CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001865

WSAS WATER STEWARDSHIP ASSURANCE SERVICES

SITE DETAILS

Site: **Pingtung Precise iManufacturing Center (Rock Park)**

Address: No. 12, Shennong Rd., Dehe Vil., Changzhi Township, Pingtung County, 900, Pingtung, Taiwan, P.R. CHINA

Contact Person: Lilian Huang

AWS Reference Number: AWS-000877

Site Structure: Single Site

CERTIFICATION DETAILS

Certification status: Certified Platinum

Date of certification decision: 2026-Mar-09

Validity of certificate: 2029-Mar-08

AUDIT DETAILS

Audited Service(s): AWS Standard v2.0 (2019)

Audit Type(s): Initial Audit

Audit Start Date: 2025-Nov-19

Audit End Date: 2025-Nov-21

Lead Auditor: Ian Jiang

Audit team participants:

Eric Hsueh

Site Participants:

Phill Lin, Plant Leader

Ryan Lin, Section Manager

Wick Chen, Engineer

Zeke Hsu, Engineer

Liliana Huang, Specialist/ESG

Jessica Tu, CSO

CERTIFICATION REPORT

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ADDITIONAL INFO

Summary of Audit Findings: During the initial audit 15 of non-conformities and 5 observations were raised.

The Client is requested to perform a root cause analysis and define corrective actions for each of the non-conformities and to submit these to WSAS within 14 days of receipt of the audit report by 05/12/2025.

The non-conformities must be closed within 90 days of the end of the audit. In order to meet this timeline evidence is to be submitted to WSAS (within 75 days) by 05/02/2026.

The audit team recommends certification of TCI Pingtung Precise iManufacturing Center (Rock Park) at Platinum level pending approval of the corrective actions plan and closure of the non-conformities.

Scope of Assessment: The scope of services covers the initial audit for assessing conformity of TCI CO., LTD. Pingtung Precise iManufacturing Center (Rock Park) Plant against the AWS International Water Stewardship Standard Version 2.

TCI Co.,Ltd is located at No. 12&21, Shennong Rd., Changzhi Township, Pingtung County, Taiwan.
The site is within Pingtung Agricultural Science and Technology Park, with a few agriculture and food manufacturers surround.
The site manufactured two types of products. One is health food, including functional beverages, jelly, powder, tablets, capsules; the other one is Skin care products like masks and essence. The site now has about 400 employees, with premises over 50000 square meters and four buildings,S5,S9,S11 and S12.
The main production process is mixing-disinfection-filling-packing. The water is mainly used in boilers, cooling towers and products.
The site used underground water provided by the Park's water purification plant. They also harvest some rainwater for gardening.

Part of the wastewater is treated by onsite wastewater treatment plant, and then discharged to the Park's Wastewater Treatment Plant, and finally discharged into the Kaoping River. The rest of wastewater is directly discharged into Park's Wastewater Treatment Plant.

The audit was conducted onsite on 19th~21st November 2025.
The onsite visit included the assessment of all facilities in the site, including production building, wastewater treatment plant, water purification system and chemical warehouse.

FINDINGS

NUMBER OF FINDINGS PER LEVEL

Observation	5
Non-Conformity	15

FINDING DETAILS

Finding No:	TNR-022674
Checklist Item No:	1.3.2
Status:	Closed
Finding level:	Observation
Checklist item:	Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped
Findings:	It is suggested that the measured values and estimated values be distinguished and marked on the water balance chart.
Evidence of implementation:	The site updated the water balance map with clear identification of measured data and estimated data.

Finding No:	TNR-023084
Checklist Item No:	1.5.1
Status:	Open
Finding level:	Observation
Checklist item:	Water governance initiatives shall be identified, including catchment plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for water stewardship collective action.
Findings:	The site has not identified its specific role, participation, or alignment with these initiatives, nor has it outlined any ongoing publicly-led or multi-stakeholder programs in which it could actively engage.

Finding No:	TNR-023332
Checklist Item No:	1.5.5
Status:	Open
Finding level:	Observation
Checklist item:	Important Water-Related Areas shall be identified, and where appropriate, mapped,and their status assessed including any threats to people or the natural environment, using scientific information and through stakeholder engagement.
Findings:	The identification of IWRAs in the Kaoping River Catchment is incomplete, as it does not consider, for example, the Kaoping River itself, lakes, wetlands, riparian areas, aquifer recharge areas and floodplains in the basin.

Finding No:	TNR-022642
Checklist Item No:	1.8.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Relevant catchment best practice for water governance shall be identified.
Findings:	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included.
Corrective action:	To collect the best practices within the industry and the catchment in accordance with the indicator of 1.8.1 to 1.8.5 , and added the additional information on the best practices list.
Evidence of implementation:	The site collects the best practices within cross the industrial and catchment in five AWS outcomes, and provided the best practices list.

Finding No:	TNR-022646
Checklist Item No:	1.8.2
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.
Findings:	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included.
Corrective action:	To collect the best practices within the industry and the catchment in accordance with the indicator of 1.8.1 to 1.8.5 , and added the additional information on the best practices list.
Evidence of implementation:	The site collects the best practices within cross the industrial and catchment in five AWS outcomes, and provided the best practices list.

Finding No:	TNR-022644
Checklist Item No:	1.8.3
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.
Findings:	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included.
Corrective action:	To collect the best practices within the industry and the catchment in accordance with the indicator of 1.8.1 to 1.8.5 , and added the additional information on the best practices list.
Evidence of implementation:	The site collects the best practices within cross the industrial and catchment in five AWS outcomes, and provided the best practices list.

Finding No:	TNR-022645
Checklist Item No:	1.8.4
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.
Findings:	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included.
Corrective action:	To collect the best practices within the industry and the catchment in accordance with the indicator of 1.8.1 to 1.8.5 , and added the additional information on the best practices list.
Evidence of implementation:	The site collects the best practices within cross the industrial and catchment in five AWS outcomes, and provided the best practices list.

Finding No:	TNR-022643
Checklist Item No:	1.8.5
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.
Findings:	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included.
Corrective action:	To collect the best practices within the industry and the catchment in accordance with the indicator of 1.8.1 to 1.8.5 , and added the additional information on the best practices list.
Evidence of implementation:	The site collects the best practices within cross the industrial and catchment in five AWS outcomes, and provided the best practices list.

Finding No:	TNR-023095
Checklist Item No:	2.1.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments: - That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes - That the site implementation will be aligned to and in support of existing catchment sustainability plans - That the site's stakeholders will be engaged in an open and transparent way - That the site will allocate resources to implement the Standard.
Findings:	The commitment to water stewardship, as required by the Standard (a publicly available, signed document articulating the site's intention to implement the AWS Standard), was not available or provided during the initial audit period.
Corrective action:	1. Resolution: As a subsequent corrective action, the site has fully provided the commitment statement, which is duly signed by the Chairman. 2. Public Disclosure: The signed commitment statement has been publicly disclosed (e.g., on the company website) in accordance with the requirement.
Evidence of implementation:	Disclose the water stewardship commitment signed by the top management on the official website https://www.tci-bio.com/zh-hant/esgs/environment/

Finding No:	TNR-023136
Checklist Item No:	2.3.2
Status:	Open
Finding level:	Observation
Checklist item:	A water stewardship plan shall be identified, including for each target: - How it will be measured and monitored - Actions to achieve and maintain (or exceed) it - Planned timeframes to achieve it - Financial budgets allocated for actions - Positions of persons responsible for actions and achieving targets - Where available, note the link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes.
Findings:	It is recommended that the WSP has a clear timeframe for completion. (Currently only yearly, without more details when the action will start and finish). The link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes could also be improved.

Finding No:	TNR-022661
Checklist Item No:	3.7.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Evidence that indirect water use targets set in the water stewardship plan, as applicable, have been met shall be quantified.
Findings:	The site was unable to provide comprehensive and complete targets for its indirect water use during the initial audit period. The scope of engagement with the supply chain regarding water consumption targets was insufficiently documented.
Corrective action:	1. Resolution: As a subsequent corrective action, the site has provided formal evidence demonstrating engagement with its supply chain. Specifically, a water reduction target set by one key upstream supplier has been submitted and verified. 2. Conclusion: The provision of the specific supplier's water efficiency target demonstrates sufficient effort to establish a target for indirect water use.
Evidence of implementation:	The site has provided formal evidence demonstrating engagement with its supply chain. Specifically, a water reduction target set by one key upstream supplier has been submitted and verified.

Finding No:	TNR-022663
Checklist Item No:	3.7.2
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Evidence of engagement with suppliers and service providers, as well as, when applicable, actions they have taken in the catchment as a result of the site's engagement related to indirect water use, shall be identified.
Findings:	The site was unable to provide comprehensive and complete targets addressing both catchment-related (3.7.2) and high-risk area (3.7.3) indirect water use during the initial audit period. The documentation lacked formal, established targets for managing the water footprint within the supply chain.
Corrective action:	1. Resolution: As a subsequent corrective action, the site provided formal evidence demonstrating active engagement and collaborative target-setting with a key upstream supplier. 2. Achievement: This collaboration resulted in the supplier successfully achieving an annual water reduction target of 1% for the reporting year. This confirmed achievement serves as the documented target and demonstrated effort required for both 3.7.2 and 3.7.3. 3. Conclusion: The provision of the specific supplier communication and the verified achievement of the water efficiency target is accepted as sufficient effort to establish and manage indirect water use targets.
Evidence of implementation:	The site provided formal evidence demonstrating active engagement and collaborative target-setting with a key upstream supplier. This collaboration resulted in the supplier successfully achieving an annual water reduction target of 1% for the reporting year.

Finding No:	TNR-022346
Checklist Item No:	3.7.3
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Advanced Indicator Actions taken to address water related risks and challenges related to indirect water use outside the catchment shall be documented and evaluated.
Findings:	The site was unable to provide comprehensive and complete targets addressing both catchment-related (3.7.2) and high-risk area (3.7.3) indirect water use during the initial audit period. The documentation lacked formal, established targets for managing the water footprint within the supply chain.
Corrective action:	1. Resolution: As a subsequent corrective action, the site provided formal evidence demonstrating active engagement and collaborative target-setting with a key upstream supplier. 2. Achievement: This collaboration resulted in the supplier successfully achieving an annual water reduction target of 1% for the reporting year. This confirmed achievement serves as the documented target and demonstrated effort required for both 3.7.2 and 3.7.3. 3. Conclusion: The provision of the specific supplier communication and the verified achievement of the water efficiency target is accepted as sufficient effort to establish and manage indirect water use targets. The plant site identified water-related challenges—specifically, water scarcity—for its main suppliers. Suppliers set annual water conservation targets, and the 2025 target of increasing recycled water usage by 1% has already been achieved.
Evidence of implementation:	The site provided formal evidence demonstrating active engagement and collaborative target-setting with a key upstream supplier. This collaboration resulted in the supplier successfully achieving an annual water reduction target of 1% for the reporting year.

Finding No:	TNR-022666
Checklist Item No:	4.1.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated.
Findings:	The site initially failed to provide a complete Water Stewardship Plan (WSP) and did not have documented mechanisms to quantify and report the benefits (value creation) and progress of its water stewardship actions during the initial audit period. This represented a critical gap in the evaluation step.
Corrective action:	1. Resolution: Following corrective action, the site has provided the complete and optimized Water Stewardship Plan (WSP). 2. Quantification and Progress (Evidence for 4.1.2 & 4.1.3): The revised WSP now includes a mandatory section that effectively quantifies: -Annual Water Saving Targets: Explicitly set annual volumetric reduction goals (e.g., efficiency targets like WUI or total reduction %). -Progress Tracking: Documents the current status and progress toward achieving these annual water saving targets, enabling systematic evaluation of the actions taken (4.1.1). 3. Conclusion: The provision of the complete plan, along with the required quantification of annual targets and reported progress, satisfactorily addresses the requirements of 4.1.1, 4.1.2, and 4.1.3.
Evidence of implementation:	The site has compiled comprehensive water stewardship plan includes detailed information on plans, performance, challenges, and goals. It is fully disclosed on the official website and made available for evaluation and feedback by stakeholders.

Finding No:	TNR-022664
Checklist Item No:	4.1.2
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	Value creation resulting from the water stewardship plan shall be evaluated.
Findings:	The site initially failed to provide a complete Water Stewardship Plan (WSP) and did not have documented mechanisms to quantify and report the benefits (value creation) and progress of its water stewardship actions during the initial audit period. This represented a critical gap in the evaluation step.
Corrective action:	1. Resolution: Following corrective action, the site has provided the complete and optimized Water Stewardship Plan (WSP). 2. Quantification and Progress (Evidence for 4.1.2 & 4.1.3): The revised WSP now includes a mandatory section that effectively quantifies: -Annual Water Saving Targets: Explicitly set annual volumetric reduction goals (e.g., efficiency targets like WUI or total reduction %). -Progress Tracking: Documents the current status and progress toward achieving these annual water saving targets, enabling systematic evaluation of the actions taken (4.1.1). 3. Conclusion: The provision of the complete plan, along with the required quantification of annual targets and reported progress, satisfactorily addresses the requirements of 4.1.1, 4.1.2, and 4.1.3.
Evidence of implementation:	The site has compiled comprehensive water stewardship plan includes detailed information on plans, performance, challenges, and goals. It is fully disclosed on the official website and made available for evaluation and feedback by stakeholders.

Finding No:	TNR-022665
Checklist Item No:	4.1.3
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	The shared value benefits in the catchment shall be identified and where applicable, quantified.
Findings:	The site initially failed to provide a complete Water Stewardship Plan (WSP) and did not have documented mechanisms to quantify and report the benefits (value creation) and progress of its water stewardship actions during the initial audit period. This represented a critical gap in the evaluation step.
Corrective action:	1. Resolution: Following corrective action, the site has provided the complete and optimized Water Stewardship Plan (WSP). 2. Quantification and Progress (Evidence for 4.1.2 & 4.1.3): The revised WSP now includes a mandatory section that effectively quantifies: -Annual Water Saving Targets: Explicitly set annual volumetric reduction goals (e.g., efficiency targets like WUI or total reduction %). -Progress Tracking: Documents the current status and progress toward achieving these annual water saving targets, enabling systematic evaluation of the actions taken (4.1.1). 3. Conclusion: The provision of the complete plan, along with the required quantification of annual targets and reported progress, satisfactorily addresses the requirements of 4.1.1, 4.1.2, and 4.1.3.
Evidence of implementation:	The site has compiled comprehensive water stewardship plan includes detailed information on plans, performance, challenges, and goals. It is fully disclosed on the official website and made available for evaluation and feedback by stakeholders.

Finding No:	TNR-023131
Checklist Item No:	4.3.1
Status:	Open
Finding level:	Observation
Checklist item:	Consultation efforts with stakeholders on the site’s water stewardship performance shall be identified.
Findings:	The plant site didn't consult stakeholders about the five key achievements of WSP.

Finding No:	TNR-022641
Checklist Item No:	5.2.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.
Findings:	The water stewardship plan is only disclosed to the board of directors. This information was not disclosed during communication with stakeholders.
Corrective action:	Complied the complete water management plan, including details such as the plan, performance, challenges, and goals. And fully disclose on the official website and made available for evaluation and feedback by stakeholders.
Evidence of implementation:	The site disclosed the water stewardship plan, performance and shared water challenges on the official website. They also sent email to communicate this to the stakeholders.

Finding No:	TNR-022640
Checklist Item No:	5.3.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum.
Findings:	The water stewardship performance is only disclosed to the board of directors. This information was not disclosed during communication with stakeholders.
Corrective action:	Complied the complete water stewardship plan, including details such as the plan, performance, challenges, and goals. And fully disclose on the official website and made available for evaluation and feedback by stakeholders.

Finding No:	TNR-022639
Checklist Item No:	5.4.1
Status:	Closed
Finding level:	Non-Conformity
Checklist item:	The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.
Findings:	The shared water-related challenges are only disclosed to the board of directors. This information was not disclosed during communication with stakeholders.
Corrective action:	Complied the complete water stewardship plan, including details such as the plan, performance, challenges, and goals. And fully disclose on the official website and made available for evaluation and feedback by stakeholders.
Evidence of implementation:	The site disclosed the water stewardship plan, performance and shared water challenges on the official website. They also sent email to communicate this to the stakeholders.

Report Details

Report	Value
Report prepared by	Ian Jiang
Report approved by	Carla Oberdiek
Report approved on (Date)	04.March.2026

Surveillance

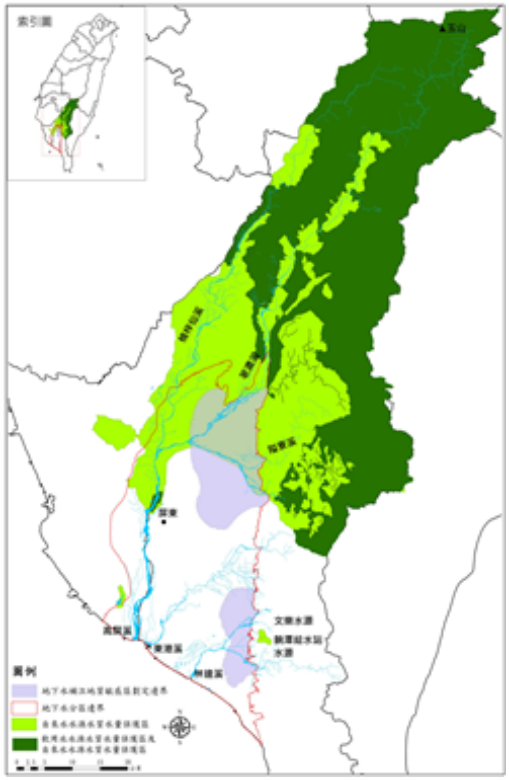
Proposed date for next audit
2026-Nov-21

Comment The next audit is proposed to be performed at 21/11/2026.

Stakeholder Announcements

Date of publication	Location
11/08/2025	https://www.tci-bio.com/zh-hant/news/public-stakeholder-announcement-aws/
15/08/2025	https://a4ws.org/wp-content/uploads/2025/08/AWS-000877_TCI_StakAnn_V3.0-billingual.pdf
15/08/2025	https://www.tuv.com/content-media-files/greater-china/about-us/downloads/aws-000877_%E5%A4%A7%E6%B1%9F%E7%94%9F%E5%8C%BB_stakeholderannouncement_monthyy_v3.0-billingual.docx

Catchment Information



Pingtung Plain Aquifer.png

Kaoping river catchment.png

Catchment Information

TCI Co.,Ltd is located at No. 12&21, Shennong Rd., Changzhi Township, Pingtung County, Taiwan. The site is within Pingtung Agricultural Science and Technology Park, with a few agriculture and food manufacturers surround.

The site used underground water provided by the Park's water purification plant. The underwater is extracted from deep groundwater Wells No. 1 to No. 3 within the park to the Agricultural Science Park's Water Purification Plant for primary treatment. Then the water is treated by the site's water purification system to meet the production requirement. Apart from the underground water, the site also harvests some rainwater for gardening.

The extracted groundwater is from Pingtung Plain Aquifer. The aquifer spans Kaohsiung City and Pingtung County, with a total area of approximately 347.4 square kilometers. The strata in the Pingtung Plain Aquifer area are mainly Miocene Lushan SLATE, distributed in the four river basins of Laonong Stream, Ailiao Stream, Linbian Stream and Lili Stream.

Based on the stratified groundwater level data, the hydrogeological stratification within 220 meters below the surface of the Pingtung Plain can be divided from top to bottom into seven layers: water-rich layer one (F1), water-blocking layer one (T1), water-rich Layer two (F2), water-blocking layer two (T2), water-rich Layer 3-1 (F3-1), water-blocking layer 3 (T3), and water-rich Layer 3-2 (F3-2).

Part of the wastewater is treated by onsite wastewater treatment plant, and then discharged to the Park's Wastewater Treatment Plant, and finally discharged into the Kaoping River. The rest of wastewater is directly discharged into Park's Wastewater Treatment Plant. The rainwater from the site is discharged into the Wuluo River through the drainage outlets RD01, RD02, and RD03, and finally flows to Kaoping River. Therefore, the site is located in the Gaoping River catchment.

The Gaoping River is located in southern Taiwan, the tropical region. It originates near Yushan in the Central Mountain Range and flows southward through Kaohsiung and Pingtung counties, emptying into the Taiwan Strait at the Shuangyuan area. With a total length of 171 kilometers and a drainage area of 3,247 square kilometers, it is the river with the largest drainage area in Taiwan. Besides the main stream Laonong Stream, its major tributaries also include Qishan River, Ailiao Stream, Meinong River and Zuokou River. The main industries within the basin are agriculture, animal husbandry and light industry.

Client Description and Site Details

Client/Site Background

TCI Co.,Ltd is located at No. 12&21, Shennong Rd., Changzhi Township, Pingtung County, Taiwan. The site is within Pingtung Agricultural Science and Technology Park, with a few agriculture and food manufacturers surround.
The site manufactured two types of products. One is health food, including functional beverages, jelly, powder, tablets, capsules; the other one is Skin care products like masks and essence. The site now has about 400 employees, with premises over 50000 square meters and four buildings,S5,S9,S11 and S12.
The main production process is mixing-disinfection-filling-packing. The water is mainly used in boilers, cooling towers and products.
The site used underground water provided by the Park's water purification plant. They also harvest some rainwater for gardening.

Part of the wastewater is treated by onsite wastewater treatment plant, and then discharged to the Park's Wastewater Treatment Plant, and finally discharged into the Kaoping River. The rest of wastewater is directly discharged into Park's Wastewater Treatment Plant.

site layout.png

Summary of Shared Water Challenges

Summary of Shared Water Challenges
The stakeholder concerns mainly focus on topics such as drinking water safety and hygiene, ecological impact on natural water environments, compliance with wastewater discharge regulations, water shortage response measures, flooding caused by extreme weather, water quality in river basins, and disruptions in supply chains

After consultation with stakeholders and self-assessment, the identified shared water challenge topics are "Ecological Impact on Natural Water Environment" and "Water Quality of catchment".

The ranking of importance is as follows: Water Quality of Catchment > Ecological Impact on Natural Water Environment.

The reasons why the water quality of the river basin was selected as the most important issue:

(1) Highly related to the site's production and emissions (direct risk)

(2) Multiple stakeholders in the catchment are highly concerned (government, residents, industrial zones)

Water quality is the issue most directly related to the community: drinking water safety, river pollution, fish deaths, odors, etc.

The reason for the ecological impact of natural water environment.

(1) It belongs to "environmental extension issues" and indirectly affects enterprises.
Most ecological damage is caused by upstream land use, agriculture, sand and gravel, and water conservancy projects.
The impact on enterprises is more of "reputation risk" rather than direct operational risk

(2) Ecological issues require long-term observation and are difficult to be directly improved by enterprises or institutions.
Ecological restoration will take many years

0.0.1 Water Source & Discharge Locations

0.01	*Have any water source or discharge locations been visited during the audit, if so, which and where? If none were visited, please provide justification.*	Yes
Comment	Groundwater well and discharge point were visited during the audit.	

1	STEP 1: GATHER AND UNDERSTAND	
1.1	*Gather information to define the site's physical scope for water stewardship purposes, including: its operational boundaries; the water sources from which the site draws; the locations to which the site returns its discharges; and the catchment(s) that the site affect(s) and upon which it is reliant.*	
1.1.1	*The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including:* *- Site boundaries;* *- Water-related infrastructure, including piping network, owned or managed by the site or its parent organization;* *- Any water sources providing water to the site that are owned or managed by the site or its parent organization;* *- Water service provider (if applicable) and its ultimate water source;* *- Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies;* *- Catchment(s) that the site affect(s) and is reliant upon for water.*	✓ Yes
Comment	The site draws a few maps covered the physical scope which identify the site boundary and the related catchment, the maps including following content: - Site boundaries - Water-related infrastructure, including water purification station, wastewater treatment plant, drainage piping network. --Map of water supply (Park's Water purification plant, main water supply infrastructure) and its ultimate water source (groundwater) - Map of municipal WWTP (Park's Wastewater Treatment Plant) and its ultimate receiving water body (Kaoping River). - Map of rainwater drainage (Wuluo River) - Map of catchment that the site affects and is reliant upon for water. (Kaoping River Catchment)	
1.2	*Understand relevant stakeholders, their water related challenges, and the site's ability to influence beyond its boundaries.*	
1.2.1	*Stakeholders and their water-related challenges shall be identified. The process used for stakeholder identification shall be identified. This process shall:* *- Inclusively cover all relevant stakeholder groups including vulnerable, women, minority, and Indigenous people;* *- Consider the physical scope identified, including stakeholders, representative of the site's ultimate water source and ultimate receiving water body or bodies;* *- Provide evidence of stakeholder consultation on water-related interests and challenges;* *- Note that the ability and/or willingness of stakeholders to participate may vary across the relevant stakeholder groups;* *- Identify the degree of stakeholder engagement based on their level of interest and influence.*	✓ Yes
Comment	The site has established a stakeholder identification procedure, which included a systematic analytical approach to understand the degree of concern of stakeholders regarding shared water challenges. In the section of identifying key stakeholders, based on the GRI criteria and the international standard AA1000 SES Stakeholder consensus standard, the site has identified six major stakeholder groups, namely investors, customers, suppliers, employees, communities, and governments. The site also established an inventory to contain the details information of the stakeholder.	

1.2.2	*Current and potential degree of influence between site and stakeholder shall be identified, within the catchment and considering the site's ultimate water source and ultimate receiving water body for wastewater.*	Yes
Comment	The site has developed an inventory which included the analysis of stakeholders, the degree of influence between site and stakeholder has been identified of each stakeholder.	
1.3	*Gather water-related data for the site, including: water balance; water quality, Important Water-Related Areas, water governance, WASH; water-related costs, revenues, and shared value creation.*	
1.3.1	*Existing water-related incident response plans shall be identified.*	Yes
Comment	The has developed a series of emergency response plan which included the water-related issue. The scenarios including earthquake, typhoon, chemical and hazardous waste leakage and malfunction of wastewater treatment, wastewater pipeline leakage and water cut-off etc., which are all related to water.	
1.3.2	*Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped*	Obs.
Comment	The site has recorded the income and discharged water data via meter, and evaporation water data via estimation. The site has developed a water balance map based on the data. The water balance map reflected the water inflows, losses, reuses and outflows, including the incoming water, production consumption, wastewater, cooling tower, fire pool and etc. The site tracks the readings of each water meter every month and carries out water balance analysis every year. Therefore, the annual high and low variances of water changes could be quantified. The error of the 2024 water balance was 3% and 0.5% for different workshops as per the water balance map, which could meet the 5% limit requirement.	
1.3.3	*Site water balance, inflows, losses, storage, and outflows, including indication of annual variance in water usage rates, shall be quantified. Where there is a water-related challenge that would be a threat to good water balance for people or environment, an indication of annual high and low variances shall be quantified.*	Yes
Comment	The site has recorded the income and discharged water data via meter, and evaporation water data via estimation. The site has developed a water balance map based on the data. The water balance map reflected the water inflows, losses, reuses and outflows, including the incoming water, production consumption, wastewater, cooling tower, fire pool and etc. The site tracks the readings of each water meter every month and carries out water balance analysis every year. Therefore, the annual high and low variances of water changes could be quantified.	
1.3.4	*Water quality of the site's water source(s), provided waters, effluent and receiving water bodies shall be quantified. Where there is a water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be quantified.*	Yes
Comment	The site regularly monitored the water quality, covered the raw wastewater, discharged wastewater, incoming water. The site has developed a water quality monitoring inventory, including monitoring points, testing methods, pollutant names, monitoring frequency, and control standards. For water quality of receiving water body, the site collected the data from the Park's website. The site tracks the testing result of water quality, so the variance could be quantified. The testing result are all compliant with the limit, and the trend is maintained under the limit.	

1.3.5	*Potential sources of pollution shall be identified and if applicable, mapped, including chemicals used or stored on site.*	Yes
Comment	The site has established a chemical inventory, which includes information on the names, suppliers, uses, quantities, storage locations, quantities, and compatibility of the chemicals used on the site. And a map was drawn, identifying and marking the storage and use areas of chemicals. The site has also compiled an inventory of rainwater pollution sources, identified potential sources of rainwater pollution, including sewage treatment stations, hazardous waste warehouses, chemical warehouses, chemical storage areas, wastewater storage tanks, and exhaust gas treatment facilities, and drew a distribution map of potential pollution sources.	
1.3.6	*On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.*	Yes
Comment	The site does not a have onsite IWRA.	
1.3.7	*Annual water-related costs, revenues, and a description or quantification of the social, cultural, environmental, or economic water-related value generated by the site shall be identified and used to inform the evaluation of the plan in 4.1.2.*	Yes
Comment	The site has identified and quantified water related costs and revenues. The site has also described the social, cultural, environmental, or economic water-related value associated with the operation of the site. The water-related costs including 1. Water supply invoice 2. Cost of wastewater discharge rights 3. Cost of Water/Wastewater Treatment (including electricity of pumps, consumables, depreciation and maintenance of facilities, etc.) 4. Water/wastewater/rainwater quality testing, peripheral water testing. Operation and maintenance of wastewater online testing facilities 5.AWS related activities expenses No water related revenues is generated.	
1.3.8	*Levels of access and adequacy of WASH at the site shall be identified.*	Yes
Comment	The site compiled a list of sanitation and hygiene facility such as water tap, washroom and drinking water machine, and assess against with the employee number. It exceeds the local regulation requirement. So the site provided sufficient drinking water, sanitation and hygiene facility to the employees.	
1.4	*Gather data on the site's indirect water use, including: its primary inputs; the water use embedded in the production of those primary inputs the status of the waters at the origin of the inputs (where they can be identified); and water used in out-sourced water-related services.*	
1.4.1	*The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.*	Yes
Comment	The site identified and screened the top 95% of suppliers in terms of purchase amount in 2024, and identified the purchased volume. The site citing data from databases such as Ecoinvent and AGRIBALYSE, and calculate the water consumption of the embedded water use of primary inputs. The site analysed the water related risk level of suppliers via WWF water risk screening results.	
1.4.2	*The embedded water use of outsourced services shall be identified, and where those services originate within the site's catchment, quantified.*	Yes

Comment	A list of outsourced services within the site's catchment has been established by the site. Meanwhile, the intensity of water consumption and water pollution has been analysed based on their water quantity and quality.	
1.4.3	*Advanced Indicator* *The embedded water use of primary inputs in catchment(s) of origin shall be quantified.*	Yes
Comment	The site identified and screened the top 95% of suppliers in terms of purchase amount in 2024, and identified the purchased volume. The site citing data from databases such as Ecoinvent and AGRIBALYSE, and calculate the water consumption of the embedded water use of primary inputs. The site analysed the water related risk level of suppliers via WWF water risk screening results. The indirect water consumption of raw materials associated with the site is 830000 tons.	
1.5	*Gather water-related data for the catchment, including water governance, water balance, water quality, Important Water-Related Areas, infrastructure, and WASH*	
1.5.1	*Water governance initiatives shall be identified, including catchment plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for water stewardship collective action.*	Obs.
Comment	Water governance initiatives were identified by the site. The initiatives included regional and local level, including the catchment development plan, industrial development plan, environmental and ecological conservation plan etc. Sample actions are described as follows: Promote the improvement of existing water supply facilities: such as the follow-up renewal and improvement project of Baihe Reservoir, the raising of the spillway of Nanhua Reservoir. Those project could improve and enhance the water supply capacity of existing water storage facilities. Strengthen technological water production: Utilize technological water production (reclaimed water, seawater and freshwater) to provide a stable water source that is not restricted by the natural hydrological environment. Currently, in the southern region, the utilization of reclaimed water should actively promote the recycling and reuse of effluent from projects such as Nanzih and Gangqiao reclaimed water in Kaohsiung and Nanshan Science Park reclaimed water in Tainan for industrial use. Continue to promote the establishment of disaster prevention and backup well networks: Groundwater has the advantage of stable water volume and can be used as an important backup water source during droughts. Among them, 99 backup water Wells in Kaohsiung and 11 in Pingtung have been completed in the current southern area. Strengthening regional water source dispatching (expanding north-south dispatching) : In the southern region, the Nanhua-Kaohsiung-Pingtung connection pipe project and the Tainan-Kaohsiung water source joint utilization water conveyance project have been completed. Currently, efforts are being made to promote the Tsengwen-Nanhua-Pingtung connection pipe project, the water supply improvement project of the Shangshan Water Purification Plant, the Yunlin-Chiayi bypass project, and the backup main pipeline project of the Gangshan-Beiling booster Station. Strengthen the water resource dispatching capacity in the southern region to enhance the resilience of water supply. Promote the development of diverse water resources: We should actively promote the development of artificial lakes such as Dahu Lake in Tainan, increase water storage space, effectively utilize surface water sources, fully utilize the remaining water sources of rivers, and increase water supply sources for industries.	

1.5.2 *Applicable water-related legal and regulatory requirements shall be identified, including legally-defined and/or stakeholder-verified customary water rights.* Yes

Comment To ensure that all operations in the factory comply with regulatory standards, in accordance with ISO14001, regular inspections are conducted annually. The work safety/environmental protection department compiles, preserves and keeps track of the comprehensive inspection operations and results of each department. Among them, the water-related regulatory inspections are mainly carried out by the water plant affairs department.

1.5.3 *The catchment water-balance, and where applicable, scarcity, shall be quantified, including indication of annual, and where appropriate, seasonal, variance.* Yes

Comment The site has performed a water balance analysis of Kaoping River, with reference of the study of Kaoping River water balance.
The main conclusion: The water balance analysis of the Kaohsiung-Pingtung River Basin in 2024 shows that with the safety of water conservancy facilities and proper management and dispatching, it has successfully dealt with the flow fluctuations caused by extreme weather and the growing population and industrial and commercial demands in the Kaohsiung area. However, this balance comes at the expense of the long-term groundwater reserves in the basin, with annual storage changes showing a net negative value. The stability of the system depends on a highly prioritized allocation strategy, which leads to the agricultural sector taking on the main risk of water resource scheduling.

1.5.4 *Water quality, including physical, chemical, and biological status, of the catchment shall be identified, and where possible, quantified. Where there is a water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be identified.* Yes

Comment The site collected the water quality data of the catchment from the government website.
The main conclusion: Overall, the water quality conditions of the upper reaches of Kaoping River in the past 10 years have been generally good, such as Qishan Stream, Meinong Stream, Laonong stream, Zuokou Stream. The water quality is generally not (slightly) polluted or slightly polluted. As for the water quality at the middle and down reaches, it is slightly worse due to the pollution from the inflow of tributaries, and generally shows moderate pollution. The concentrations of various major pollutants in the drainage of the Wuluo River and the Niuchou River, which are tributaries, are generally higher than those at other monitoring stations, making them the main severely polluted sections and the main sources of pollution inflow in this basin.

The water quality changes in the Gaoping River Basin during the rain and dry seasons are significantly different. In the upper reaches, the water quality is better during the dry season. However, during the rainy season, due to the erosion of rainfall and the increase in suspended solid measurement values, the RPI pollution level generally changes from not (slightly affected or light) to moderately polluted. As for the more severely polluted river sections in the middle and down reaches, due to the dilution effect of the increased river flow during the wet season and the decrease in pollutant concentration, the water quality has slightly improved, generally changing from severely polluted to moderately polluted.

1.5.5 *Important Water-Related Areas shall be identified, and where appropriate, mapped,and their status assessed including any threats to people or the natural environment, using scientific information and through stakeholder engagement.* Obs.

Comment The site identified the Important Water-Related Area of the catchment via information collection and stakeholder consultation. One IWRA is identified.
The site is located in the Pingtung Agricultural Science and Technology Park. The park has an artificial lake with rich vegetation, which enhances biodiversity, establishes native aquatic plant seedlings, deepens the partnership with agricultural science, and improves the water quality purification and care of the artificial lake. It also has the function of a flood detention basin

1.5.6	*Existing and planned water-related infrastructure shall be identified, including condition and potential exposure to extreme events.*	Yes
Comment	The site identified the existing and planned water-related infrastructure including water supply, wastewater treatment, and their condition and potential exposure to extreme events. Pingtung Water Purification Plant The Pingtung Water Purification Plant takes raw water from deep underground Wells and processes it through aeration, filtration, disinfection and other water purification procedures. It is designed to handle 73,000CMD of water and currently produces approximately 65,000 CMD of water, supplying about 63,000 households of tap water users in Pingtung City. Pingtung Agricultural Science Park WRTP, its total designed processing capacity has reached 8,000 cubic meters per day (CMD). The recent upgrade doubles the daily processing capacity and addressing the issue of increased wastewater discharge caused by the rapid growth of industrial clusters within the park. The design objective of the facilities is to maintain a high level of environmental compliance, achieve a 90% removal rate of major pollutants, and enhance the function of water resource recycling and reuse to support the sustainable development strategy of the park.	
1.5.7	*The adequacy of available WASH services within the catchment shall be identified.*	Yes
Comment	The site collected the WASH data of Pingtung City, including the the toilet number, the tap water penetration rate, wastewater treatment rate and other data. Overall, the WASH services ranked low in the region.	
1.5.8	*Advanced Indicator* *Efforts by the site to support and undertake catchment level water-related data collection shall be identified.*	Yes
Comment	The site monitored the water quality of two neighbor creek, the Ailiao River and Dajiangpang Canal. They sample monitoring points in upper stream and downstream stream twice per year, and test the water quality.	
1.5.9	*Advanced Indicator* *The adequacy of WASH provision within the catchments of origin of primary inputs shall be identified.*	Yes
Comment	The site established a list of product suppliers covering major material suppliers, and then they sent out questionnaires to the suppliers to collect information related to water. Based on the questionnaires, the website searched for the WASH information in the annual statistical yearbook or public database. The WASH data includes the coverage of safe drinking water supply, the coverage of wastewater, the rate of treatment and safe disposal of urban domestic waste, as well as public facilities and urban environmental hygiene.	
1.6	*Understand current and future shared water challenges in the catchment, by linking the water challenges identified by stakeholders with the site's water challenges.*	
1.6.1	*Shared water challenges shall be identified and prioritized from the information gathered.*	Yes

Comment	The stakeholder concerns mainly focus on topics such as drinking water safety and hygiene, ecological impact on natural water environments, compliance with wastewater discharge regulations, water shortage response measures, flooding caused by extreme weather, water quality in river basins, and disruptions in supply chains After consultation with stakeholders and self-assessment, the identified shared water challenge topics are "Ecological Impact on Natural Water Environment" and "Water Quality of catchment". The ranking of importance is as follows: Water Quality of Catchment > Ecological Impact on Natural Water Environment. The reasons why the water quality of the river basin was selected as the most important issue: (1) Highly related to the site's production and emissions (direct risk) (2) Multiple stakeholders in the catchment are highly concerned (government, residents, industrial zones) Water quality is the issue most directly related to the community: drinking water safety, river pollution, fish deaths, odors, etc. The reason for the ecological impact of natural water environment. (1) It belongs to "environmental extension issues" and indirectly affects enterprises. Most ecological damage is caused by upstream land use, agriculture, sand and gravel, and water conservancy projects. The impact on enterprises is more of "reputation risk" rather than direct operational risk (2) Ecological issues require long-term observation and are difficult to be directly improved by enterprises or institutions. Ecological restoration will take many years	
1.6.2	*Initiatives to address shared water challenges shall be identified.*	✓ Yes
Comment	In response to the aforementioned shared water challenges, the site has identified measures to address them, including the public initiatives and site's action plan.	
1.6.3	*Advanced Indicator* *Future water issues shall be identified, including anticipated impacts and trends*	✓ Yes

Comment

The site analyzed the trends in population changes, agricultural, industrial, and domestic water use changes, climate, and ecological environment changes within the catchment by querying reports published by government or academic institutions. Main conclusion as below:
A. Forecast of the Impact of Climate Change on Southern Taiwan
Climate models predict that the frequency and intensity of extreme rainfall events (typhoons and heavy rainfall) in southern Taiwan will increase. This will increase the risk of flood in the plant area in the short term and intensify the sediment load along the Laonong stream.

B. Demand forecasting conflicts with future resources
Future forecasts for the region indicate that industrial development and population growth will continue, which will further intensify the pressure on existing water resources.

C. The impact of agriculture and animal husbandry on the water quality of river basins
There are many agricultural and livestock industries in the basin. Their agricultural pesticides and livestock wastewater have a significant impact on the water quality of the basin. In the future, we will take reducing the risk of water pollution as the direction and continue to work with agricultural and livestock industry players in the basin to jointly propose countermeasures and plans.
Strengthen water supply and other work, enhance the water resource dispatching capacity in the southern region to improve the resilience of water supply.

1.6.4 *Advanced Indicator*
Potential water-related social impacts from the site shall be identified, resulting in a social impact assessment with a particular focus on water.

Yes

Comment

The site has prepared the social impact assessment report, which included the water-related social impacts.
The report evaluated the positive impact and negative impact of the water by the site's operation. For the negative impact, the report also listed the mitigation plans for the influence.

1.7 *Understand the site's water risks and opportunities: Assess and prioritize the water risks and opportunities affecting the site based upon the status of the site, existing risk management plans and/or the issues and future risk trends identified in 1.6.*

1.7.1 *Water risks faced by the site shall be identified, and prioritized, including likelihood and severity of impact within a given timeframe, potential costs and business impact.*

Yes

Comment

The site identified 14 water risks and summarized in a spreadsheet. In the spreadsheet, the frequency of the risk, the severity of the impact, potential costs and business impact are evaluated by the site.
The site scored the frequency of the risk and severity of the impact, and detection difficulty, then to prioritize the level of the risk. The control measures or respond actions are also included.
Top water risks included:
Compliance with water-related regulations (water withdrawal and discharge)
Ecological impacts on the natural water environment
The water usage intensity reduction

1.7.2 *Water-related opportunities shall be identified, including how the site may participate, assessment and prioritization of potential savings, and business opportunities.*

Yes

Comment

The site has identified five major water related opportunities at the site level in a spreadsheet, considering following factors:
how the site may participate, assessment and prioritization of potential savings, magnitude of business opportunities.
Sample opportunities are:
Develop green product production lines and related processes
Internal education and training promotion, as well as the cultivation of habits and culture.

1.8	*Understand best practice towards achieving AWS outcomes: Determining sectoral best practices having a local/catchment, regional, or national relevance.*	
1.8.1	*Relevant catchment best practice for water governance shall be identified.*	No
Comment	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included. ***Finding No: TNR-022642***	
1.8.2	*Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.*	No
Comment	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included. ***Finding No: TNR-022646***	
1.8.3	*Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.*	No
Comment	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included. ***Finding No: TNR-022644***	
1.8.4	*Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.*	No
Comment	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included. ***Finding No: TNR-022645***	
1.8.5	*Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.*	No
Comment	The current collection only includes the practical actions of TCI, and no best practices from countries, regions, industries or other leading enterprises have been included. ***Finding No: TNR-022643***	

2	**STEP 2: COMMIT & PLAN - Commit to be a responsible water steward and develop a Water Stewardship Plan**

2.1 *Commit to water stewardship by having the senior-most manager in charge of water at the site, or if necessary, a suitable individual within the organization head office, sign and publicly disclose a commitment to water stewardship, the implementation of the AWS Standard and achieving its five outcomes, and the allocation of required resources.*

2.1.1 *A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments:*
- That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes
- That the site implementation will be aligned to and in support of existing catchment sustainability plans
- That the site's stakeholders will be engaged in an open and transparent way
- That the site will allocate resources to implement the Standard.

No

Comment

1. Signed & Publicly Disclosed Document: The site provided a Water Stewardship Declaration signed by Senior Management (Chairman), publicly available on the company website via the link: https://www.tci-bio.com/zh-hant/esgs/environment/.
2. Content Verification: A review confirms the Declaration explicitly includes commitments covering all four required elements of the AWS Standard:
-Disclose Progress: Commitment to implement and publicly disclose progress on the water stewardship program.
-Catchment Alignment: Commit Sustained commitment to supporting catchment water governance policies, ensuring implementation aligns with regional water priorities and collective action.
-Stakeholder Engagement: Commitment to continuous cooperation with stakeholders in an open and transparent way.
-Resource Allocation: Commitment to allocate necessary resources to implement the AWS Standard.

Finding No: TNR-023095

2.1.2 *Advanced Indicator*
A statement that explicitly covers all requirements set out in Indicator 2.1.1 and is signed by the organization's senior-most executive or governance body and publicly disclosed shall be identified.

Yes

Comment

1. Signed & Publicly Disclosed Document: The site provided a Water Stewardship Declaration signed by Senior Management (Chairman), publicly available on the company website via the link: https://www.tci-bio.com/zh-hant/esgs/environment/.
2. Content Verification: A review confirms the Declaration explicitly includes commitments covering all four required elements of the AWS Standard:
-Disclose Progress: Commitment to implement and publicly disclose progress on the water stewardship program.
-Catchment Alignment: Commit Sustained commitment to supporting catchment water governance policies, ensuring implementation aligns with regional water priorities and collective action.
-Stakeholder Engagement: Commitment to continuous cooperation with stakeholders in an open and transparent way.
-Resource Allocation: Commitment to allocate necessary resources to implement the AWS Standard.

2.2 *Develop and document a process to achieve and maintain legal and regulatory compliance.*

2.2.1 *The system to maintain compliance obligations for water and wastewater management shall be identified, including:*
- Identification of responsible persons/positions within facility organizational structure
- Process for submissions to regulatory agencies.

Yes

Comment

Water Stewardship and Compliance Status:
1. Organizational Structure and Legal Compliance:
The factory site has updated its organizational structure, personnel assignments, and responsibilities for corporate water sustainability on its official website (Website link: https://www.tci-bio.com/zh-hant/esgs/environment/). The duties assigned to personnel align with local legal and regulatory requirements, and the site conducts regular identification and assessment of applicable water-related regulations.

2. Water Usage Permit:
The factory site has applied for and secured the necessary water usage permit from the local regulatory authority, in accordance with the site's official Water Use Plan documentation.

3. Water Quality Monitoring:
Regular water quality monitoring is conducted at the factory site, and all results reviewed (e.g., Water Quality Monitoring Reports: FN114W02451 and FN114W02452) consistently demonstrate full compliance with regulatory standards.

2.3 *Create a water stewardship strategy and plan including addressing risks (to and from the site), shared catchment water challenges, and opportunities.*

2.3.1 *A water stewardship strategy shall be identified that defines the overarching mission, vision, and goals of the organization towards good water stewardship in line with this AWS Standard.*

Yes

Comment

Overall, the water saving targets for the period from 2026 to 2030 have been formally confirmed. The organization is committed to reducing raw water withdrawal through the following strategic implementations:
1. Water Stewardship Targets for Specific Plant Sites (S5, S9, S11, and S12):
The following targets are established for enhancing water circularity across the specified plant sites (S5, S9, S11, and S12):
1) By 2026: Achieve a water recycling rate of 19.5%.
2) By 2028: Increase the water recycling rate to 21.0%.
3) By 2030: Further increase the water recycling rate to 25.0%.
2. Key Mitigation Measures and Means:
1) Implementation of NFR System (Non-Filtrate Recovery):
Description: The site utilizes the NFR system to recycle and reclaim process water.
Application: The reclaimed water is redirected for use in chiller units.
Objective: To significantly decrease the demand for and consumption of raw water.
2) Upgrade of High Water-Consumption Equipment:
Description: Modernization and replacement of high water-usage machinery on the production lines, specifically the Rewarming Machines.
Objective: To optimize water efficiency at the source and reduce the overall intake of raw water.

2.3.2 *A water stewardship plan shall be identified, including for each target:*
- How it will be measured and monitored
- Actions to achieve and maintain (or exceed) it
- Planned timeframes to achieve it
- Financial budgets allocated for actions
- Positions of persons responsible for actions and achieving targets
- Where available, note the link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes.

Obs.

Comment	The factory site has established the following strategy components for its continuous water stewardship program from 2026 to 2029: In 2026, -Specific Initiative: Wastewater Treatment Plant Modernization Project (Compliance with water-related regulations). -Goal/Methodology: Implement a comprehensive upgrade by installing new wastewater treatment units. Enhance the biological basin and chemical mixing systems. Significantly increase the retention time and overall treatment capacity of the wastewater plant. -Responsible Unit: Factory Affairs Department. -Estimated Budget: Approximately 50,000,000 NTD. -Verification Frequency: Performance review conducted quarterly. A comprehensive audit performed semi-annually. In 2027, -Specific Initiative: Upgrading of high water-consuming equipment in production lines (The water usage intensity reduction). -Goal/Methodology: Upgrading the high water-consuming equipment. It may decrease water consumption. -Responsible Unit: Factory Affairs Department. -Estimated Budget: Approximately 5,000,000 NTD. -Verification Frequency: Performance review conducted quarterly. A comprehensive audit performed semi-annually. Please see the attached for more details.

2.3.3	*Advanced Indicator* *The site's partnership/water stewardship activities with other sites within the same catchment (which may or may not be under the same organisational ownership) shall be identified and described.*	Yes
Comment	The site initiated a strong community partnership with Evergreen Lily Elementary School (same catchment) through the "Red Quinoa Contract Farming" Project. This collaboration successfully integrated corporate goals with local sustainability and social impact: -Environmental Benefit (Water Conservation): Red Quinoa is a drought-resistant indigenous crop, making it an ideal sustainable alternative to conventional, water-intensive crops like rice. By promoting its cultivation, the project actively contributes to reducing regional water consumption and conserving water resources. -Business Benefit (Supply Chain Stability): The project established a reliable and stable source of high-quality Red Quinoa raw material for the site's products. -Social & Educational Benefit: The initiative allows students at Evergreen Lily Elementary School to gain practical experience and deepen their understanding of Red Quinoa's application in biotechnology and sustainable agriculture.	

2.3.4	*Advanced Indicator* *The site's partnership/water stewardship activities with other sites in another catchment(s) (either under same corporate structure or with another corporate site) shall be identified.*	Yes
Comment	Since 2024, the factory site has provided support to BLUEMAGPIE TEA SOCIAL ENTERPRISE CO., LTD. for the cultivation of "Taiwan Blue Magpie Tea." (within and outside catchment) This collaboration has yielded significant results in both sustainable agriculture and ecological restoration: -Ecological Restoration: By implementing pesticide-free and environmentally friendly cultivation methods within the Beishi River basin in Taipei, the project has successfully encouraged the return of the Taiwan Blue Magpie to its native catchment area. -Water Stewardship: The tea planting practices used in the catchment area naturally reduce the need for large amounts of supplemental irrigation water, directly contributing to water conservation efforts in the basin.	

2.3.5	*Advanced Indicator* *Stakeholder consensus shall be sought on the site's water stewardship plan. Consensus should be achieved on at least one target. A list of targets that have consensus and in which stakeholders are involved shall be identified.*	Yes
Comment	The site communication the WSP with stakeholders via questionaries or sending the emails. The summary of questionaries feedback showed the stakeholders basically agree with the WSP plan. Some specific stakeholders sent back the emails to descript their opinions on the WSP. For example, one stakeholder agreed the supply chain water management approaches and hoped to work in deep with the site.	
2.4	*Demonstrate the site's responsiveness and resilience to respond to water risks*	
2.4.1	*A plan to mitigate or adapt to identified water risks developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.*	Yes
Comment	1. Risk Identification and Emergency Preparedness: -The factory site systematically identifies and documents both internal and external water-related issues and risks via the established procedure TCI-P-QA-011-01. -Based on this analysis, high-priority risks, such as water scarcity (shortage risk) and water treatment system malfunctions, are addressed through the dedicated contingency plan: Management Procedures for Emergency Preparedness and Response (TCI-P-QA-008). 2. Water Scarcity Risk and Contingency: -The underground river water source in Pingtung provides a stable and resilient supply, and the site has not yet experienced a water shortage crisis. -For emergency backup, the site maintains active contracts with water transport companies to ensure a supply of emergency water resources should the primary source become unavailable during severe dry seasons. 3. Water Treatment System Integrity: -The site's wastewater treatment systems have maintained consistent stability with no instances of operational anomalies to date. This high reliability is achieved through regular execution of wastewater discharge quality testing and proactive system maintenance.	
2.4.2	*Advanced Indicator* *A plan to mitigate or adapt to water risks associated with climate change projections developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.*	Yes
Comment	The factory location regularly holds meetings with the management center, and the management center will send notices to the factory in the event of a water shortage crisis. The global risk of water scarcity is heightened due to the impacts of climate change. The site addresses this challenge through proactive management and contingency planning: Water Resilience and Stability: The facility relies on the underground river water source in Pingtung, which provides a naturally stable and resilient supply. Consequently, the site has not experienced a significant water shortage crisis to date. Contingency Measures: To mitigate potential disruption during extreme weather events, the site maintains active contracts with water transport providers. This ensures a dedicated emergency water resource supply can be immediately deployed should the primary source become unavailable during severe dry seasons.	

3	STEP 3: IMPLEMENT - Implement the site's stewardship plan and improve impacts

3.1 *Implement plan to participate positively in catchment governance.*

3.1.1 *Evidence that the site has supported good catchment governance shall be identified.* ✓ Yes

Comment

1. Wastewater Permit and Compliance:
-The factory site has successfully obtained the official approval letter (No. TM032-03, TM044-09) for its Water Pollution Control Measures Plan through the relevant Management Center.
-To date, the site has maintained full compliance with all discharge standards, with no instances of wastewater exceeding regulatory limits recorded.
2. Personnel Competency and Training:
-Wastewater treatment personnel receive regular and specialized training. For example, Mr. Chen, the designated wastewater management specialist, successfully completed the Specialized Wastewater Management Personnel Training Program in 2022.
-To ensure continuous competency and adherence to the latest regulations, the site has already registered personnel for the 2026 iteration of the Specialized Wastewater Management Personnel Training Program.
3. Actively respond to the government's regulatory briefing meetings:
The site actively supports good catchment governance through its participation in and adherence to the unified water management mechanisms established by the Industrial Park Management Center, which acts as the local governance body. This demonstrates effective collective action and support for regional water policies.

3.1.2 *Measures identified to respect the water rights of others including Indigenous peoples, that are not part of 3.2 shall be implemented.* ✓ Yes

Comment

1. Securing Water Rights: The factory site has successfully obtained the official approval letter (No. No. TM032-03, TM044-09) for its water rights permit.
2. Impact on Indigenous Communities: The facility is located in an area with no surrounding Indigenous residential communities. Therefore, the site's water usage does not impact the water rights or water access of any local Indigenous populations.

3.1.3 *Advanced Indicator*
Evidence of improvements in water governance capacity from a site-selected baseline date shall be identified. ✓ Yes

Comment

1. Due to the replacement of water-consuming equipment in Beverage Line 1 in November 2024 and the execution of equipment trial operations from March to May 2025, the water used during this period did not produce marketable products, resulting in an increase in water intensity from 33.2 m^3/ton (2024) to 38.6 m^3/ton (January-August 2025). Therefore, the short-term water intensity' has increased, which does not temporarily indicate a decline in process water efficiency.
2. Staffing and Capacity: Although the factory site is legally required to employ only one Class A Wastewater Treatment Specialist, the site proactively employs for one certified Class A Specialists and one certified Class B Specialists, ensuring robust system oversight and operational redundancy.
3. Initial Infrastructure (Water Reuse): A rainwater harvesting system was successfully integrated into the site's design and infrastructure from the initial construction phase.
4. 2025 Equipment Efficiency Upgrades: In 2025, the site undertook a significant upgrade by replacing the water-intensive equipment on Beverage Production Line 1 (specifically the Pasteurizer/Warmer). Additionally, the mixing tanks and the CIP system were modernized and updated.
5. 2026 Treatment Capacity Expansion: The site plans to significantly expand its wastewater capacity in 2026 by adding new treatment units to the wastewater treatment plant. This enhancement aims to boost the retention and treatment capacity of both the biological basin and the chemical mixing system.

3.1.4	*Advanced Indicator* *Evidence from a representative range of stakeholders showing consensus that the site is seen as positively contributing to the good water governance of the catchment shall be identified.*	Yes
Comment	The factory site has successfully implemented water conservation measures, achieving significant results in water resource efficiency and fully embodying the principles of green manufacturing and the circular economy. These achievements have been recognized through prestigious awards, including: 2023 Green World Award: Champion (Top Honors) 2024 The 3rd Asia-Pacific Sustainability Action Awards 2024 TSAA Taiwan Sustainable Action Awards	
3.2	*Implement system to comply with water-related legal and regulatory requirements and respect water rights.*	
3.2.1	*A process to verify full legal and regulatory compliance shall be implemented.*	Yes
Comment	1. The factory site has successfully obtained the official approval letter (No. TM032-03, TM044-09) for its Water Pollution Control Measures Plan through the relevant Management Center. 2. Regulatory Compliance Review: The factory site has completed its routine identification and assessment of applicable environmental regulations, with the latest review documented on June 30, 2025. 3. Effluent Quality Monitoring: The site conducts regular and periodic testing of its final effluent discharge to ensure continuous compliance. The latest water quality monitoring reports are available under the reference numbers: 114W02452-01W and 114W02451-01W.	
3.2.2	*Where water rights are part of legal and regulatory requirements, measures identified to respect the water rights of others including Indigenous peoples, shall be implemented.*	Yes
Comment	1. Securing Water Rights: The factory site has successfully obtained the official approval letter (No. TM032-03, TM044-09) for its water rights permit. 2. Impact on Indigenous Communities: The facility is located in an area with no surrounding Indigenous residential communities. Therefore, the site's water usage does not impact the water rights or water access of any local Indigenous populations.	
3.3	*Implement plan to achieve site water balance targets.*	
3.3.1	*Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified.*	Yes
Comment	1. Target and Baseline: The site's primary 2025 water balance target is to achieve a Water Use Intensity (WUI) of 30.6 m³/ton. The baseline WUI (2024 annual average) was 33.2 m³/ton. 2. Current Status: As of August 2025, the WUI has temporarily risen to 38.6 m³/ton (compared to the 2024 baseline). 3. Rationale for Deviation: This short-term increase does not represent a decline in process water efficiency. The fluctuation is attributed to the commissioning and trial production phase of the newly replaced water-intensive equipment on Production Line 1, which was conducted from March to May 2025. Water consumed during this period was essential for testing but did not result in salable product output, thereby artificially inflating the WUI metric for the reporting period. The site is actively tracking post-commissioning performance toward the 30.6 m³/ton target.	

3.3.2	*Where water scarcity is a shared water challenge, annual targets to improve the site's water use efficiency, or if practical and applicable, reduce volumetric total use shall be implemented.*	Yes
Comment	1. 2025 Water Reduction Goal & Progress: The site's water reduction goal for 2025 is set at 7.8%. To meet this target, the water-intensive equipment (specifically the Pasteurizer/Warmer) on Beverage Production Line 1 (S5) was successfully replaced in November 2024.This new process equipment is currently undergoing production testing and commissioning. 2. 2026~2029 Planned Efficiency Upgrades: The site plans to continue its efficiency program in 2027 and 2028 by replacing the water-intensive equipment (Pasteurizer/Warmer units) on Beverage Production Lines 2 and 3 Separately.	
3.3.3	*Legally-binding documentation, if applicable, for the re-allocation of water to social, cultural or environmental needs shall be identified.*	Yes
Comment	The factory site has successfully obtained the official authorization document for its water usage permit from the relevant management authority.	
3.3.4	*Voluntary Advanced Indicator* *The total volume of water voluntarily re-allocated (from site water savings) for social, cultural and environmental needs shall be quantified.*	N/A
Comment	The site does not perform this indicator.	
3.4	*Implement plan to achieve site water quality targets*	
3.4.1	*Status of progress towards meeting water quality targets set in the water stewardship plan shall be identified.*	Yes
Comment	Effluent Quality Performance: -The local governing authority's acceptance limits (Control Standards) are set at: COD: 500 mg/L and SS: 300 mg/L. -The factory proactively implements rigorous internal standards for polluted water treatment, surpassing the required limits. -Performance Data (Q1 2025): The average quality of the final effluent discharge achieved: COD: 26.4 mg/L and SS: 18.7 mg/L. Both indicators significantly exceed the Management Center's regulatory requirements.	
3.4.2	*Where water quality is a shared water challenge, continual improvement to achieve best practice for the site's effluent shall be identified and where applicable, quantified.*	Yes
Comment	The greatest potential impact on water quality originates from the "material residue process line". Despite this inherent challenge, the implementation of process optimization and rigorous management protocols ensures that effluent discharge (COD: 26.4 mg/L, SS: 18.7 mg/L) remains compliant with the specific industrial park wastewater standards.	
3.5	*Implement plan to maintain or improve the site's and/or catchment's Important Water-Related Areas.*	
3.5.1	*Practices set in the water stewardship plan to maintain and/or enhance the site's Important Water-Related Areas shall be implemented.*	Yes
Comment	1. To safeguard the watershed's water quality, the site proactively implements water sampling procedures targeting the upstream section of the catchment. 2. Reactive Contamination Mitigation (Localized Response): In the event of observed contamination in surrounding drainage channels, the site promptly executes pollutant removal procedures to mitigate adverse effects.	

3.5.2	*Advanced Indicator* *Evidence of completed restoration of non-functioning or severely degraded Important Water-Related Areas including where appropriate cultural values from a site-selected baseline date shall be identified. Restored areas may be outside of the site, but within the catchment.*	Yes
Comment	-Reactive Contamination Mitigation (Localized Response): In the event of observed contamination in surrounding drainage channels, the site promptly executes pollutant removal procedures to mitigate adverse effects.: The polluted rivers have been improved. -Establish river cleaning and maintenance - improve riverside vegetation conditions, prune shrubs: the fallen leaves is reduce.	
3.5.3	*Advanced Indicator* *Evidence from a representative range of stakeholders showing consensus that the site is seen as positively contributing to the healthy status of Important Water-Related Areas in the catchment shall be identified.*	Yes
Comment	TCI and its key stakeholder, Chang Jung Lily Elementary School, frequently communicate and discuss the red quinoa contract farming project. Because the project does not use pesticides, it reduces water consumption and also protects the habitat of native species such as the bear eagle and other top predators. Chang Jung Lily Elementary School believes that TCI has made a significant contribution to watershed health.	
3.6	*Implement plan to provide access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all workers at all premises under the site's control.*	
3.6.1	*Evidence of the site's provision of adequate access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all workers onsite shall be identified and where applicable, quantified.*	Yes
Comment	1. Safe Drinking Water: The site ensures adequate provision of safe drinking water by installing 13 water dispensers across the facility. Management regularly executes and documents water quality inspections (Refer to latest Drinking Water Report) to confirm compliance with regulatory health standards. 2. The urinals and toilets for staff in the factory meet standards higher than the building regulations. Verification shows that the entire factory has 8 men's restrooms: 30 sinks, 32 urinals, 24 toilets, and 2 shower rooms; 8 women's restrooms: 29 sinks, 32 toilets, and 2 shower rooms; 3 accessible restrooms: 3 sinks, 8 urinals, 3 toilets, and 1 shower room. The bathroom facilities are sufficient.	
3.6.2	*Evidence that the site is not impinging on the human right to safe water and sanitation of communities through their operations, and that traditional access rights for indigenous and local communities are being respected, and that remedial actions are in place where this is not the case, and that these are effective.*	Yes
Comment	Evidence confirms that the site's operations do not impinge upon the human right of local communities to safe water and sanitation, nor do they impact traditional access rights. This is substantiated by the following factors: 1. The site facility is situated within a designated industrial park, which is utilized solely for factory establishment and does not contain any indigenous or residential communities. 2. The site exclusively uses water supplied by the industrial park utility. Water consumption is strictly governed by an approved Water Use Permit, ensuring the site does not draw water from shared surface or groundwater sources that may be essential for community use.	
3.6.3	*Advanced Indicator* *A list of actions taken to support the provision to stakeholders in the catchment of access to safe drinking water, adequate sanitation and hygiene awareness shall be identified.*	Yes

Comment	The site actively supports the provision of WASH services to stakeholders within the catchment, as demonstrated by the following initiated actions: Action: Partnership with Evergreen Lily Elementary School under the "Red Quinoa Contract Farming" Project. Support Details (2025): The site committed NT$200,000 for the year 2025 to support the school, which includes direct allocation towards: 1. Safe Drinking Water: Maintenance and upkeep of the school's drinking water facilities. 2. Adequate Sanitation: Maintenance and upkeep of sanitation equipment (restroom facilities). 3. Community Engagement: Funding the Red Quinoa contract farming initiative, fostering economic stability alongside water stewardship awareness. This action directly addresses the provision of safe drinking water and adequate sanitation to a critical community stakeholder (a school) within the catchment.	
3.6.4	*Voluntary Advanced Indicator:* *In catchments where WASH has been identified as a shared water challenge, evidence of efforts taken with relevant public-sector agencies to share information and to advocate for change to address access to safe drinking water and sanitation shall be identified.*	N/A
Comment	The site does not perform this indicator.	
3.7	*Implement plan to maintain or improve indirect water use within the catchment:*	
3.7.1	*Evidence that indirect water use targets set in the water stewardship plan, as applicable, have been met shall be quantified.*	No
Comment	1. Program Initiation: The site has formally commenced the process of collecting water stewardship related data from its key suppliers. 2. Data Collection Scope: The supplier survey scope includes critical information necessary for target assessment, such as: planning status for wastewater recycling or reuse measures, and methods and frequency of water quality testing for water stewardship. 3. Current Status: The collected supplier information is currently being compiled and analyzed. ***Finding No: TNR-022661***	
3.7.2	*Evidence of engagement with suppliers and service providers, as well as, when applicable, actions they have taken in the catchment as a result of the site's engagement related to indirect water use, shall be identified.*	No
Comment	The site formally communicated its Water Resource Management Policy to its vendors during the annual Supplier Conference. Documentation from the Supplier Conference presentations confirms that the site has established a concrete and measurable long-term goal for indirect water impact: a 25% reduction in water withdrawal intensity by 2030. ***Finding No: TNR-022663***	
3.7.3	*Advanced Indicator* *Actions taken to address water related risks and challenges related to indirect water use outside the catchment shall be documented and evaluated.*	No

Comment 1. Drought-Resistant Sourcing: The site strategically purchases Quinoa (□□), a recognized drought-resistant crop, which requires significantly less water for cultivation compared to high-water-demand alternatives such as rice. This action directly mitigates the risk of water scarcity in the upstream agricultural catchment where the crop is grown.
2. Mitigating Catchment Water Quality Risk: Through its procurement practices, the site actively encourages farmers to obtain organic product certification (pesticide-free).
3. Evaluation of Impact: The reduction in pesticide use, driven by the site's policy, is evaluated as a positive contribution to the overall water quality and health of the supplier's upstream catchment, addressing a key shared water challenge outside the site's immediate area.

Finding No: TNR-022346

3.8 *Implement plan to engage with and notify the owners of any shared water-related infrastructure of any concerns the site may have.*

3.8.1 *Evidence of engagement, and the key messages relayed with confirmation of receipt, shall be identified.* Yes

Comment The Industrial Park Management Center regularly convenes all tenants to relay critical information regarding environmental and water governance:
Specific training and informational sessions confirmed include:
1. Environmental Regulations Compliance Seminar (Held on 2025.03.03): Relaying compliance requirements for environmental laws.
2. Wastewater Management Green Transition Briefing (Held on 2025.03.14): Communicating strategies and key objectives for the park's wastewater management and sustainability goals.

3.9 *Implement actions to achieve best practice towards AWS outcomes: continually improve towards achieving sectoral best practice having a local/catchment, regional, or national relevance.*

3.9.1 *Actions towards achieving best practice, related to water governance, as applicable, shall be implemented.* Yes

Comment 1. Strategic Targets & Planning: The site has established a clear long-term target for water recycling, covering the period from 2026 to 2029. This commitment reflects proactive internal governance and a strategic focus on water use efficiency.
2. Integrated Best Practice Actions: To implement best practices in water stewardship, the site continuously invests in integrated operational measures, including:
-Ongoing maintenance, upgrading, and addition of new wastewater treatment facilities.
-Continuously conduct training for wastewater treatment personnel.
-Execution of rigorous, routine effluent monitoring (ensuring performance and compliance verification).
3. Award:
-APSAA 2024.
-TSAA 2024.

3.9.2 *Actions towards achieving best practice, related to targets in terms of water balance shall be implemented.* Yes

Comment To achieve the defined 2025 Water Reduction Goal, the site completed a significant operational improvement by renewing the water-intensive equipment on "Production Line 1" in November 2024. The new system is currently in the commissioning and performance testing phase to quantify the anticipated water balance improvement.

3.9.3 *Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.* Yes

Comment	1.Performance Documentation: The First Quarter Effluent Monitoring Report serves as documentation of the site's superior water quality performance. 2.Best Practice Achievement: The report confirms that the site's wastewater discharge consistently outperforms the industrial park's regulatory standards, indicating that the internal water quality target is set well below the minimum legal requirement—a hallmark of best practice. 3. Quantified Superior Performance (Q1): The current effluent quality reflects a high degree of treatment efficiency, with the following quantified results: -COD (Chemical Oxygen Demand): 26.4 mg/L -SS (Suspended Solids): 18.7 mg/L	
3.9.4	*Actions towards achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas shall be implemented.*	Yes
Comment	-In the event of observed contamination in surrounding water sources, the site promptly executes pollutant removal procedures to mitigate adverse effects: The polluted rivers have been improved. -Establish river cleaning and maintenance - improve riverside vegetation conditions, prune shrubs: the fallen leaves is reduce.	
3.9.5	*Actions towards achieving best practice related to targets in terms of WASH shall be implemented.*	Yes
Comment	1. Internal Provision: The site's provision of safe drinking water and sanitation facilities significantly exceeds minimum regulatory standards and is maintained through: -Drinking Water: 13 water dispensers are distributed across the facility, with the Management Unit executing regular, documented water quality testing to ensure safety and adequate supply. -Sanitation Facilities: Restroom facilities (toilets and urinals) are provided at a ratio superior to local building codes. The comprehensive inventory (including 8 men's, 8 women's, and 3 accessible restrooms, complete with dedicated sinks and shower facilities) confirms the site's action towards maximizing accessibility and hygiene standards for all workers. 2. External Best Practice (Sustained Community Support): The site conducts targeted, long-term actions to enhance WASH services in the catchment area: -Action: Through the "Red Quinoa Contract Farming" Project in partnership with Evergreen Lily Elementary School, the site provided NT$200,000 in 2025. -WASH Focus: A portion of this funding is specifically allocated for the maintenance and upkeep of the school's drinking water and sanitation equipment, demonstrating a sustained action to support the WASH needs of a critical community stakeholder.	
3.9.6	*Voluntary Advanced Indicator* *Achievement of identified best practice related to targets in terms of good water governance shall be quantified.*	N/A
Comment	The site does not perform this indicator.	
3.9.7	*Voluntary Advanced Indicator* *Achievement of identified best practice related to targets in terms of sustainable water balance shall be quantified.*	N/A
Comment	The site does not perform this indicator.	
3.9.8	*Voluntary Advanced Indicator* *Achievement of identified best practices related to targets in terms of water quality shall be quantified*	N/A
Comment	The site does not perform this indicator.	
3.9.9	*Voluntary Advanced Indicator* *Achievement of identified best practices related to targets in terms of the site's maintenance of Important Water-Related Areas have been implemented.*	N/A

Comment	The site does not perform this indicator.	
3.9.10	*Voluntary Advanced Indicator* *Achievement of identified best practice related to targets in terms of WASH shall be quantified.*	N/A
Comment	The site does not perform this indicator.	
3.9.11	*Voluntary Advanced Indicator* *A list of efforts to spread best practices shall be identified.*	N/A
Comment	The site does not perform this indicator.	
3.9.12	*Voluntary Advanced Indicator* *A list of collective action efforts, including the organizations involved, positions of responsible persons of other entities involved, and a description of the role played by the site shall be identified.*	N/A
Comment	The site does not perform this indicator.	
3.9.13	*Voluntary Advanced Indicator* *Evidence of the quantified improvement that has resulted from the collective action relative to a site-selected baseline date shall be identified and evidence from an appropriate range of stakeholders linked to the collective action (including both those implementing the action and those affected by the action) that the site is materially and positively contributing to the achievement of the collective action shall be identified.*	N/A
Comment	The site does not perform this indicator.	

4	STEP 4: EVALUATE - Evaluate the site's performance.

4.1 *Evaluate the site's performance in light of its actions and targets from its water stewardship plan and demonstrate its contribution to achieving water stewardship outcomes.*

4.1.1 *Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated.* — No

Comment

1. Formal Target Tracking: Performance against the annual Water Use Intensity (WUI) target is formally documented and reported as part of the stewardship review process.
2. Quantified Comparison (Target vs. Actual):
-Annual WUI Target (2025): 30.6 m³/ton
-Actual WUI (As of end of August): 38.6 m³/ton
3. Evaluation of Deviation: The evaluation includes a critical analysis of the deviation from the target. The increase in WUI is attributed to a temporary operational change:
-Root Cause: Factory conducted equipment commissioning and trial operations between March and May 2025.
-Impact: During this phase, water consumption increased for testing purposes while output did not proportionally increase, leading to a short-term spike in WUI.
4. Conclusion on Contribution: The evaluation correctly concludes that this temporary increase does not represent a decline in process water efficiency, but rather a temporary anomaly necessary for the long-term benefit of efficiency gains. The site is actively managing this deviation.

Finding No: TNR-022666

4.1.2 *Value creation resulting from the water stewardship plan shall be evaluated.* — No

Comment

1. Strategic Value (Long-Term Resilience): The evaluation confirms that enhanced equipment efficiency will lead to a reduction in external water dependency, directly creating long-term operational resilience value.
2. Basis of Quantification (Target-Driven): The value assessment is explicitly based on achieving the 2025 Annual Water Use Intensity (WUI) target of 30.6 m³/ton.
3. Projected Volumetric Value: Based on this performance target, the projected savings represent the following potential value creation:
-Environmental/Economic Savings: An anticipated 7.8% reduction in water consumption compared to 2024.
-Quantified Projection: This reduction is calculated to save approximately 24,119 cubic meters (m³) of water annually.
4. Conclusion: This documented calculation serves as the site's required evaluation of potential value creation for the current reporting cycle. The site will update this figure with the actual realized value once the commissioning phase is complete and stable data is available (as referenced in 4.1.1).

Finding No: TNR-022664

4.1.3 *The shared value benefits in the catchment shall be identified and where applicable, quantified.* — No

Comment	1. Identification of Shared Benefit (Water Scarcity Mitigation): The core shared value benefit identified is the mitigation of competition for shared surface/groundwater resources, which is a recognized Shared Water Challenge in the catchment. 2. Quantified Contribution to Catchment Resilience: The site's WUI improvement initiative is projected to yield an annual water saving of 24,119 m³ (2025). -This reduction directly translates to 24,119 m³ of water that remains available in the catchment for other users (including community and agriculture) or for environmental flows. -Strategic Impact: By reducing its external water dependency (as noted in 4.1.2), the site contributes directly to the long-term water resilience of the catchment, making water allocation more stable for all users, particularly during the dry season. 3. Identification of Shared Benefit (Water Quality Improvement): Based on the site's consistently superior effluent performance (as documented in 3.9.3), the site continuously reduces the pollution load entering the catchment, benefiting downstream users and the health of the local ecosystem. ***Finding No: TNR-022665***	
4.1.4	*Advanced Indicator* *A governance or executive-level review, including discussion of shared water challenges, water risks, and opportunities, and any water-related cost savings or benefits realized, and any relevant incidents shall be identified.*	✓ Yes
Comment	The plant site underwent a management review meeting in January 2025, during which the annual target for wastewater discharge exceeding standards was set at zero. The wastewater treatment plant renovation plan was also initiated at the site simultaneously. The management review record for the plant site is attached.	
4.2	*Evaluate the impacts of water-related emergency incidents (including extreme events), if any occurred, and determine the effectiveness of corrective and preventative measures.*	
4.2.1	*A written annual review and (where appropriate) root-cause analysis of the year's emergency incident(s) shall be prepared and the site's response to the incident(s) shall be evaluated and proposed preventative and corrective actions and mitigations against future incidents shall be identified.*	✓ Yes
Comment	1. Incident Performance: The site has successfully maintained an absence of significant water-related incidents (e.g., spills, contamination events, or major operational upsets) throughout the calendar year 2025 to date. 2. Emergency Preparedness: The site implements and verifies its response capabilities through scheduled exercises, providing documented evidence of a Flood and Inundation Drill conducted on 2025.07.05. This drill confirms the operational readiness of personnel and equipment to mitigate potential water-related emergencies.	
4.3	*Evaluate stakeholders' consultation feedback regarding the site's water stewardship performance, including the effectiveness of the site's engagement process.*	
4.3.1	*Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.*	🔍 Obs.

Comment	The ESG report has been published for the plant site, revealing its water management objectives, including a "reducing water intensity" target that addresses the site's immediate water shortage risk. In terms of implementation, the site already uses condensate to supplement the steam boiler system, rainwater harvesting for plant irrigation, and RO concentrate for toilet flushing. In the future, the site plans to invest approximately NT$5 million to NT$8 million in effluent recycling equipment, with a reclaimed water program expected to commence within three years, aiming to reduce water intensity by 25% by 2030 (based on 2022). All of the above is detailed in the ESG report (Site: https://www.tci-bio.com/wp-content/uploads/2025/09/2024%E6%B0%B8%E7%BA%8C%E5%A0%B1%E5%91%8A%E6%9B%B8_TC_250912-S.pdf). Regarding Consultation, TCI and its key stakeholder, Chang Jung Lily Elementary School, frequently communicate and discuss the red quinoa contract farming project. Because the project does not use pesticides, it reduces water consumption and also protects the habitat of native species such as the bear eagle and other top predators. Chang Jung Lily Elementary School believes that TCI has made a significant contribution to watershed health.	
4.3.2	*Voluntary Advanced Indicator* *The site's efforts to address shared water challenges shall be evaluated by stakeholders. This shall include stakeholder reviewing of the site's efforts across all five outcome areas, and their suggestions for continual improvement.*	N/A
Comment	The site does not perform this indicator.	
4.4	*Evaluate and update the site's water stewardship plan, incorporating the information obtained from the evaluation process in the context of continual improvement.*	
4.4.1	*The site's water stewardship plan shall be modified and adapted to incorporate any relevant information and lessons learned from the evaluations in this step and these changes shall be identified.*	Yes
Comment	The site has provided and optimized a water resource management plan. It also emphasizes its "water resource management", "analysis of watershed common challenges", and "implementation results and benefits." As part of the "analysis of watershed common challenges," the site proactively cleans up polluted waters surrounding the site. The site also regularly holds meetings and conducts improvement work related to the water resources management plan.	

5	STEP 5: COMMUNICATE & DISCLOSE - Communicate about water stewardship and disclose the site's stewardship efforts	
5.1	*Disclose water-related internal governance of the site's management, including the positions of those accountable for legal compliance with water-related local laws and regulations.*	
5.1.1	*The site's water-related internal governance, including positions of those accountable for compliance with water-related laws and regulations shall be disclosed.*	Yes
Comment	The site discloses the AWS management organization chart on the corporate website, which includes the responsible person and department for water stewardship. https://prtr.moenv.gov.tw/detail.html?id=T47A2408	
5.2	*Communicate the water stewardship plan with relevant stakeholders.*	
5.2.1	*The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.*	No
Comment	The water stewardship plan is only disclosed to the board of directors. This information was not disclosed during communication with stakeholders. ***Finding No: TNR-022641***	
5.3	*Disclose annual site water stewardship summary, including: the relevant information about the site's annual water stewardship performance and results against the site's targets.*	
5.3.1	*A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum.*	No
Comment	The water stewardship performance is only disclosed to the board of directors. This information was not disclosed during communication with stakeholders. ***Finding No: TNR-022640***	
5.3.2	*Advanced Indicator* *The site's efforts to implement the AWS Standard shall be disclosed in the organization's annual report.*	Yes
Comment	In the 2024 CSR report of the TCI Group, the efforts and benefits of implementing AWS standards were disclosed. (page 101~102)	
5.3.3	*Voluntary Advanced Indicator* *Benefits to the site and stakeholders from implementation of the AWS Standard shall be quantified in the organization's annual report.*	N/A
Comment	The site does not perform this indicator.	
5.4	*Disclose efforts to collectively address shared water challenges, including: associated efforts to address the challenges;engagement with stakeholders; and co-ordination with public-sector agencies.*	
5.4.1	*The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.*	No
Comment	The shared water-related challenges are only disclosed to the board of directors. This information was not disclosed during communication with stakeholders. ***Finding No: TNR-022639***	

5.4.2	*Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.*	Yes
Comment	The site engaged with the stakeholders through various channels, such as stakeholder visits, questionnaire surveys, and collaborated with stakeholders to take collective action to address water challenges or risks within or outside the catchment.	
5.5	*Communicate 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.*	
5.5.1	*Any site water-related compliance violations and associated corrections shall be disclosed.*	Yes
Comment	A procedure to manage non-conformance and related corrective action is developed, there is no water-related compliance violation identified in past a few years.	
5.5.2	*Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.*	Yes
Comment	A procedure to manage non-conformance and related corrective action is developed, there is no water-related compliance violation identified in past a few years.	
5.5.3	*Any site water-related violation that may pose significant risk and threat to human or ecosystem health shall be immediately communicated to relevant public agencies and disclosed.*	Yes
Comment	A procedure to manage non-conformance and related corrective action is developed, there is no water-related compliance violation identified in past a few years.	

Previous Findings

	All non-conformities raised in the previous audit have been satisfactorily closed.	N/A
Comment	This is an initial audit.	