CERTIFICATION REPORT

Alliance for Water Stewardship (AWS)

Audit Number: AO-001597

WSAS WATER STEWARDSHIP ASSURANCE SERVICES

SITE DETAILS

Site: **Apple - Waukee Data Center**
Address: 2995 W. Hickman Road, 50263, Waukee, Iowa, UNITED STATES
Contact Person: Marin Williams (consultant)
AWS Reference Number: AWS-000815
Site Structure: Single Site

CERTIFICATION DETAILS

Certification status: Certified Core
Date of certification decision: 2025-Jul-10
Validity of certificate: 2028-Jul-09

AUDIT DETAILS

Audited Service(s): AWS Standard v2.0 (2019)
Audit Type(s): Initial Audit
Audit Start Date: 2025-Jun-10
Audit End Date: 2025-Jun-11
Lead Auditor: Monserrath Zamora

Audit team participants:

Rupa Bidap
Monserrath Zamora, Lead Auditor

Site Participants:

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ADDITIONAL INFO

Summary of Audit Findings: During the certification audit, one observation was raised.

The audit team recommends certification of Apple Waukee Data Center at Core level.

Scope of Assessment: The scope of services covers the Initial certification audit for assessing conformity of Apple Waukee-Data Center against the AWS International Water Stewardship Standard Version 2.

The site is a data center that is located at 2995 W. Hickman Road Waukee, Iowa 50263 (Latitude: 41.620528 N, Longitude: -93.926901 W); in the North Raccoon River watershed within the Des Moines River watershed and the Mississippi River basin. The campus is located in Dallas County. All water is supplied by the City of Waukee, which sources its municipal water from surface water and various wells along the Raccoon River, including shallow groundwater connected to the river.

Most of the on-site water is used for domestic purposes and humidifiers. The site discharges its wastewater into the City of Waukee's sanitary sewer system, where it is treated at a wastewater treatment plant and ultimately discharged into the Des Moines River.

The Des Moines River watershed, which includes the Raccoon River, drains 7.8 million acres across Iowa and Minnesota. The Raccoon River watershed alone drains 2.3 million acres in western and central Iowa. While the watershed is largely rural, it also includes parts of Iowa's capital city, Des Moines, as well as several smaller towns. It contains several tracts of rare oak savanna ecosystem, often described as a transition zone between prairie and woodland environments.

The Raccoon and Des Moines Rivers are key sources of drinking water in central Iowa. Upstream agricultural and urban land use directly affects the quality and quantity of water available to downstream users.

The audit was conducted onsite on June 10-11, 2025.

The onsite visit included an assessment of water-related infrastructure—such as pumps, the closed-loop chilled water system, data halls, humidifiers, the water inlet point, and meters—as well as stormwater retention ponds, wetlands, administrative offices, and restrooms. Additionally, during the audit, the North Raccoon River was visited as part of the catchment tour.

FINDINGS

Observation 1

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FINDING DETAILS

Finding No:	TNR-018438
Checklist Item No:	1.5.3
Status:	Open
Finding level:	Observation
Checklist item:	The catchment water-balance, and where applicable, scarcity, shall be quantified, including indication of annual, and where appropriate, seasonal, variance.
Findings:	The site could engage with stakeholders to determine whether more accurate data is available for quantifying the water balance of the catchment.

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WSAS WATER STEWARDSHIP ASSURANCE SERVICES

Report Details

Report	Value
Report prepared by	Monserrath Zamora
Report approved by	Ozge Gokmen
Report approved on (Date)	01 July 2025

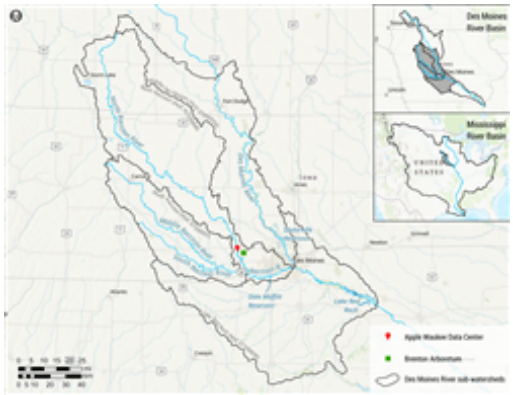
Surveillance

Proposed date for next audit
2026-Jun-09

Stakeholder Announcements

Date of publication	Location
	https://watersas.org/wp-content/uploads/2025/04/AWS-000815_-Apple-Waukee_StakeholderAnnouncement_June25.pdf https://a4ws.org/wp-content/uploads/2025/04/AWS-000815_-Apple-Waukee_StakeholderAnnouncement_June25.pdf
17/04/2025	Local newspaper: Dallas County News
11/04/2025	https://www.limno.com/aws-certification-apple-data-center-waukee-iowa/
Comment	The stakeholder announcement was published on the following websites: WSAS, AWS, and LimnoTech. Additionally, it was published in the local newspaper Dallas County News.

Catchment Information



Map of the catchment.jpg

Catchment Information

The site is located in the North Raccoon River watershed within the Des Moines River watershed and the Mississippi River basin.

The Des Moines River watershed, which includes the Raccoon River, drains 7.8 million acres across Iowa and Minnesota. The Raccoon River watershed alone drains 2.3 million acres in western and central Iowa. While the watershed is largely rural, it also includes parts of Iowa's capital city, Des Moines, as well as several smaller towns. It contains several tracts of rare oak savanna ecosystem, often described as a transition zone between prairie and woodland environments.

The Raccoon and Des Moines Rivers are key sources of drinking water in central Iowa. Upstream agricultural and urban land use directly affects the quality and quantity of water available to downstream users.

Client Description and Site Details

Site Boundaries.png

Client/Site Background

The Apple-owned data center campus, located in rural Waukee, Iowa, began operations in August 2024. It includes multiple data halls, administrative and logistics buildings, and support facilities, with plans for future expansion. The property also features leased farmland and prairie pothole wetlands. The on-site water-related infrastructure includes stormwater ponds, a closed-loop cooling system that uses air-cooled chillers, and humidifiers.

Water for the site is supplied by the City of Waukee, sourced from surface water and wells along the Raccoon River. Most water use on-site supports domestic needs and humidifiers. Wastewater is discharged into the city's sanitary sewer system, treated, and eventually released into the Des Moines River.

Summary of Shared Water Challenges

Summary of Shared Water Challenges

The following shared water challenges were identified:

-Impaired water quality: nutrient runoff (nitrates) from agriculture, factory farm contamination, TCE (Trichloroethylene) superfund site.
-Wetland loss: agricultural land use; 95% of pre-European settlement wetlands destroyed.
-Water scarcity and resilience: climate change, increased drought frequency, increased water demand.
-Flood-related-impacts: climate change, increased frequency of highly intense storms.

1	STEP 1: GATHER AND UNDERSTAND

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

1.1.1 *The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including:*
- Site boundaries;
- Water-related infrastructure, including piping network, owned or managed by the site or its parent organization;
- Any water sources providing water to the site that are owned or managed by the site or its parent organization;
- Water service provider (if applicable) and its ultimate water source;
- Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies;
- Catchment(s) that the site affect(s) and is reliant upon for water.

Yes

Comment

The site has identified and mapped its physical scope, including:

-Map showing site boundaries, including water-related infrastructure and piping network: water inlet points, fire pump house, sanitary sewer system (including discharge point), domestic water piping network, chilled water loop, stormwater retention ponds, wetlands, water meters, and humidifiers. These maps were reviewed during the audit.

-Map of the Catchments:

-Site: the site is situated in the North Raccoon River watershed (within the Des Moines River watershed and the Mississippi River basin).

-Sources: the site's water source is supplied by the City of Waukee. The water is primarily sourced from surface water (Racoon River), but also from shallow and deep groundwater wells. Therefore, the water originates from the Raccoon River watershed, the Des Moines River watershed, and the Jordan Aquifer.

-Discharge: the catchments affected by the site are the North Raccoon River watershed and the Des Moines River watershed.

-The locations of the water service provider have been mapped: L.D. McMullen, Saylorville and Fleur Drive Water Treatment Plants. The Maffitt Reservoir is used as a surface water supply for the water treatment plant.

-The water wells have been mapped based on the evidence provided in Indicator 1.3.4.

-The Des Moines Metropolitan Wastewater Reclamation Facily has been mapped as the location of the wastewater service provider (sanitary wastewater).

-The Des Moines River as the immediate receiving water body and the Mississippi River as the ultimate receiving water body have been mapped. The stormwater is collected in on-site retention ponds, which do not discharge off-site.

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

1.2.1 *Stakeholders and their water-related challenges shall be identified. The process used for stakeholder identification shall be identified. This process shall:*
- Inclusively cover all relevant stakeholder groups including vulnerable, women, minority, and Indigenous people;
- Consider the physical scope identified, including stakeholders, representative of the site's ultimate water source and ultimate receiving water body or bodies;
- Provide evidence of stakeholder consultation on water-related interests and challenges;
- Note that the ability and/or willingness of stakeholders to participate may vary across the relevant stakeholder groups;
- Identify the degree of stakeholder engagement based on their level of interest and influence.

Yes

Comment

The site has identified 22 distinct stakeholders and their respective water-related challenges, including local, state, and federal government organizations; the water supplier and wastewater service provider; non-governmental organizations (NGOs); peer companies; the public and agricultural sectors; and a tribal group.

The process used for stakeholder identification and the degree of stakeholder engagement based on their level of interest and influence have been identified. A workshop-based mapping exercise was conducted using input from site staff, corporate staff, consultants, and desktop research.

A comprehensive basis of the level of interest was identified:

-Key Player: active dialogue and engagement
-Involve: keep informed and explore opportunities
-Consult: anticipate needs and consult
-Monitor: minimal contact and information gathering

Evidence of stakeholder consultation on water-related interests and challenges was identified and reviewed during the audit. The site provided a calendar of meetings held with stakeholders in April 2025, some of which were confirmed during stakeholder interviews. Additionally, the site presented a summary of stakeholder engagement activities conducted throughout 2025.

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 degree of influence between site and the stakeholders has been identified, it includes the following methods of influence:

-Key Player: active dialogue and engagement
-Involve: keep informed and explore opportunities
-Consult: anticipate needs and consult
-Monitor: minimal contact and information gathering

1.3 *Gather water-related data for the site, including: water balance; water quality, Important Water-Related Areas, water governance, WASH; water-related costs, revenues, and shared value creation.*

1.3.1 *Existing water-related incident response plans shall be identified.*

Yes

Comment

The site has identified the following water-related incident response plans:

-The Spill Prevention Control and Countermeasure Plan: its primary purpose is to establish and maintain a program to prevent the discharge of oils into the waters of the United States or adjoining shorelines. Last revised: June 2024 (reviewed and evaluated every five years).

-The Emergency Action and Fire Prevention Plan, 2025: this plan provides an organizational and procedural framework for managing emergency incidents and addressing issues related to fire prevention, spills or leaks, floods, severe weather, and other hazards. A tornado drill was conducted in June 2025. In the event of an on-site spill, the site is equipped to contain it, and spill management is handled by a third-party.

-A response plan addressing drought conditions or disruptions in water supply has been provided.

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

Yes

Comment

The site has identified and mapped its water inflows and outflows in a schematic diagram. This includes water used in the chilled water loop, the domestic water network, and humidifiers. Based on current operations and the use of air-cooled units instead of water evaporation systems, there are no significant water losses within the system.

There is no water storage on-site, and water is not used for irrigation or landscaping purposes.

1.3.3 *Site water balance, inflows, losses, storage, and outflows, including indication of annual variance in water usage rates, shall be quantified. Where there is a water-related challenge that would be a threat to good water balance for people or environment, an indication of annual high and low variances shall be quantified.*

Yes

Comment

The site has quantified its water balance (change in storage volume is zero). Water data is available from August 2024 (start of operations) through January 2025. The data center does not use water for cooling.

The site presented monthly water supply and wastewater data for the years 2024 and 2025. The spike in consumption in November 2024 was due to specific flushing activities, including the cleaning and passivation of a portion of the chilled water loop, which was a one-time event.

Currently, the site's water balance does not pose a challenge, as overall water consumption remains low. This is primarily due to the use of air-cooled units instead of water-evaporative systems.

1.3.4 *Water quality of the site's water source(s), provided waters, effluent and receiving water bodies shall be quantified. Where there is a water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be quantified.*

Yes

Comment

Water quality of the site's water sources has been quantified. The Raccoon and Des Moines Rivers face contamination from agricultural runoff, particularly nitrates from fertilizers and bacterial pollution from livestock waste. The USGS and the state of Iowa monitor water quality, including daily nitrate levels (variance). In contrast, deeper groundwater wells in the Jordan aquifer are less affected by surface-level nitrate contamination, as confirmed by the latest Iowa DNR groundwater quality report. Additionally, the variances have been quantified.

The City of Waukee supplies water to the site through Des Moines Water Works. The site has provided the 2024 and 2025 Water Quality Reports, which outline the testing results for 2023 and 2024 and include information from the U.S. Environmental Protection Agency (EPA) regarding drinking water standards. There are no water quality violations during the reporting period. The reports include results from samples taken as water leaves Des Moines Water Works' three treatment plants, as well as from various points within the water distribution systems and water wells.

The April 2025 water quality report for the stormwater ponds measured dissolved oxygen, pH, nitrite, nitrate, and observed vegetation growth. All ponds were reported to be in good condition, with no concerning water quality parameters. This was the first of nine surveys scheduled for summer 2025.

To prevent bacterial growth within the chilled water system, several parameters are closely monitored, including pH, total dissolved solids (TDS), and iron concentrations. A third-party contractor conducts monthly inspections of the chilled water loop, with the most recent inspection observed on-site on April, 2025. All values have consistently remained within acceptable limits.

Water quality is not tested at the point of discharge from the site, as the water is used for domestic purposes and not for industrial processes. All wastewater is directed to a municipal treatment facility for proper handling. According to publicly available compliance data, the Wastewater Reclamation Facility (WRF) remained in compliance with its National Pollutant Discharge Elimination System (NPDES) Individual Permit during the 2024–2025 reporting period. Specifically, the facility did not exceed the maximum allowable pollutant load limits established under the permit. This is tracked through the U.S. Environmental Protection Agency's ECHO (Enforcement and Compliance History Online) reporting system.

The water quality of the receiving water body has been quantified, with nitrate levels downstream of the Des Moines Metropolitan WRF remaining below 3.0 mg/L in 2025. Continuous monitoring is in place.

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 and mapped all potential sources of pollution, including oils, transformers, generators, and hazardous materials. Spill prevention kits are distributed throughout the facility.

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

Yes

Comment

The site has identified and mapped important on-site water-related areas (IWRAs), including stormwater ponds, along with descriptions of their current status. Wetlands have also been identified as part of the IWRAs. The final wetland delineation report was reviewed during the audit, and these areas have been mapped. The site is currently working with a third-party organization to restore the wetlands.

The April 2025 water quality report for the stormwater ponds included measurements of dissolved oxygen, pH, nitrite, and nitrate levels, as well as observations of vegetation growth. All ponds were reported to be in good condition, with no concerning water quality parameters. This report was the first of nine surveys scheduled for summer 2025. Additionally, a study conducted in May 2025 identified various fish species in the ponds.

These areas were visited during the audit. Wildlife observations included geese, ducks, birds, and diverse vegetation.

1.3.7 *Annual water-related costs, revenues, and a description or quantification of the social, cultural, environmental, or economic water-related value generated by the site shall be identified and used to inform the evaluation of the plan in 4.1.2.*

Yes

Comment

The site has identified and quantified the costs associated with incoming water from the City of Waukee and discharged water to the Des Moines Metropolitan Wastewater Reclamation Authority. Additional project-related water costs are detailed in the Water Stewardship Plan. The site does not generate any water-related revenue.

In addition, the site has provided a description of the social, economic, cultural, and environmental value associated with its water-related activities.

1.3.8 *Levels of access and adequacy of WASH at the site shall be identified.*

Yes

Comment

The level of access and adequacy of WASH facilities has been identified and quantified. Additionally, the site has a self-assessment tool for evaluating access to Water, Sanitation and Hygiene (WASH) at the workplace.

The number of drinking fountains, restrooms, showers, handwashing sinks, and eyewash stations has been provided.

The access of WASH facilities was checked during the site visit by the auditor.

1.4 *Gather data on the site's indirect water use, including: its primary inputs; the water use embedded in the production of those primary inputs the status of the waters at the origin of the inputs (where they can be identified); and water used in out-sourced water-related services.*

1.4.1 *The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.*

Yes

Comment

There are no primary inputs within the catchment area.

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 does not have any outsourced services with embedded water use.

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

1.5.1 *Water governance initiatives shall be identified, including catchment plan(s), water-related public policies, major publicly-led initiatives under way, and relevant goals to help inform site of possible opportunities for water stewardship collective action.* Yes

Comment The site has identified various water governance initiatives, some of them are:

-The City of Waukee has a Water Conservation Plan that outlines voluntary and mandatory water use reduction measures based on the capacity of the water distribution system.

-Des Moines Water Works has implemented a Source Water Assessment Project to protect the Raccoon and Des Moines Rivers. It includes source delineation, contaminant inventory, and susceptibility analysis, fulfilling requirements of the Safe Drinking Water Act Amendments of 1996.

-Iowa's Nutrient Reduction Strategy aims to reduce nitrogen and phosphorus runoff into the Mississippi River Basin. It targets both point sources (e.g., wastewater treatment plants) and non-point sources (e.g., agriculture).

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

Comment The site provided a list of water related legal/regulatory requirements (federal, state and local regulations). Some examples are:

-U.S. Environmental Protection Agency Clean Water Act
-Iowa construction stormwater permit.
-US Army Corps of Engineers construction wetland fill permit
-Water Development Agreement
-Dallas County building code
-Certificate of Occupancy
-Lease agreements for the farmland owned by the site

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

Comment Currently, there is no comprehensive dataset available to quantify the catchment water balance in its entirety. In response, the site has provided an estimate based on available data and has stated the following:

"The Red Rock Reservoir (Lake Red Rock) is located downstream of all Des Moines Water Works sources on the Raccoon and Des Moines Rivers, as well as downstream of the discharge from the Des Moines Metropolitan Wastewater Reclamation Authority. The reservoir's water level, which serves as a proxy for the catchment's water balance (including inflows, throughflows, outflows, and storage), indicates a stable balance. Based on five years of lake level data (stage height) from January 1, 2020, to December 31, 2024, there is minimal annual and seasonal variation, except for two high stages in June and July 2024. The normal target pool (desired stage) for the reservoir is 742 feet. Over the five-year period, the stage was below this target 15.8% of the time (288 days out of 1,826). The stage dropped below 741.5 feet only 1.9% of the time (35 days). Lake storage volume data also shows stability, with a minimum storage value of 176,161 acre-feet."

In addition, the site utilized the Aqueduct Water Risk Atlas, which identified the following water-related risks for the catchment:

-Water stress: Low to medium
-Seasonal variability: Low to medium
-Groundwater table decline: Low
-Drought risk: Medium

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

Yes

Comment

Water quality of the catchment has been identified including physical, biological and chemical parameters, with some information available in indicator 1.3.4.

American Rivers, a nonprofit focused on protecting U.S. river systems, ranked the Raccoon River as the 9th most endangered river in the country due to significant pollution concerns. The primary issues in the watershed stem from bacterial contamination linked to over 750 factory farms and nutrient runoff (particularly nitrates and phosphorus) from agricultural lands. These pollutants contribute to surface water degradation and have caused toxic algae blooms. Similar problems have been documented in the Des Moines River. Despite these challenges, the site does not anticipate future changes in water quality for its sources. Ongoing water quality monitoring is conducted by the USGS and the Iowa DNR, with deeper groundwater sources like the Jordan Aquifer showing less impact from surface-level nitrate contamination.

High and low variances have been identified for some of the parameters mentioned above.

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

Yes

Comment

The site has identified and mapped 7 Important Water-Related Areas, inside the site's catchment:

-Brenton Arboretum
-Saylorville Reservoir
-Lake Red Rock
-Jordan Aquifer
-Des Moines River
-Raccoon River
-Maffitt Reservoir

Their status has been assessed including any threats to people or the natural environment.

The site uses a handout during stakeholder meetings that includes information and discussion points related to Important Water-Related Areas (IWRAs).

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

Yes

Comment

Existing water-related infrastructure has been identified, along with its current condition. Overall, the infrastructure is relatively new and well-maintained. Ongoing projects are focused on expanding capacity rather than addressing damage. This was verified during the stakeholder interviews.

Potential exposure to extreme events—such as tornadoes and floods—has been assessed. Although such events have occurred, they have not caused significant damage to water infrastructure. No other extreme events currently pose major threats.

Planned infrastructure projects include the addition of 10 MGD of capacity to both the Saylorville Water Treatment Plant and the West Des Moines Water Works.

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

Yes

Comment

The adequacy of available WASH services within the catchment has been identified. Overall, WASH is not a concern in the catchment. This was confirmed by the City of Waukee during the stakeholder interview, it was mentioned that approximately, 100 % of the population has access to drinking water and sanitary sewer services.

In 2023, over 2.95 million Iowans were served by community PWSs (PWS is a system that provides water to the public for human consumption, which includes drinking, handwashing, bathing, ice-making, dishwashing, food preparation), or 92.6% of the total state population, with the remaining 7.4% of the population served by private water supplies at their residences.

According to the Aqueduct Water Risk Atlas, the catchment area has a low to medium risk for unimproved or no access to drinking water, and a low risk for both unimproved or no sanitation and untreated connected wastewater.

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

Shared water challenges have been identified and prioritized:

-Impaired water quality: nutrient runoff (nitrates) from agriculture, factory farm contamination, TCE (Trichloroethylene) superfund site.
-Wetland loss: agricultural land use; 95% of pre-European settlement wetlands destroyed.
-Water scarcity and resilience: climate change, increased drought frequency, increased water demand.
-Flood-related-impacts: climate change, increased frequency of highly intense storms.

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

Yes

Comment

Initiatives to address the shared water challenges have been identified, some examples include:

-Impaired water quality: support of projects that implement agricultural BMPs to reduce nutrient runoff and factory farm discharge.

-Wetland loss: restore or construct wetlands in Raccoon and Des Moines River basins. Collaborations possible with organizations.

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

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

Yes

Comment

Water risks have been identified and prioritized, including likelihood and severity of impact within a given timeframe, potential costs and business impact.

The risks have been clasified as: physical, regulatory, reputational and financial risks.

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

Yes

Comment	Water-related opportunities have been identified and prioritized. Potential savings and value creation have been determined. The Water Stewardship Plan contains a column that links an action back to an identified opportunity, including the cost, value creation and assessment.	
1.8	*Understand best practice towards achieving AWS outcomes: Determining sectoral best practices having a local/catchment, regional, or national relevance.*	
1.8.1	*Relevant catchment best practice for water governance shall be identified.*	Yes
Comment	Relevant catchment best practice for water governance has been identified: -The catchment best practice for water governance is multi-stakeholder participation in water-related initiatives. This includes maintaining active engagement with water-focused stakeholders and exploring collaborative opportunities; particularly in connection with the Iowa Nutrient Reduction Strategy.	
1.8.2	*Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.*	Yes
Comment	The site identified the following relevant sector/catchment best practices for water balance: -Replenish 100% of withdrawals (not consumption), ensuring a positive impact in the basin. -Use of closed loop, air cooling, which significantly reduces water use.	
1.8.3	*Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.*	Yes
Comment	The site identified the following as relevant sector and/or catchment best practices for water quality: -Zero liquid discharge (though this is a rare and expensive outcome). -Reduce nitrate pollution. -Best management practices for agricultural land include modifying drainage systems, restoring wetland areas, implementing conservation techniques like grassed waterways, no-till farming, and using cover crops to improve water retention and soil health.	
1.8.4	*Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified.*	Yes
Comment	The site identified the following best practice for maintenance of Important Water-Related Areas: -Restore habitats to healthy conditions and ensure their long-term protection. This includes preserving riparian corridors and creating or restoring wetlands to manage nutrient loads.	
1.8.5	*Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.*	Yes
Comment	The site has identified the following as relevant sector and/or catchment best practices for provision of equitable and adequate WASH: -UN-Water on provision of WASH, documented in the WBCSD/WASH4Work WASH Pledge. -Free sanitary products. -Mother's room available on-site.	

2	STEP 2: COMMIT & PLAN - Commit to be a responsible water steward and develop a Water Stewardship Plan	
2.1	*Commit to water stewardship by having the senior-most manager in charge of water at the site, or if necessary, a suitable individual within the organization head office, sign and publicly disclose a commitment to water stewardship, the implementation of the AWS Standard and achieving its five outcomes, and the allocation of required resources.*	
2.1.1	*A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments:* *- That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes* *- That the site implementation will be aligned to and in support of existing catchment sustainability plans* *- That the site's stakeholders will be engaged in an open and transparent way* *- That the site will allocate resources to implement the Standard.*	✓ Yes
Comment	The site commitment to water stewardship signed by the Site Manager has been identified. This commitment is posted on-site in a publicly accessible location. The auditor verified this during the on-site audit.	
2.2	*Develop and document a process to achieve and maintain legal and regulatory compliance.*	
2.2.1	*The system to maintain compliance obligations for water and wastewater management shall be identified, including:* *- Identification of responsible persons/positions within facility organizational structure* *- Process for submissions to regulatory agencies.*	✓ Yes
Comment	The site provided a spreadsheet listing all water-related compliance obligations and identifying the responsible individuals. Submission reports to regulatory agencies were provided.	
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 identified a water stewardship strategy including the mission, vision and goals. The goals for the site are set in the Water Stewardship Plan.	
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.*	✓ Yes

Comment	The site has presented its Water Stewardship Plan including 5 targets linked with the 5 AWS outcomes. The plan includes for each target: -How actions will be measured and monitored -Actions and description -Planned time-frames to achieve actions/targets -Financial budgets allocated for actions -Positions of persons responsible for action -The link between each action and the achievement of best practice to help address shared water challenges
2.4	*Demonstrate the site's responsiveness and resilience to respond to water risks*
2.4.1	*A plan to mitigate or adapt to identified water risks developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.* — Yes
Comment	All water risks identified under Indicator 1.7.1 are classified as low. The site has developed mitigation and adaptation plans in coordination with relevant public-sector entities. These include: -Spill Prevention, Control, and Countermeasure Plan (SPCC): A formal plan is in place to manage and prevent potential spills. -Third-Party Water Risk Assessment: A third-party consultant conducted a water risk assessment across multiple data centers. For the Waukee site, the assessment identified a water risk premium. Consequently, the selected air-cooled design significantly reduces the site's water-related risks. -Water Stewardship Plan: This plan addresses identified water risks and has been communicated to various stakeholders. -Emergency Response Plan: Communication with the local fire department has been established as part of emergency preparedness.

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: Evidence that the site has supported good catchment governance has been identified. Some examples of ongoing activities are:

-Stakeholder Engagement: the site has initiated engagement with five different stakeholders, as confirmed during stakeholder interviews.

-Wetland Restoration Project: the site is currently restoring on-site wetlands, with seeding expected to be completed by June 2025. Although the wetlands are owned by the site, the restoration positively impacts surrounding areas and neighboring properties within the catchment. This initiative contributes to the protection of Important Water-Related Areas (IWRAs) by delivering multiple benefits, including:

-Stormwater capture
-Peak runoff reduction
-Groundwater recharge
-Improved water quality, with modeled reductions in annual loads of nitrogen, phosphorus, and sediment
-Habitat creation for native species

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

Comment: The site ensures compliance with human rights by adhering to all applicable water-related laws and regulations.

There are no non-regulatory water rights applicable to the site. Additionally, the site does not exceed its system water allocation limits for peak daily water or wastewater usage. This was confirmed through stakeholder interviews with the City of Waukee.

3.2 *Implement system to comply with water-related legal and regulatory requirements and respect water rights.*

3.2.1 *A process to verify full legal and regulatory compliance shall be implemented.* ✓ Yes

Comment: The implementation of the process to verify full legal and regulatory compliance was verified in indicator 2.2.1

3.2.2 *Where water rights are part of legal and regulatory requirements, measures identified to respect the water rights of others including Indigenous peoples, shall be implemented.* ✓ Yes

Comment: Water rights are not part of the site's legal and regulatory requirements, as water is supplied by the City of Waukee.

3.3 *Implement plan to achieve site water balance targets.*

3.3.1 *Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified.* ✓ Yes

Comment	The site is a new facility that began operations in August 2024. Water consumption is actively monitored using multiple water meters, which were observed during the on-site audit. The site plans to establish its expected water use by July 2025 and will continue with quarterly monitoring thereafter.	
3.3.2	*Where water scarcity is a shared water challenge, annual targets to improve the site's water use efficiency, or if practical and applicable, reduce volumetric total use shall be implemented.*	Yes
Comment	Water scarcity is not a shared challenge within the catchment area.	
3.3.3	*Legally-binding documentation, if applicable, for the re-allocation of water to social, cultural or environmental needs shall be identified.*	Yes
Comment	The site does not have a legally binding document for reallocation of water to social, cultural and environmental needs.	
3.4	*Implement plan to achieve site water quality targets*	
3.4.1	*Status of progress towards meeting water quality targets set in the water stewardship plan shall be identified.*	Yes
Comment	Status of progress towards meeting the water quality target has been identified and evidence of implementation was provided for these actions: -Monitoring of stormwater pond performance: water quality testing of the stormwater ponds was conducted in April and May 2025. A fish study was also scheduled for May 2025 to assess aquatic biodiversity and ecosystem health. -Maintenance of stormwater ponds: initial restoration of the ponds was completed in 2022. Ongoing maintenance is planned for the period of April to June 2025. Water sampling is conducted quarterly to ensure continued performance and compliance.	
3.4.2	*Where water quality is a shared water challenge, continual improvement to achieve best practice for the site's effluent shall be identified and where applicable, quantified.*	Yes
Comment	The site has identified water quality as a shared water challenge. However, it does not treat its effluent on-site, nor does it monitor it. The wastewater is discharged into the city's sanitary sewer system and is ultimately treated at the Des Moines Metropolitan Wastewater Reclamation Authority. The sewer manager has reported no issues with nutrient levels. The site utilizes air-cooled units in its data hall, thereby eliminating the need for water in industrial processes such as cooling towers. Stormwater is not discharged off-site; it is contained in on-site stormwater retention ponds. The site has implemented a monitoring program to assess the performance of these ponds. Water quality testing of the stormwater ponds was conducted in April and May 2025. Additionally, a fish study was scheduled for May 2025 to assess aquatic biodiversity and ecosystem health—this is considered a best practice for the site.	
3.5	*Implement plan to maintain or improve the site's and/or catchment's Important Water-Related Areas.*	
3.5.1	*Practices set in the water stewardship plan to maintain and/or enhance the site's Important Water-Related Areas shall be implemented.*	Yes

Comment	The site has on-site Important Water-Related Areas (IWRAs) and is actively implementing measures to maintain and enhance them: -Prairie Pothole Wetland Restoration: restoration is currently in progress, with seeding expected to be completed by June 2025. -Promotion of Best Management Practices (BMPs) on Leased Agricultural Land: the site encourages the use of wetland and surface water BMPs. A signed farm lease includes these practices. -Additionally, the site monitors its stormwater retention ponds: refer to comments in indicator 3.4.1.	
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's provision of adequate access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all workers onsite has been identified and quantified. The site holds an occupancy certificate confirming compliance with WASH regulations. Additionally, sanitary products are available on-site, as verified during the audit. The site has also completed the WASH4Work scoring checklist, achieving a business compliance score of 98% and a pledge score of 100%.	
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 site does not withdraw water directly from natural sources or discharge wastewater into them. Therefore, it does not impact the community's access to safe water and sanitation. The site complies with all applicable water regulations and uses a minimal amount of water, staying well within its approved limits.	
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.*	Yes
Comment	The site does not have any primary inputs or outsourced services, as such there is no Indirect water use target in the WSP (refer to indicators 1.4.1 and 1.4.2).	
3.7.2	*Evidence of engagement with suppliers and service providers, as well as, when applicable, actions they have taken in the catchment as a result of the site's engagement related to indirect water use, shall be identified.*	Yes
Comment	The site did not identify any indirect water use. Therefore, indirect water use targets were not included in the water stewardship plan.	
3.8	*Implement plan to engage with and notify the owners of any shared water-related infrastructure of any concerns the site may have.*	
3.8.1	*Evidence of engagement, and the key messages relayed with confirmation of receipt, shall be identified.*	Yes

Comment

The site has actively engaged with the City of Waukee, and evidence of this engagement was provided. During the stakeholder interview, it was confirmed that there are currently no concerns regarding water-related infrastructure.

In the event that an issue arises, the site will contact the appropriate infrastructure owner to conduct a root cause analysis and develop a targeted action plan to address the concern.

During the construction phase, the City of Waukee conducted multiple on-site inspections to ensure that the construction of the water mains complied with standard specifications.

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

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

Comment

Actions taken toward achieving catchment best practices for water governance include:

-Wetland Restoration Project: Supports the Iowa Nutrient Reduction Strategy and provides additional benefits, as outlined in Indicator 3.1.1.
-Implementation of Best Management Practices (BMPs): Integrated into farm leases to promote sustainable land and water use.
-Ongoing Water-Specific Stakeholder Engagement: Includes identifying opportunities for collaboration.

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

Comment

Best practice includes the use of closed-loop air cooling systems, which significantly reduce water consumption by eliminating the need for water-based cooling processes.

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

Comment

Actions towards achieving best practice, related to targets in terms of water quality have been implemented:

-Best Management Practices through farmer leases
-Wetland restoration efforts
-Stormwater management strategies

3.9.4 *Actions towards achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas shall be implemented.* Yes

Comment

Actions towards achieving best practice related to maintenance of Important Water-Related Areas have been implemented:

-Habitat Restoration and Long-Term Protection: The site is restoring prairie pothole wetlands to healthy ecological conditions. Restoration is currently in progress, with seeding expected to be completed by June 2025.

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

Comment	The site has implemented the following best practices for provision of equitable and adequate WASH: -A site self-assessment of WASH capacity. -The site provides free sanitary products. -There is a Mother's room available on-site. -Drinking Water Dispenser: provides hot, cold, sparkling, and flavored water options for on-site use. -Water bottle filters are available to team members to fill up personal water bottles.

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

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

4.1.1 *Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated.* ✓ Yes

Comment: Performance against targets in the site's water stewardship and the contribution to achieving water stewardship outcomes plan have been evaluated for implemented projects. Some examples of the evaluation include:

-Stormwater Pond Monitoring: Water quality targets were met according to the April 2025 monitoring of the stormwater ponds. Achieving these targets helps maintain water quality in the catchment by preventing potential nutrient loading from stormwater runoff.

-WASH4Work Compliance: The site has met WASH4Work requirements. This helps prevent potential health issues associated with inadequate water and sanitation services on-site.

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

Comment: Value creation resulting from the water stewardship plan has been evaluated. For example, the site has quantified savings in terms of both money and water.

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

Comment: The shared value benefits within the catchment have been identified and, in some cases, quantified. One key example is the wetland restoration project, which supports the protection of Important Water-Related Areas (IWRAs) by delivering multiple ecosystem and water management benefits, including:

-Stormwater capture
-Reduction of peak runoff
-Groundwater recharge
-Improved water quality, with modeled reductions in annual loads of nitrogen, phosphorus, and sediment
-Habitat creation for native species

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: There have been no water-related emergency incidents at the site over the past year.

The site uses an Incident Management System, a software tool designed to track all types of incidents—including water-related ones—along with root cause analyses and corresponding corrective and preventive actions. This system was reviewed and verified during the on-site audit.

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.*	Yes
Comment	The site has developed and distributed "Stakeholder Disclosure Emails" to the stakeholders engaged through the A4WS process. These emails include detailed information on the site's water stewardship objectives, progress, and performance. As of now, no feedback has been received from stakeholders.	
4.4	*Evaluate and update the site's water stewardship plan, incorporating the information obtained from the evaluation process in the context of continual improvement.*	
4.4.1	*The site's water stewardship plan shall be modified and adapted to incorporate any relevant information and lessons learned from the evaluations in this step and these changes shall be identified.*	Yes
Comment	During the on-site audit, the site implemented several updates to the current plan. These changes are highlighted in color within the document for easy reference. Any further updates will be incorporated as additional feedback is received and as progress continues.	

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 "Stakeholder Disclosure Emails" contains a section on who is responsible for the different aspects of delivering the AWS scheme. The site manager is responsible for the day-to-day water onsite stewardship-related activity and operations.	
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	"Stakeholder Disclosure Emails" have been sent to stakeholders engaged through the A4WS process. These emails outline the five AWS outcomes, along with the site's water stewardship objectives and performance progress.	
5.3	*Disclose annual site water stewardship summary, including: the relevant information about the site's annual water stewardship performance and results against the site's targets.*	
5.3.1	*A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum.*	Yes
Comment	"Stakeholder Disclosure Emails" have been sent to stakeholders engaged as part of the A4WS process. These emails provide a summary of the site's water stewardship performance, including quantified results against established targets.	
5.4	*Disclose efforts to collectively address shared water challenges, including: associated efforts to address the challenges;engagement with stakeholders; and co-ordination with public-sector agencies.*	
5.4.1	*The site's shared water-related challenges and efforts made to address these challenges shall be disclosed.*	Yes
Comment	"Stakeholder Disclosure Emails" have been sent to stakeholders engaged through the A4WS process. These emails outline the site's shared water challenges and the actions taken to address them.	
5.4.2	*Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified.*	Yes
Comment	Efforts made by the site to engage stakeholders are recorded in the Stakeholder Engagement Log, and that include public-sector agencies. These efforts were confirmed during the stakeholder interviews.	
5.5	*Communicate transparency in water-related compliance: make any site water-related compliance violations available upon request as well as any corrective actions the site has taken to prevent future occurrences.*	
5.5.1	*Any site water-related compliance violations and associated corrections shall be disclosed.*	Yes

Comment	The site remains fully compliant with all water-related regulations, with no violations reported. This was confirmed during the stakeholder interviews.	
5.5.2	*Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable.*	Yes
Comment	No corrective actions have been taken because the site has not committed any water-related compliance violations.	
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	No water-related compliance issues have been identified at the site.	

Previous Findings

	All non-conformities raised in the previous audit have been satisfactorily closed.	N/A