

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000754

SITE DETAILS

Site: **Samsung Electronics - Suwon**

Address: 129, Samseong-ro, Yeongtong-gu, Suwon-si (Maetan-dong), 16677, Suwon-si, KOREA, REPUBLIC OF

Contact Person: Miyoung Nam

AWS Reference Number: AWS-000615

Site Structure: Single Site

CERTIFICATION DETAILS

Certification status: Certified Platinum

Date of certification decision: 2024-Jan-31

Validity of certificate: 2027-Jan-31

AUDIT DETAILS

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

Audit Type(s): Initial Audit

Audit Start Date: 2023-Oct-30

Lead Auditor: Amit Singh

Audit team participants:

Sa-Myeong Gim

Site Participants:

Chang Han Lee, Other

Byoung Hee Chun, Other

Jing Cheol Kim, Other

Ben Kab Kim, Other

Mi Young Nam, Other

Kyung Gin Choi, Other

Young Seoh Yu, Other

Yeunhee Kim, Other

Ji-Eon Lee, Other

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ADDITIONAL INFO

Summary of Audit Findings: A total of 20 number of findings were raised during the certification audit, 9 minor non-conformities, 11 observations.

The Client is requested to perform a root cause analysis and define corrective actions for each of the non-conformities and to submit these to WSAS within 30 days of receipt of the audit report by 22/01/2024.

Minor non-conformities must be closed out by the time of the next annual audit.

The audit team recommends Certification of Samsung Electronics - Suwon Site at Platinum level pending approval of the corrective actions plan.

CLOSURE OF FINDINGS AND CORRECTIVE ACTION PLAN:

The Client has successfully submitted the corrective action plans addressing all findings. Proof of implementation has been requested for the Minors and this will be evaluated during the Surveillance Audit. The client is requested to upload evidence of implementation prior to the Surveillance Audit.

Scope of Assessment: The scope of services covers the Initial certification audit for assessing conformity of Samsung Electronics - Suwon site against the AWS International Water Stewardship Standard Version 2.

Samsung Electronics's Suwon business site is located in Maetan 3-dong, Yeongtong-gu, Suwon City, Gyeonggi Province, Republic of Korea, in the downstream area of the Paldang Dam in Han River Catchment.

The site receives water supply from the Korea Water Resources Corporation (K-water) through Gwacheon Pressurization Plant which is further treated at water purification plants. In addition to the municipal supply, the site also uses groundwater. The tap water is sourced from Paldang Water Intake Station (Stage 3) in the Han River Catchment and supplied to the site through Seongnam Water Purification Plant.

The domestic wastewater is treated at sewage treatment plant and process wastewater at effluent treatment plants. The same is discharged directly into the Woncheonri Stream. Also, treated sewage is discharged directly into the Woncheonri Stream whereas rainwater is released into the stream without a treatment process.

The audit was conducted onsite from 30th October to 2nd November 2023.

The above mentioned facilities were visited during the site tour and the onsite visit included the assessment of these facilities as part of the audit.

The following external stakeholders were interviewed during the audit:

SCORE

112.00

FINDINGS

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NUMBER OF FINDINGS PER LEVEL

| | |
|-------------|----|
| Observation | 11 |
| Minor | 9 |

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FINDING DETAILS

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| | |
|--------------------|--|
| Finding No: | TNR-008109 |
| Checklist Item No: | 1.1.1 |
| Status: | In Progress - CA plan approved |
| Finding level: | Minor |
| Due date: | 2024-Oct-30 |
| Checklist item: | The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including: <ul style="list-style-type: none">- 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. |
| Findings: | <p>The site also utilises groundwater for usage within the plant premises. But, the groundwater mapping is not done to assess from which aquifer or layer the water is being sourced. The site needs to confirm the source of groundwater, i.e. from where the groundwater is being tapped.</p> <p>The Han River catchment is understood to be too large for the water stewardship activities yet the current physical scope defined as Suwon city is too small as it does not encompass water source and ultimate receiving water body. A relevant sub-catchment has not been defined that would follow hydrology and topography.</p> |
| Corrective action: | <ul style="list-style-type: none">- Supplement the aquifer information for groundwater with geologic investigation data from the same area- Establishing the catchment of groundwater by applying national groundwater information- We will establish the catchment area affected by the Suwon site in relation to water, starting from the large catchment area covering the withdrawal source and the ultimate receiving water body, then the middle catchment area and the sub-catchment area, and gradually establish the direction of our site's water management activities from the small catchment area. <p>(Example) Large catchment area (Han River catchment area), middle catchment area (Paldang Dam ~ Anseong Stream), sub-catchment area (Gwacheon Pressurization Plant ~ Hwangguji Stream)</p> <p>< Preventive Action ></p> <ul style="list-style-type: none">- Obtaining and keeping geotechnical investigations for each new building construction- Periodically updating the catchment information as the site's impact on the catchment changes |

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Evidence of implementation: 1) [NEW] 1.1.1_Geotechnical Investigation Report for R6 in Suwon Digital City (□□□□□□ R6 □□□□ □□□)
2) [NEW] 1.1.1_References in Geotechnical Investigation Report for R6 (□□□□ □□□ □ □□ □□)
3) [NEW] 1.1.1_Groundwater spill points and geotechnical investigations at the Suwon site (□□□ □ □□□ □□ □ □□□□ □□)
4) [NEW] 1.1.1_Identifying the catchment area of groundwater at the Suwon site (□□□□□□ □□□ □□ □□)

Finding No: TNR-008110
Checklist Item No: 1.2.1
Status: In Progress - CA plan approved
Finding level: Minor
Due date: 2024-Oct-30
Checklist item: 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.
Findings: The site should identify and engage with other stakeholders within the catchment for coverage of relevant stakeholder groups including vulnerable, women, minority, and Indigenous people.
Corrective action: - When identifying stakeholders, we will consult with local governments to select vulnerable populations in the region, and we will identify water-related challenges and risks for the selected vulnerable populations and create documents.

< Preventive Action>
- Identifying vulnerable populations in consultation with local governments so that we can objectively determine which populations are vulnerable.

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Finding No: TNR-008153
Checklist Item No: 1.3.3
Status: Open
Finding level: Observation
Due date: 2024-Oct-30
Checklist item: 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.
Findings: The estimated evaporation loss from cooling towers for year 2021 and 2022 is same whereas in actual, the same should be different. Also, the site could capture and estimate the rainfall captured by green area (through run-off coefficient) across the campus.

Finding No: TNR-008379
Checklist Item No: 1.3.6
Status: Open
Finding level: Observation
Checklist item: On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.
Findings: Buildings with groundwater would not be identified as IWRA's using the a definition of an IWRA in the standard and guidance.

Finding No: TNR-008155
Checklist Item No: 1.4.1
Status: Open
Finding level: Observation
Checklist item: The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.
Findings: The site needs to recheck and analyse the data provided by suppliers including a clarity whether the water data received represents total water use by the supplier companies, or water use for Samsung's inputs. For example, annual water consumption of Partner 4 & 9 is not known and even for Partner 14 is quite low which does not seems to be practically feasible.

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|--------------------|--|
| Finding No: | TNR-008157 |
| Checklist Item No: | 1.5.5 |
| Status: | In Progress - CA plan approved |
| Finding level: | Minor |
| Due date: | 2024-Oct-30 |
| Checklist item: | Important Water-Related Areas shall be identified, and where appropriate, mapped, and their status assessed including any threats to people or the natural environment, using scientific information and through stakeholder engagement. |
| Findings: | The site should focus on identifying other relevant IWRA's in the catchment and prioritise the actions based on the condition of the IWRA's. |
| Corrective action: | <ul style="list-style-type: none">- We will identify other IWRAs in the catchment by identifying the importance of each element (environmental, community, cultural, and economic) for each IWRA in accordance with the AWS Guidance, including who it applies to and why it is important. - In addition to the Woncheonri Stream that directly discharge water from the site, the Hwangguji Stream, which is the final confluence of the Woncheonri Stream, will be included in the IWRA, and quarterly status assessments will be conducted in the same way as the Woncheonri Stream.- Setting priorities for action according to IWRA status<ol style="list-style-type: none">1) Gwacheon Pressurization Plant<ul style="list-style-type: none">· In case of abnormal water quality of Paldang Water, send a official document to K-water about our own water quality status and measures.2) Woncheonri Stream/Hwangguji Stream<ul style="list-style-type: none">· Analyzing the impact of our effluents on the stream's water quality if the water quality of the stream is "poor" or below according to the residential environment standards for rivers in the Framework Act on Environmental Policy.· Conducting analysis about the cause in collaboration with river management departments in the local government <p>< Preventive Action ></p> <ul style="list-style-type: none">- Reestablishing IWRAs through annual IWRA identification and updating action activities through monitoring their status. |

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Finding No: TNR-008158
Checklist Item No: 1.5.7
Status: In Progress - CA plan approved
Finding level: Minor
Due date: 2024-Oct-30
Checklist item: The adequacy of available WASH services within the catchment shall be identified.
Findings: As per the data gathered by site, it mentions that the catchment has 100% water supply coverage.

However, in section 1.6 site has identified "vulnerable populations lacking access to safe and sustainable water supply" as a shared water challenge. If this is the case, the site should capture actual adequacy of WASH services within the catchment.

Corrective action: - We will expand the number of people to collect opinions so that water challenges are not identified based on minority opinions, conduct a preliminary explanation of the survey to prevent confusion among stakeholders before the survey to identify water challenges, and derive the water related tasks after conducting an appropriateness review based on the survey results.

< Preventive Action >
- Identifying the adequacy of WASH services in the catchment area by continuously monitoring water supply coverage and deriving representative water challenges from stakeholders.

Finding No: TNR-008161
Checklist Item No: 1.7.1
Status: Open
Finding level: Observation
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 timeframe for each risks have been selected as either of the following:
"Current up to one year"
"1-3 years"
"4-6 years"
"More than 6 years"

It was not clear on what basis the different timeframes are chosen for different risks. For example, for Risk 16 - "Negative media coverage", the site has selected the timeframe as "More than 6 years" - why?

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Finding No: TNR-008166
Checklist Item No: 1.8.4
Status: Open
Finding level: Observation
Due date: 2024-Oct-30
Checklist item: Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.
Findings: The site should also focus on identifying more best practices most relevant to the IWRA's on the basis of the condition of other IWRA's in the catchment.

Finding No: TNR-008168
Checklist Item No: 2.1.1
Status: Open
Finding level: Observation
Due date: 2024-Oct-30
Checklist item: A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments:
- That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes
- That the site implementation will be aligned to and in support of existing catchment sustainability plans
- That the site's stakeholders will be engaged in an open and transparent way
- That the site will allocate resources to implement the Standard.
Findings: The document does not mention the name of the site. The site could focus on looking for more options for disclosing the commitment specifically to the site or including the name of the site in the current document.

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Finding No: TNR-008216
Checklist Item No: 2.3.2
Status: In Progress - CA plan approved
Finding level: Minor
Due date: 2024-Oct-30
Checklist item: A water stewardship plan shall be identified, including for each target:
- How it will be measured and monitored
- Actions to achieve and maintain (or exceed) it
- Planned timeframes to achieve it
- Financial budgets allocated for actions
- Positions of persons responsible for actions and achieving targets
- Where available, note the link between each target and the achievement of best practice to help address shared water challenges and the AWS outcomes.

Findings: The plan includes regular monitoring activities and activities which are already in place or were a one time activity. For example: "Conducting activities to improve WASH status in the basin at least twice a year". Under this target - drinking water was provided to vulnerable groups which was a one time activity and how would this one time activity help in improving the WASH status in the basin. Part of the targets are on implementing actions rather than on what the site wants to achieve by implementing those actions.

Corrective action: - New activities to achieve the targets will be reflected in future Plans instead of one-time activities and activities already in place.
- In the case of providing bottled water to vulnerable populations, we will accurately identify the targets of water-related vulnerable populations and provide bottled water continuously every year, not just once.

< Preventive Action >
- We will periodically update our Stewardship Plan

Finding No: TNR-008172
Checklist Item No: 2.4.1
Status: Open
Finding level: Observation
Due date: 2024-Oct-30
Checklist item: A plan to mitigate or adapt to identified water risks developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.

Findings: Out of the identified 18 water risks, the site needs to develop a plan to mitigate the risks for each identified risk. There are 10 such water risks for which there is no plan.

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| Finding No: | TNR-008201 |
| Checklist Item No: | 3.3.2 |
| Status: | In Progress - CA plan approved |
| Finding level: | Minor |
| Due date: | 2024-Oct-30 |
| Checklist item: | 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. |
| Findings: | <p>There are no specific targets to improve the site's water use efficiency or reduce volumetric total water use.</p> <p>The correlation between the activities performed for reducing water use and the actual water use is not clear as the water consumption (industrial water & tap water) for year 2022 have increased substantially compared to year 2021 even though site has performed activities to improve water use.</p> <p>The site should focus on setting specific targets for reducing total use at plant or improving water use efficiency.</p> |
| Corrective action: | <p>- Targeting an 11% reduction from 2023 usage and identifying water saving items. (to be reflected in the 2024 Water Stewardship Plan)</p> <p>< Preventive Action ></p> <p>- Planning water usage compared to the previous year's usage, taking into account reduction activities such as applying water use improvement items, and providing a clear rationale for any increase in water usage compared to the plan.</p> |
| Finding No: | TNR-008207 |
| Checklist Item No: | 3.7.1 |
| Status: | Open |
| Finding level: | Observation |
| Checklist item: | Evidence that indirect water use targets set in the water stewardship plan, as applicable, have been met shall be quantified. |
| Findings: | The site should also focus on gathering information from the suppliers & service providers to plan improvement of indirect water use. |
| Finding No: | TNR-008211 |
| Checklist Item No: | 3.9.4 |
| Status: | Open |
| Finding level: | Observation |
| Checklist item: | Actions towards achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas shall be implemented. |
| Findings: | The site should focus on identifying more best practices most relevant to improving the condition of other IWRA's wherever required. |

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| Finding No: | TNR-008383 |
| Checklist Item No: | 4.1.1 |
| Status: | In Progress - CA plan approved |
| Finding level: | Minor |
| Due date: | 2024-Oct-30 |
| Checklist item: | Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated. |
| Findings: | The evaluation is mostly whether the actions have been done but insufficient evaluation of what was achieved with the help of those actions (in other words, what difference did the actions make). In the document - Water stewardship plan, there is a column AWS outcomes, in which site has classified the targets as one or more of the AWS outcomes. But, there are no description about how it contributed to the AWS outcomes. |
| Corrective action: | <ul style="list-style-type: none">- We will evaluate what outcomes we have achieved with actions within our Water Stewardship Plan (WSP).- In the future, we will revise the 2024 Outcomes form to include a description of how our water management activities contribute to each AWS Outcome. <p>< Preventive Action ></p> <ul style="list-style-type: none">- Revising the Outcomes form to include the reason for selecting Outcomes. |
| Finding No: | TNR-008384 |
| Checklist Item No: | 4.1.2 |
| Status: | Open |
| Finding level: | Observation |
| Checklist item: | Value creation resulting from the water stewardship plan shall be evaluated. |
| Findings: | In line with the Guidance document, the site should aim to provide a financial water cost-benefit component and report on its financial investment in water stewardship and the services and what are the benefits achieved. |

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Finding No: TNR-008213
Checklist Item No: 4.3.1
Status: In Progress - CA plan approved
Finding level: Minor
Due date: 2024-Oct-30
Checklist item: Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.
Findings: The current approach and wording of the survey does not leave a possibility for stakeholders to comment on separate parts or elements of plan and performance. Stakeholders need to say that the performance overall was not effective if they want to make any comments. The site should engage more with the stakeholders (explore more methods of engaging with stakeholders other than just sharing the survey form and seeking their comments) for consultation on the water stewardship performance.
Corrective action:

- We will revise the survey form to include descriptive questions in addition to multiple-choice questions for accurate feedback on our performance.
- We will organize public hearings to listen to stakeholders' opinions and communicate with them face-to-face in the future.
 - Interacting with the Green Company Practitioners Meeting
 - Communicating with local governments and residents on World Water Day and World Environment Day

< Preventive Action >
- From 2024, we will revise the online survey form to collect stakeholders' opinions in various ways, and also conduct off-line consultations.

Finding No: TNR-008214
Checklist Item No: 4.4.1
Status: Open
Finding level: Observation
Checklist item: 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.
Findings: The site should explore other methods of engagement with stakeholders for attaining their feedback and suggestions so as to incorporate the relevant ones in the water stewardship plan and for collaborative action, as well as to identify the changes to the plan.

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|--------------------|---|
| Finding No: | TNR-008215 |
| Checklist Item No: | 5.3.1 |
| Status: | In Progress - CA plan approved |
| Finding level: | Minor |
| Due date: | 2024-Oct-30 |
| Checklist item: | A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum. |
| Findings: | The quantified performance against the targets have not been disclosed. |
| Corrective action: | <ul style="list-style-type: none">- We will add performance-related content to the company's 2024 Sustainability Report and disclose quantified, detailed performance on the company's website. <p>< Preventive Action ></p> <ul style="list-style-type: none">- We will disclose quantified performance against our targets on the website every year. |

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Report Details

| Report | Value |
|---------------------------|-------------------|
| Report prepared by | Amit Singh |
| Report approved by | Neringa Pumputyte |
| Report approved on (Date) | 22 December 2023 |

Surveillance

Proposed date for next audit
2024-Oct-29

Stakeholder Announcements

| Date of publication | Location |
|---------------------|---|
| 08/09/2023 | WSAS Website |
| 08/09/2023 | AWS Website |
| 14/09/2023 | Mail to Stakeholders Samsung Website |

Comment The link for publication of the Stakeholder Announcement at AWS website is:
<https://a4ws.org/wp-content/uploads/2023/08/AWS-000615-Samsung-Suwon-2023-Stakeholder-Announcement.pdf>

The link for publication of the Stakeholder Announcement at WSAS website is:
<https://watersas.org/wp-content/uploads/2023/08/AWS-000615-Stakeholder-Announcement-Suwon-R1.pdf>

The link for publication of the Stakeholder Announcement at Samsung website is:
https://www.samsung.com/sec/sustainability/policy-file/AYIzAYv6xTEALYNW/AWS_outcomes_2023_kr.pdf

The site also shared the Stakeholder Announcement to different Stakeholders via email.

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Catchment Information

Catchment Information

Samsung Electronics - Suwon site is located at Maetan 3-dong, Yeongtong-gu, Suwon City, Gyeonggi Province, Republic of Korea, downstream from the Paldang Dam in Han River Catchment.

The Industrial water flow from initial source to ultimate water receiving body is as follows : Paldang suction well (Step 2) → Gwacheon Pressurization Plant → Suwon Plant → Woncheonri Stream.

The Tap water flow from initial source to ultimate water receiving body is as follows : Paldang suction well (Step 3) → Seongnam water purification plant → Suwon Plant → Woncheonri Stream.



- Paldang Dam : Water service provider
- Gwacheon Pressurization Plant : Water service provider
- Seongnam Water Purification Plant : Water service provider
- Woncheonri Stream : Waste water discharge point

Catchment.png

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Client Description and Site Details

Client/Site Background

Samsung Electronics - Suwon site also being known as "Samsung Digital City" is located at Maetan 3-dong, Yeongtong-gu, Suwon City, Gyeonggi Province, Republic of Korea.

The site receives water supply from the Korea Water Resources Corporation (K-water) through Gwacheon Pressurization Plant which is further treated at water purification plants. In addition to the municipal supply, the site also uses groundwater. The tap water is sourced from Paldang Water Intake Station (Stage 3) in the Han River Catchment and supplied to the site through Seongnam Water Purification Plant.

The domestic wastewater is treated at sewage treatment plant and process wastewater at effluent treatment plants. The same is discharged directly into the Woncheonri Stream. Also, treated sewage is discharged directly into the Woncheonri Stream whereas rainwater is released into the stream without a treatment process.



Site Boundary.png

Summary of Shared Water Challenges

Summary of Shared Water Challenges

The site has identified the following shared water challenges based on survey with stakeholders:

- Risk of drought and water scarcity
- Destruction of rivers, lakes, streams and wetlands
- Water pollution (e.g. sewage, wastewater)
- Community marginalised from a reliable and sustainable water supply
- Disruption of aquatic ecosystems and declining biodiversity"

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| 0.1 General Requirements for Single Sites, Multi-Sites and Groups | |
|---|---|
| 0.1.1 | <i>Eligibility Criteria</i> |
| 0.1.1.1 | <i>The site(s) occupy one catchment OR an exception has been granted.</i> ✔ Yes |
| Comment | The site is located in a single catchment, the Han River Catchment, Republic of Korea. |
| 0.1.1.2 | <i>The scope of the proposed certification shall be under the control of a single management system.</i> ✔ Yes |
| Comment | The site and scope of the proposed certification is under the control of a single management system. |
| 0.1.1.3 | <i>The scope of the proposed certification shall be homogeneous with respect to primary production system, water management, product or service range, and the main market structures.</i> ✔ Yes |
| Comment | The site and scope of the proposed certification is homogeneous with respect to the primary production system, water management, product range and the main market structures. |


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1 STEP 1: GATHER AND UNDERSTAND

1.1 *Gather information to define the site's physical scope for water stewardship purposes, including: its operational boundaries; the water sources from which the site draws; the locations to which the site returns its discharges; and the catchment(s) that the site affect(s) and upon which it is reliant.*

1.1.1 *The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including:*

- Site boundaries;
- Water-related infrastructure, including piping network, owned or managed by the site or its parent organization;
- Any water sources providing water to the site that are owned or managed by the site or its parent organization;
- Water service provider (if applicable) and its ultimate water source;
- Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies;
- Catchment(s) that the site affect(s) and is reliant upon for water.

 in progress

Comment The site has identified Han River Catchment as the site is located in the downstream area of the Paldang Dam in Han River catchment. The physical scope of site has been defined as Suwon city area.

The site boundaries have been defined as the Suwon site is located at Maetan 3-dong, Yeongtong-gu, Suwon City, Gyeonggi Province.

The Industrial water and wastewater flow from initial source to ultimate water receiving body is as follows :
Paldang Water Intake Station (Stage 2) → Gwacheon Pressurization Plant → Suwon Plant → Woncheonri Stream.

The Industrial water is treated at the water purification plant and used for manufacturing processes (e.g., for cooling towers and facilities), as well as for drinking water and sanitary purposes.

The Tap water and wastewater flow from initial source to ultimate water receiving body is as follows :
Paldang Water Intake Station (Stage 3) → Seongnam water purification plant → Suwon Plant → Woncheonri Stream

The Tap water is used as a supplement when industrial water is insufficient.

Apart from industrial water and tap water, the Groundwater is also used by site for landscaping and restroom flushing, while rainwater is used for landscaping during the rainy season and in summer and other wise being released into the Woncheonri stream.


Finding No: TNR-008109

1.2 *Understand relevant stakeholders, their water related challenges, and the site's ability to influence beyond its boundaries.*

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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.

 in progress

Comment The site had conducted an stakeholder survey involving government authorities, regulatory bodies, local residents, suppliers, neighboring companies, customers, NGOs, and environmental organizations to identify the stakeholders and their water-related challenges. Based on the survey regarding the stakeholders' water-related interest and influence as well as internal reviews, the site had identified the following as stakeholders:


- Executives and staff members
- Suwon City Government
- Yeongtong-gu District Office
- Korea Water Resources Corporation
- Local residents
- Han River Basin Environmental Office
- NGOs
- Neighboring companies, and its supplier companies.

The Stakeholder Power, Interest, and Engagement Matrix was also created including a stakeholder database to enlist data including - how stakeholders are connected to the organization, water-related concerns or challenges faced by stakeholders, and communication methods with stakeholders.

Based on the survey, stakeholder locations and their IWRA's were mapped. Gwacheon Pressurization Plant (water-related facilities) and Woncheonri Stream were designated as IWRA's.

Finding No: TNR-008110


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 current and potential degree of influence between the site and stakeholders have been identified, based on which a Stakeholder Influence and Engagement Matrix was prepared. Stakeholders were categorized as Partner, Involve, Consult, Inform, and Reciprocate to determine respective engagement methods.

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

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Comment The site has mentioned that to protect the lives and company assets from various risks that may occur at the site, the site had prepared "Suwon Digital City Crisis Response Manual" in 2011 and have been continuously updating it. The manual includes crisis response systems, incident reporting systems, and emergency response scenarios. Various incidents such as earthquakes, heavy snowfall, floods, water supply disruptions, and earthquake-induced pipeline leaks were covered in water-related emergency scenarios. Each scenario specifies the action sequence, procedures, minimum necessary resources, time required, responsible department, and relevant department.

The Water Resource Office conducts quarterly training to effectively respond to water-related emergencies. The training includes response to four emergency situations: chemical leaks from hose failures of tank trucks, leaks in tap water supply pipes in the cafeteria, spills of wastewater treatment chemicals, and high-concentration wastewater inflow.

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

Comment The site records water intake and discharge data in the G-EHS system for effective management of water consumption and treatment in the product manufacturing. This allows real-time monitoring of water intake, treated water, water usage, reuse, wastewater treatment, wastewater discharge, and water discharge in quantity.

The site has mapped the water inflows to the campus (tap water, industrial water, ground water and rain water) and water supply/distribution to various process and domestic streams alongwith the effluent generation and discharge outside the plant boundary.

The site has mapped the evaporation from Boiler section and Cooling Towers.

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.* 🔍
Obs.

Comment The site has prepared, tabulated and quantified the water balance for year 2021 and 2022. The site monitors and aggregates monthly data for total inflow, total outflow and evaporation loss.

The estimated evaporation loss from cooling towers for year 2021 and 2022 is same whereas in actual, the same should be different. Also, the site could capture and estimate the rainfall captured by green area (through run-off coefficient) across the campus.

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

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Comment The water quality of industrial water is monitored by referencing the data published weekly by the Water Environment Information System (<https://water.nier.go.kr>) and monthly data provided by the Korea Water Resources Corporation. The water quality parameters for industrial water include COD, BOD, DO, TN, TP, chlorophyll, and TOC.

The quality of tap water is also monitored every month by referencing data published on the Suwon City Waterworks Office website (<https://water.suwon.go.kr>). The Suwon City Waterworks Office conducts water quality analysis for 7 parameters daily, 19 parameters weekly, and 62 parameters monthly, and monthly analysis data is available to public.

The groundwater quality is assessed by an external contractor. The water quality analysis is done for various parameters such as total coliforms, pH, nitrate nitrogen, chloride ions, and 17 other parameters. The results are managed on a quarterly basis and documented in Excel sheets.


The site is obligated to install Tele-Monitoring Systems (TMS) on discharge points to monitor the water quality of discharges in real-time and report it to the government. Additionally, TMS is voluntarily installed for wastewater raw water and sewage for real-time water quality monitoring, while the installation is not required.

The water quality of effluents from the site is analyzed by an external contractor. They conduct water quality analyses for 62 parameters including BOD, SS, T-N, and T-P every month and issue measurement records. The measurement data is uploaded to the internal G-EHS system and managed on a monthly basis.

The water quality of sewage from the site is analyzed by an external contractor. They conduct water quality analyses for 8 parameters including BOD, SS, ecological toxicity, and total coliform bacteria monthly and issue measurement records. The measurement data is uploaded to the internal G-EHS system and managed on a monthly basis.


In each quarter, water quality assessments are conducted at four locations near the site's discharge points along the Woncheonri Stream by an external contractor. The parameters include BOD, COD, SS, T-P, T-N, chloride ions, and sulfate ions, and the data is documented in spreadsheets and managed on a quarterly basis.

The water quality of the water discharged into Woncheonri Stream flows into Asan Lake through Hwangguji Stream is also quantified. The water quality of Asan Lake is monitored by referencing the data published monthly by the Water Environment Information System (<https://water.nier.go.kr>). The water quality parameters for Asan Lake include COD, BOD, DO, TN, TP, chlorophyll a, and TOC.

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 potential sources of pollution (alongwith locations of the buildings where chemicals and hazardous substances are being used) which include chemical storage and usage facilities, hazardous goods warehouses, wastewater treatment plants, and waste storage facilities. They are mapped on the company's site map for special care.




The site has tabulated chemicals and Hazardous Substances alongwith the locations of the buildings where these are used.

1.3.6 *On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.* 
Obs.

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| | | |
|--------------|--|---|
| Comment | <p>The site has identified the following as onsite IWRA's:</p> <ol style="list-style-type: none"> 1. Buildings with Groundwater flow 2. Ponds within the campus <p>The site has categorised the condition of IWRA's as "Good condition requiring little work apart from protection". The site analyses groundwater quality and captures photographs of the IWRA's and evaluates the condition of IWRA's every quarter. The water quality analysis is done for a total of 17 parameters including total coliform, hydrogen ion concentration, nitrate nitrogen and chloride ion, and provide water quality data to the site.</p> | |
| 1.3.7 | <p><i>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.</i></p> |  Yes |
| Comment | <p>The Water-related costs include operational costs regarding wastewater treatment plants, sewage treatment plants, water purification plants, industrial water supply (Paldang Reservoir), tap water supply as well as water-related facility investment and maintenance costs. For 2022, the water related expenses have been identified for the following:</p> <ol style="list-style-type: none"> 1) Wastewater treatment plant operation costs 2) Sewage treatment plant operation costs 3) Water purification plant operation costs 4) Industrial water (Paldang Reservoir) supply costs 5) Tap water supply costs 6) Water-related facility investment and maintenance costs <p>There is no revenue generated from the sale of water.</p> <p>The site has also identified Social, Cultural, Environmental, and Economic Water-related Values generated by site.</p> | |
| 1.3.8 | <p><i>Levels of access and adequacy of WASH at the site shall be identified.</i></p> |  Yes |
| Comment | <p>The site has ensured that all employees and visitors have access to safe and clean water as well as sanitation and health facilities. The WASH-related facilities available at the site include water dispensers, toilets, shower rooms, and hygiene facilities. The number of each facility at the site has been quantified.</p> <p>The site has conducted a self-assessment of WASH status using the WBCSD Revised Self-Assessment Tool. The assessment consists of six categories, and each category is scored out of 2.0 points. Out of six categories, three of them are relevant to the site (workplace water supply, workplace sanitation, workplace hygiene), and the results are as follows:</p> <ol style="list-style-type: none"> 1) Workplace water supply: 2.0 out of 2.0 points 2) Workplace sanitation: 1.7 3) Workplace hygiene: 2.0 <p>The above confirms that adequate WASH services are provided at the site.</p> | |
| 1.4 | <p><i>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.</i></p> | |
| 1.4.1 | <p><i>The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.</i></p> |  Obs. |

Audit Number: AO-000754

Comment The Samsung EHS Group identifies the status of water consumption by major supplier companies at each site in Samsung Electronics.

- Last year, there was a survey on water use for 19 suppliers of the Suwon site. Among the 19 companies surveyed, 12 companies accounted for more than 1% of the total purchase amount, and 6 companies were located within the site's catchment (Han River Catchment).
 - As a result of the survey, the total water consumption for all 19 suppliers amounted to 416 744 tons. The water consumption for 6 supplier companies based in the Han River Catchment amounted to 80 556 tons, while the water consumption for 13 companies situated outside the site's catchment totaled 336 188 tons.

In addition to the above, Samsung Electronics conducts the RBA assessment every year for its major suppliers at each site. The RBA assessment includes various issues including water quality (e.g., reduction of water pollutants and energy use, management of pollution sources and discharges). As a result of the inspection, it has been confirmed that none of the suppliers of Suwon site have any water quality issues.

- The EHS Group conducts water resource use inspections to identify instances in supplier companies related to environmental incidents such as water contamination and pollutants.
 - In addition, the site is identifying the upstream and downstream within the Han River catchment and investigating the water quality of those streams.

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 The site has outsourced various services such as cafes, restaurants, bakeries, flower shops, side dish stores, and opticians within the site campus for the convenience of employees. The annual water consumption is measured using flow meters for each building.

The outsourced services are available in 11 buildings at the site, and the water use of these buildings in 2022 was quantified. The water use of the outsourced services within the campus site is included in the total water use of the Suwon site.

In addition to the above, the Suwon site uses 1 product transport vehicle, 372 commuting buses, and 2 shuttle buses, and the annual water usage due to washing of these vehicles is approximately 821 tons.

Also, the site washes 100 kg loads of laundry every month through an outsourcing company, and the annual water usage is about 6.6 tons.

1.4.3 *Advanced Indicator*
The embedded water use of primary inputs in catchment(s) of origin shall be quantified. ✔
Yes

Comment The Samsung EHS Group has identified the status of water consumption by major supplier companies at each site in Samsung Electronics.

Last year, the site has conducted a survey on water use for 19 suppliers of the Suwon site. Among the 19 companies surveyed, the total water consumption for 13 companies situated outside the site's catchment accounted for 336 188 tons of water.

However, the site should focus on reviewing the data shared by the suppliers.

Score 7

1.5 *Gather water-related data for the catchment, including water governance, water balance, water quality, Important Water-Related Areas, infrastructure, and WASH*

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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 identified catchment plans and water-related public policies for water intake and discharge within the catchment area, considering rivers, streams, dams, water intake facilities, water treatment plants, and pressurization plant. In particular, since 2011, the Ministry of Environment has established the Water Reuse, Basic Plan and from 2022, Suwon City has been implementing the 'Sustainable Urban Environment Improvement Project,' in which Samsung Electronics has been engaged in operating rainwater harvesting and reusing water facilities on site, in alignment with the governmental policies.

The major government-led initiatives in the catchment area include the Han River Environment Monitoring Committee, Suwon Sustainable City Foundation's Water Environment Center, Suwon Saemaul Undong Center, Integrated Ecology & Environment Management Council for Han River Estuary, Korean Federation for Environmental Movement, Suwon Environmental Movement Center, and the Citizen Network for Restoring Woncheonri Stream. These initiatives involve various stakeholders in the catchment area, working together to address shared water-related challenges and enhance sustainability of water resources. The Suwon site has been part of the initiative of Citizen Network for Restoring Woncheonri Stream since 2002, participating in activities such as water quality monitoring, vegetation project, and environmental cleanup. Additionally, in collaboration with Suwon Sustainable City Foundation, the site has been participating in eradication of ecological invasive species and river cleanup volunteer activities, fostering communication and cooperation with the stakeholders.

The site has identified the following opportunities for water stewardship collective action by monitoring water governance initiatives in the Han River catchment area:

- 1) Woncheonri Stream cleanup activity: Employees at Samsung Electronics Suwon site engage in riverbank cleanup activities on a quarterly basis in collaboration with Suwon City and Suwon Sustainable City Foundation.
- 2) Removal of ecological invasive species: Employees participate in volunteer activities to remove ecological invasive species every year in collaboration with Suwon Sustainable City Foundation and the Suwon Watershed Network.

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

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Comment The Water-related laws applicable to the site include the Water Environment Conservation Act, the Sewerage Act, and the Act on Promotion and Support of Water. The personnel in charge of water-related compliance in the EHS Group's environment division who monitors changes in regulations and policies (e.g., water-related laws and regulations, local government orders) and the emergence of new regulatory agencies on a daily basis using an internal monitoring system.

The site signs a yearly contract with the Korea Water Resources Corporation which specifies a daily allocation from Paldang Reservoir. The site has the flexibility to amend the contract regarding water withdrawals from Paldang Reservoir six times a year based on seasonal environmental changes. The site manages its daily allocation (tons/day) on contract and monthly consumption (tons/month) using an internal management system.

There are laws governing the water quality of discharge applicable to the site. For wastewater discharge, installation of the Tele-Monitoring System (TMS) is mandatory for monitoring water quality in real-time, as well as the report to the government. While it is not legally required, the site has installed TMS also for wastewater raw water and sewage raw water as well as their treated water to monitor compliance with water quality standards.

The Suwon site strives to comply with water laws and regulations by operating a Compliance Calendar. Compliance Calendar is a system that registers the implementation details, start date, expected completion date, related basis, and responsible department for the items that the Suwon site must implement among water laws and manages whether they are carried out within the deadline. If the legal compliance person does not fulfill the task, system request to proceed with the implementation task registered in the system via email.

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



Yes

Audit Number: AO-000754

Comment To monitor catchment water balance, the plant collects data on water inflows, storages, and outflows from all major water supply and storage facilities within the catchment area. The data is available at Korea Water Resources Corporation's Water Information Portal (https://www.water.or.kr/kor/menu/sub.do?menuId=13_91_93) and the Korea Hydro & Nuclear Power's National Water Resource Management Comprehensive Information System (<http://www.wamis.go.kr>).

The water storage and supply facilities in the Han River catchment is divided into five categories as below:

- 1) Multi-purpose Dams: Soyang River Dam, Chungju Dam, Hoengseong Dam
- 2) Water Dams: Gwangdong Dam, Dalbang Dam
- 3) Multi-purpose Weirs: Gangcheon Weir, Yeoju Weir, Ipo Weir, Gyeongin Ara Waterway Weir, Gylhyeon Weir
- 4) Flood Control Reservoirs: Peace Dam Control Reservoir, Gunnam Control Reservoir, Hantan River Control Reservoir
- 5) Power Generation Dams: Goesan Dam, Hwacheon Dam, Chuncheon Dam, Uiam Dam, Cheongpyeong Dam, Paldang Dam

The water balance of the water storage and supply facilities in the Han River catchment in 2021 and 2022 is as follows. Water balance changes refer to changes due to factors such as ground water, evapotranspiration, and soil moisture:

- 2021 Water Balance
42,951,860,237 tons (Inflows) = 43,025,826,499 tons (Outflows) + 1,055,161,638 tons (Changes) + (-) 1,129,127,900 tons (Changes in storage volume)
- 2022 Water Balance
83,741,888,362 tons (Inflows) = 83,119,048,906 tons (Outflows) + 1,411,851,456 tons (Changes) + (-) 789,012,000 tons (Changes in storage volume)

Water Balance Variance:

- The water balance status of Paldang Dam and the Han River holds great importance for the site's business operations, as they serve as the primary water sources for both industrial and tap water. As such, their water balance as well as annual and seasonal variance are monitored in real-time with the reference to the websites of the Korea Water Resources Corporation and the Korea Hydro and Nuclear Power.
- In 2022, the inflows to Paldang Dam increased by 110% compared to 2021, reaching 20 958 194 880 tons. In 2022, the inflows to the Han River increased by 95% year-on-year, amounting to 83 741 888 362 tons. For the last three years, the Han River catchment where the site is located has not faced water shortage or drought risks, and therefore, water scarcity has not been quantified.

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



Yes

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Comment The site regularly monitors water quality data for its catchment area - the Han River Catchment, using the Water Environment Information System website (<https://water.nier.go.kr/web/onecPopUp>) provided by the Ministry of Environment. This website provides access to water quality data for various rivers and streams across different regions. The parameters assessed include COD, BOD, DO, TN, TP, chloride a, and TOC, with measurements occurring from once to four times a month.

Additionally, water quality assessments are conducted at four locations near the site's discharge points along the Woncheonri Stream by an external contractor. The parameters examined include BOD, COD, SS, T-P, T-N, chloride ions, and sulfate ions, and these measurements are carried out on a quarterly basis.

The site compiles the catchment data obtained from the website into spreadsheets to check quarterly seasonal variations in water quality parameters. At present, there have been no identified water quality risks that could be a threat to human health or the environment.

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.* 🚧 in progress

Comment The site has identified following as IWRA's:

1. Gwacheon Pumping Station, which supplies industrial water to the factory
2. Woncheonri Stream, where site's wastewater is discharged

Out of the identified IWRA's, the Gwacheon Pumping Station should be categorised as water related infrastructure rather than IWRA.

The condition/status are being evaluated as - good, not good or poor and the same is being assessed every quarter based on photographs of these sites.

The water quality assessments are conducted quarterly at four locations near the site's discharge points along the Woncheonri Stream by an external contractor. The parameters include BOD, COD, SS, T-P, T-N, chloride ions, and sulfate ions, and the data is documented in spreadsheets and managed on a quarterly basis and also engaged in activities such as quarterly riverbank cleanups near the Woncheonri Stream and annual activities to remove invasive plant species in the surrounding water environment.

The site should focus on identifying other relevant IWRA's in the catchment and prioritise the actions based on the condition of the IWRA's.

Finding No: TNR-008157

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

Audit Number: AO-000754


Comment The site has identified the following key water-related infrastructures:

- Paldang Dam
- Paldang 1 Intake Station
- Paldang 2 Intake Station
- Seongnam Water Purification Plant
- Gwacheon Booster Station
- Dongmoon Booster Station
- Woncheon-ri Stream

Overall scale, condition and any related upgrade projects in response to climate events are identified for each facility. Through the ongoing monitoring of water-related infrastructure, the site's current and potential water supply status is assessed. It also strives to enhance water resource sustainability through continuous communication and cooperation with relevant public agencies.

The site has evaluated the baseline and future water risks for each facility using the WRI Aqueduct tool. The baseline assessment includes 13 items such as water stress, water scarcity, seasonal variability, coastal eutrophication potential, and unimproved/no drinking water, while the future assessment includes four items: water stress, water depletion, water demand, and seasonal variability. It was found that all facilities are at risk of eutrophication according to the baseline assessment. In the future risk assessment, Gwacheon Booster Station and Woncheon Stream are at risk of water stress, and all facilities are at risk of seasonal variability.

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

 in progress

Comment Suwon Metropolitan Waterworks supplies the water abstracted from the Paldang Intake Station to the local community after the treatment at the Seongnam Water Purification Plant. The water used by local residents is sent to wastewater treatment facilities through connected sewage systems for treatment.

The Ministry of Environment annually conducts surveys on the water supply and sewerage status of all regions in South Korea, and the results are disclosed to the public. According to the 2021 Water Supply and Sewerage Statistics published by the Ministry of Environment in 2022, Suwon City had a water supply population of 1 216 459, boasting a 100% water supply coverage rate. Furthermore, the sewerage treatment population stood at 1 215 127, with a sewerage treatment coverage rate of 99.8%.

In Suwon City, there are a total of 264 open restrooms and public toilets accessible to local residents. Information regarding their locations and opening hours can be found on Suwon City's website, allowing local residents to access relevant details.
(https://www.suwon.go.kr/sw-www/deptHome/dep_env/env_03/env_04_04/env_04_04_02.jsp)

In Suwon City, there are a total of 93 public drinking water facility accessible to local residents. Information regarding their locations and water quality can be found on Suwon City's website, allowing local residents to access relevant details
(https://www.suwon.go.kr/web/board/BD_board.view.do?seq=20221109140238470&bbsCd=1115&pageType=&showSummaryYn=N&delDesc=&q_ctgCd=&q_currPage=1&q_sortName=&q_sortOrder=&q_rowPerPage=10&q_searchKeyType=T1TLE___1002&q_searchKey=&q_searchVal=)

Finding No: TNR-008158

1.5.8 *Advanced Indicator*
Efforts by the site to support and undertake catchment level water-related data collection shall be identified.

 Yes


Audit Number: AO-000754

Comment The site conducts quarterly monitoring of water quality at four locations near the Woncheonri Stream, through an external contractor. Water quality parameters examined include BOD, COD, SS, T-P, T-N, chloride ions, and sulfate ions. The monitoring outcomes are communicated to NGOs, its stakeholders within the catchment, via email. Furthermore, the results are included in the Green Business Report and shared with government agencies, including the Han River Basin Environmental Office and the Korea Environmental Industry & Technology Institute.

The Suwon site is collecting Groundwater quality check status by city, province and catchment data, through the Groundwater Survey Annual Report (p.9, p.110, p.163, p.170, p.296, p.329) published by the Ministry of Environment and Korea Water Resources Corporation.

The site should also focus on gathering information of other IWRA's in the catchment.

Score 5

1.5.9 *Advanced Indicator*
The adequacy of WASH provision within the catchments of origin of primary inputs shall be identified. No 


Comment The site has identified 13 suppliers (out of a total of 19 suppliers) outside the site's catchment which are located in the United States, China, Vietnam, Japan, Hong Kong and 1 supplier within the country.

For the supplier within the country located at Yeongsan River catchments, the water supply coverage rate among domestic suppliers ranged from 99.9% or higher, with an average coverage rate of 99.8%. Moreover, the sewerage coverage rate was 100%, with an average sewerage coverage rate of 100%. Based on the data, it can be concluded that there are no WASH-related issues. The related information is available on the govt. website (<https://www.localdata.go.kr/lif/lifeCtacDataView.do?menuNo=40003>).

For other suppliers, the site has gathered information through JMP website (<https://washdata.org>), which provides information on the global WASH status. Through this website, the site has gathered information on the status of access to clean drinking water and hygienic sanitation services at the country level.

The site should engage with the suppliers to gather information on the catchment level to get representative data of the catchment and wherever there is a gap, activities could be planned for adequate WASH services.

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 had conducted an stakeholder survey targeting government agencies, regulatory bodies, local residents, supplier companies, neighboring businesses, customers, NGOs, and environmental protection organizations. Through this survey, the site has identified the following shared water challenges:
 - Five water challenges were shared among stakeholders, including drought and water scarcity risks, water pollution such as wastewater and sewage, vulnerable populations lacking access to safe and sustainable water supply, destruction of aquatic ecosystems and biodiversity decline, and the destruction of rivers, lakes, streams, and wetlands.

The shared water challenges have been prioritized based on significance and urgency. Water quality contamination issues such as wastewater and sewage, shared by businesses near the site, local residents, and supplier companies, were ranked as the top priority. Drought and water scarcity risks, shared by government agencies, regulatory bodies, and other stakeholders, were ranked as the second priority (Priority 2).




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| 1.6.2 | <i>Initiatives to address shared water challenges shall be identified.</i> |  Yes |
| Comment | The site had listed the initiatives being implemented as initiatives to address each of the shared water challenges. | |
| 1.6.3 | <i>Advanced Indicator Future water issues shall be identified, including anticipated impacts and trends</i> |  Yes |
| Comment | <p>The anticipated impacts and trends in the site's catchment were identified, regarding population changes, industrial shifts, climate trends, and the status of water-related infrastructure facilities.</p> <ul style="list-style-type: none"> - Population Changes: As of April 2023, the population of Gyeonggi Province is 14 003 527 people, and it is projected to reach its peak at 14 790 812 people in 2040, followed by a decrease of approximately 3% to 14 353 146 people by 2050. - Industrial Shifts: Within the city of Suwon where the site is located, there are three industrial complexes, with most industries having low water intensity, such as electrical equipment manufacturing and machinery manufacturing. - Climate Trends: Average temperature, precipitation, and rainfall intensity are expected to increase under both SSP1-2.6 and SSP5-8.5 scenarios. - Water-Related Infrastructure Facilities: Using the WRI Aqueduct tool, the site has assessed the baseline and future water risk for facilities such as Paldang Intake Station, Paldang 2 Intake Station, Seongnam Water Purification Plant, Gwacheon Booster Station, and Woncheonri Stream. The assessment revealed that these facilities are currently exposed to water stress risk. Additionally, Gwacheon Booster Station and Woncheonri Stream are expected to continue facing water stress risk, and all facilities are expected to be exposed to seasonal variability risk in the future. - According to the 1st Han River Catchment Water Management Comprehensive Plan published by the Han River Presidential Water Committee in 2022, the climate in the Han River catchment area will rise by 2.6 ~ 7.0 Celcius degrees in 2030, precipitation will increase by +3 ~ 14% in 2030, BOD and T-P It is expected that the total amount will increase. In addition, water shortages were expected to occur mainly in some vulnerable areas such as islands, coasts, mountains, and catchment directly downstream of dams. | |
| Score | 3 | |
| 1.6.4 | <i>Advanced Indicator Potential water-related social impacts from the site shall be identified, resulting in a social impact assessment with a particular focus on water.</i> |  No |
| Comment | There are no social impacts identified. | |
| 1.7 | <i>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.</i> | |
| 1.7.1 | <i>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.</i> |  Obs. |




Audit Number: AO-000754

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| Comment | <p>The severity of impact and likelihood of 18 water risk factors were assessed based on the results of a water risk survey targeting public water-related organizations and the opinions from the site. These risks were categorized into four groups: physical risks (general), physical risks (site), regulatory risks, and reputational risks. Prioritization of water risks was determined in consideration of the impact and likelihood assessments, along with their business and financial impact. Prioritization was classified into 'High', 'Medium-high', 'Medium', 'Medium-low', and 'Low'. Water risk factors with a priority rating of 'Medium' or higher were subject to the plan to address identified water risks. Water risks rated 'Medium' or higher are as follows:</p> <ol style="list-style-type: none"> 1) Water scarcity 2) Sudden infrastructure failure, such as breaks or leaks, leading to interruption of water supply 3) Contamination outbreak in water source or supply (e.g., from pollution in reservoirs or leaky pipework) 4) Inadequate access to water, sanitation, and hygiene services 5) Restriction of water supply due to drought 6) Sudden infrastructure failure, such as breaks or leaks, leading to interruption of groundwater supply 7) Contamination outbreak in groundwater 8) Poor water quality due to failure of on-site wastewater treatment systems | |
| 1.7.2 | <p><i>Water-related opportunities shall be identified, including how the site may participate, assessment and prioritization of potential savings, and business opportunities.</i></p> |  Yes |
| Comment | <p>The site has identified and prioritized six major business opportunities in terms of how the site may participate, cost assessment of potential savings, and magnitude of potential financial impact. Prioritization was categorized as 'High', 'Medium-high', 'Medium', 'Medium-low', and 'Low'. The following opportunities rated as 'Medium-high' or higher are as follows:</p> <ol style="list-style-type: none"> 1) Boiler condensate water reuse 2) Utilization of groundwater leaks for landscaping, firefighting, and toilet flushing 3) Utilization of treated wastewater for landscaping 4) Retreatment of wastewater discharge for reuse as process water | |
| 1.8 | <p><i>Understand best practice towards achieving AWS outcomes: Determining sectoral best practices having a local/catchment, regional, or national relevance.</i></p> | |
| 1.8.1 | <p><i>Relevant catchment best practice for water governance shall be identified.</i></p> |  Yes |
| Comment | <p>The site has gathered and documented best practices in terms of water governance by examining the websites, annual reports, news articles, and other sources of companies operating in the same catchment (Han River catchment) and the same business sector (electronics). The following activities were identified as best practices for water governance:</p> <ul style="list-style-type: none"> - Participation in a community program that supports environmental technology in SMEs, with a focus on operation of pollution emission facilities and technology support for improvement of facilities handling hazardous chemicals - Operation of water resource improvement Task Force consisting of water/wastewater management personnel and quality assurance team in each factory & provision of incentives to factories which identify and manage effective water-saving initiatives - Hosting green tours for a group of students, providing education about biodiversity conservation, environmental protection, and related corporate initiatives | |
| 1.8.2 | <p><i>Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.</i></p> |  Yes |

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| Comment | <p>The site has gathered and documented best practices in terms of water governance by examining the websites, annual reports, news articles, and other sources of companies operating in the same catchment (Han River catchment) and the same business sector (electronics). The following activities were identified as best practices for Water Balance:</p> <ul style="list-style-type: none"> - Reusing concentrate, rinse water, and discharge water from wastewater discharges. - Operating rainwater harvesting and treatment systems to utilize rainwater in various production processes and reduce water consumption. - Installing water-saving equipment. | |
| 1.8.3 | <p><i>Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.</i></p> |  Yes |
| Comment | <p>Some examples of activities identified as best practices for water quality are:</p> <ul style="list-style-type: none"> - Wastewater is discharged according to the internal standards which are more stringent (within 30%) than legal regulations. - Real-time TMS-based monitoring of sewage and wastewater quality. - Replacing sensors used in wastewater and sewage treatment plants. | |
| 1.8.4 | <p><i>Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.</i></p> |  Obs. |
| Comment | <p>Some examples of activities identified as best practices for IWRA's are:</p> <ul style="list-style-type: none"> - Implementing 'One Company, One River' campaign focusing on the removal of ecosystem-disturbing plants, cleanup activities, and ecological landscape preservation. - Removal of invasive plant species to protect biodiversity in collaboration with relevant stakeholders. - Conducting regular status assessments for onsite and offsite IWRA's. | |
| 1.8.5 | <p><i>Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.</i></p> |  Yes |
| Comment | <p>Some examples of activities identified as best practices for WASH are:</p> <ul style="list-style-type: none"> - Providing disaster relief drinking water to residents in water-scarce areas and vulnerable populations. - Operating water purifiers in the information center at the site to provide clean and safe drinking water to visitors and nearby residents. - Registering the restroom at the site's main gate as a public restroom for Suwon City. - Conducting bacteria tests for water purifiers installed in the business site. - Regular inspection and maintenance of in-house toilets and bidets. | |

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| 2 | STEP 2: COMMIT & PLAN - Commit to be a responsible water steward and develop a Water Stewardship Plan | |
| 2.1 | <i>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.</i> | |
| 2.1.1 | <i>A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments:</i> <ul style="list-style-type: none"> - That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes - That the site implementation will be aligned to and in support of existing catchment sustainability plans - That the site's stakeholders will be engaged in an open and transparent way - That the site will allocate resources to implement the Standard. |  Obs. |
| Comment | At the corporate level for Samsung Electronics DX division (which includes Suwon site), the AWS declaration was prepared (covering the required four commitments) and was publicly disclosed in June 2023 on the policy and document page on its website (https://www.samsung.com/sec/sustainability/digital-library/policy-document). | |
| 2.1.2 | <i>Advanced Indicator</i> <i>A statement that explicitly covers all requirements set out in Indicator 2.1.1 and is signed by the organization's senior-most executive or governance body and publicly disclosed shall be identified.</i> |  Yes |
| Comment | The AWS declaration was signed by the senior executive of Samsung Electronics' DX division - CSO, Chief Safety Officer & Vice President, and was publicly disclosed via the Samsung Electronics website in June 2023 (https://www.samsung.com/sec/sustainability/digital-library/policy-document). | |
| Score | 1 | |
| 2.2 | <i>Develop and document a process to achieve and maintain legal and regulatory compliance.</i> | |
| 2.2.1 | <i>The system to maintain compliance obligations for water and wastewater management shall be identified, including:</i> <ul style="list-style-type: none"> - Identification of responsible persons/positions within facility organizational structure - Process for submissions to regulatory agencies. |  Yes |

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Comment The site has prepared a chart with name of persons and responsibilities including the compliances with Water Regulations. The Environment Division under Suwon EHS Group is responsible for water-related tasks, such as water intake and operation of wastewater treatment facilities.

The site has set up a compliance calendar to comply with water laws and regulations. Compliance Calendar is a system that registers the implementation details, start date, expected completion date, related basis, and responsible department for the items that the Suwon site must implement among water laws and manages whether they are carried out within the deadline. If the legal compliance person does not fulfill the task, system request to proceed with the implementation task registered in the system via email.

Samsung Electronics' Suwon site provides information related to water resources, its compliance status, and the designated individuals responsible for regulatory compliance to relevant government agencies.

The site submits environmental data to the Nationwide Pollution Source Inspection website (<https://wems.nier.go.kr>). The information subject to submission includes general status, wastewater treatment and discharge, water usage and wastewater treatment, wastewater pollution levels, discharge facility details, their installation status, and preventive facility operation status.

The site submits environmental information, including water usage volume, water pollutant discharge, chemical substance discharge, and compliance status with environmental regulations, through the Environmental Information Disclosure System website (<https://www.env-info.kr/member/main/main.do>).


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 defined the organization's mission, vision, and goals for three plants (Suwon, Gumi and Gwangju) and established a water stewardship strategy accordingly.

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.


in progress

Comment The site has developed a water stewardship plan for each target, considering the following factors:

- positions of persons responsible for actions
- actions to achieve the target
- planned timeframes to achieve the targets
- financial budgets allocated for few actions

Finding No: TNR-008216

2.3.3 *Advanced Indicator*
The site's partnership/water stewardship activities with other sites within the same catchment (which may or may not be under the same organisational ownership) shall be identified and described.


Yes

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Comment The site has engaged with the Suwon Sustainable City Foundation and the Suwon Watershed Network to combat invasive species.

The employees at the site engage in quarterly riverbank cleanup efforts, working in conjunction with Suwon City and the Suwon Sustainable City Foundation to mitigate underwater and riverbank pollution. The Suwon site takes charge of coordinating cleanup segments, organizing plans, and providing necessary equipment like tongs, gloves, waste bags, and waders. In June 2022, approximately 1.5 kilometers of the riverbank was covered, stretching from Samsung Bridge to Baeknyeong Bridge.

In commemoration of World Water Day in March 2022, site had carried out an activity to plant plants on the waterside of Woncheonri Stream together with Suwon City Hall, Suwon Watershed Network and Suwon Sustainable City Foundation.

Suwon City utilizes water sourced from the river for road spraying in response to high-concentration fine dust and heatwaves. In June 2019, Suwon City and Samsung Electronics' Suwon site entered into a business agreement to ensure the prompt supply of reclaimed water, with an aim to effectively control fine dust and heatwaves. Subsequently, an investment of approximately KRW 320 million was made to establish reclaimed water supply facilities. Following the installation of these reclaimed water supply facilities, the site has consistently provided reclaimed water to Suwon City.

Starting from March 2023, the site has been supplying reclaimed water spraying trucks to six large-scale construction sites to reduce airborne dust, in collaboration with the Yeongtong District Office and five construction companies. The Yeongtong District Office evaluated the suitability of using reclaimed water and selected the recipients of the service.

In March 2023, in commemoration of World Water Day, the site collaborated with Suwon City to donate 1 500 liters of drinking water (equivalent to 3,000 bottles of 500mL bottled water) to vulnerable populations within the catchment region. Suwon City was in charge of the recipient selection process and the overall project management, while the site covered all associated costs and conducted the delivery of drinking water to the recipients.

Score 4

2.3.4 *Advanced Indicator*

The site's partnership/water stewardship activities with other sites in another catchment(s) (either under same corporate structure or with another corporate site) shall be identified.

 No

Comment The site has identified the following water stewardship activities outside the catchment:

The Suwon site is registered as a member of the Green Business Council (Gyeonggi and Seoul Branch). The Green Business Council holds working-level meetings, workshops, and meetings every year in conjunction with the Han River Basin Environmental Office to discuss environmental-related legislation and policy trends, provide guidance on legal compliance and enforcement cases, and facilitate the exchange of environmental information and best practices among member companies.

In addition, site is also carrying out activities for the vulnerable populations by paying annual membership fees for the association's activities every year. Furthermore, in March 2023, as part of World Water Day commemorations and to support regions in the southern islands of the country facing water scarcity due to source depletion, we collaborated with Green Business Council members and the Han River Basin Environmental Office to donate 3.4 tons of drinking water (equivalent to 1,700 bottles of 2L bottled water) to Nohwa Island in Wando County, South Jeolla Province. In April 2023, 17.6 tons (2L, 8,820 bottles) of bottled water was donated to Ongjin county, Incheon Metropolitan City, suffering from severe drought."

However, these activities are not really partnerships/water stewardship activities with other sites as per AWS guidance, and they are conducted in the same catchment.

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2.3.5 *Advanced Indicator* ✔ Yes
Stakeholder consensus shall be sought on the site's water stewardship plan. Consensus should be achieved on at least one target. A list of targets that have consensus and in which stakeholders are involved shall be identified.

Comment The site had disclosed the Water Stewardship Plan to stakeholders, including employees, government agencies, public organizations, supplier companies, NGOs, and neighboring businesses. Additionally, a survey was conducted to inquire whether the site's activities outlined in the plan effectively contribute to the AWS's five primary outcomes (water governance, water balance, water quality, IWRAs, and WASH). All stakeholders responded positively to the survey, indicating that the site's water stewardship plan well aligns with the five primary aims. Therefore, it can be concluded that an agreement was reached among stakeholders regarding the site's water stewardship plan.

Score 7

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.* 🔍 Obs.

Comment To identify water risk factors of site, the site had referred to the 1st Han River Catchment Water Management Comprehensive Plan and the CDP Water Security Questionnaire (Questions W4.2).

- The site conducted a water risk survey on public water-related organizations and gathered input from the Suwon site to assess the severity of impact and likelihood for 18 water-related risk factors.

- Based on the evaluation of both the severity of impact and likelihood, along with their business and financial implications, the site had prioritized the identified water risks into five categories: refer to indicator 1.7.1.

The 18 water risks including climate change risks have been categorized into four groups: physical risks (general), physical risks (site), regulatory risks, and reputational risks. General physical risks refer to risks involving public water facilities and include examples such as water scarcity, sudden infrastructure failure, such as breaks or leaks, leading to interruption of water supply, contamination outbreak in water source or supply (e.g., from pollution in reservoir, or leaky pipework), and restriction of water supply due to drought.

Out of the identified 18 water risks, the site needs to develop a plan to mitigate the risks for each identified risk. There are 10 such water risks for which there is no plan.

2.4.2 *Advanced Indicator* 🚩 No
A plan to mitigate or adapt to water risks associated with climate change projections developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.

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Comment The 18 water risks including climate change risks have been categorized into four groups: physical risks (general), physical risks (site), regulatory risks, and reputational risks. General physical risks refer to risks involving public water facilities and include examples such as water scarcity, sudden infrastructure failure, such as breaks or leaks, leading to interruption of water supply, contamination outbreak in water source or supply (e.g., from pollution in reservoir, or leaky pipework), and restriction of water supply due to drought.

Climate change risks include extreme natural events (e.g., earthquake, typhoon, freezing pipes, and extreme cold), drought, flood, and heavy precipitation. Among these, the risk of drought in the site's catchment was evaluated as 'Medium.' As part of a plan to address the identified risk, measures have been developed, including: water reuse, installation of water-saving facilities at the site, and reclaimed water supply to Suwon city and private construction sites.

However, out of the identified 18 water risks, the site needs to develop a plan to mitigate the risks for each identified risk. There are 10 such water risks for which there is no plan.

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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 Paldang Water Supply Association have been established in collaboration with Samsung Electro-Mechanics, and Sungmin Corporation to collectively receive Paldang water through a dedicated pipeline. The association has established a social media channel to share water quality information related to Paldang water. Furthermore, the association shares issues arising at the water source via email for collective action of member companies. Samsung Suwon site, as the representative company of the Paldang Water Supply Association, engages in communication with the Korea Water Resources Corporation, which supplies water from Paldang Reservoir, to disseminate information to member companies and make proposals to the Korea Water Resources Corporation in case of water supply issues. In June 2023, the site alerted member companies to potential water shortages due to routine electrical equipment inspections.

The Green Business Council (Gyeonggi and Seoul Branch), in partnership with the Han River Basin Environmental Office, conducts annual working-level meetings and workshops. These gatherings serve as forums to discuss environmental-related legislation and policy trends, provide guidance on legal compliance and enforcement cases, and facilitate the exchange of environmental information and best practices among member companies. Furthermore, these meetings foster discussions between Green Business Council member companies and the Han River Basin Environmental Office regarding issues and suggestions pertaining to green company initiatives.

During the first-quarter working meeting in February 2023, the most recent legal regulations and compliance inspection cases were shared. Additionally, a meeting was organized between member companies and the Han River Basin Environmental Office to plan World Water Day events, including the donation of drinking water to vulnerable populations.

In November 2022, the Suwon site actively participated in the Green Business Council's working-level meeting hosted by the Han River Basin Environmental Office. During this meeting, the Suwon site presented its best practice of "Free Reusing Water Supply for Dust Control on Roads" to neighboring companies within the same catchment area. In recognition of this best practice, Samsung Electronics' Suwon site was honored as an exemplary green company by the Korea Environmental Industry & Technology Institute under the Ministry of Environment.

Furthermore, in March 2023, as part of World Water Day commemorations and to support regions in the southern islands of the country facing water scarcity due to source depletion, the site collaborated with Green Business Council members and the Han River Basin Environmental Office to donate 3.4 tons of drinking water (equivalent to 1 700 bottles of 2 L bottled water) to Nohwa Island in Wando County, South Jeolla Province.

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

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Comment Suwon City used to utilise water sourced from the river for road spraying in response to high-concentration fine dust and heatwaves. In June 2019, Suwon City and Samsung Electronics' Suwon site entered into a business agreement to ensure the prompt supply of treated wastewater, with an aim to effectively control fine dust and heatwaves. Subsequently, a capital investment was made to establish water supply facilities. Following the installation of these supply facilities, the site has consistently provided treated wastewater to Suwon City. Furthermore, it submits quarterly water quality test results to the city authorities, including parameters such as total coliforms, turbidity, BOD, odor, and pH. For the year 2022, the quantity of reusing water supplied to Suwon City had reached a total of 1 694 tons.

Since March 2023, the site has been supplying treated wastewater via spraying trucks to six large-scale construction sites to reduce airborne dust, in collaboration with the Yeongtong District Office and five construction companies. The Yeongtong District Office evaluated the suitability of using reusing water and selected the recipients of the service. The site is responsible for operating the reusing water supply facility and managing water treatment facilities to ensure adequate water quality. The estimated volume of reusing water to be supplied to these construction sites in 2023 is 12 210 tons.

In March 2023, in commemoration of World Water Day, the site collaborated with Suwon City to donate 1,500 liters of drinking water (equivalent to 3,000 bottles of 500mL bottled water) to vulnerable populations within the catchment region. Suwon City was in charge of the recipient selection process and the overall project management, while the site covered all associated costs and conducted the delivery of drinking water to the recipients.

Providing Clean Drinking Water to Visitors and Local Residents: the Suwon facility has installed and operated a water purifier in the main entrance information center to provide clean and safe drinking water to the site's visitors and local residents within the catchment. To ensure water quality, the water purifier is cleaned and sanitized every two months, and a checkup sheet is attached to each water dispenser to track and confirm the maintenance status. Additionally, drinking water is sampled for quarterly bacteria tests.

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

Comment To strengthen its water resource management capabilities with the goal of water stewardship, the Suwon site has established the AWS Task Force Team which is composed of members from the EHS Group and the Infrastructure Group as well as external consultants. The AWS TF Team aims to efficiently pursue data collection, develop AWS plans, execute them, foster external communication, explore collaboration opportunities, evaluate performance, and facilitate disclosure. The key activities of the Suwon facility's AWS TF Team include the following:

- 1) Conducting three times of catchment stakeholders surveys.
- 2) Benchmarking water-related best practices from other companies in the same catchment or business sector (e.g., TSMC, Career, Apple, etc.).
- 3) Sharing water-related best practices with the other affiliated sites in Gumi and Gwangju.
- 4) Regularly sharing progress and future plans with the headquarters, Gumi, and Gwangju sites.
- 5) Quarterly AWS meetings with the headquarters, Gumi, and Gwangju sites.





To develop wastewater reuse technologies at the site, the Suwon Infrastructure Technology Group, in collaboration with members from the headquarters' Production Technology Research Center, Circular Economy Research Center, and Global EHS Center, established the Wastewater Reuse Council. This council assesses opportunities for wastewater reuse by evaluating wastewater treatment methods for improving wastewater quality and reviewing water quality test results.

Score 2

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| 3.1.4 | <i>Advanced Indicator</i> <i>Evidence from a representative range of stakeholders showing consensus that the site is seen as positively contributing to the good water governance of the catchment shall be identified.</i> |  Yes |
| Comment | The site has prepared an AWS Outcomes Evaluation sheet, which includes information on water stewardship performance and outcomes, and shared it with stakeholders, including employees, government agencies, public organizations, suppliers, NGOs, and neighboring businesses. The AWS Outcomes Evaluation covers topics such as performance against targets, contributions to water stewardship outcomes, and value creation. Stakeholders have been encouraged to provide feedback through surveys on the effectiveness of the site's water stewardship performance. All participating stakeholders have responded positively, acknowledging that the Suwon site has made a positive contribution to water governance. | |
| Score | 2 | |
| 3.2 | <i>Implement system to comply with water-related legal and regulatory requirements and respect water rights.</i> | |
| 3.2.1 | <i>A process to verify full legal and regulatory compliance shall be implemented.</i> |  Yes |
| Comment | <p>Samsung electronics operates a legal standard change management committee at the headquarters level to review the enactment and water-related laws every month and share them with the CSO, Chief Safety Officer. In this committee, organizations affiliated with G-EHS (EHS Technology Group, Infra Technology Group, Law Compliance, etc.) participate to periodically review, amend, and supplement the promulgation of laws and legislation/administration.</p> <p>The Suwon site complies with water laws and regulations by operating a Compliance Calendar. Compliance Calendar is a system that registers the implementation details, start date, expected completion date, related basis, and responsible department for the items that the Suwon site must implement among water laws and manages whether they are carried out within the deadline. If the legal compliance person does not fulfill the task, system request to proceed with the implementation task registered in the system via email.</p> <p>Additionally, through the Environmental Information Disclosure System operated by the Korea Environmental Industry & Technology Institute (https://www.env-info.kr), the site discloses annual data on environmental accidents, complaints and responses, cases of non-payment of discharge fees, and violations of environmental regulations. There have been no records of violations of water-related regulations (Water Environment Conservation Act) from 2017 to 2022.</p> | |
| 3.2.2 | <i>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.</i> |  Yes |
| Comment | There are no water related rights legal or regulatory requirements which Suwon site should comply with. | |
| 3.3 | <i>Implement plan to achieve site water balance targets.</i> | |
| 3.3.1 | <i>Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified.</i> |  Yes |

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- Comment The site has identified status of progress towards meeting water balance targets. As of September 2023, the average progress rate (%) for the 15 action plans is 82%, and the progress status for each action plan is listed below:
- 1) Conducting activities to raise employee awareness of water saving and delivering water treatment training at least once a year:
 - Holding an employee water saving idea contest: 100%
 - Carrying out water-related employee trainings: 100%
 - 2) Achieving 15% of water reuse rate within the company:
 - Reusing screen wash water in the water treatment process: 75%
 - Reusing wash water used for deodorisation tower at the wastewater treatment plant: 75%
 - Reusing boiler steam condensate: 75%
 - Monitoring on water consumptions: 75%
 - 3) Water replenishment by increasing greywater consumption:
 - Supplying greywater for fugitive dust spraying at private construction sites: 100%
 - Continuing to supply greywater for road sprinkling: 75%
 - Starting daily monitoring of greywater consumption: 75%
 - 4) Improving water use efficiency:
 - Installation of water saving flush switches for toilets in women's washrooms: 100%
 - Using rainwater in the garden and landscape: 75%
 - Water consumption monitoring by building in the business sites: 75%
 - Daily inspection of water supply facilities and corrective actions: 75%
 - Wastewater reuse committee meetings: 75%
 - Sharing daily water consumptions: 75%

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.* 👉 in progress

Comment Through a first-phase stakeholder survey, five water related challenges were identified which included droughts, water scarcity, water pollution from sewage and wastewater, marginalized groups excluded from safe and sustainable water supply, degradation of aquatic ecosystems and biodiversity decline, and the destruction of rivers, lakes, streams, and wetlands.

The site has identified certain targets to address the risk due to water scarcity which mentioned the following:

- Improving water use efficiency
- Achieving 15% of water reuse rate within the company

The activities performed by site for water reuse have resulted in continuous increase in reuse of water comparing data from 2021 to 2023. The total rainwater use in year 2021 amounted to 1 234 m3 and in year 2022 amounted to 1 965 m3.

The site has installed water-saving faucets and toilets in three buildings planned for expansion or renovation (Smart Manufacturing Building, Antenna Tambour Building, and Product Safety Testing Lab). Additionally, in 2023, water-saving dual-flush devices were installed in 94 units of women's restroom toilets. The site has estimated the water saving through the above implementations.

However, the total water consumption of site has been increasing comparing water consumption values for year 2021 and year 2022.

Finding No: TNR-008201


3.3.3 *Legally-binding documentation, if applicable, for the re-allocation of water to social, cultural or environmental needs shall be identified.* ✅ Yes

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Comment There are no legally binding regulations on site for reallocation of water to social, cultural or environmental needs. However, site has signed an MoU with relevant authorities for supplying site greywater for fugitive dust spraying at private construction sites and for road sprinkling.


3.3.4 *Advanced Indicator* 
Yes
The total volume of water voluntarily re-allocated (from site water savings) for social, cultural and environmental needs shall be quantified.

Comment In June 2019, Suwon City and Samsung Electronics' Suwon site entered into a business agreement to ensure the prompt supply of reclaimed water, with an aim to effectively control fine dust and heatwaves. Subsequently, the site had invested to establish reclaimed water supply facilities. Following the installation of these reclaimed water supply facilities, the site has consistently provided reclaimed water to Suwon City. For the year 2022, the quantity of reclaimed water supplied to Suwon City was 1 694 tons and 8 134 tons for year 2021.

Since March 2023, the site has been supplying reclaimed water spraying trucks to six large-scale construction sites to reduce airborne dust, in collaboration with the Yeongtong District Office and five construction companies. The estimated volume of reclaimed water to be supplied to these construction sites in 2023 is above 12 000 tons.

Score 6

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

Audit Number: AO-000754

- Comment Most of the targets identified by site are which the site has already been implementing and are based on calendar year timelines i.e. as the months complete for a year, the progress achievement is calculated. The site has listed the following achievement against the progress:
- 1) Achieving 100% water-related regulatory compliance:
 - Efforts in response to internal and external compliance inspection & achieving zero legal violations: 50%
 - Monitoring of regulatory changes such as legislative revisions and notices: 50%
 - Managing water pollutant concentrations below 30% of legal standards & conducting risk analysis: 50%
 - 2) Achieving zero legal penalties:
 - Compliance inspections and internal reporting: 50%
 - 3) Achieving 100% satisfaction regarding the quality of reclaimed water supplied to local community in Suwon City for fine dust and heatwave mitigation:
 - Preventive maintenance inspections for reclaimed water supply facilities (e.g., pumps, pipes, etc.): 50%
 - Stable water management: Monitoring of water quality and quantity & related data submission to Suwon City: 50%
 - 4) Monitoring of water quality & achieving 100% compliance with the site's standards:
 - Real-time TMS monitoring of wastewater: 50%
 - Maintenance of TMS wastewater measurement instruments: 50%
 - Water quality monitoring of the Paldang Reservoir: 50%
 - Outsourced measurement of wastewater pollutants: 50%
 - Monitoring of water quality measurement results & risk analysis: 50%
 - Installation of a liquid activated carbon injection system for reducing wastewater pollutant concentrations: 30%
 - Replacement of measurement sensors for wastewater treatment plant: 50%
 - Expansion of sewage treatment chemical injection tanks: 50%
 - Replacement of measurement sensors for sewage treatment plant: 50%
 - 5) Maintaining treatment efficiency of non-point source pollution reduction facility over 80%:
 - Verification of treatment efficiency at the non-point source pollution reduction facility: 0%
 - Maintenance of non-point source pollution reduction facilities: 100%
 - Dredging work for non-point source pollution reduction facilities: 0%

3.4.2 *Where water quality is a shared water challenge, continual improvement to achieve best practice for the site's effluent shall be identified and where applicable, quantified.* ✔
Yes

Comment Through a first-phase stakeholder survey, five water challenges were identified as shared concerns among stakeholders: drought and water scarcity risks, water pollution from sewage and wastewater, marginalized groups excluded from safe and sustainable water supply, degradation of aquatic ecosystems and biodiversity decline, and the destruction of rivers, lakes, streams, and wetlands.

A TMS system has been installed at wastewater and sewage treatment plants to continuously monitor compliance with internal water quality standards and report relevant data to the government.

The site has set more stringent targets for site water effluents, i.e. within 30% of legal limits.

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

Audit Number: AO-000754

Comment The site treats its wastewater, ensuring that pollutant concentrations remain below 30% of the permitted limits set by legal standards. This proactive approach minimizes the adverse impact of its discharges on the water quality and aquatic ecosystem of the Woncheonri Stream. The site conducts quarterly monitoring of meteorological conditions, atmospheric conditions, water quality, noise levels, and vibrations at four locations near the Woncheonri Stream, through an external contractor. Water quality parameters examined include BOD, COD, SS, T-P, T-N, chloride ions, and sulfate ions. The monitoring outcomes are communicated to NGOs, and stakeholders within the catchment, via email. Furthermore, the results are included in the Green Business Report and shared with government agencies, including the Han River Basin Environmental Office and the Korea Environmental Industry & Technology Institute. Sharing water-related data with the stakeholders (NGOs and government agencies) serves to inform them about the status of the nearby aquatic ecosystems and facilitates collaborative actions in the catchment in case of any incidents.

The employees at the site engage in quarterly riverbank cleanup efforts, working in conjunction with Suwon City and the Suwon Sustainable City Foundation to mitigate underwater and riverbank pollution, covering approximately 1.5 kilometers of the riverbank, stretching from Samsung Bridge to Baeknyeong Bridge.

Every year, employees engage in volunteer activities to combat invasive species in partnership with the Suwon Sustainable City Foundation and the Suwon Watershed Network. In June 2022, employees successfully eliminated two invasive species (Japanese knotweed and Asian hop) from the Woncheonri Stream. Furthermore, in August 2023, employees took part in another removal effort, targeting stems and roots of Japanese knotweed and thorny gourds, by walking from the site's main gate to the Sin-dong riverside park.

3.5.2 *Advanced Indicator* 
Yes
Evidence of completed restoration of non-functioning or severely degraded Important Water-Related Areas including where appropriate cultural values from a site-selected baseline date shall be identified. Restored areas may be outside of the site, but within the catchment.

Comment The site initiated a project aimed at restoring the ecosystem of the Woncheonri stream. This endeavor was undertaken to enhance water quality and create a more eco-friendly environment. The restoration research was carried out in three phases from 1995 to 2003.


The first phase of research, from 1995 to 1996, involved a fundamental survey of the Woncheonri Stream, research into water quality improvement at its primary source, and research on water quality improvement of the Woncheonri Stream.

The second phase, from 1996 to 1998, focused on improving water quality in the upper reaches of the Woncheon Reservoir and Sindae Reservoir, developing strategies, and conducting impact assessment of land development projects in the stream's vicinity.

The third phase, from 2002 to 2003, encompassed a basic survey for the restoration of the Woncheonri Stream's ecosystem, ecological surveys of the stream, and the establishment of a citizen network dedicated to its restoration. As a result, the water quality of the Woncheonri Stream showed significant improvement compared to previous conditions.

In 2004, it was recognized as an exemplary case at an OECD meeting held in France and was featured in the Ministry of Environment's guidelines for the successful 'One Company, One River' campaign. Since then, the site continues to maintain the restored ecosystem of the stream through the ongoing restoration efforts.

Score 6

3.5.3 *Advanced Indicator* 
Yes
Evidence from a representative range of stakeholders showing consensus that the site is seen as positively contributing to the healthy status of Important Water-Related Areas in the catchment shall be identified.

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000754

Comment The site had shared the AWS outcomes evaluation, including water stewardship performance, with stakeholders, including employees, government agencies, public institutions, suppliers, NGOs, and neighboring companies. The AWS outcomes evaluation encompasses aspects such as performance against targets, contributions to achieving water stewardship outcomes, and value creation. We have disclosed the AWS outcomes evaluation to the stakeholders and gathered their feedback through surveys. All participating stakeholders responded positively, stating that the site has made a positive contribution to IWRAs maintenance and improvement.

Score 2

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 had conducted a self-assessment of WASH status using the WBCSD Revised Self-Assessment Tool. The assessment consists of six categories, and each category is scored out of 2.0 points. Out of six categories, three of them are relevant to the site (workplace water supply, workplace sanitation, workplace hygiene), and the results are as follows:

- 1) Workplace water supply: 2.0 out of 2.0 points
- 2) Workplace sanitation: 1.7
- 3) Workplace hygiene: 2.0

Three urinals are provided for every 45 male employees and three toilets for 45 male employees. Additionally, ten toilets are provided for every 45 female employees. Therefore, it satisfies the WBCSD standard of providing 2 toilets and urinals per 45 male workers and 4 toilets per 50 female workers.

The site had provided evidence of adequate WASH services within the premises.

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 The Ministry of Environment annually conducts surveys on the water supply and sewerage status of all regions in South Korea, and the results are disclosed to the public. According to the 2021 Water Supply and Sewerage Statistics published by the Ministry of Environment in 2022, Suwon City had a water supply population of 1 216 459, boasting a 100% water supply coverage rate. Furthermore, the sewerage treatment population stood at 1 215 127, with a sewerage treatment coverage rate of 99.8%. With both water supply and sewerage treatment rates surpassing 99%, it seems that the site is not impinging on human rights as well as traditional access rights to safe water and sanitation.

The site is in compliance with the water use/quality regulations.

3.6.3 *Advanced Indicator
A list of actions taken to support the provision to stakeholders in the catchment of access to safe drinking water, adequate sanitation and hygiene awareness shall be identified.* ✔
Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000754

Comment In March 2023, in commemoration of World Water Day, the site collaborated with Suwon City to donate 1 500 liters of drinking water (equivalent to 3 000 bottles of 500 mL bottled water) to vulnerable populations within the catchment region. Suwon City was in charge of the recipient selection process and the overall project management, while the site covered all associated costs and conducted the delivery of drinking water to the recipients.

To improve access to WASH services for stakeholders near the site, the restrooms at the main entrance information center at the site have been registered as public restrooms in Suwon City. The facility includes four toilets, four urinals, and two water basins in men's restrooms, and four toilets, and two water basins in women's restrooms. The Suwon site regularly maintains the restrooms to ensure that stakeholders have access to clean facilities. Suwon City has also posted signage to enhance local residents' access to public restrooms.

The Suwon facility has installed and operates a water purifier at the main entrance information center to provide clean and safe drinking water to the site's visitors and local residents. To ensure water quality, the water purifier is cleaned and sanitized every two months, and a checkup sheet is attached to each water dispenser to track and confirm the maintenance status. In addition, the site also conducts bacterial tests on the water purifying dispensers at least once every quarter.

Score 5

3.6.4 *Advanced Indicator:* In catchments where WASH has been identified as a shared water challenge, evidence of efforts taken with relevant public-sector agencies to share information and to advocate for change to address access to safe drinking water and sanitation shall be identified. 🚩 No

Comment During first-phase stakeholder survey, five water challenges were identified as shared concerns among stakeholders which included marginalized groups excluded from safe and sustainable water supply.

The site should also focus on identifying the locations where these issues are so as to take action to address the access to safe drinking water and sanitation.

The site has performed some actions mentioned in 3.6.3. But, these actions does not completely cover the address the access to safe drinking water and sanitation.

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.* 🔍 Obs.

Comment As of June 2023, the average progress rate of the four action plans stands at 33.0%, with the progress status for each action plan specified below.

- 1) Conducting engagement with suppliers at least twice:
 - Survey of participating companies in the Supplier Water Stewardship Improvement Consortium: 100%
 - Conducting water resource training for ESG divisions of the supplier companies: 33%
 - Supplier water use survey: 0%
 - Promoting the site's water stewardship best practices & related training: 0%

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

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000754

Comment Samsung Electronics G-EHS Center conducts water conservation training for suppliers in collaboration with the Shared Growth Cooperation Center and the Cooperative Society ESG Division. The training program consists of three sessions and involves a total of 28 suppliers, including those within and outside the site's catchment area. The purpose of this training is to address climate change-induced water risks and enhance water stewardship capabilities of suppliers.

- In May 2023, the first session was conducted on the theme of 'Global Trends in Water Conservation.' The education covered increased global interest in water risk management by global leading companies, and their long-term water goals and declarations, as well as Samsung Electronics' initiative to achieve 100% water replenishment by 2030.
- The second session, held in July 2023, focused on 'Introduction to AWS Certification,' and introduced global companies' internal and external water stewardship strategies, improvement of water stewardship system through AWS certification, the advanced water resource management, and Samsung Electronics' progress on the AWS certification regarding its DX Division's three domestic business sites.

In March 2023, a survey was conducted to assess the interest of the five suppliers of the site in participating in water resource management improvement programs. Among the suppliers surveyed, one that supplies printed circuit boards (PCBs) and is located within the site's catchment area, expressed an interest in participation.

In June 2023, an on-site visit was arranged at a third parties site to evaluate the status of their wastewater treatment facilities, environmental licenses and permits, and emergency response training. During the evaluation, two areas requiring improvement were identified. The first involves replacing the existing COD measurement instruments with TOC measurement devices to align with the updated regulatory standards for organic substances in wastewater discharge. The second area entails the installation of dual-flush valves in their toilets to reduce water consumption. It is anticipated that 2 liters of water will be saved per each flush.

3.7.3

Advanced Indicator
Actions taken to address water related risks and challenges related to indirect water use outside the catchment shall be documented and evaluated.




Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)






Audit Number: AO-000754

| | |
|--------------|---|
| Comment | <p>Samsung Electronics G-EHS Center conducts water conservation training for suppliers in collaboration with the Shared Growth Cooperation Center and the Cooperative Society ESG Division. The training program consists of three sessions and involves a total of 28 suppliers, including those within and outside the site's catchment area.</p> <p>- In May 2023, the first session was conducted on the theme of 'Global Trends in Water Conservation.' The education covered increased global interest in water risk management by global leading companies, and their long-term water goals and declarations, as well as Samsung Electronics' initiative to achieve 100% water replenishment by 2030.</p> <p>- The second session, held in July 2023, focused on 'Introduction to AWS Certification,' and introduced global companies' internal and external water stewardship strategies, improvement of water stewardship system through AWS certification, the advanced water resource management, and Samsung Electronics' progress on the AWS certification regarding its DX Division's three domestic business sites.</p> <p>Samsung Electronics has established its own RBA evaluation criteria, which are used to regularly assess its suppliers. These evaluations cover various aspects, including water-related criteria such as pollution prevention, resource conservation, and water pollution. Each criterion is rated as 'Conformance,' 'Priority,' 'Major,' 'Minor,' or 'N/A' based on the supplier's adherence to the standards. The assessment criteria for water-related items are as follows:</p> <p>C2) Pollution Prevention & Resource Conservation: Resource management assessment practices, establishment and achievement of resource conservation goals. C7) Water Pollution: Regular monitoring of water quality at wastewater discharge facilities, facility maintenance, maintenance of operation logs, and completion of mandatory education by facility managers.</p> |
| Score | 5 |
| 3.8 | <i>Implement plan to engage with and notify the owners of any shared water-related infrastructure of any concerns the site may have.</i> |
| 3.8.1 | <i>Evidence of engagement, and the key messages relayed with confirmation of receipt, shall be identified.</i>  Yes |
| Comment | <p>The Paldang Water Supply Association was established in collaboration with Samsung Electro-Mechanics, and Sungmin Corporation, which all receive water supply from Paldang Reservoir through a dedicated pipeline. The association has established a social media channel to share water quality information related to Paldang water. Furthermore, the association shares issues arising at the water source via email for collective action of member companies.</p> |
| 3.9 | <i>Implement actions to achieve best practice towards AWS outcomes: continually improve towards achieving sectoral best practice having a local/catchment, regional, or national relevance.</i> |
| 3.9.1 | <i>Actions towards achieving best practice, related to water governance, as applicable, shall be implemented.</i>  Yes |
| Comment | <p>The Suwon site has established an AWS Task Force Team with the aim of achieving best practices in water governance. The TF team actively supports suppliers' water stewardship and conducts environmental and water resource education programs for university students and other activities within the Suwon city.</p> |
| 3.9.2 | <i>Actions towards achieving best practice, related to targets in terms of water balance shall be implemented.</i>  Yes |

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000754

| | | |
|--------------|---|--|
| Comment | The site has made various efforts to achieve best practices which include the following: - transforming a portion of wastewater into treated water for use in screens and scrubber tower facilities - installing rainwater harvesting systems for landscaping purposes - installing water efficient flushes in women toilets to optimize water consumption | |
| 3.9.3 | <i>Actions towards achieving best practice, related to targets in terms of water quality shall be implemented.</i> |  Yes |
| Comment | The following water quality best practices were implemented: - To achieve best practices in water quality, the site established internal water quality standards (more stringent than legal standards) for pollutants in the effluents from sewage and wastewater treatment plants, which maintain pollutant concentrations below 30% of the legal standards. - Realtime TMS monitoring of wastewater | |
| 3.9.4 | <i>Actions towards achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas shall be implemented.</i> |  Obs. |
| Comment | To achieve IWRA-related best practices, the Suwon site engaged in the Woncheonri Stream cleanup activity with the Suwon City and the Suwon Sustainable City Foundation, and the removal of invasive plant species with the Suwon Sustainable City Foundation and the Suwon Watershed Network. | |
| 3.9.5 | <i>Actions towards achieving best practice related to targets in terms of WASH shall be implemented.</i> |  Yes |
| Comment | The following WASH best practices were implemented: - Providing drinking water to vulnerable groups in partnership with Suwon City - Registering the toilets in the information centre as an open toilet in Suwon City - Providing clean drinking water to visiting guests, construction workers, local residents using information centre toilets by operating water dispensers in the information centre. | |
| 3.9.6 | <i>Advanced Indicator Achievement of identified best practice related to targets in terms of good water governance shall be quantified.</i> |  Yes |
| Comment | To strengthen its water resource management capabilities with the goal of achieving AWS certification, the Suwon site has established the AWS Task Force Team. Composed of 6 members from the EHS Group and the Infrastructure Group as well as external consultants, the AWS TF Team aims to efficiently pursue data collection, develop AWS plans, execute them, foster external communication, explore collaboration opportunities, evaluate performance, and facilitate disclosure. The key activities of the Suwon facility's AWS TF Team include the following: 1) Conducting three times of catchment stakeholders surveys. 2) Benchmarking water-related best practices from other companies in the same catchment or business sector (e.g., TSMC, Career, Apple, etc.). 3) Sharing water-related best practices with the other affiliated sites in Gumi and Gwangju. 4) Regularly sharing progress and future plans with the headquarters, Gumi, and Gwangju sites. 5) Quarterly AWS meetings with the headquarters, Gumi, and Gwangju sites. Progress rate for each target is quantified. | |
| Score | 8 | |
| 3.9.7 | <i>Advanced Indicator Achievement of identified best practice related to targets in terms of sustainable water balance shall be quantified.</i> |  Yes |

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)


Audit Number: AO-000754

Comment In 2022, the reusing water use for the drum screen amounted to 210,897 tons, while it reached 31,627 tons for the odor control tower. As of 2022, the amount of reusing water supplied to Suwon City for road spraying purposes was 1,694 tons. Additionally, since 2023, it has been supplying reusing water to six private construction sites for dust control purposes. From March to May 2023, an average of 5,395 tons of reusing water was supplied per month.

In the R5 building at the site, a rainwater utilization system with a capacity of 1,080 m3 has been installed. This harvested rainwater is utilised for landscaping purposes, and detailed usage data is recorded manually. In 2022, the total rainwater use amounted to 1,965 m3.

Between 2019 and 2022, the site installed water-saving faucets and toilets in three buildings planned for expansion or renovation (Smart Manufacturing Building, Antenna Tambour Building, and Product Safety Testing Lab). Additionally, in 2023, water-saving dual-flush devices were installed in 94 units of women's restroom toilets. Previously, a uniform 6 liters of water were used for each flush, regardless of the type of flush. However, after the implementation of these devices, only 4 liters of water are now used for a small flush, resulting in a 2-liter reduction compared to previous usage.

Score 8

3.9.8 *Advanced Indicator* **Achievement of identified best practices related to targets in terms of water quality shall be quantified** 
Yes

Comment To minimize the site's adverse impacts to water resources, the site has established internal water quality criteria which are stricter than legal requirements for effluents released from wastewater and sewage treatment plants. A TMS system has been installed at wastewater and sewage treatment plants to continuously monitor compliance with internal water quality standards and report relevant data to the government. In case of any incidents detected related to deteriorating performance or aging equipment, maintenance or new investments are carried out in accordance with the internal standards.


Legal and internal water quality criteria for wastewater discharge

- 1) TOC: (Legal) Below 50 mg/L, (Internal) Below 12.5 mg/L
- 2) BOD: (Legal) Below 80 mg/L, (Internal) Below 24 mg/L
- 3) SS: (Legal) Below 80 mg/L, (Internal) Below 5 mg/L
- 4) T-N: (Legal) Below 60 mg/L, (Internal) Below 18 mg/L
- 5) T-P: (Legal) Below 8 mg/L, (Internal) Below 2.4 mg/L

- As of 2022, the site's average discharge concentration for major parameters is as follows, all of which meet the internal water quality criteria.

- 1) TOC: 2.2 mg/L
- 2) BOD: 2.3 mg/L
- 3) SS: 0.4 mg/L
- 4) T-N: 2.4 mg/L
- 5) T-P: 0.01 mg/L

Score 8

3.9.9 *Advanced Indicator* **Achievement of identified best practices related to targets in terms of the site's maintenance of Important Water-Related Areas have been implemented.** 
Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)


Audit Number: AO-000754

Comment Every year, employees engage in volunteer activities to combat invasive species in partnership with the Suwon Sustainable City Foundation and the Suwon Watershed Network. They undergo training provided by the Suwon Watershed Network, which includes information about the targeted plants and removal techniques. In June 2022, employees successfully eliminated two invasive species (Japanese knotweed and Asian hop) from the Woncheonri Stream, one of the site's IWRA's. Furthermore, in August 2023, employees took part in another removal effort, targeting stems and roots of Japanese knotweed and thorny gourds, by walking from the site's main gate to the Sin-dong riverside park. The progress rate is quantified. The site should consider quantifying the result achieved.

The employees at the site also engage in quarterly riverbank cleanup efforts, working in conjunction with Suwon City and the Suwon Sustainable City Foundation to mitigate underwater and riverbank pollution. The Suwon site takes charge of coordinating cleanup segments, organizing plans, and providing necessary equipment like tongs, gloves, waste bags, and waders. In June 2022, approximately 1.5 kilometers of the riverbank was covered, stretching from Samsung Bridge to Baeknyeong Bridge. However, cleanup activity could be considered best practice only at initial stages of certification.

The site should also focus on identifying other IWRA's within the catchment, assess the condition of those IWRA's and plan activities in coordination with relevant authorities.


Score 8

3.9.10 *Advanced Indicator* **Achievement of identified best practice related to targets in terms of WASH shall be quantified.**  **No**

Comment The site has mentioned that during March 2023, in commemoration of World Water Day, the site collaborated with Suwon City to donate 1,500 liters of drinking water (equivalent to 3,000 bottles of 500mL bottled water) to vulnerable populations within the catchment region. Suwon City was in charge of the recipient selection process and the overall project management, while the site covered all associated costs and conducted the delivery of drinking water to the recipients.

The identified best practice of supplying drinking water to vulnerable class during the risk of drought was quantified as 100 % achieved but it was a one time activity.

The site should gather information about the access of drinking water including the above population and how has this one time activity helped in improving the WASH status.

3.9.11 *Advanced Indicator* **A list of efforts to spread best practices shall be identified.**  **Yes**

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000754

Comment In November 2022, the working-level meeting of the Green Business Council was held by the Han River Basin Environmental Office. This meeting serves as a platform for sharing exemplary environmental management practices and environmental issues among businesses. The Suwon site participated in this meeting and presented its best practice (“Provision of reusing water to the local government for fine dust control on the road”) to the neighboring enterprises in the catchment.

- With its efforts in the best practice recognized, the Suwon site was selected as an excellent green company by the Korea Environmental Industry & Technology Institute, which operates under the Ministry of Environment.


Since 2015, Samsung Electronics has been hosting an annual Manufacturing/Environment and Safety Innovation Day, which serves as an opportunity for outstanding business sites to share their best practices across the company.

In 2019, the Suwon site promoted its practice of providing reclaimed water for public use of road watering in Suwon City to other domestic and international business sites.

In 2019, Kimhae City made a request to visit the Suwon site for the purpose of benchmarking the reusing water supply project. The site responded to the request by inviting their representatives to the plant so that they gain insights into its reusing water facilities and water reuse projects.

Score 3

3.9.12 *Advanced Indicator*
A list of collective action efforts, including the organizations involved, positions of responsible persons of other entities involved, and a description of the role played by the site shall be identified.


Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000754

Comment Woncheonri Stream Cleanup Activities:
 1) Collaborating organizations: Suwon City Government, Suwon Sustainable City Foundation
 2) Responsible personnel from collaborating organizations: Suwon City Government's Senior Officer, Suwon Sustainable City Foundation's Center Director
 3) Suwon site's roles: Establishing catchment cleanup zones and activity plans, providing essential equipment (such as tongs, gloves, waste bags, and waders), and actively participating in underwater and waterbank cleanup activities for Woncheonri Stream.

Removal of Invasive Species:
 1) Collaborating organizations: Suwon Watershed Network, Suwon Sustainable City Foundation
 2) Responsible personnel from collaborating organizations: Suwon Watershed Network's Director, Suwon City Foundation's Center Director
 3) Suwon site's roles: Removal of invasive plant species around the Woncheonri Stream

Reclaimed Water Supply to Suwon City for Public Use (Road Watering):
 1) Collaborating organizations: Yeongtong-gu District Office
 2) Responsible personnel from collaborating organizations: Yeongtong-gu District Office's Senior Officer
 3) Suwon site's roles: Provision of reclaimed water for public road watering, operation of water treatment facility for reclaimed water, and reclaimed water quality management.

Reclaimed Water Supply to Private Construction Sites :
 1) Collaborating organizations: Yeongtong-gu District Office, 4 Construction Companies
 2) Responsible personnel from collaborating organizations: Suwon City's Senior Officer, Namgwang Construction's Manager, Sunwon Construction's Manager, Daewoo Construction's Manager, Taeyoung Construction's Employee
 3) Suwon site's roles: Provision of reclaimed water to construction companies, operation of water treatment facility for reclaimed water, and reclaimed water quality management.

Donation of Drinking Water to Vulnerable Groups within the Catchment:
 1) Collaborating organizations: Suwon City Government
 2) Responsible personnel from collaborating organizations: Suwon City's Senior Officer
 3) Suwon site's roles: Financial support for providing drinking water to vulnerable groups and delivery of water to recipients

Registration of Public Restrooms in Suwon City:
 1) Collaborating organizations: Suwon City Government
 2) Responsible personnel from collaborating organizations: Suwon City's Senior Officer
 3) Suwon site's roles: Facilitating access and maintaining public restrooms for relevant stakeholders in the Information Center at the site

Score 14

3.9.13

Advanced Indicator
 Evidence of the quantified improvement that has resulted from the collective action relative to a site-selected baseline date shall be identified and evidence from an appropriate range of stakeholders linked to the collective action (including both those implementing the action and those affected by the action) that the site is materially and positively contributing to the achievement of the collective action shall be identified.


 Yes

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)



Audit Number: AO-000754

Comment The site prepared an AWS outcomes evaluation report to share with various stakeholders, including employees, government agencies, public organizations, suppliers, NGOs, and neighboring businesses.

All stakeholders in the catchment affected by the collective efforts provided positive responses in the survey, stating that Suwon site's collective actions have contributed positively to all five AWS areas.

- Suwon City, which collaborated on activities such as stream cleanup, drinking water donation, and public restrooms registration, conveyed a positive response, affirming that these collaborative activities have contributed positively to the catchment.
- Yeongtong-gu District Office, which collaborated on activities involved with the site's reclaimed water supply, responded positively to the collaborative activities with the site as contributing positively to the catchment.
- Suwon Sustainable City Foundation, which collaborated on stream cleanup and the invasive species removal activities, responded positively to the collaborative activities with the site as contributing positively to the catchment.

The site should provide evidence of the quantified improvement that has resulted from the collective action compared to the site-selected baseline date.

Score 3

CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-000754

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.* 🚩 in progress

Comment For water governance, four targets were set (securing resources for AWS activities, 100% disclosure of water-related information required by stakeholders, conducting external stakeholder engagement activities twice or more, conducting supplier engagement activities twice or more) along with 13 actions. As of June 2023, two targets have been achieved, with an average progress rate (%) of 64.1% for the 13 actions.

For water balance, four targets were set (delivering water saving awareness-building activity and water treatment training for employees once a year or more, achieving 15% of water reuse rate at the site, water replenishment through expansion of reclaimed water use, enhancing water use efficiency) along with 16 actions. As of June 2023, the average progress rate (%) for the 16 actions is 58.8%.

For water quality, five targets were set (100% compliance with Water-Related regulatory compliance, zero legal penalties, 100% satisfaction with the quality of reclaimed water supplied to Suwon City for fine dust and heatwave control, monitoring of water quality & achieving 100% compliance with the site's standards, maintaining treatment efficiency of non-point source pollution reduction facility over 80%) along with 18 actions. As of June 2023, the average progress rate (%) for the 18 actions is 46.1%.

For IWRA's management, two targets were set (100% compliance with domestic water quality standards for IWRA's at the site, conducting maintenance and improvement measures for IWRA's outside the site once per quarter or more) along with nine actions. As of June 2023, the average progress rate (%) for the 9 actions is 35.2%.

For WASH provision, two targets were set (conducting activities to improve catchment's WASH status twice per year or more, enhancing the site's WASH status) along with 9 actions. As of June 2023, one WASH target has been achieved, with an average progress rate (%) of 55.6% for the 9 actions.

Finding No: TNR-008383

4.1.2 *Value creation resulting from the water stewardship plan shall be evaluated.* 🔍 Obs.

Comment The site has tabulated site and shared value benefits against the evaluated performance on targets and has classified as social, environmental, financial and cultural values which were created through implementation of WS Plan. The value creation through water savings (resulting into monetary savings) have been estimated by site.

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

Audit Number: AO-000754

Comment The following benefits to the catchment have been identified:

- Between January and June 2023, the site provided 7,331 tons of reusing water to construction sites to reduce airborne dust. When calculated at a standard water rate of KRW 1,478 per ton, it was found that the construction sites benefited by approximately KRW 10.84 million.
- The estimated supply of reusing water to Suwon City throughout the year 2023, aimed at addressing local environmental issues such as fine dust, yellow dust, and heatwaves, amounts to 1,056 tons. Based on the standard water rate of KRW 1,478 per ton, it was confirmed that residents within the catchment area benefited by approximately KRW 1.56 million.
- By consistently supplying an average of 5,500 tons of treated water daily to a nearby river within the Suwon site's catchment area for the maintenance of the Woncheonri Stream, local residents experienced environmental benefits, including enhanced access to cleaner water with reduced pollutant concentrations and increased water sources.

The site has also mentioned of the project - Anticipated water resource return through the construction of agricultural water supply infrastructure in water-scarce rural areas during the first half of 2023 is projected to reach 109,317 tons. The evidence mentions about two projects - one outside the catchment and other within the catchment. The site needs to provide the status of project within the catchment along with the supporting evidence.

4.1.4 *Advanced Indicator* ✔
Yes
A governance or executive-level review, including discussion of shared water challenges, water risks, and opportunities, and any water-related cost savings or benefits realized, and any relevant incidents shall be identified.

Comment The site reported to Young-ho Kim, the Center Manager of the Suwon EHS Team, regarding shared water challenges in the Han River catchment, Samsung Electronics' actions to address water challenges, water-related risks and opportunities, cost savings and benefits, and water incidents. Additionally, on July 20, 2023, the Global EHS Center Environmental Management Promotion Group part leader collected the subjects reported to the center managers at the Suwon, Gumi, and Gwangju sites and reported them to Kim Kyung-jin, the CSO of the Global EHS Center.

Score 3

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 In the event of an emergency incident, the Environment and Safety Team documents the details of the incident and countermeasures in writing and reports them to the CSO. In August 2022, there was a flood affecting four low-rise buildings in the low-lying area due to a sudden heavy rainfall. No emergency incidents have occurred in the first half of 2023.

The site's Environment and Safety Team analyzed the causes and countermeasures of the flooding incident. The flooding was caused by the sudden extreme rainfall, which led to a large amount of rainwater entering the low-lying buildings through the drainage, mechanical room walls, and ventilation ducts without immediate drainage into the Woncheonri Stream. To prevent future flooding incidents, a series of measures were established, including the prevention of rainwater inflows through openings, waterproofing crack areas, capacity expansion of drainage pumps, and the installation of additional drainage channels and pipes. The corresponding improvements were completed by the end of November.


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

4.3.1 *Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.*

 in progress

Comment The site has shared the water stewardship performance with stakeholders through third survey and have asked for feedback through a questionnaire in which it was asked : "Do you think that the performance of Samsung Electronics' Suwon site's activities was effective and contributed to stakeholders and the local community? Yes / No".

If No - "Please feel free to write down why you think the performance is not effective or does not contribute to stakeholders and the community, and what needs to be improved".

The stakeholders have acknowledged the work carried out by the site by selecting the option 1, i.e. Yes. But, the stakeholders have not provided any comment or feedback for improvement as the stakeholders will have to first select the option " No ", that the performance is not effective or does not contribute to stakeholders and the community - for which the stakeholders may be not willing to mention that the site's performance overall is not effective. This approach does not leave a possibility for stakeholders to comment on separate parts or elements of plan and performance.

Finding No: TNR-008213

4.3.2 *Advanced Indicator
The site's efforts to address shared water challenges shall be evaluated by stakeholders. This shall include stakeholder reviewing of the site's efforts across all five outcome areas, and their suggestions for continual improvement.*

 No

Comment The site has shared the water stewardship performance with stakeholders through survey and have asked for feedback through a questionnaire. However, the site did not receive any suggestions.

The site should explore methods of engagement with stakeholders for attaining their feedback and suggestions for continual improvement and addressing the shared water challenges.

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.*

 Obs.

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Comment The site has set a frequency of updating the AWS plan quarterly.

The site has shared the water stewardship performance with stakeholders through third survey and have asked for feedback through a questionnaire in which it was asked : "Do you think that the performance of Samsung Electronics' Suwon site's activities was effective and contributed to stakeholders and the local community? Yes / No ".

If No - "Please feel free to write down why you think the performance is not effective or does not contribute to stakeholders and the community, and what needs to be improved".

However, all the stakeholders have selected option 1, i.e. Yes.

In April 2023, the Suwon site received a request for cooperation in environmental education for university students from Suwon City Hall and reflected this in the WS Plan. And in July 2023, a tour of the water treatment facility at the Suwon site and an education program were conducted for university students in the Gyeonggi Province region to train expert capable of conducting research activities in the environmental field and working in industrial sites.

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5 STEP 5: COMMUNICATE & DISCLOSE - Communicate about water stewardship and disclose the site's stewardship efforts

5.1 *Disclose water-related internal governance of the site's management, including the positions of those accountable for legal compliance with water-related local laws and regulations.*

5.1.1 *The site's water-related internal governance, including positions of those accountable for compliance with water-related laws and regulations shall be disclosed.* ✔ Yes

Comment The site disclosed the names of officials responsible for different areas including for Environment related at the Samsung Electronics website under the AWS outcomes announcement for each site with the following link:
<https://www.samsung.com/sec/sustainability/digital-library/policy-document>.

In order to enhance awareness among the employees regarding the individuals responsible for internal water-related governance and regulatory compliance, the site have uploaded the organizational structure to the Global EHS System Board within the corporate system, which is accessible to all employees, allowing them to review the site's organizational structure for water governance at their convenience.

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 has defined the progress against each targets set in the water stewardship plan and has tabulated the contribution of actions towards the AWS outcomes and this has been communicated with the stakeholders through email.

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.* ✗ in progress

Comment Samsung Electronics discloses overall information about water conservation and quality management in the Sustainability Report. (<https://www.samsung.com/sec/sustainability/main>).

Samsung Electronics publicly discloses documents for its water management performance on the official website (<https://www.samsung.com/sec/sustainability/digital-library/policy-document>).

The site's outcomes of Water Stewardship is disclosed at the group's website in the name of AWS outcomes announcement. However, quantified performance against targets, have not been disclosed.

Finding No: TNR-008215

5.3.2 *Advanced Indicator*
The site's efforts to implement the AWS Standard shall be disclosed in the organization's annual report. ✔ Yes




Comment The site's efforts to implement AWS standards are disclosed in its sustainability report and AWS outcomes announcement documents. These documents are available at group's website with the following link:
<https://www.samsung.com/global/sustainability/digital-library/sustainability-report/>

Score 1

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| | | |
|--------------|---|--|
| 5.3.3 | <i>Advanced Indicator</i> <i>Benefits to the site and stakeholders from implementation of the AWS Standard shall be quantified in the organization's annual report.</i> |  Yes |
| Comment | The benefits obtained by the site and stakeholders through implementation of AWS standards are disclosed at the Samsung Electronics website (AWS Outcomes document) with the following link : https://www.samsung.com/sec/sustainability/digital-library/policy-document | |
| Score | 1 | |
| 5.4 | <i>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.</i> | |
| 5.4.1 | <i>The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.</i> |  Yes |
| Comment | Through the 3rd stakeholder survey, water challenges and priorities for each challenge were shared to stakeholders such as employees, government agencies, public agencies, partner companies, civic groups, NGOs, and nearby companies. In addition to the above, the shared water challenges and site's contribution to address them is publicly available at group's website with the following link: https://www.samsung.com/sec/sustainability/digital-library/policy-document | |
| 5.4.2 | <i>Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.</i> |  Yes |
| Comment | The site has engaged with the stakeholders and supported govt. authorities and the efforts / activities are summarised as below: Based on the business agreement signed with Suwon City, the site is supplying reuse water to the city so that the water is used for environmental purposes, such as fine dust or heatwaves control, thereby mitigating water scarcity risks in the region. The site has also entered into a business agreement with the Korea Rural Community Corporation to promote water reuse and conduct a water use offset project. In order to alleviate water scarcity, we install water storage facilities or water wells at locations in the selected rural areas where water inflow is difficult, using pumps to introduce river water or reusing water into the reservoirs. In collaboration with an NGO, the water quality, air quality, noise, and vibration are measured for the Woncheonri Stream, which is the receiving water body of the site's wastewater discharges. The site is working on mitigating water quality contamination risk by monitoring the water quality of the stream four times a year through an external service provider. The site employees voluntarily carry out activities for removal of invasive species and river environment cleanup, in collaboration with Suwon City and NGOs. Invasive plant species, such as Japanese knotweed and Asian hop were eradicated and garbage were picked up around the riverbank of the Woncheonri Stream, which was designated as the IWRA. In collaboration with Suwon City, the site donated 3,000 bottles of 500ml water to vulnerable populations facing limited access to safe and sustainable water supply. In this way, the site managed to minimize the risks involving vulnerable populations lacking access to safe and sustainable water supply. | |
| 5.5 | <i>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.</i> | |

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5.5.1 *Any site water-related compliance violations and associated corrections shall be disclosed.* ✔
Yes

Comment From 2017 to 2022, there have been no violations of water-related regulations (Water Environment Conservation Act). Additionally, the site shares information with the stakeholders through the Environmental Information Disclosure System website (<https://www.env-info.kr/member/main/main.do>). The disclosed information includes status of environmental incidents, public complaints and responses, non-payment of water discharge fees, and cases of environmental compliance violations.

The site categorises environmental and safety incidents occurring at the site into Grade A, B, C according to the 'Suwon Digital City Crisis Response Manual (p.9)'. This manual defines the reporting entity, reporting method, and reporting target for each category of incident.

5.5.2 *Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.* ✔
Yes

Comment No necessary corrective actions as there were no water related violations observed.

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 From 2017 to 2022, there have been no water-related violations that pose risks to human and ecosystem health. Additionally, the site shares information about environmental regulation violations, as well as water usage and water quality pollutant discharge, with stakeholders through the website of the Environmental Information Disclosure System (<https://www.env-info.kr/member/main/main.do>).

Photographic Evidence from Audit

✔
Yes