# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-001831

WSAS WATER STEWARDSHIP ASSURANCE SERVICES

## SITE DETAILS

Site: **Nestlé Pakistan Kabirwala**
Address: Kabirwala Road, District Khanewal, 58250, Kabirwala, PAKISTAN
Contact Person: Tauqeer Qadeer
AWS Reference Number: AWS-000101
Site Structure: Single Site

## CERTIFICATION DETAILS

Certification status: Certified Core
Date of certification decision: 2026-Mar-18
Validity of certificate: 2029-Mar-17

## AUDIT DETAILS

Audited Service(s): AWS Standard v2.0 (2019)
Audit Type(s): Re-Certification Audit
Audit Start Date: 2025-Oct-20
Audit End Date: 2025-Oct-22
Lead Auditor: Akhlaq Hussain

Site Participants:
Mr. Tauqeer Ahmad Qadeer, Water Expert
Mr. Farooq Ahmad Khan, Team Leader
Mr. Bilal Sial, Factory Engineer
Ms. Fatima Raza, Safety & Environment Specialist
Mr. Muhammad Bukhsh, Industrial Services Manager

# CERTIFICATION REPORT

## Alliance for Water Stewardship (AWS)

Audit Number: AO-001831

## ADDITIONAL INFO

Summary of Audit Findings: During the recertification audit, 6 non-conformities and 2 observations were raised.

The Client is requested to submit a root cause analysis and corrective actions for each of the non-conformities to WSAS within 7 days of receipt of the audit report, by 10/12/2025.

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 06/01/2026.

The audit team recommends re-certification of  Nestlé Pakistan Kabirwala at Core level pending successful closure of the non-conformities.

Scope of Assessment: The scope of services covers the recertification audit for assessing conformity of Nestlé Pakistan Kabirwala against the AWS International Water Stewardship Standard Version 2.

Nestlé Pakistan's Kabirwala Factory is a major dairy processing facility located approximately 7 km from Khanewal and 3 km from Kabirwala, along the Kabirwala–Khanewal Road (Coordinates: 30.3732° N, 71.8826° E). The factory produces a range of dairy products, including milk powders, dairy tea whitener, UHT milk, and butter. The site relies entirely on groundwater extracted from two deep wells, which is stored in a bulk water tank, chlorinated, and distributed across the facility for production use. Recycled water is primarily utilized in energy operations, while a wastewater treatment plant (WWTP) and cooling towers manage process water. Stormwater runoff from the factory is safely discharged into a nearby canal that supports agricultural irrigation. The site also maintains separate stormwater and firewater distribution networks to ensure system efficiency and safety.

In terms of wastewater and effluent management, the factory operates a single discharge point. Wastewater is treated at the WWTP before being discharged into the Venoi Canal, which ultimately supports nearby agricultural lands. Sewage effluents are treated through SBR plant under its AWS (Alliance for Water Stewardship) continual improvement program, aiming to fully treat domestic wastewater and prevent potential groundwater contamination.

Based on stakeholder consultations, key shared water challenges in the catchment area include poor drinking water quality, inadequate sewerage and water supply networks, solid waste accumulation in canals, and over-extraction of water resources. These challenges underscore the importance of collaborative water stewardship efforts within the region.

The audit was conducted onsite from 20/10/2025 to 22/10/2025
The onsite site audit included the review of documents, interviews of stakeholders, visit included the assessment of site water infrastructure, storage of potential sources of pollution and WASH facilities at site

## FINDINGS

**NUMBER OF FINDINGS PER LEVEL**

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| **Observation** | 2 |
| **Non-Conformity** | 6 |

### FINDING DETAILS

| | |
|---|---|
| Finding No: | TNR-022168 |
| Checklist Item No: | 1.1.1 |
| Status: | Closed |
| Finding level: | Non-Conformity |
| Due date: | 2026-Jan-21 |
| Checklist item: | The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including:<br>- Site boundaries;<br>- Water-related infrastructure, including piping network, owned or managed by the site or its parent organization;<br>- Any water sources providing water to the site that are owned or managed by the site or its parent organization;<br>- Water service provider (if applicable) and its ultimate water source;<br>- Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies;<br>- Catchment(s) that the site affect(s) and is reliant upon for water. |
| Findings: | The site has defined its catchment as a 16 km radius around the facility. However, the circular area around the site does not align with the catchment definition according to the AWS Standard. Identification of the catchment in line with the definition is needed to ensure shared water challenges are appropriately identified and water stewardship efforts are focused on them. |
| Corrective action: | We have identified the catchment area on the basis of Kabirwala factory hydrogeological study conducted by third party (SGS Pakistan) which was based on ground water recharge source and factory discharge point and now with the updated information about catchment area i.e.. The geographical zone in which water is captured, flows through and eventually discharges at one or more points. The concept includes both surface water catchment and groundwater catchment. A surface water catchment is defined by the area of land from which all precipitation received flows through a sequence of streams and rivers towards a single river mouth, as a tributary to a larger river, or to the sea. A groundwater catchment is defined by geological structure of an aquifer and groundwater flow paths. It is replenished by water that infiltrates from the surface. It has vertical thickness (from a few meters to 100s of meters) as well as area. Depending on local conditions, surface and groundwater catchments may be physically separate or interconnected.<br><br>Based on the above definition we need to check with some more maps or sites to define proper catchment area. |
| Evidence of implementation: | As concluded, Kabir Wala Factory lies in Lower Bari Doab area and Lower Bari Doab Canal's catchment. The LBDC irrigates (command area) more than 5000 Km2 area. |

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| Finding No: | TNR-021050 |
| Checklist Item No: | 1.2.1 |
| Status: | Closed |
| Finding level: | Non-Conformity |
| Due date: | 2026-Jan-21 |
| Checklist item: | Stakeholders and their water-related challenges shall be identified. The process used for stakeholder identification shall be identified. This process shall:<br>- Inclusively cover all relevant stakeholder groups including vulnerable, women, minority, and Indigenous people;<br>- Consider the physical scope identified, including stakeholders, representative of the site's ultimate water source and ultimate receiving water body or bodies;<br>- Provide evidence of stakeholder consultation on water-related interests and challenges;<br>- Note that the ability and/or willingness of stakeholders to participate may vary across the relevant stakeholder groups;<br>- Identify the degree of stakeholder engagement based on their level of interest and influence. |
| Findings: | The site has provided general information on water challenges and stakeholder engagement; however, there is no structured system in place to monitor or record these interactions, such as tracking the number and type of stakeholders engaged, engagement timelines, and outcomes. Additionally, the documented water challenges do not clearly indicate whether they pertain to the immediate water body or the ultimate receiving water body. |
| Corrective action: | Previously we were doing engagement sessions through invitation on emails via PR department and email as evidence was given to onsite auditor. To make it more formal now we have made a plan of key stakeholders' engagement sessions from the start of the year. plan is attached evidence. For feedback on shared water challenges, a Q & A format is also formalized to have formal feedback from our stakeholders to have clear understanding of shared water challenge along with its relevance with receiving water body or recharging source. |

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| Finding No: | TNR-021056 |
| Checklist Item No: | 1.5.4 |
| Status: | Open |
| Finding level: | Observation |
| Checklist item: | 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. |
| Findings: | The site has identified the variance; however, variance frequency yet to be determined |
| Corrective action: | Sample collection and analysis frequency has been established on quarterly basis. |

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| Finding No: | TNR-021051 |
| Checklist Item No: | 1.7.1 |
| Status: | Closed |
| Finding level: | Non-Conformity |
| Due date: | 2026-Jan-21 |
| Checklist item: | 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. |
| Findings: | The site's risk analysis (Water Risk prioritization) does not adequately assess risks arising from shared water challenges, specifically the potential impacts these challenges may pose to the site in the short, medium, or long term. |
| Corrective action: | Relevant shared water challenges were not added in the sheet initially. Now we have added column to identify relevant shared water challenges linked with the identified risks. |

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| Finding No: | TNR-021564 |
| Checklist Item No: | 2.3.2 |
| Status: | Closed |
| Finding level: | Non-Conformity |
| Due date: | 2026-Jan-21 |
| Checklist item: | A water stewardship plan shall be identified, including for each target:<br>- How it will be measured and monitored<br>- Actions to achieve and maintain (or exceed) it<br>- Planned timeframes to achieve it<br>- Financial budgets allocated for actions<br>- Positions of persons responsible for actions and achieving targets<br>- 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: | The site has not established quantified targets for indirect water use, however mentioned in the AWS plan "Conduct an indirect water use awareness and evaluation for the supply chain vendors to factory". Although efforts have been made to raise awareness among suppliers on reducing water consumption, no measurable or time-bound targets have been defined to track performance or demonstrate progress. |
| Corrective action: | Quantified target was established in coordination with Milk Collection department for milk suppliers. email is attached and also same target is mentioned in updated WSP as well. |

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| Finding No: | TNR-021053 |
| Checklist Item No: | 3.3.1 |
| Status: | Open |
| Finding level: | Observation |
| Checklist item: | Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified. |
| Findings: | The site has reported target statuses as either “done” “completed” or “ongoing”; however, the degree of progress could be presented in percentage terms. Doing so would provide greater clarity on the extent of achievement for each target and enable more precise monitoring of performance over time. |
| Corrective action: | Previously we were sharing water balance progress in descriptive form and share the targets status as completed or done. Now we have update WSP for all jobs progress in terms of percentage to have better clarity. |

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| Finding No: | TNR-021054 |
| Checklist Item No: | 3.7.1 |
| Status: | Closed |
| Finding level: | Non-Conformity |
| Due date: | 2026-Jan-21 |
| Checklist item: | Evidence that indirect water use targets set in the water stewardship plan, as applicable, have been met shall be quantified. |
| Findings: | The facility has established water-related targets for its indirect water-use stakeholders, such as suppliers and service providers; however, these targets have not been integrated into the AWS Plan. As a result, progress on these commitments is not formally monitored or reported within the site’s water stewardship framework, limiting transparency and alignment with AWS requirements. |
| Corrective action: | Water Reduction target for Milk supplier (Indirect Water usage) has been added in WSP. |

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| Finding No: | TNR-021055 |
| Checklist Item No: | 4.3.1 |
| Status: | Closed |
| Finding level: | Non-Conformity |
| Due date: | 2026-Jan-21 |
| Checklist item: | Consultation efforts with stakeholders on the site’s water stewardship performance shall be identified. |
| Findings: | The site does not have a formalized process for collecting feedback from stakeholders regarding AWS performance. Specifically, there is no structured mechanism in place to capture and evaluate stakeholder insights |
| Corrective action: | Engagement plan and formalized Q & A format have been established to take feedback from stakeholders. |

### Report Details

| Report | Value |
|---|---|
| Report prepared by | Akhlaq Hussain |
| Report approved by | Lorenzo Brioschi |
| Report approved on (Date) | 29/11/2025 |

### Surveillance

**Proposed date for next audit**
2026-Oct-20

Comment The proposed date for the next audit 20/10/2026

### Stakeholder Announcements

| Date of publication | Location |
|---|---|
| 19/09/2025 | Nestle website |
| 17/09/2025 | AWS and WSAS websites |
| 23/09/2025 | Local News papers |

Comment The stakeholder announcement was published on the websites of Nestle, local newspapers, AWS, and WSAS eight weeks prior to the audit. This ensured sufficient notice and transparency for all relevant parties.
https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-09/aws-stakeholder-announcement-english.pdf
https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-09/aws-stakeholder-announcement-urdu.pdf

### Catchment Information

**Catchment Information**

The factory operates two deep wells as its sole water source. Extracted groundwater is stored in a bulk tank and distributed across the site. Effluent is treated at the Wastewater Treatment Plant (WWTP) and discharged into the Venoi Canal, which supports downstream agriculture. A small portion of sewage is managed via septic tanks and soakage pits; however, a sewage treatment plant has been approved under the AWS continual improvement plan to ensure all discharges are treated.

The site lies within the Lower Bari Doab Basin, part of the Indus Basin Irrigation System, bounded by the Ravi and Sutlej Rivers and fed by the Lower Bari Doab Canal (LBDC). Surface runoff flows from northeast to southwest, draining ultimately to the Venoi Canal. Venoi Canal is part of the Lower Bari Doab Canal (LBDC) system, which in turn is connected to River Ravi. The relevant catchment is the catchment of the LBDC.

Hydrogeological and Climatic Setting

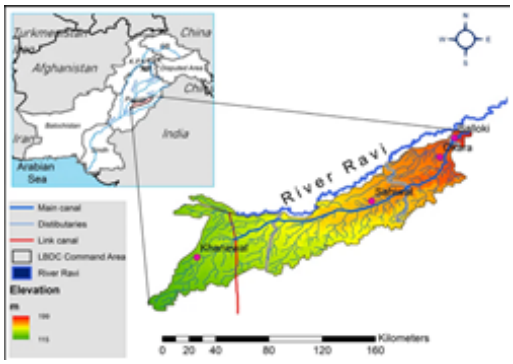
Groundwater occurs in unconsolidated alluvial deposits of sand and gravel with high transmissivity and yields (~1 cusec per tubewell). The region receives ~298 mm annual rainfall and has a semi-arid climate with hot summers, low rainfall, and high evapotranspiration, increasing irrigation demand. Surface water supply from canals is limited, resulting in seasonal reliance on groundwater for both agriculture and industry.

Catchment Features

- Water Availability: Water table generally stable with minor seasonal changes; heavy dependence on groundwater during off-canal periods.
- Flooding: Area not flood-prone; canals are closed during extreme flood events.
- Protected Areas: No major ecological zones nearby; downstream ecosystems depend on managed flows.
- Inter-Basin Transfers: LBDC connected to the Ravi River via Balloki Barrage (~70 km from Lahore).
- Dominant Uses: Intensive irrigated agriculture (rice, corn, wheat) and food industry operations.

Key Water-Related Challenges

- Declining surface water availability and high groundwater dependence
- Limited sewerage and water-supply infrastructure
- Localized contamination risks from untreated sewage
- Solid-waste deposition in canals




Catchment of Lower Bari Doab Canal (LBDC).png

### Client Description and Site Details

**Client/Site Background**

Nestlé Pakistan's Kabirwala Factory is one of the company's key dairy processing sites, located along the Kabirwala–Khanewal Road, approximately 7 km from Khanewal and 3 km from Kabirwala (Coordinates: 30.3732° N, 71.8826° E). The facility produces a wide range of dairy products including milk powders, dairy tea whitener, UHT milk, and butter, serving as a significant contributor to Nestlé's national supply chain.

The factory's operations depend entirely on groundwater, extracted from two deep wells and stored in a central bulk tank before chlorination and use in production. Recycled water is primarily utilized in energy operations, while a wastewater treatment plant (WWTP) and cooling towers manage process water efficiently. Although there is currently no rainwater harvesting system, stormwater runoff is responsibly discharged into a nearby canal, benefiting local agriculture. Dedicated stormwater and firewater distribution networks are maintained to ensure operational and environmental safety.

The site has one main discharge outlet, with approximately 90% of wastewater treated at the WWTP before being released into the Venoi Canal, which supports irrigation in surrounding farmlands. A small portion of domestic effluent is managed through septic tanks and soakage pits, which present some risk of groundwater infiltration. In alignment with the AWS (Alliance for Water Stewardship) continual improvement program, Nestlé has approved the establishment of a dedicated sewage treatment plant to fully treat domestic wastewater and mitigate groundwater contamination.

The Kabirwala Factory employs a total of 705 permanent workers, comprising 89% male and 11% female staff, reflecting a strong local employment footprint and commitment to workforce diversity.

Engagement with local stakeholders has highlighted several shared water challenges in the catchment area, including poor drinking water quality, insufficient sewerage and water supply infrastructure, solid waste accumulation in canals, and over-extraction of groundwater resources. Nestlé continues to collaborate with relevant authorities and community partners to address these issues through sustainable water stewardship initiatives.


Site location Map.jpg

Nestle Kabirwala-Site Map.jpg

| | Summary of Shared Water Challenges |
|---|---|

**Summary of Shared Water Challenges**
Through extensive stakeholder consultations, the site has identified several key water-related challenges within the catchment area. These include:

Poor drinking water quality, affecting both communities and local ecosystems.

Inadequate sewerage and water supply networks, leading to inefficient water distribution and potential contamination.

Solid waste deposition in the canal, contributing to pollution and reduced water flow.

Over-extraction of catchment water resources, putting pressure on the region's groundwater and long-term water availability.

| 0.0.1 | Water Source & Discharge Locations |
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| **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 | During Audit, auditor has visited Venoi Canal, which is ultimate wastewater receiving body. | |

| 1 | STEP 1: GATHER AND UNDERSTAND |
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**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.*

No

Comment

Site has clearly identified the boundaries and map of the catchment based on aquifer. Catchment's boundaries identified based on hydrology and topography, including water sources and ultimate receiving bodies.
The site ultimate receiving body (Venoi Canal) has been identified as per the hydrogeological ground water study attached conducted by SGS in September 2025, Nestle Pakistan - Kabirwala Factory Plant is a dairy products processing factory and produces Milk Powders, Dairy Tea Whitener, UHT Milk and Butter.
Site has documented its layout, physical and geographical location in maps. Site has two operation deep wells as source of water. After withdrawal from wells, the water is transferred to a bulk water tank and distributed to different areas in factory. Site has also documented its onsite water related infrastructure including piping diagrams, well locations, discharge points and sewerage system.
Factory has one discharge point and around 90 % of discharges are going to waste water treatment plant and Venoi canal, finally to agricultural fields. The site is disposing of a portion of its effluents (about 10 %) through septic tank and soakage pits arrangement which is eventually going to underground water table.
Site is located in Lower Bari Doab basin and has conducted a water resource study for the area in 2025. Site has identified the catchment based on its water extraction and ultimate disposal. it has identified 16.69 km radius around the site as its catchment. The site has an effluent treatment plant that treats all the wastewater from site before disposal. Site's treated effluent is sent to "venoi canal". Site has documented the site discharge point(s) and for effluents and storm water from site. Site has identified ultimate receiving body for its effluent of the site effluent is "Venoi Canal".

***Finding No: TNR-022168***

**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.*

closed

Comment: Site has identified the stakeholders based on the CSR process tool. The stakeholder mapping includes stakeholders in a 16.69 km radius around the factory and site has included representative of ultimate receiving body. Identified stakeholders include vendors, industries, community, 3rd party contractors, water governance and regulated bodies (Government officials). Site has maintained updated records of engagements with stakeholders. Site has prioritized stakeholders based on their influence and interest in " degree of stakeholders engagement - sphere of influence." A survey (conducted by a site) report has been shared which includes general company perception related questions and focused was on shared water related challenges. The last engagement session arranged in June 2026.

***Finding No: TNR-021050***

**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 prioritized stakeholders according to their current and potential level of influence on, and interest in, the site, as outlined in the " degree of stakeholders engagement - sphere of influence." Based on site management feedback and document review, the Environmental Protection Agency (EPA), Irrigation department, neighboring industries, and the local community have been identified as the most influential stakeholders.

**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 site management has assessed and identified potential water-related incidents and emergency situations that could impact operations, the environment, and the surrounding community. Key scenarios include chemical or fuel spills that may contaminate water sources, flooding events that could disrupt supply and damage infrastructure, and well pump malfunctions that might interrupt water availability. Site also has response plan in case of wastewater treatment plant failure.

**1.3.2** *Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped*

Yes

Comment: The site has comprehensively mapped its water infrastructure and equipped its water lines with adequate instrumentation, including water flow meters, to track consumption by area. Water inflows, losses, storage levels, and outflows are continuously monitored and recorded. Using these measured values, the site has developed a detailed water balance for the year 2024.

**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 implemented extensive metering across its water network, with nearly every water line equipped with meters to ensure accurate measurement. Based on these recorded values, the site has prepared a documented water balance for the year 2024 (attached).
Key highlights include:

- Water withdrawal from deep well: 485114 m³/year
- Inflow from Cow Water: 166209 m³/year
- Total Inflow deep well + Cow: 651323
- Water used in Production and utility: 322598 m³/year
- Water used in social block: 57507 m3/ year
- Water used in firefighting + Drinking water cooler+ Warehouse toilets+ Tanker cleaning+ Offices area (Toilets) and toilets for contactor: 79847 m3/ year
- Process discharge to treatment plant: 435112 m³/year
- Discharge from social block: 46006 m³/year
- Losses (cooling tower, soakage pit, gardening, steam heating, evaporation at powered plant): 178804 m³/year

Short fall 1 % due to flow meter accuracy and some evaporation during cleaning activities.
This comprehensive metering and data recording enables the site to closely monitor water usage, identify inefficiencies, and improve water management practices.

**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 has developed and implemented a comprehensive Water Quality Monitoring Plan covering source water, drinking water, and effluents. Physical, chemical, and biological parameters are monitored in line with the Nestlé Quality Assurance Center (NQAC) Sampling Plan 2025, while compliance with Punajb Environmental Quality Standards (PEQS) is ensured through a defined monitoring schedule. Effluent quality at the process discharge pit is routinely tested under the SOP for Wastewater Sampling and Testing, with the most recent third-party assessment (March 2025) confirming compliance with all local standards.
The site generates two types of wastewaters: sewage wastewater and effluent wastewater, treated via a septic tank and treatment plant before discharge into venoi canal; Seasonal monitoring of Venoi Canal (Jan to Dec) confirmed full compliance with PEQS limits, with COD, TDS, BOD, and TSS levels showing slight improvement in June compared to December. The site also documented seasonal fluctuations in water quality to ensure continuous and adaptive monitoring.
Overall, wastewater discharges and receiving body quality remain stable, consistently meeting updated NEQS standards with no evidence of seasonal deterioration. Supporting monitoring reports and graphical analysis of seasonal water quality trends are attached.

**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 identified chemicals, lubricants, fuels and scrap yards (waste storage areas) as potential sources of pollution. Preventive measures to avoid contamination include secondary containment systems, readily available spill control kits, and employee training on spill response. All potential pollution sources have been mapped in the site layout. During the site visit, it was observed that effective mitigation measures are in place, including secondary containment for chemical and fuel storage and accessible spill control arrangements.

**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

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| Comment | Site explained that there is no onsite important water related area. This was also verified during site visit. | |
| **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 organization is making significant financial commitments toward sustainable water management and stakeholder engagement. Major expenditure areas include:<br>• Community & Stakeholder Engagement Initiatives: ~PKR 50,000<br>• Environmental Conservation (Tree Plantation Programs): ~PKR 2,000,000<br>• Water Quality Assurance: Annual water testing and treatment costs total ~PKR 28,500,000<br>• Infrastructure Maintenance: Water-related equipment maintenance accounts for ~PKR 11,500,000 annually<br>• Water Conservation Projects: Major initiatives to enhance water efficiency require ~PKR 40,000,000<br>• Regulatory Compliance: Annual Canal NOC cost is ~PKR 105,000<br>• Public Welfare Contributions: Operation of public water filtration plants costs ~PKR 5,938,891 annually<br>• Catchment Management: Canal cleaning efforts cost ~PKR 450,000 each year<br>• Energy for Water Operations: ~PKR 19,599,164 allocated towards energy consumption related to water systems<br>• Efficient Irrigation Systems: Drip irrigation and moisture sensor deployment costs ~PKR 1.5 million per acre<br>• Onsite Sanitation Improvement: ~PKR 1,000,000 invested annually to improve water-efficient sanitation facilities for staff | |
| **1.3.8** | *Levels of access and adequacy of WASH at the site shall be identified.* | Yes |
| Comment | The facility has implemented comprehensive measures to ensure safe drinking water, sanitation, and hygiene (WASH) for all employees. A self-assessment tool is used regularly to monitor workplace WASH conditions, including water availability, sanitation infrastructure, and hygiene practices. Separate washrooms for male and female employees are available, with an assessment confirming that the number of facilities meets regulatory requirements 51 toilets for males and 15 for females, totaling 66. All temporary washrooms have been eliminated and replaced with newly constructed, fully operational toilets that comply with WASH standards. Additionally, temporary water coolers have been replaced with water dispensers installed at designated locations to ensure reliable access to safe drinking water. | |
| **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 has actively engaged its milk suppliers and milk collection centers in water conservation initiatives to promote responsible water use within the catchment. It regularly collects and monitors water consumption data from these centers and has launched several projects aimed at improving water efficiency and reducing water consumption. In collaboration with local farmers, the site has implemented initiatives such as installing water-efficient sprinkler nozzles for heat rebate systems, adopting moisture analyzer-based irrigation for cultivating animal feed crops, and introducing drip irrigation systems. Additionally, awareness sessions are conducted with service providers to encourage sustainable water practices.

The site has also assessed embedded water use within the catchment, identifying key suppliers particularly milk suppliers who use water directly in production and for potable purposes. Annual water consumption data collected from these suppliers shows that approximately 40% of their operations are located within the catchment and 60% outside it, with 40% drawing from the same watershed. The site has established ongoing communication with all major milk suppliers to align them with the Alliance for Water Stewardship (AWS) principles. Notably, one of the primary milk suppliers reported a water consumption of approximately 1,285 m³/year in 2024.

**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

No such outsourced services in the catchment. The facility does outsource canteen, laundry service and cleaning contractors, all are being used the water of the site.

**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.*

Yes

Comment

The site has comprehensively identified and mapped key water governance initiatives within the catchment area, focusing on improving water supply and sanitation infrastructure, promoting rainwater harvesting, and strengthening flood control and disaster management to enhance community resilience. Site management actively contributes to local water governance through awareness campaigns and water-related improvement projects, both within the factory and in surrounding communities.
In alignment with shared water challenges, the site has implemented several publicly led initiatives, including the installation of three water filtration plants in Kabirwala, Khanewal, and Allahabad; participation in Venoi Canal cleaning (silt removal); tree plantation drives; installation of water-efficient showering nozzles at the dairy farm; water awareness programs at milk collection centers; and the promotion of soil moisture sensors and drip irrigation systems to enhance agricultural water efficiency.
The site also monitors and supports government-led initiatives and public water policies within the catchment. Ongoing engagement with the Town Municipal Administration (TMA) Kabirwala, Irrigation Department, and Environmental Protection Agency (EPA) ensures alignment with regional water governance efforts. Recently completed public projects include the installation of a water filtration plant in Kabirwala by the Public Health Engineering Department (to be handed over to TMA), sewage rehabilitation works in Khanewal, and improvements in solid waste management and municipal services. Proposed government projects include sewage line cleaning and drainage improvements in Kabirwala, preparation of a comprehensive sewerage master plan for Tehsil Kabirwala, installation of three new tube wells, rehabilitation of three existing wells, and construction of an underground water storage tank to improve long-term water quality and supply reliability.

**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

The site has identified all relevant legal requirements and established a formal process for ongoing compliance review, as detailed in the document titled “SHE Regulatory and Other Matrix for Legal Requirements.” Compliance is systematically monitored through the EHS Legal Gap Assessment Report. Key regulations identified include provisions from the Punjab Environmental Protection Act Punjab Environmental Quality Standards for liquid industrial effluents, Drainage Act 1873, Pakistan Standard & Quality Control Authority (PS-4639-2004), Punjab Food Authorities, Drinking water standards EPA, The Punjab irrigation and drainage authority act 1997, The Punjab Water Act 2019, National Water Policy, Factories Act 1934, and other applicable laws. Comprehensive details of these requirements and the compliance process are documented within the referenced Standard Operating Procedure (SOP). Engagement with major stakeholders has also highlighted customary water rights linked to both the quantity and quality of water. In response, the site ensures full legal compliance for water use and disposal while going beyond regulatory obligations through its AWS plan. This includes adopting stricter internal wastewater discharge limits, installing community filtration plants to enhance safe water access, and delivering WASH training for local communities. Furthermore, the site is advancing water-saving measures such as rainwater harvesting and RO recovery projects, reinforcing its commitment to fair, sustainable, and shared water resource management.

**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

In 2025, the site conducted a comprehensive hydrological study of catchment, including a detailed water balance assessment. Findings showed that annual water abstraction (446.36 million $m^3$) exceeds natural recharge (398.2 million $m^3$), despite total precipitation of 4.16 million $m^3$, resulting in declining groundwater levels. Given the predominantly urban nature of the catchment, with no agricultural land, the imbalance reflects significant stress from over-abstraction. Annual variance analysis, based on precipitation data from the Pakistan Meteorological Department, indicated higher rainfall in 2025 compared to previous years. While Nestlé’s operations have minimal impact on the deep well aquifer, the catchment overall recorded a groundwater deficit of about 48 million $m^3$ in 2025 relative to the baseline study. This growing scarcity has been a key factor in shaping and prioritizing the site’s AWS initiatives. Detail calculations already attached.

**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.*

Obs.

Comment

The site has compiled comprehensive water quality data for the catchment drinking water and effluent-receiving body, venoi canal incorporating surface and groundwater assessments from multiple organizations and published sources. Seasonal and annual variations were evaluated through testing conducted at several downstream points in December 2022 and Sep 2025. Results showed a strong rainy season influence on water quality: alkalinity remain same during the rainy season due to dilution and rose afterward as minerals leached back; turbidity peaked from runoff and stabilized post-rainy season; fecal coliform levels spiked sharply during rains because of sewage overflows but declined afterward; and TDS dropped during the rainy season from dilution before rising again with post-monsoon evaporation. Detailed monitoring values are provided on the attached table. However, variance frequency yet to be determined.

**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.*

Yes

Comment

Based on previous audit findings and auditor annotations, this aspect is considered not applicable, as the site has confirmed that there are no identified natural Important Water-Related Areas (IWRAs) within the defined catchment.

**1.5.6** *Existing and planned water-related infrastructure shall be identified, including condition and potential exposure to extreme events.* Yes

Comment: The site has comprehensively mapped both existing and planned water-related infrastructure within the catchment, covering aspects such as water supply systems, sanitation facilities, and associated public services. Data has also been collected on water availability trends and potential extreme events, including flooding, that may influence water quality.
The site is located in a predominantly rural, agriculture-based region where water-related infrastructure is limited. Key challenges observed in the catchment include restricted water supply, inadequate sewage systems, and poor drinking water quality. Some infrastructure improvements are currently underway, such as new filtration units and sewerage system installations in Khanewal and Kabirwala by MC-Khanewal and PHED.
The catchment relies on a canal system managed by the Irrigation Department, which also conducts annual canal cleaning in collaboration with the site. According to the Irrigation Department, there are no stormwater channels in the area, and existing control measures at water heads effectively reduce the risk of flooding or stormwater impacts. Government agencies, including the Environment Protection Authority (EPA), are actively working on mitigation efforts through technical training sessions focused on water conservation and rainwater harvesting. Additionally, initiatives have been undertaken to enhance capacity and improve water quality monitoring through training provided to the Food Authority by Nestlé.

**1.5.7** *The adequacy of available WASH services within the catchment shall be identified.* Yes

Comment: The site has assessed WASH (Water, Sanitation, and Hygiene) conditions within the catchment and identified several key challenges, including poor drinking water quality, limited water availability, inadequate hygiene practices, and a deficient sanitation system. These issues are particularly pronounced in underserved and rural areas of the catchment.
The assessment referenced multiple reliable sources, including a survey conducted by the relevant department with support from UNICEF. Data was derived from the Water and sanitation fact sheet by water aid and Punjab Government -Tehsil WASH study 2015, with results published in 2018. Raw datasets were obtained from the Punjab Bureau of Statistics and UNICEF. The key findings include:

- Access to water on premises: Overall – 68.69%, Urban – 69.87%, Rural – 65.62%
- Access to sufficient quantity of water: 88.95%
- Access to improved water sources: 94%
- This comprehensive assessment provides critical insight into the current WASH conditions and supports the site's broader efforts in water stewardship and community engagement.

**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 site has identified shared water challenges through extensive stakeholder consultation. The key water-related challenges in the catchment area include:

- Drinking Water quality issue
- Poor Sewerage and water supply network
- Solid waste deposition in canal
- Overuse of catchment water

**1.6.2** *Initiatives to address shared water challenges shall be identified.* Yes

Comment

The site has outlined a comprehensive set of initiatives within its Water Stewardship Plan aimed at addressing the common water-related challenges identified. A clear linkage has been established between these challenges and the proposed actions.
Key initiatives include:

- Clean Drinking Water Facility / Water Filtration Plant Khanewal(For 10k peoples/day)
- Clean Drinking Water Facility / Water Filtration Plant Kabirwala(For 10k peoples/day)
- Clean Drinking Water Facility / Water Filtration Plant Allahabad(For 10k peoples/day)
- Participation in Canal Cleaning / De-Silting Annually
- Distribution of Irrigation Water to our neighboring Farmers
- Encourage other industrialists and landowners for clean drinking facilities (Iqbal cotton factory public drinking facility)
- Tree Plantation
- Awareness session with community in Allahabad
- Orifice installation in water taps of adjacent factories
- Poster Competition in adjacent school
- Drip Irrigation system
- Showering Nozzles at Dairy Farms
- Soil moisture sensor
- Engagement sessions with government officials and industrialists for development w.r.t sewage and drinking water
- Water Saving initiatives at Factory and milk collection centers
- SBR installation for sewerage treatment

The site has mapped key water governance initiatives across the catchment, focusing on improvements in water supply, sanitation infrastructure, and flood management to enhance water security and community resilience. Through ongoing engagement with TMA Kabirwala, the Irrigation Department, and the EPA, the site ensures that current and future projects are incorporated into its water stewardship planning. Notable recent developments include the installation of a new water filtration plant in Kabirwala and major sewage rehabilitation works in Khanewal. Planned initiatives include upgrading sewer systems, enhancing water supply through new and rehabilitated tube wells, and constructing underground water storage facilities.

**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.*

No

Comment

The site has undertaken a comprehensive assessment of water-related risks by considering their likelihood, severity over time, financial impacts, and implications for business continuity. Through this process, declining static water levels (groundwater depletion) have been identified as a significant risk due to their potential to affect water availability, disrupt operations, and increase costs related to extraction and maintenance. Proactively addressing this risk is consistent with AWS requirements for sustainable water stewardship and reflects the site's commitment to ensuring long-term water security and operational resilience. The site has defined "Reputational risks of water abstraction"
and "wastewater discharge in the water course" risk in the risk assessment. However, the site's Water Risk Prioritization analysis does not sufficiently address or evaluate the risks associated with shared water challenges.

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**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 is proactively implementing measures to enhance its water balance and reduce overall water consumption through a series of targeted efficiency and recovery initiatives. Key opportunities identified include the recovery of cow water for use in powdered milk production, recycling of treated effluent for gardening and landscaping, and process optimization to improve water use efficiency in Cleaning-in-Place (CIP) systems.

Ongoing water-saving projects include:

Recovery and re-use of stabilization water at Evaporator-1 and Evaporator-2

Upgradation of MBR membranes to improve wastewater treatment efficiency

Optimization of the CIP process through installation of light-in sensors to reduce water use

Reduction of recombination water by increasing total solids in the evaporation feed line (in coordination with AG)

Optimization of raw water use by utilizing RO water in recovery tanks for milk dilution

**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.*

Yes

Comment

The site has yet to sufficiently identify, and document catchment-level best practices related to water governance. These initiatives are includes as;

- Implementation of a comprehensive water stewardship plan to drive sustainable water management.
- Transparent communication of the site's water stewardship efforts to demonstrate leadership and promote best practices.
- Active engagement with local authorities and communities to support effective water governance.
- Collaboration with TMA Khanewal on the repair and improvement of sewerage disposal infrastructure.
- Local publication of the Khanewal Water Supply Plan (ESMP), including water quality reports, community feedback, pollution source identification, and a water quality monitoring framework.
- Partnership with the Irrigation Department to conduct canal desilting activities to maintain efficient water flow.
- Integration of climate change adaptation measures into water governance strategies, including managing changing rainfall patterns and mitigating water scarcity risks.
- Providing a collaborative platform for community members and government officials to discuss water-related challenges and develop shared solutions.
- Industrial sector supports the Irrigation Department for the desilting of canals to improve water availability and catchment resilience. Frequency of cleaning once a year.

**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.*

Yes

| | | |
|---|---|---|
| Comment | The site has identified several best practices within the catchment aimed at improving the water balance. These include:<br>Water Use Monitoring & Management<br>• Track total water consumption regularly.<br>• Review annual water consumption trends and key contributors.<br>• Monitor groundwater level fluctuations.<br>• Identify and implement water-saving initiatives across operations.<br>Water Recycling and Reuse Practices<br>• Recycle “cow water” from processing activities.<br>• Reuse treated wastewater from the treatment plant within the facility.<br>• Reuse sealing water to minimize consumption.<br>• Install efficient water taps with filtration systems to reduce water usage.<br>• Implement showering nozzles at dairy farms to optimize water use.<br>Agricultural Water Efficiency Initiatives<br>• Introduce drip irrigation systems.<br>• Install soil moisture sensors to guide irrigation scheduling.<br>• Promote laser land leveling and precision planting.<br>• Implement center pivot systems for controlled irrigation.<br>• Encourage the gradual shift to volumetric warabandi (turn by turn) instead of time-based warabandi for equitable water distribution.<br>Community Engagement & Knowledge Sharing<br>• Conduct awareness campaigns promoting responsible water use through visual messaging.<br>• Share water-saving best practices with neighboring industries.<br>• Facilitate community engagement sessions to promote improved agricultural practices such as drip irrigation.<br>• Encourage the use of native, drought-resistant plants in public and private landscapes to reduce irrigation demand.<br>Infrastructure and Policy Improvements<br>• Supply urban areas with surface water to reduce dependence on groundwater extraction.<br>• Enforce water conservation measures across domestic, commercial, and industrial sectors to promote circular water use (reduce, reuse, recycle).<br>• Enhance canal capacity to make use of surplus flows.<br>• Construct rainwater harvesting and surface water storage ponds.<br>• Improve unimproved and aging watercourses to minimize seepage and water loss. | |
| **1.8.3** | *Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.* | Yes |

| | |
|---|---|
| Comment | The site has identified several best practices for improving water quality within the catchment area. These include:<br>Water Quality Monitoring<br>• Establish defined parameters for drinking water (physical, chemical, and microbiological) to be monitored at specified frequencies.<br>• Conduct regular monitoring of water discharged into receiving bodies to ensure compliance with regulatory and environmental standards.<br>• Ensure periodic reporting of drinking water quality by EPA and relevant authorities.<br>Infrastructure and Treatment Improvements<br>• Implement improvements to sewerage systems through coordination with relevant authorities.<br>• Operate and support water filtration plants managed by both the site and government bodies.<br>• Install a Sequencing Batch Reactor (SBR) at the site to effectively treat sewage water.<br>• Enhance domestic wastewater disposal facilities to prevent contamination of water sources.<br>Pollution Prevention and Source Protection<br>• Integrate solid waste management practices to prevent leachate contamination of groundwater.<br>• Establish strict control measures to prevent the discharge of untreated industrial wastewater into surface or groundwater.<br>• Implement initiatives to protect water sources from pollution activities such as chemical dumping or waste disposal near water bodies.<br>Community Engagement<br>• Conduct awareness programs to educate and engage catchment communities on safeguarding water quality and adopting responsible practices to prevent water pollution. |

| | | |
|---|---|---|
| **1.8.4** | *Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.* | Yes |
| Comment | Based on previous audit findings and auditor annotations, this aspect is considered not applicable, as the site has confirmed that there are no identified natural Important Water-Related Areas (IWRAs) within the defined catchment. Therefore best practice related to IWRA's also consider not applicable. | |
| **1.8.5** | *Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.* | Yes |

| | |
|---|---|
| Comment | The site has implemented several best practices to ensure the provision of WASH (Water, Sanitation, and Hygiene) services; these initiatives are as;<br>Workplace Water, Sanitation, and Hygiene (WASH) Measures<br>• Safe Drinking Water Provision: Drinking water coolers are installed and maintained across the factory to ensure sufficient supply of clean water, especially during hot weather.<br>• Adequate Sanitation Facilities: Separate, high-standard toilets and washrooms are provided for male and female workers.<br>• Shower Facilities: Showers are available onsite to support workers who may not have adequate sanitation facilities at home.<br>• Hygiene Awareness: Regular communication and training are provided to all factory employees to promote good hygiene practices.<br>• Water Filtration Systems: Filtration units are installed and maintained to ensure safe drinking water quality within the facility.<br>Catchment-Level Water and Sanitation Initiatives (Led by PHED and TMA)<br>• Water Filtration Plants: Installation of 30 water filtration plants in Union Councils of Tehsil Kabirwala (8 completed to date).<br>• Sewerage and Drainage Infrastructure: New projects include sewerage, drainage, brick pavement, culverts, and tuff tiles in key UCs (Chak 9/GH, Chak 13/GH).<br>• Rural Water Supply Rehabilitation: Improvement of water supply schemes in Chak No. 4/D, 13/D, and 21/GH, Tehsil Kabirwala.<br>• Municipal Infrastructure Development: Construction of drains, water supply lines, sewerage systems, and wastewater disposal facilities in Municipal Committee Kabirwala.<br>• Expanded Water Access: Provision of new water supply schemes in Chak No. 136/10.R, District Khanewal.<br>Operational Public Facilities (as reported by TMA)<br>• Government Filtration Plants: Fully operational water filtration plant under TMA supervision.<br>• Public Washrooms: Operational public sanitation facilities at Lahore Mor provided by TMA.<br>• Industrial Filtration Support: Operational filtration plant at Iqbal Cotton Factory.<br>Infrastructure Improvement Projects (In Progress)<br>• Emergency Sewerage Rehabilitation: Underway by TMA Khanewal.<br>• Comprehensive Sewerage Upgrades: Ongoing major rehabilitation projects led by TMA Khanewal.<br>• Sewerage Disposal Station: Construction in progress in Khanewal.<br>• Sewerage Line Cleaning & New Disposal Unit: Approved and in progress by TMA Kabirwala. |

| 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:*<br>*- That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes*<br>*- That the site implementation will be aligned to and in support of existing catchment sustainability plans*<br>*- That the site's stakeholders will be engaged in an open and transparent way*<br>*- That the site will allocate resources to implement the Standard.* | ✓ Yes |
| Comment | The site has formally established its sustainability commitment, which was documented and signed by the Factory Manager in March 2025. This commitment clearly demonstrates the site's dedication to responsible water management and stewardship and aligns with the AWS Standard requirements. The Water Stewardship Commitment is visibly displayed at multiple locations within the facility and is also publicly accessible on the company's website. https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/aws-signed-off-commitment-english.pdf | |
| **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:*<br>*- Identification of responsible persons/positions within facility organizational structure*<br>*- Process for submissions to regulatory agencies.* | ✓ Yes |
| Comment | The site has clearly established a structured hierarchy to ensure effective management of legal compliance related to water. All relevant legal and regulatory requirements are documented within the Water Governance Framework under the AWS (Alliance for Water Stewardship) initiative, with clearly defined roles and responsibilities.<br>Ms. Khadija Asif, Manager S&E, holds primary responsibility for the identification, assessment, and continuous monitoring of water-related legal requirements. She is supported by the EHS team, ensuring comprehensive oversight and full compliance with all applicable regulations and standards. Document procedure for legal compliance management has been presented during audit. | |
| **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

The site has adopted the CEO's mandate on water stewardship as its strategic direction, aligned with Nestlé's global Policy on Environmental Sustainability and its dedicated Water Stewardship framework. This strategy defines the vision, mission, and objectives for responsible water stewardship in accordance with the AWS Standard. In addition, the site has developed an internal Water Stewardship Plan (WSP) that is fully aligned with the global policy.
The site's water stewardship approach is implemented under the Caring for Water-Pakistan (C4W-Pakistan) initiative, which is structured around three strategic pillars: Factories, Communities, and Agriculture. Through this initiative, the site is committed to reducing water withdrawals in its operations, promoting sustainable agricultural practices among farmers, and advancing access to safe water and sanitation in surrounding communities.
Launched in 2017, the C4W-Pakistan initiative serves as a collective action platform, bringing together partners to address national water challenges. The site has undertaken multiple activities under these three pillars, and further details are available on the company's website. https://www.nestle.pk/csv/water/managing-water-through-caring-for-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.*

closed

Comment

The site has developed comprehensive annual Water Stewardship Plans that define clear actions, targets, responsibilities, budgets, and timelines, fully aligned with the AWS outcomes. These plans address key focus areas, including water governance, sustainable water balance, water quality, and WASH, covering both site-level initiatives and catchment-level engagement.
Each project within the plan is structured with a defined scope, SMART objectives, measurable targets, and accountability mechanisms. Progress is monitored through data tracking, performance reports, regular meetings, and stakeholder consultations. Initiatives are explicitly connected to water-related challenges and mapped to shared water benefits and AWS outcomes, demonstrating value creation for both the site and the broader catchment. This systematic approach ensures effective implementation, transparent monitoring of results, and continuous improvement in water stewardship performance. However, indirect water direct are not included in the AWS plan.

***Finding No: TNR-021564***

**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

The site's water sources and associated risks have been independently identified through internal assessments, rather than relying solely on information from public sector or infrastructure agencies. To strengthen water governance and mitigate potential infrastructure-related risks, the site has implemented effective mitigation measures for both its water supply and wastewater treatment systems. Additionally, the site maintains active coordination with the Irrigation Department to ensure the safe and compliant disposal of treated wastewater into the designated canal network.

| 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

The site management is actively contributing to improved water governance within the catchment through community awareness initiatives and the implementation of water-related projects both within the facility and across the surrounding area. Publicly led initiatives are prioritized based on shared water challenges, demonstrating the site's commitment to collective action and AWS principles.
Key Initiatives Include:
- Installation of Three Water Filtration Plants in Kabirwala, Khanewal, and Allahabad, benefiting approximately 10,000 families by providing access to safe drinking water.
- Annual Participation in Venoi Canal Desilting Activities to support water flow efficiency and reduce water losses.
- Tree Plantation Campaigns, including the plantation of 8,750 trees in collaboration with the Environment Protection Agency (EPA), contributing to improved groundwater recharge and ecosystem health.
- Installation of Soil Moisture Sensors in agricultural lands, with support from the Agriculture Department, to promote responsible irrigation and reduce groundwater depletion (three sensors installed in community farmlands).
- Collaboration with Government Authorities, including participation in training programs organized by the EPA and Punjab Food Authority.
- Support for Operation and Maintenance of Community Filtration Plants within the catchment.

**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

The site has proactively taken steps to protect and support community water rights that are not governed by existing legal or regulatory requirements. Recognizing that surrounding communities face poor groundwater quality, the site has voluntarily installed and operates three drinking water filtration plants in Kabirwala, Khanewal, and Allahabad, providing access to safe drinking water for approximately 10,000 residents daily. These facilities are maintained by the site to ensure both operational efficiency and water quality. In addition, the site has reduced its own groundwater abstraction as part of its responsible water use strategy to help conserve shared water resources. These actions reflect the site's commitment to supporting the rights to water and sanitation in line with AWS principles and Nestlé's corporate guidelines, despite no legal obligation to do so.

**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

Water-related legal compliance is rigorously monitored, with the Environmental Protection Agency (EPA) requiring quarterly assessments of key effluent quality parameters. The S&E Manager is responsible for overseeing the evaluation of legal and regulatory compliance. During the recent audit, compliance with water-related requirements was confirmed, including effluent quality monitoring, EPA approvals, and effluent discharge permits. No legal or regulatory noncompliance was identified. In addition to monitoring effluent water, the quality of well water and product water is also regularly tested to ensure ongoing compliance with applicable standards. All water quality results to date have met the required benchmarks. Furthermore, the site has obtained all necessary operational approvals and licenses, ensuring full regulatory alignment. Regulatory compliance assessment, at the time of the audit was found up to date.

**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

There are no specific obligations applicable to the site under this indicator. This criterion refers to water rights not already addressed by existing legal or regulatory mechanisms, as outlined in indicator 3.2.2.
Although the catchment area faces poor drinking water quality due to a shallow groundwater table, the site has voluntarily taken steps to support the local community's right to safe drinking water. To address this issue, the site has installed and operates three community water filtration plants in Kabirwala, Khanewal, and Allahabad, providing access to clean and safe drinking water.
While there is no legal requirement mandating such actions, the site continues to maintain these plants both operationally and in terms of water quality, demonstrating its proactive commitment to social responsibility and community well-being.

**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.*

Obs.

Comment

The site has demonstrated a strong commitment to water efficiency through a structured approach supported by clearly defined targets, continuous monitoring, and implementation of strategic projects. Over the past five years, the site has shown consistent improvement in its water balance, reflecting measurable reductions in water consumption. As part of the Water Stewardship Plan, a 2025 water reduction target of 18,800 m³ was established. This target is being driven by key initiatives such as the ongoing CIP optimization project, which has already achieved savings of 1,278 m³, and the completed RO recovery project contributing an annual reduction of 1,470 m³. Additionally, the recycling of treated effluent water from the ETP is delivering a significant annual saving of 12,755 m³. As a result of these initiatives, the 2025 target has already been met ahead of schedule, and the site will review and establish new targets during the Operational Master Plan (OMP) meeting in December 2025, demonstrating its commitment to continual improvement in line with AWS requirements. However, completion percentage (%) of projects not marked.

**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

The site is in a water-stressed catchment where sustainable water balance is a critical priority. In alignment with the AWS Standard, the site has set a specific target to reduce water consumption by 18,800 m³ in 2025 compared to the 2024 baseline. To support this objective, the site has implemented a range of water efficiency initiatives, including extensive metering across operational areas to closely monitor and control raw water usage.
The site has consistently tracked and recorded its raw water extraction over recent years, demonstrating continuous improvement in reducing withdrawals:

- 2021: 590,069 m³
- 2022: 544,710 m³
- 2023: 514,540 m³
- 2024: 485,213 m³
- 2025: 354,015 m³ (up to September 30, 2025)

This documented trend reflects the site's proactive approach to improving water efficiency and reducing dependency on local water resources, thereby contributing to catchment sustainability and shared water security.

**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

There are no legally binding requirements applicable regarding wastewater reuse at the site. However, the site has proactively aligned with the Pakistan Environmental Protection Agency (EPA) on plans to reuse treated wastewater for construction activities currently at the initial discussion stage, with the first consignment yet to be implemented. Additionally, the site is already reusing Reverse Osmosis (RO) concentrate for non-potable purposes and has planned a project to further recover RO water to minimize overall water consumption within its operations.

**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

The site has implemented robust systems to maintain and continuously monitor water quality for both raw (source) water and treated effluents. Third-party laboratories conduct bi-annual monitoring of raw water, effluent discharges, and receiving water bodies to ensure reliability and transparency. All monitoring results have consistently met applicable regulatory standards, and the most recent independent analysis confirmed full compliance with national wastewater discharge limits. In addition, quarterly effluent quality reports are formally submitted to the Environmental Protection Agency (EPA), ensuring regulatory oversight.
As part of its AWS Plan, the site has voluntarily adopted water quality targets that are more stringent than legal requirements to demonstrate proactive leadership in water stewardship. These enhanced targets include:

- Chemical Oxygen Demand (COD): ≤125 mg/L (legal limit: 150 mg/L)
- Biochemical Oxygen Demand (BOD): ≤30 mg/L (legal limit: 80 mg/L)
- Total Suspended Solids (TSS): ≤50 mg/L (legal limit: 200 mg/L)

Furthermore, the site is investing in community resilience and emergency preparedness by maintaining existing filtration plants and installing a new filtration plant in Barakaho. A Memorandum of Understanding (MoU) is also under development with the Pakistan Red Crescent Society (PRCS) to ensure the continued provision of safe drinking water during emergency situations, supporting both site and community needs.
Moreover, the site has installed "Sequential Batch Reactor (SBR) for sewage treatment for improving water quality in catchment. It was found operational during audit.

**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

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|---|---|
| Comment | The site has established comprehensive measures to maintain and monitor water quality standards for both groundwater (source water) and effluent discharges. Water quality monitoring is conducted by third-party laboratories on a monthly and quarterly basis, with all results consistently meeting applicable regulatory requirements. In addition to regulatory compliance, the site has adopted internal quality targets that are more stringent than legal standards as part of its commitment to continual improvement. Monitoring confirms that effluent quality remains fully compliant with local environmental regulations. These water quality parameters and targets are clearly defined in the site's Effluent Treatment Plant (ETP) Quality Monitoring Plan, which is directly aligned with the Water Stewardship Plan. |
| **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 | Based on previous audit findings and auditor annotations, this aspect is considered not applicable, as the site has confirmed that there are no identified natural Important Water-Related Areas (IWRAs) within the defined catchment. Therefore, this is also consider not applicable. |
| **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 | The site has implemented comprehensive measures to ensure access to safe drinking water, sanitation, and hygiene (WASH) for all employees, in accordance with legal requirements and best practice standards. A dedicated self-assessment tool is regularly used to evaluate the adequacy and condition of workplace WASH facilities, including water supply, sanitation, and hygiene provisions.<br>Key features include:<br>• Separate toilet facilities for male and female employees, with the number of units assessed and aligned with applicable legal standards.<br>• A total of 66 toilets installed across the facility, consisting of 51 for males and 15 for females, ensuring equitable access and privacy.<br>• 64handwashing stations strategically placed throughout the premises.<br>• 6 locker rooms provided 4 for males and 2 for females.<br>• Safe drinking water of filtration plant available at 14 designated points, 10 supplemented by bottled water to guarantee potable quality. |
| **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 | No incidents or evidence of human rights violations related to water or sanitation were identified during the audit or stakeholder consultations. Despite persistent catchment-level challenges such as poor drinking water quality, scarcity, and weak governance, the site has proactively advanced the human right to save water through the installation and operation of five water filtration plants within the site and local schools, ongoing WASH awareness programs for communities and authorities, and planned projects including a new filtration plant and rainwater harvesting system. These efforts, along with tree plantation initiatives to support groundwater recharge, reflect the site's strong commitment to protecting water rights and supporting the well-being of communities beyond its operational boundaries. |
| **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.*

closed

Comment

The site has engaged with its key suppliers, primarily milk suppliers and farmers, on their water consumption. All packaging suppliers and transport services providers are outside the catchment. Site has provided awareness to all their milk suppliers to use the wastewater in farming and in bio-gas plants. The site has collected the estimated data from the milk vendors,

1. Farmers (Greem Leaf Raw Materials Providers)
- Annual Water Consumption (YTD): 1200 m³ of milk suppliers for the Site productions.
- Water Reduction Targets: 2 % by 2026

These efforts demonstrate the site's commitment to addressing indirect water use across its supply chain.
The facility has established targets for its indirect water-use stakeholders (suppliers and service providers); however, these targets have not yet been integrated into the AWS plan.

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**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.*

Yes

Comment

The site has demonstrated proactive engagement with its suppliers, including milk vendors and farmers, to promote water conservation and improve catchment-level water stewardship. As part of this initiative, the site is collecting water consumption data from suppliers to better monitor and manage indirect water use in alignment with AWS requirements.
In collaboration with local farmers, the site has implemented various projects to enhance water efficiency and support sustainable agriculture, including:

- Installation of water-efficient sprinkler nozzles for the heat rebate system
- Use of moisture analyzer-based irrigation to optimize water use in growing animal feed crops
- Implementation of drip irrigation systems
- Introduction of an automated washing system for chiller cleaning to reduce water consumption at one of the supplier dairy farms

Additionally, the site conducts awareness and training sessions with service providers to promote water conservation practices. These initiatives demonstrate the site's holistic approach to water stewardship, addressing both operational and supply chain impacts. The facility has also established water reduction targets in collaboration with its indirect water-use stakeholders, reflecting its commitment to shared catchment sustainability.

**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

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| Comment | The site's water sources and associated risks are managed independently of public sector infrastructure; however, the site utilizes government canal networks for the disposal of treated effluent. To ensure responsible water governance in alignment with AWS principles, the site maintains active engagement with relevant authorities, including the Irrigation Department, to support infrastructure management and improve canal operations.<br>As part of its collective water stewardship efforts, the site contributes to canal desilting activities within the catchment to enhance water flow and equitable distribution. The facility also regularly engages stakeholders through water awareness campaigns and conservation initiatives.<br>Additionally, the site has collaborated with the Environmental Protection Agency (EPA) to rehabilitate and maintain both onsite and offsite water infrastructure, including filtration plants, and ensures that treated factory effluent discharged into the Venoi Canal meets water quality standards and is suitable for downstream agricultural use.<br>In response to requests from the EPA and Punjab Food Authority for technical support, Nestlé conducted hands-on water quality testing training and WASH (Water, Sanitation, and Hygiene) awareness sessions. Furthermore, the site has supported EPA-led environmental improvement initiatives by launching a large-scale plantation drive of 8,750 trees in surrounding communities. These actions demonstrate the site's commitment to shared water stewardship, enhancing catchment resilience, ecological health, and stakeholder capacity. |
| **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 | The site has identified and documented catchment-level best practices in water governance. These practices ideally cover improvements in water supply and sanitation infrastructure, including:<br>Site has identified the following best practices for water governance:<br>• Implemented a comprehensive water stewardship plan to promote sustainable water management in alignment with AWS principles.<br>• Established transparent communication channels to publicly share the site's water stewardship initiatives and demonstrate leadership in best practices.<br>• Actively engaged with local authorities and surrounding communities to support effective and inclusive water governance.<br>• Collaborated with TMA Khanewal to repair and enhance sewerage disposal infrastructure for improved water management.<br>• Facilitated the local publication of the Khanewal Water Supply Plan (ESMP), including water quality reports, stakeholder feedback, identification of pollution sources, and a monitoring framework.<br>• Partnered with the Irrigation Department to conduct canal desilting activities, ensuring efficient water flow and improved water distribution within the catchment.<br>• Integrated climate change adaptation measures into water governance strategies to address changing rainfall patterns, mitigate water scarcity risks, and enhance long-term resilience.<br>• Established a collaborative platform that brings together community members and government officials to address water-related challenges and develop shared solutions.<br>• Supported annual canal desilting efforts in coordination with the Irrigation Department and the industrial sector to increase water availability and strengthen catchment resilience. |
| **3.9.2** | *Actions towards achieving best practice, related to targets in terms of water balance shall be implemented.* ✓ Yes |

Comment

The site has effectively implemented a range of best practices to enhance water balance and promote sustainable water stewardship within the catchment. These practices address operational efficiency, agricultural sustainability, community engagement, and infrastructure enhancement, demonstrating a holistic approach aligned with AWS principles.
Key Implemented Actions Include:

- Water Use Monitoring & Management:

The site regularly tracks water consumption, reviews annual trends, monitors groundwater levels, and implements targeted water-saving initiatives across operations.

- Water Recycling and Reuse:

Multiple water reuse systems are in place, including recycling “cow water,” reusing treated wastewater, sealing water, and installing efficient water fixtures and showering nozzles to minimize consumption.

- Agricultural Water Efficiency:

Best practices such as drip irrigation, soil moisture sensors, precision irrigation systems (center pivots), laser land leveling, and equitable volumetric water distribution have been implemented to improve agricultural water efficiency.

- Community Engagement:

The site runs awareness campaigns, shares best practices with neighboring stakeholders, engages communities in improved irrigation practices, and promotes the use of drought-resistant vegetation to reduce irrigation needs.

- Infrastructure and Policy Improvements:

Initiatives include supplying surface water to urban areas, promoting water conservation across sectors, enhancing canal capacity, constructing rainwater harvesting structures, and upgrading watercourses to reduce water loss.

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

Yes

Comment

The site has implemented a series of best practices aimed at enhancing water quality within the catchment, reflecting its commitment to responsible water stewardship and alignment with AWS standards. These practices are focused on monitoring, infrastructure improvements, pollution prevention, and community engagement.
Water Quality Monitoring

- Established defined drinking water quality parameters covering physical, chemical, and microbiological indicators with scheduled monitoring frequencies.
- Conducts regular monitoring of effluent discharged into receiving water bodies to ensure environmental compliance.
- Ensures periodic reporting of drinking water quality through the EPA and other regulatory authorities.

Infrastructure and Treatment Improvements

- Collaborates with authorities to upgrade and maintain sewerage systems.
- Operates and supports water filtration plants managed by both the site and government agencies.
- Installed a Sequencing Batch Reactor (SBR) system to effectively treat sewage water.
- Improved domestic wastewater disposal facilities to prevent contamination of groundwater and surface water.

Pollution Prevention and Source Protection

- Integrated robust solid waste management practices to prevent leachate contamination.
- Enforced strict control measures to eliminate the discharge of untreated industrial effluent.
- Implemented initiatives to protect water sources from pollution, including preventing dumping of chemicals or waste near water bodies.

Community Engagement

- Conducts awareness and educational programs to engage local communities on water quality protection and promote responsible environmental practices.

**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 | Based on previous audit findings and auditor annotations, this aspect is considered not applicable, as the site has confirmed that there are no identified natural Important Water-Related Areas (IWRAs) within the defined catchment. Therefore, best practice related to IWRA's is also considered not applicable. |

**3.9.5** *Actions towards achieving best practice related to targets in terms of WASH shall be implemented.* Yes

Comment

The site has successfully implemented comprehensive WASH measures to ensure the well-being of its workforce while also contributing to broader catchment-level improvements in public water and sanitation infrastructure. These actions demonstrate a strong commitment to sustainable water stewardship and alignment with AWS principles.

Site-Level WASH Implementations

- Safe Drinking Water: Drinking water coolers are installed and continuously maintained across the facility to provide workers with clean, safe drinking water throughout all seasons.
- Sanitation Facilities: Separate, hygienic, and well-maintained toilets and washrooms are provided for male and female workers.
- Shower Facilities: Onsite showers are available to support the hygiene needs of employees, particularly those who may lack adequate facilities at home.
- Hygiene Awareness Programs: Regular communication and training sessions promote good hygiene practices among employees.
- Water Filtration Systems: Filtration units have been installed and are routinely maintained to ensure safe and high-quality drinking water at the workplace.

Catchment-Level Water and Sanitation Initiatives (Led by PHED and TMA with Site Support)

- Water Filtration Plants: A total of 30 water filtration plants are being installed across Union Councils in Tehsil Kabirwala (8 completed so far).
- Infrastructure Development: Ongoing projects include sewerage systems, drainage networks, brick pavement, culverts, and community infrastructure improvements in key rural areas.
- Rural Water Supply Rehabilitation: Upgrades to water supply schemes in Chak No. 4/D, 13/D, and 21/GH are improving access to safe drinking water.
- Municipal Water Improvements: Construction of drains, water supply lines, sewerage networks, and disposal facilities is being carried out in Municipal Committee Kabirwala.
- Water Access Expansion: New water supply schemes are being implemented in Chak No. 136/10.R, District Khanewal.

Operational Public Facilities

- Fully operational government-managed water filtration plants.
- Functional public washrooms at Lahore Mor under TMA supervision.
- Operational filtration system at Iqbal Cotton Factory to support industrial water safety.

Infrastructure Improvement Projects (Ongoing)

- Emergency sewerage rehabilitation projects led by TMA Khanewal.
- Major sewerage system upgrades currently in progress.
- Sewerage disposal station under construction in Khanewal.
- Sewerage line cleaning and new disposal unit approved and in progress in TMA Kabirwala.

| 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.* ✓ Yes

Comment

The site consistently monitors its performance against the Alliance for Water Stewardship (AWS) Plan through structured monthly site-level evaluations and quarterly Top Management Meetings (TMM). Progress is documented in AWS performance reports and reviewed during Operational Management Program (OMP) meetings to ensure accountability and continual improvement.

From August 2024 to July 2025, a total of 34 water stewardship projects were undertaken: 24 projects were completed, 1 is on track, 9 are ongoing, and 1 is planned. Key completed initiatives include:

- Plantation of 8,750 trees, with an additional 3,250 trees scheduled for completion
- AWS engagement on national platforms involving government, private sector, research institutions, and financial stakeholders
- Mapping of encroachment zones with identified risks and capacity-building of staff
- Installation of a Recovery RO Plant, resulting in annual water savings of 12,755 m³
- Stakeholder engagement and knowledge-sharing activities
- Full compliance with effluent discharge standards (COD: 125 mg/L, BOD: 30 mg/L, TSS: 50 mg/L)
- AWS awareness sessions conducted in two schools and two villages

Ongoing initiatives include achieving indirect water savings from service providers (2% savings to date), maintenance of filtration plants at three locations (investment of approximately PKR 5.9 million), and completion of CIP water optimization resulting in savings of 1,278 m³. Additionally, the site has signed an agreement with the Irrigation Department to utilize the canal network for effluent discharge in accordance with regulatory requirements.

**4.1.2** *Value creation resulting from the water stewardship plan shall be evaluated.* ✓ Yes

Comment

The site has effectively demonstrated value creation through financial savings and measurable social and environmental benefits resulting from the projects implemented under its Water Stewardship Plan. Each initiative has been evaluated for economic impact, with documented cost savings contributing to improved operational efficiency.

Through these efforts, the site has enhanced natural capital and ecosystem services, strengthened long-term water security, and reduced exposure to water-related risks. Additionally, the site has significantly contributed to community well-being by improving WASH (Water, Sanitation, and Hygiene) facilities, installing three community water filtration plants, and conducting multiple awareness campaigns in collaboration with local government agencies.

To date, the implementation of water-saving initiatives has generated cumulative financial savings of approximately USD 1,250 per year (equivalent to PKR 0.2 million), reflecting both economic benefits and a positive contribution to sustainable water management and community resilience.

**4.1.3** *The shared value benefits in the catchment shall be identified and where applicable, quantified.* ✓ Yes

Comment

The site has assessed and demonstrated shared value creation resulting from the implementation of its Water Stewardship Plan, reflecting environmental, social, cultural, and economic benefits across both site operations and the wider catchment. These outcomes are achieved through collaborative action with stakeholders and contribute directly to AWS compliance by addressing shared water challenges and enhancing collective water resilience.
Key Quantified Shared Value Benefits Include:

- Free discharge of treated effluent to canal (443,216 m³/year): Supports agricultural irrigation and contributes to catchment water balance.
- High-quality treated water discharge: Enhances canal water quality, supporting downstream users and ecosystems.
- Tree plantation (12,000 trees): Promotes environmental sustainability and improves ecosystem services.
- Water efficiency projects (29,327 m³ reduction in extraction): Contribute to groundwater recharge, improved water balance, and reduced water stress in the catchment.
- Venoi canal desilting: Increases canal flow, ensuring equitable water distribution and improved water access for stakeholders.
- Recovery of cow water for powder milk production (167,073 m³/year): Reduces freshwater demand and enhances catchment water sustainability.
- Recycling of treated effluent for landscaping (27,390 m³/year): Supports water reuse, reducing stress on natural water sources.
- Water-efficient sprinkler nozzles: Help dairy suppliers reduce water consumption and improve agricultural water productivity.
- Moisture sensor-based irrigation (~73,246 m³/year savings): Improves water use efficiency and positively impacts catchment water balance.
- Installation of SBR unit (10 m³/hr capacity): Ensures effective treatment of sewage water before discharge, improving overall water quality in the canal system.

**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

The site has implemented a comprehensive Emergency Preparedness and Corrective/Preventive Action System designed to effectively manage potential emergencies, including floods, earthquakes, chemical spills, fire outbreaks, and security threats. This system includes clearly defined procedures for identifying non-conformities, conducting root cause analyses, evaluating risk levels, implementing corrective and preventive measures, assigning responsibilities, setting timelines, estimating associated costs, and tracking implementation progress on monthly basis.
In alignment with best practices, the site has established a dedicated procedure to ensure readiness and timely response to emergency situations. As a result of these robust controls, the site has maintained an excellent safety performance record, reported zero lost time injuries (LTI) and achieved a 100% first-time-right incident response rate, with no emergency incidents recorded to date. An example of safety incidents has been provided, related to trip hazard, a proper root cause analysis and corrective evidence have bene maintained by the site. Moreover no spillage incident observed during the audit. Following the chemical spill incident of previous finding, the site revised its incident reporting procedures to integrate both safety and environmental aspects. The SHE and Water Stewardship teams now jointly review all chemical-related incidents, supported by enhanced training on spill management and improved containment, spill kits, and inspection routines within the maintenance and emergency response programs.

**4.3** *Evaluate stakeholders' consultation feedback regarding the site's water stewardship performance, including the effectiveness of the site's engagement process.*

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|---|---|---|
| **4.3.1** | *Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.* | No |
| Comment | The site actively engages stakeholders to ensure transparency and promote awareness of its Alliance for Water Stewardship (AWS) initiatives and performance. The most recent stakeholder engagement session, held on June 25–26, 2025, included a presentation of the site's water stewardship progress, outcomes, and future commitments. The AWS performance report has also been published on the company's website and shared during engagement sessions to ensure open access to information and encourage stakeholder participation.<br>To further strengthen collaboration and shared value creation, the site has organized and participated in various initiatives focused on water stewardship, including:<br>• Creating Shared Value (CSV) programs<br>• Tree plantation campaigns<br>• Water governance meetings with government authorities<br>• Training and awareness sessions for stakeholders<br>However, there is no structured system in place to get the feedback from stakeholders after consultation.<br>***Finding No: TNR-021055*** | |
| **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 proactively updated its Water Stewardship Plan to reflect key insights, progress, and lessons learned through ongoing evaluations, demonstrating its commitment to continuous improvement in alignment with AWS principles.<br>I.) In September 2025, the plan was revised to incorporate updated project timelines, refined project details, revised key performance indicators (KPIs), and documented progress for each initiative.<br>II.) The site continues to demonstrate strong commitment to continual improvement by regularly reviewing performance during Management of Review (MOR) sessions and using these insights to update and enhance the Water Stewardship Action 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 Manager S&E is responsible for ensuring compliance with water-related legal requirements, while ultimate accountability lies with the Factory Manager. Based on site comments, the AWS Legal Compliance hierarchy and the site's AWS Team structure were communicated to stakeholders during consultation and disclosure meetings. Moreover, this has been published on the website.
https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/kbf-compliance-hierarchy.pdf
https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/kbf-aws-team.pdf

**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.* ✓ Yes

Comment: The site actively engages a wide range of stakeholders including industrial partners, suppliers, government agencies, and non-governmental organizations through formal communications such as letters, emails, as well as in-person and virtual meetings. During these engagements, the site provides updates on its water stewardship performance, highlighting achievements both within its operations and across the wider catchment.
To ensure transparency and accessibility, the site has also published its Alliance for Water Stewardship (AWS) Plan, including detailed actions and progress updates, on the company's official website.
https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/kbf-wsp-2025.pdf

**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.* ✓ Yes

Comment: The site has demonstrated measurable progress toward its Water Stewardship Plan by successfully implementing various environmental and community-based initiatives. Key achievements include the plantation of 12,000 trees (including 8,750 in collaboration with the EPA), the operation and maintenance of community filtration plants, and the effective functioning of the on-site wastewater treatment system (SBR). The site has also conducted awareness programs in two schools and completed activities such as the Venoi Canal cleaning and WASH best practices implementation. These initiatives collectively strengthen water sustainability, enhance community well-being, and support AWS targets.
https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/site-stewardship-performance.pdf

**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.* ✓ Yes

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|---|---|---|
| Comment | The site has effectively communicated its shared water challenges to stakeholders through structured engagement sessions, where these issues were formally presented and discussed. In addition to direct stakeholder engagement, the site has ensured public transparency by disclosing its shared water challenges on the company's website (see below links). This approach demonstrates the site's commitment to accountability, awareness building, and collaborative action in addressing water-related risks within the catchment.<br>https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/shared-water-challenges-2025.pdf<br>https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/aws-journey-2025.pdf | |
| **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 has actively engaged stakeholders and collaborated closely with public-sector agencies as part of its Alliance for Water Stewardship (AWS) commitments. It has presented its initiatives to encourage stakeholder participation and to strengthen coordination with public-sector efforts. These collaborative activities and outcomes have been regularly discussed and reviewed during stakeholder engagement meetings, demonstrating the site's ongoing commitment to shared water stewardship objectives.<br><br>https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/aws-journey-2025.pdf<br>https://www.nestle.pk/sites/g/files/pydnoa361/files/2025-10/publically-led-initiatives-2025.pdf | |
| **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 | The site representative confirmed that no water-related violations have been reported or occurred in the recent past. | |
| **5.5.2** | *Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.* | Yes |
| Comment | The site representative confirmed that no water-related violations have been reported or occurred in the recent past. | |
| **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 | The site representative confirmed that no water-related violations have been reported or occurred in the recent past. | |

### Previous Findings

| | | |
|---|---|---|
| | *All non-conformities raised in the previous audit have been satisfactorily closed.* | Yes |
| Comment | All non-conformities from previous audit closed, however, some new findings has been observed in the relevant clauses. | |