SCS shall suspend or withdraw the certificate and reinstatement shall not occur before another conformity assessment has been successfully completed.

Minor non-conformity: Where the audit team has evaluated an audit finding and determines that the seriousness of the issue does not meet the any of the criteria for Major non-compliance the audit team shall grade the finding as a minor non-conformity.

Applicants must submit an acceptable corrective action plan^ to address all minor non-conformities to be recommended for certification.

Certificate Holders must close minor NCR within Ninety (90) days of the NCR issue date. SCS may agree to an alternative time frame with the client as long as this can be justified and is documented in the NCR report.

If corrective actions are inadequate to resolve a minor non-conformity by the time of the next scheduled audit, SCS shall upgrade the audit finding to a major non-conformity.

If an unusually large number of minor non-conformities are detected during the course of a single audit, the audit team may at their discretion raise a major non-conformity to reflect a systematic failure of the client's management system to deliver conformity with the AWS Standard.

* closed = actioned by the client, corrections & corrective actions verified and closed by the auditor.

^The corrective action plan shall include an analysis of the root cause of the minor non-conformity; the specific corrective action(s) to address the minor non-conformity; and an appropriate time frame to implement corrective action(s).

MAJOR#	Criteria / Indicator #	Major – Detail on Non Conformance	Due Date (XX calendar Days)	Root Cause Analysis and Corrective Action Taken

MINOR#	Section #	Minor – Detail on Non Conformance	Due Date	Root Cause Analysis and Corrective Action Taken
ECO-2017-MINOR-001	3.3.1	The site submitted an emergency response plan but did not address the water aspects . Emergency response plan updated on 11/21 to include the Drought Contingency Plan. Additional updates include responsiveness and resilience aspects.	December 30, 2017	Closed 11/28/17. Root Cause: The inclusion of resilience and responsiveness in the context of the AWS standard was a new concept and it was not clear how to integrate this aspect of the criteria into current response plans that were considered compliant. Corrective Action: ECOLAB updated their Global Operations Disaster Recovery Plan. It was specifically updated to address the responsiveness and resilience aspects of water related issues and/or risks, which includes utilizing third-party sites for continued production. The existing drought contingency plan was integrated into the emergency response plan.

ECO-2017-MINOR-002	6.5.1	Plant manager attended AWS training in San Francisco, CA in October 2014. During the site audit, it was evident that there was not an overall awareness of AWS, however general awareness of water reduction needs. To increase awareness on AWS issues with their team, they have monthly safety meetings when they discuss the importance of water issues. They also have daily meetings with open door policy, during which employee express any ideas. They don't keep records of internal complaints and ideas but they reported that they will have records going forward.	December 30, 2017	Closed 11/27/2017. Root Cause: The Ecolab facility in Carson is made up with few employees and the majority of the plant staff commute over 1hr to the site and have less of a stake in the Carson community and neighboring area, therefore not as engaged/interested in local stewardship efforts. Corrective Action: The Carson site conducted an AWS specific training for all staff on 10/28/17 reviewing all 6 criteria of the AWS standard and overall stewardship efforts conducted by ECOLAB. Training led by Plant Engineer. To engage staff more in the community watershed efforts, the plant plans on getting involved in the Pacific Institute/CEO water mandate focusing on advancing landscapes in the Santa Ana watershed.
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OBS#	Section #	Observation– Detail on Opportunity for Improvement	Due Date	Corrective Action Taken / Response
ECO-2017-OBS-001	2.2.1	Multiple records and documents submitted to verify conformance with the criterion, but a consolidated stakeholder mapping document was submitted on 10/27/17 to clearly identify specific stakeholders, contact information, level of engagement, type of stakeholder, and interest of stakeholder. The level of engagement was found to be primarily led by corporate, with increasing engagement at the facility level more recently. At the facility level the Plant Manager has been engaged more recently with some added support from the Production Supervisor and Plant Engineer. Ecolab has an active engagement with both the California Action Water Collaborative and Rowland Water District. OBS: Ensure that the facility level staff leads and maintains a continuous engagement of key stakeholders.	N/A	ECOLAB understood the need for more facility level engagement with stakeholders and will look to resolve this immediately.

ECO-2017-OBS-002	2.3.1	<p>A list of regional objectives and Planning Targets that apply to the catchment was provided. These include objectives to optimize local water resources to reduce the reliance on imported water; to improve water quality; to enhance habitat; to enhance open space and recreation; to improve flood management; and to address climate change. The Geosyntec October 2013 GLAC IRWM report and the Dominguez Watershed Action Plan were reviewed. They are regional and watershed plans applicable to the whole regional area and major watersheds (Dominguez, Santa Monica, Los Angeles and Ballona). The goal of the IRWM Plan is to address the water resources needs of the Region in an integrated and collaborative manner and generate local funding, position the Region for future state bonds, and create opportunities for federal funding. The 2004 Dominguez Watershed Management Master Plan lists detailed issues and concerns together with programs, actions, goals, relative costs, and potential action benefits for the Dominguez Watershed.</p> <p>In addition Ecolab provided a list of publicly led initiatives and water related projects including how they have participated/contributed at the company level to these initiatives. A list of "actions to consider" on how to contribute to the Dominguez Watershed Master Plan was prepared and provided by Ecolab.</p> <p>OBS: Ecolab would benefit by specifying how the Integrated Water Resources Management actions are implemented from the site level to the watershed level with examples.</p>	N/A	ECOLAB will consider how to specify how the IWRM actions are implemented at the site level to the watershed with examples.
ECO-2017-OBS-003	2.7.2	<p>Priorities for opportunities were identified as reducing landscaping and operational processes. Detailed plan on water reduction target goals related to economical savings. OBS: Expanding upon the list of opportunities to include more specific details on how it relates to the catchment. There are assumed connections with decreased water usage and reduced impact on the environment in the water sensitive region of California. The only ongoing opportunity is operational processes, but all others are complete. Conduct annual review of opportunities for the site.</p>	N/A	ECOLAB understood the observation and will take it under consideration.

ECO-2017-OBS-004	5.1.1	While opportunities to evaluate post-implementation performance is still limited, Ecolab completed targets over the time since they started the initiative of seeking AWS certification in 2014. Carson completed a review of water reduction efforts as related to water scarcity risk. The review did not clearly relate to the larger site water stewardship plans. OBS: Structure the review on an annual basis so it is clear that it was conducted and was comprehensive to assess if the implementation had strong/weak performance, specifically discussing if the water stewardship efforts are effective, mitigating water risk, decreasing shared water challenge or creating value.	N/A	ECOLAB noted the need to review at least annually and clearly be able to evaluate performance.
ECO-2017-OBS-005	5.3.1	Stakeholder engagement is low due to regional representatives unresponsiveness and the ECOLAB site in Carson is a smaller facility in size and risk in comparison to other larger production facilities in the neighboring area. ECOLAB is encouraged to identify other potential stakeholders within the area that are more receptive to stewardship efforts.	N/A	ECOLAB noted the observation and will consider how to engage relevant stakeholders to be more active.
ECO-2017-OBS-006	6.2.1	The summary of the sites water stewardship results are discussed in the case study. The document is a brief summary of the water stewardship plan. It is publically available for review on the Ecolab website. Data is from 2015-2016. OBS: Site could include more detail on the challenges and opportunities that have occurred and resulted in significant impacts.	N/A	ECOLAB noted the observation and will take into consideration for updates to the Case Study.
	6.3.1	The case study stated listed several water challenges from water scarcity, failing infrastructure, loss of wetlands, natural disasters. The list of engagement is very brief and general. Further elaboration was requested on the level of engagement for each stakeholder and how it addressed the shared water challenges.		

Certification Decision

Guidance
<p>The recommendation section to be filled out by the auditor with optional comments.</p> <p>The Certification Decision section is to be completed by the SCS's decision-making entity after initial, re-certification and re-evaluation audits.</p> <p>Details of the decision making entity and any observations or further details can be included in the comments field.</p>

Auditor's recommendation for initial, continued or re-certification based on compliance with requirements:	X	Initial Certification Recommended
		Initial/Continued Certification Not Recommended
Level of certification recommended (if applicable):	X	AWS Core
		AWS Gold
		AWS Platinum
Comments (e.g. justification for change in certification level, recommendations for sampling):		

To be completed by the SCS Decision-Making Entity	SCS Certification Decision:	X	Approved
			Denied
	Certification decision by:	Neil Mendenhall	
	Technical Review by:	Neil Mendenhall	
	Date of decision:	December 31st, 2017	
Surveillance schedule:	Next audit is scheduled for <i>(include range)</i> : October 2018-December 2018		